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Volume 2, 2023

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STKIP PGRI PACITAN 2023**

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PREFACE

First of all, Let us praise The Almighty Allah SWT, who has given health and opportunities to all of us, so that today we can carry out the 2nd International Conference on Learning and Education (2nd ICLE) STKIP PGRI Pacitan in 2023. Hopefully, this activity will provide blessings and benefits for all of us.

On this occasion, we would like to express our sincere gratitude to the speakers who are willing to share with us in this seminar. This seminar raised the theme "Demand for innovation and education connectivity". It is hoped that it can unravel the demands for innovation and educational connectivity, as well as disseminate various ideas, thoughts, and results of scientific research as well as empirical experiences related to these themes in order to make government programs successful with the jargon of independent learning. The output of this seminar will be published in the International Seminar Proceedings of STKIP PGRI Pacitan. This seminar will also be held regularly every year with an up-to-date theme and present competent speakers from within and outside the country.

We thank all of you for your participation, and we wish you all the best for participating. Thus, if there are things that are less pleasing, I sincerely apologize to all of you. May we always be given health and given ease in all our affairs.

Pacitan, 21 July 2023
Committee Chairman

ttd

SUGIYONO, M.Pd.

SPEECH FOR INTERNATIONAL CONFERENCE

Assalamu'alaikum Warahmatullah Wb.,

Blessings to all of us.

The Excellency:

1. The Deputy Chief Executive of the Pusat Kampus Merdeka, Ministry of Education, Culture, Research and Technology, Dr.Agr.Sc. Ir. Hatma Suryatmojo, S.Hut, M.Si. IPU,
2. Associate Professor Dr. Phaosan Jehwae (Faculty Educaion, Fatoni University, Thailand) Associate Professor Ts. Dr. Aslina Baharum (School of Engineering and Technology Sunway University, Malaysia).
3. The Chairman, and all Management of PPLPT STKIP PGRI Pacitan.
4. Invited guests (Head of Education Office, Head of Branch Office, College Colleagues, Chancellor and Chairperson).
5. Vice Chairs, Heads of Study Programs, Heads of Bureaus, Heads of Institutions, Heads of Technical Services Units, and staff.
6. Lecturers, presenters wherever you are,
7. Students, alumni and all seminar participants.

For a moment, let us praise and thank Allah SWT who has given His mercy, taufiq and inayah, so that we can be present virtually at the International Conference on Learning and Education (2nd ICLE). Let us give shalawat and greetings to the Prophet Muhammad SAW, hopefully one day we will get his intercession, amen.

Dear virtual guests,

First of all, I would like to welcome, virtually, to all ladies and gentlemen in the City of 1001 caves, the city where the 6th President Susilo Bambang Yudhoyono (SBY) was born. Pacitan is a city, which is very charming, comfortable, friendly, beautiful and scenic. This city is well worth it for anyone to visit.

This international seminar was very special, because the Deputy Governor, Chair of the PGRI of East Java Province, and the Regent of Pacitan were pleased to join us all online. On behalf of the leadership and the entire academic community of STKIP PGRI Pacitan, I would like to express my sincere and infinite gratitude. Their presence certainly confirms to all of us for their commitment, dedication and concern for the quality of education, including higher education. We would also like to thank all the resource persons who are willing to spend their time and thoughts in this forum. Moreover, we would also like to express our gratitude to all the committee members who made this event a success.

Dear Ladies and Gentlemen.

This international seminar is actually a series of activities on the 31th Anniversary of STKIP PGRP Pacitan. Carrying the theme " Future Trends of Science and Education: The Use of Artificial Intelligence in the New World". This theme emphasizes that this campus is very serious in improving institutional capacity, quality of graduates and

preparing themselves to respond to the challenges of the times. We ask for prayers, blessings, support and assistance, ladies and gentlemen, especially to the Governor of East Java who was represented by the Deputy Governor, The Chair of the PGRI of East Java Province and the Regent of Pacitan so that this Campus would be of higher quality, standing firm, and highly competitive.

Ladies and gentlemen, in virtual space wherever you are,
We hope that this international seminar can be a medium for transfer of knowledge and transfer of value for lecturers, teachers, education staff, students and the wider community who are engaged in education. The various knowledge gained later, hopefully can be a provision to face the changes and demands of life in this era.
Welcome and congratulations on attending the seminar, hopefully you will be enlightened. That's all we have to say, for all our mistakes, we ask for forgiveness. To conclude this speech, we ask the Regent of Pacitan and the Deputy Governor of East Java to give a speech. Waallahu muafiq ila aqwamitthariq, wassalamu'alaikum warahmatullahi wabarakatuh.
Wassalamualaikum wr. wb.

Pacitan, 21 July 2023
Chairman,

signed

Dr. Mukodi, M.S.I.

**PROCEEDING
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Cybercrime Based on Social Media and Its Impact on Victims

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Abstract

Cybercrime is a phenomenon that has begun to unsettle the community. This is because today the majority of people are already using smartphones so it is difficult to escape from the internet-based life. Perpetrator of cybercrime often target someone's personal data and then use it for crime. Someone's loss passes cybercrime not only in the form of material or financial losses, but often in the form of mental and social losses. Personal data taken by the perpetrator cybercrime often comes from social media data belonging to someone who is a victim.

Based on this, this study aims to: analyze patterns of cybercrime based on social media, analyze the potential harm arising from cybercrime on a person and to analyze patterns of anticipation in avoiding their occurrence cybercrime social media based. Subjects in this study are victims and perpetrators of acts cybercrime social media based. The method used in this research is a qualitative research method with a case study approach.

The research results show that the pattern of cybercrime based on social media is to trap victims through online dating or online sex services, threaten to spread the contents of conversations and extort victims. The danger posed by cyber crime based on social media is the occurrence of extortion and potential damage to the victim's reputation in real life. Anticipation that must be done to avoid cyber crime based on social media is to limit interactions with unknown contact numbers, limit posting of data and activity on social media.

Keywords : cybercrime, social media.

INTRODUCTION

Sadya's findings (2022), show that in 2021 the percentage of the population of smartphone users in Indonesia reached 65.87% or more than 160 million people. User size smartphones makes the large number of Indonesians connected to the internet and utilizing social media as a means of communication. This great potential is identified by internet-based criminals or commonly known as perpetrators of cybercrime.

Namira and Karsen (2022) stated that cybercrime is a criminal act committed by criminals by using the internet network and computer technology to attack the victim's information system. Cybercrime It is very vulnerable to attacking someone's information system compared to that of an institution or company. This is because someone's information system does not have a security system and often only relies on social media.

A person's vulnerability to cyber crime due to many smartphone users who are not yet aware of the potential dangers that lurk in the security of their personal data. Someone who uses social media often behaves in selling data, starting from image data, activities and even addresses and social relations. This will be very potential for perpetrators of cybercrime to exploit data and then commit criminal acts that are very detrimental to the victim.

Handling Cybercrime legally it still seems limited, because often victims are also reluctant to report it to the law enforcement agencies. Many victims feel that this is a risk when using the internet or social media online. That's why anticipatory efforts, outreach and education are needed to prevent cybercrime from happening to someone.

Namira and Karsen (2022) state that there are several types cybercrime that is:

1. Carding, which is a type of cyber crime by using someone else's credit card unlawfully or illegally.
2. Phishing, which is a type of cyber crime by tricking or tricking victims into obtaining important victim data such as identity cards, passwords, ATM codes or banking accounts.
3. Ransomware, which is a malware that is used to infect the victim's computer, then takes personal data and with that personal data is used to threaten the victim so that they are given a ransom.
4. Illegal Content, namely spreading information that is incorrect and violates the law, which is usually in the form of pornographic information or other sensitive information. Unlike the case with Putri (2022), states that there are several types cybercrime that is:
 1. Unauthorized Access namely a type of cyber crime in which criminals access information systems without permission or illegally.
 2. Illegal Content namely a type of cyber crime in which criminals enter content that is not true into the internet network. Such content is usually offensive, unethical or even illegal.
 3. Deliberate spread of viruses is a type of cyber crime committed by spreading viruses to disrupt computers or computer systems.
 4. Data forgery namely falsifying important data in the internet system or transactions on the internet.
 5. Cyber espionage, sabotage, and extortion namely cyber crime by spying and/or damaging and destroying an information system and computer system.
 6. Cyber Stalking, namely cyber crimes committed by harassing other people via the internet or social media.
 7. Carding, namely cyber crimes committed by breaking into credit cards to steal payments from other people's credit cards.
 8. Hackers and crackers, namely cyber crimes committed by breaking into computers, internet and other security systems.
 9. Cybersquatting and Typosquatting, namely cyber crimes committed by imitating and falsifying the domain addresses of other companies to sell at a higher price to interested parties.
 10. Hijacking is a cyber crime committed by pirating the work of others.
 11. Cyberterrorism is a cyber crime for the sake of terrorism.

METHOD

The research was conducted using the case study method. Research is done by trying to be a victim of cybercrime based on social media to find out what the perpetrators are doing. Data collection was carried out in April 2023, which was carried out online in Pacitan.

RESULTS AND DISCUSSION

Results

By Cybercrime Social Media Based

Cybercrime based on social media began to occur frequently due to the increasing number of social media users. These criminals take advantage of the growing number of social media users who are not aware of the potential dangers behind personal data on social media. Social media users often reveal a lot of their personal data so that it has the potential to be used by perpetrators of cybercrime.

This research found that the perpetrator of cybercrime one of the ways to induce victims is by spreading whatsapp contact numbers. Research proves that one of the WhatsApp numbers

is spread through social media with the lure of online sex services. It is hoped that someone will contact the WhatsApp number and then set up a trap.

The research retrieved data by trying to contact one of the WhatsApp numbers which incidentally offered online sex services. Not long after, the number suddenly sent personal data from the number that was the researcher. The data sent is about workplace data and personal photos and photos of naked people without faces. Perpetrator cybercrime also made threats to damage the reputation of the researcher by spreading the naked photos and whatsapp conversations to the researcher's workplace and online relations.

Perpetrator cybercrime then asked for a sum of money as compensation so as not to spread information that would bring down the reputation of the researcher. The researcher followed this path by transferring a sum of money to a predetermined account. Finally after the transfer, the perpetrator of cybercrime keeps threatening to spread information that could damage the reputation of the researcher and demand a larger sum of money thereby canceling the evil plan.

Researchers threatened to return by making telephone calls and threatening to report to the police. It is said that this is a planned and done research cybercrime will not be able to drop the reputation or honor of researchers. It is also said that the perpetrator of cybercrime will have difficulty dropping the reputation of researchers due to limited researcher data on social media.

These conditions make the perpetrator cybercrime confused and did not continue his crime. When the perpetrator is continuously contacted and contacted, he disconnects by blocking it. Of course this shows that the perpetrator felt defeated and failed because the pattern of his crime had been read.

The research process shows that the perpetrators of crime cyber crime based on social media in carrying out activities using several patterns as follows:

a. Fishing for victims

Perpetratorcybercrime based on social media will lure victims with things that attract the victim's attention. The thing that is most often done is to spread contacts and services on social media, such as Twitter, Facebook and Instagram. These contacts are usually accompanied by pictures of attractive women so that victims are interested in making contact and calling that number. Offers of online dating, online sex services, part-time jobs and job vacancies make for pretty interesting bait.

b. Communicating with Victims

Victims who are interested in contacting the perpetrator's contact will be invited to communicate intensively. Victims who have an interest in online sexual services and online dating will become easy targets because they are easily provoked by intimate sexual communication. This intimate communication will be a potential point to damage the victim's reputation, especially victims who have broad social and work ties. Conversations between victims and perpetrators can be published so that it has the potential to damage the victim's reputation.

c. Tracking the Victim's Personal Data

The victim's WhatsApp number will be very easy to trace through the "get-contact" application. This application will provide name information stored on the smartphone of the person who has the victim's contact number. Of the many names stored, there will be a similar name pattern. This will make it easier for the perpetrator of cybercrime to dig deeper information through search engines and data on the names of victims on social media.

d. Terrorizing Victims with Their Personal Data Information

The victim will be sent his personal data found by the perpetrator of cybercrime. Many people will certainly be surprised and do not expect the amount of information already known

by the perpetrators of cybercrime. The victim, of course, panicked when his personal data was found out by the perpetrator.

e. Threatening and blackmailing the Victim

Victims who are shocked when their personal data is known by the perpetrator will panic and be afraid so they are easy to threaten. The threats made by the perpetrators were to spread screenshots of conversations accompanied by naked photos of the victims, which are usually only digital engineering. The thing that the victim is most afraid of, of course, is when the screenshot is sent by the perpetrator to the partner, close family or the victim's work environment.

Victims who panic, of course, will comply with the perpetrator's request to send some money. The victim was promised not to send secret conversations or nude photos as long as he sent some money to a predetermined account. It's just that when the victim has sent the money, the perpetrator doesn't stop threatening, but instead sees that his threat is effective.

Perpetratorcybercrime will further increase the intensity of the threat after it is proven that the victim is truly scared because it is proven that he has sent money. The perpetrator will offer to completely delete the victim's data if he sends a larger amount of money again. This of course continues at a higher degree, because the perpetrators of cybercrime feel the victim as an easy target to continue to be threatened and blackmailed.

Potential Hazard fromCybercrime on Someone

There are two potential dangers cybercrime the victims are as follows:

a. Potential Loss of Money through Extortion

Of course the target of the perpetrator of cybercrime based on social media is to get money from victims by means of threats and extortion. Victims who look more afraid will have more potential to be blackmailed with higher and continuous values. This of course will be very inconvenient for the victim, especially when the victim really panics and feels threatened because of the fear of falling reputation and social comfort.

Social media, however, is a medium that makes it easier for someone to connect with their social relations. It's just that this is of course very easy to take advantage of by cybercrime to frighten the victim to spread fake news that damages the victim's social reputation. The victim of course will try to pay whatever the perpetrator cyber crime because they realize how easy it is for perpetrators to destroy someone's life just by taking advantage of social networks on social media.

b. Potential Drop in Social Reputation

Victims who in real life have a social reputation and have a social life will be disturbed if their shame or secrets are revealed. Victims who have had online sex conversations or online dating will become real information that will damage their reputation and social comfort. For example, a victim who already has a partner, family or work and life environment will destroy his reputation and life when the contents of the victim's conversation are spread during online dating or online sex services.

The perpetrator will really spread disgrace and information that damages the victim's reputation if the victim really does not provide monetary compensation as a threat. This of course will have an impact on the victim being seen as a pervert, cheating person, or other negative predicate that ruins their life. This is what will become a prolonged problem and burden for victims in the future.

Social Media Based Cybercrime Anticipation Pattern

Anticipatory steps to avoid action cybercrime based on social media is by several things as follows:

a. Don't be tempted to communicate with foreign numbers

The bait from the perpetrator of cybercrime based on social media that is most often done is with offers of online dating and online sex services. This lure is usually accompanied by an interesting photo, and not infrequently the perpetrator actually provides the opposite sex to lure the victim. If the victim has the potential to be ensnared, the perpetrator will carry out the action from the data obtained from the victim's contact number and victim's data on social media.

b. Not posting too many activities, photos and real names on social media

Many people don't realize that social media is a medium that is easily accessible to other people, including perpetrators of cybercrime social media based. Social media is often used to post personal data, family data, daily activities, life activities and even work activities, even social connections. This of course will be the emp source

c. Protecting our identity from identity downloading apps like Get-Contact

Increasingly advanced technology has an impact on the easier it is to penetrate boundaries. As with the get-contact application, it can penetrate the identity of another person's contact storage, so that the identity of the contact can be identified. This is a gateway for perpetrators of cybercrime to explore one's identity through search engines and social media. Of course this is a potential for perpetrators of cybercrime to be social media based.

This phenomenon makes it important for us to do protection so that our personal identity is not disclosed. For example, via the get-contact page, we can disable our contacts from being opened by other people through the get-contact application. Although not completely effective, at least it is one effort to prevent cybercrime.

Discussion

Cybercrime based on social media is a new type of crime that develops along with the development of social media. Social media-based cybercrime actors take advantage of the increasing number of social media users and the low understanding of the risks of social media in cybercrime. This low knowledge is used by perpetrators to dig up personal information, trap and frighten victims.

Cybercrime based on social media does not only have material losses in the form of loss of money for victims. More than that, the victim will experience psychological trauma from the threat made by the perpetrator. Threats to damage reputation and embarrass the victim result in lasting trauma.

So far there has been no real action from the state or government to prevent and take action against social media-based cybercrime. The state and government do not yet know the pattern and impact of social media-based cybercrime. That's why many people suddenly become victims and don't even have the courage to report and convey it to the public because it is related to damage to personal reputation.

CONCLUSION

Cybercrime social media-based patterns have patterns of luring victims to call contact numbers, attracting victims to engage in online dating or online sex activities, identifying personal data through applications and social media, threatening to spread online dating activities or online sex through the victim's social media networks and blackmailing victims to asked for money on the basis of the victim's fear of falling social reputation in real life. Cyber Crime based on social media is very dangerous because it will harm the victim financially and has the potential to damage the victim's reputation in real life as a result of entrapment by the perpetrator cybercrime. Anticipating what must be done from action cybercrime based on social media is to be careful not to connect and communicate with suspicious contact numbers, limit posting personal data and activity on social media and limit our contact numbers to be explored through certain applications such as the get-contact application.

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How Does Student Bullying Happen in The University?

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Abstract

Bullying is a phenomenon that is starting to worry many people, especially the education community. Phenomenon Bullying has an impact on the psychology of the victim and often becomes a hidden phenomenon. Phenomenon Bullying does not only occur in children and adolescents, but also occurs in college students who are already adults.

This study aims to: analyze patterns of bullying that happened to students and analyze the impact of bullying on students. The research was conducted using the case study method which was conducted between January and May 2023 in Pacitan, Indonesia. The results showed that the type of bullying that occurred to students was direct non-verbal by means of social isolation and communication restrictions. The impact felt by victims of student bullying is psychological pressure, feelings of being alone, and even wanting to stop studying.

Keywords: Bullying, students.

INTRODUCTION

Bullying is one of the deviant social phenomena that occur in the educational environment. Behavior Bullying apparently does not only occur in children and adolescents, but can also occur in college students. Preliminary research indicates that bullying has occurred to students at one of the universities in the city of Pacitan.

Rahayu and Permana (2019), found that verbal bullying is the majority occurred (42.16%). This was also the case for students bullying what happened was verbal bullying but also had a huge impact on the victim's life. Therefore, whatever form bullying has an important impact on a person's life.

Sulisrudatin (2015), found that the perpetrator's motivation for bullying in his actions is to achieve his own satisfaction. They do bullying in the form of repeated physical, psychological, social and verbal attacks. Actor satisfaction inner *bullying* this action is what can then happen to students who are actually not in the age of children or teenagers anymore.

Rahayu and Permana (2019), found that behavior bullying was caused by the perpetrator's low empathy for his victim. The perpetrator never positioned himself as a victim, so he did whatever he wanted bullying on the victim. Lack of empathy behavior does not only occur in children and adolescents, but can also occur in adult students bullying can occur in students who do not have a sense of empathy.

According to the Ministry of PPPA (2022), Bullying can be grouped into 6 categories:

1. Direct physical contact.

The act of hitting, pushing, biting, grabbing, kicking, locking someone in a room, pinching, scratching, also includes extorting and destroying other people's belongings.

2. Direct verbal contact.

Threatening, humiliating, demeaning, harassing, name-calling, sarcasm, put-downs, denouncing/ridiculing, intimidating, cursing, spreading gossip.

3. Direct non-verbal behavior.

The act of looking cynically, sticking out the tongue, showing condescending, mocking, or threatening facial expressions; usually accompanied by physical or verbal bullying.

4. Indirect non-verbal behavior.

The act of keeping someone silent, manipulating friendships so that they become fractured, intentionally isolating or ignoring, sending anonymous letters.

5. Cyberbullying

Acts of hurting others by means of electronic media (video recordings of intimidation, defamation via social media)

6. Sexual harassment.

Sometimes acts of harassment are categorized as physical or verbal aggressive behavior.

Study Bullying that occurs in adults in this case students is quite rare. This is because incident bullying in adults such as college students is rare. Adults usually have little interest in doing so bullying, so are adults relatively immune to behavior bullying. So the phenomenon of bullying happening to students is an interesting phenomenon to study, because both have a pattern of lack of empathy for perpetrators and the impact it has on victims.

METHOD

The research was conducted using the case study method, because this incident is quite rare. In-depth interviews were conducted with students who were victims of bullying and students who were bullies intensively from January 2023 to May 2023. The interviews were conducted informally in the city of Pacitan, Indonesia, which is also the city where bullying occurred.

RESULTS AND DISCUSSION

Results

Bullying what happens to students is of course much different from what happens to children. This is because students are people who have entered adulthood, meanwhile bullying in children occurs in victims and perpetrators who are not yet adults. Adult age makes students have a pattern of social interaction that is different from the age of children.

The research data shows that casebullying What happens to students is motivated by low social ties as a result of low social interaction. This is because when the Covid 19 pandemic occurred, teaching and learning activities for students for almost two years were carried out online. Between students there is rarely direct interaction and communication, so that when the Covid 19 pandemic ended, stuttering occurred in social interaction and communication. This has an impact on the occurrence of misperceptions in communication and has an impact on the failure of the communication process.

Bullying of what happened to the object of research was also caused by the intensive interaction of the victim with his partner who was also a student in the same class and one major in a courtship relationship. Meanwhile, none of the other students were dating classmates. This has an impact on the different conditions between the victim and her classmates.

Bullying happened to the research object was also caused by the victim's failure to establish interaction with students in one class. The intensity of the interaction with the boyfriend has an impact on exclusivity so that every day the victim and his girlfriend tend to be alone and do not communicate with other friends. This has an impact on the distance between the victim and his classmates and causes a failure to grow group togetherness in one class.

Victims who are more likely to be with their girlfriends than their fellow students in one class, make it difficult for victims to receive messages in the process of communication in class. Victims sometimes become sensitive in the communication process with classmates so that classmates also respond differently in the communication process. This is what the victim then understands as behavior bullying what his classmates did to him.

Data from the party opposite the victim shows that bullying was a response to the victim's sensitive behavior towards a classmate. For example, when classmates joke, the victim

feels that he was being attacked. This is what makes classmates become irritated so they take action bullying in return for the victim.

Bullying is an indirect action, because they are both adults of course bullying direct physical and verbal contact is considered childish. Bullying what happens is type bullying direct non-verbal, namely by silencing the victim which is carried out together by students who are classmates both during the lecture process and outside the lecture. The existence of the victim in class was physically ignored by other students and left alone so that he was socially isolated.

This behavior is quite felt by the victim as a form of extreme social isolation. The victim felt that he was not considered so that all the time he was silent and could not carry out social interactions with other students. This had an impact on the victim's feelings as a stranger among her classmates, even though she was forced to stay in the same class during the lecture process.

Bullying what happened in the long term because the victim felt it had happened in the last 1 year. The communication freeze between the victim and classmates continued without any resolution. The victim, on the one hand, feels unable to establish communication with his friends who are also perpetrators, but on the other hand, his friends also feel reluctant to stop the bullying. Therefore, a mediator should be needed to resolve the problem of bullying.

Impact Bullying however it will be felt on the victim, because the victim will feel depressed. Bullying: It is true that an act is carried out by the perpetrator on the victim, so that the victim feels pressured both physically, psychologically and socially Bullying happened to the student victims in this study had a more psychological and social impact, because there was no physical bullying.

The psychological impact felt by the victim is the impact of social pressure. This is because the victim is still physically forced to be with classmates but there is no social contact with classmates. Victims are completely silenced or ignored socially, because there is no communication or social interaction even though they are physically present in the class group.

The social impact that occurs on the victim results in a psychological impact, because it occurs repeatedly and in the long term. This social neglect makes victims feel alone and feel distinguished by groups in their class. This has an impact on the psychological pressure felt by the victim.

The climax of the psychological pressure made the victim admit that she often cried alone. Even when the psychological pressure was very heavy, the victim once wanted to get out of the pressure of the class group by not continuing his studies *ordroup out*. The plan was even carried out by submitting it to the Head of the Study Program.

The plan not to continue studying in college was not carried out due to many considerations, one of which was having already studied for 3 years. Of course the decision not to continue with the study was a tough one to make because the remaining study time only had 1 year left. This is what makes the victim feel in a dilemma because on the one hand they are still experiencing psychological pressure but on the other hand they are unable to get out of the psychological pressure.

Discussion

Research findings indicate that college students who are adults become victims of bullying. This is of course very different from most bullying phenomena that usually occur in children. College students who are adults become effectively affected by bullying, because bullying is done by carrying out social isolation so that the existence of victims seems ignored and neglected. This of course creates psychological and social pressure for the victim, especially if it happens over a long period of time.

Ramdhani (2016) said that bullying still affects adults, some even commit suicide because they are unable to face it. It is recommended that adults who experience bullying immediately solve it by reprimanding the bully. This study shows similar findings when students

who are victims of bullying are unable to reprimand the perpetrators of bullying, namely their classmates, then the bullying continues. The repeated bullying had a big impact on psychological pressure so that the victim's students had time to consider not continuing their studies at the university.

CONCLUSION

by bullying what happens to students is a pattern bullying non-verbal, namely by isolating victims by one class. The victims were not invited to interact and communicate with the perpetrators who were also the victims' classmates in college. Bullying has been going on for a long time, almost 1 year. Impact of Bullying that happened to students was quite profound because it had an impact on the psychology of the victims. The victim felt alone and neglected by her social environment, so she often cried alone and even planned to drop out of her studies.

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Implementation of Cognitive Load Theory In The Abstract Algebra Learning Module

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Abstract

Abstract algebra is a crucial branch of mathematics that helps students develop problem-solving and critical thinking skills. Instructional materials play a vital role in mathematics education, supporting learning and influencing teaching practices. Cognitive Load Theory (CLT) is a framework that focuses on managing the cognitive load placed on learners during the learning process. It distinguishes between intrinsic, extraneous, and germane cognitive load. Well-designed handouts can reduce extraneous cognitive load and enhance learning outcomes. Visual aids and interactive elements in handouts promote comprehension and active cognitive engagement. Proper scaffolding and differentiation support learners in managing cognitive load effectively. Applying CLT principles in abstract algebra instruction can optimize learning outcomes. Instructional materials should present information clearly, use visual aids, break down complex concepts, provide guidance, cater to diverse learning needs, relate abstract concepts to real-world examples, promote active learning and reflection, and offer formative assessment and feedback. By applying CLT principles, educators can enhance the learning experience and foster a deeper understanding of abstract algebraic concepts.

Keywords: *abstract algebra, cognitive load theory, instructional material*

INTRODUCTION

Math college students learn abstract algebra because it is a fundamental branch of mathematics that provides a deep understanding of abstract algebra and their properties. Abstract algebra studies mathematical structures such as groups, rings, fields, and vector spaces, focusing on their abstract properties rather than specific numerical computations. Abstract algebra provides a solid foundation for many advanced mathematical areas, including number theory, algebraic geometry, algebraic topology, and mathematical physics. Abstract algebra is essential for mathematics students as it provides a solid foundation for advanced mathematical concepts (Artin, 2010).

Understanding abstract algebra allows students to delve deeper into these areas and develop a more comprehensive understanding of mathematics. Abstract algebra develops students' problem-solving and critical thinking skills. It encourages them to think abstractly, analyze complex structures, and formulate and prove theorems. These skills are valuable not only in mathematics but also in various other disciplines and real-world applications. Abstract algebra also emphasizes mathematical rigor and formal proof techniques. It helps students develop the ability to construct logical arguments, write rigorous proofs, and reason abstractly. These skills are essential for advanced mathematical research and are also transferable to other fields that require analytical thinking.

Student reactions to abstract algebra can vary widely. Some students may find it challenging and abstract, requiring them to think in a different way than they are accustomed to in more concrete areas of mathematics. Others may find it fascinating and intellectually stimulating, enjoying the abstract nature and the ability to explore abstract algebra in a more general sense. However, because abstract algebra introduces students to new concepts and

notation, so it can be initially confusing where the shift from working with concrete numbers to studying abstract structures can be a significant adjustment for some students.

Instructional materials play a crucial role in mathematics education, providing students with resources to enhance their learning experience. It can play a vital role in helping students learn abstract algebra effectively. Instructional materials are essential for effective mathematics teaching and learning and support students in developing deep conceptual understanding, procedural fluency, and mathematical reasoning and problem-solving abilities (NCTM, 2014), influence teaching practices, student learning outcomes, supporting effective teaching strategies and promoting student engagement (Porter et al., 2021; Remillard, 2005), also facilitate conceptual understanding, provide opportunities for problem-solving (Higgins et al., 2020), and support differentiated instruction (Kroesbergen et al., 2009). Instructional materials also affects the learning opportunities available to students and shapes their experiences with mathematics (Remillard & Heck, 2014), can enhance student understanding and performance in mathematics (Wood & Sellers, 2017), also mathematics achievement (Bayaga, 2021; Mullis et al., 2019).

Instructional materials play a crucial role in the application of cognitive load theory. Cognitive Load Theory (CLT) has emerged as a valuable framework for designing instructional materials to optimize learning outcomes in educational settings. Specifically, when it comes to creating handouts for teaching and learning, incorporating the principles of CLT can significantly enhance the effectiveness of these educational resources. This article aims to explore the application of Cognitive Load Theory in the context of handout design, drawing upon relevant research studies and published articles to provide evidence-based insights and practical guidelines.

Research studies have highlighted the importance of managing cognitive load in instructional materials. For instance, Sweller, van Merriënboer, and Paas (2019) demonstrated that reducing extraneous cognitive load through well-designed handouts can lead to improved learning outcomes. Their findings emphasize the need to eliminate unnecessary cognitive burden imposed by poorly organized or complex handout structures. In a study by Kalyuga (2018), the integration of visual aids in handouts was found to enhance comprehension and reduce cognitive load. By presenting information in a visual format, such as diagrams, charts, or graphs, learners can more efficiently process and retain the content. This highlights the significance of incorporating visual elements into handout design to facilitate cognitive processing.

Furthermore, according to research conducted by Ayres and Paas (2019), interactive elements in handouts can promote active cognitive engagement and enhance learning. By including activities, exercises, or questions within the handouts, educators can encourage students to actively process and apply the information, leading to deeper understanding and retention. Consideration of learners' prior knowledge and cognitive abilities is also crucial in handout design. A study by Mayer and Moreno (2017) emphasized the importance of providing appropriate scaffolding in handouts to support learners in building new knowledge. Scaffolding techniques, such as providing clear explanations, examples, and step-by-step instructions, can help learners manage their cognitive load and facilitate the construction of meaningful understanding. The application of CLT principles in handout design has shown promising results in various educational contexts. For example, a study by Chen and Wu (2020) demonstrated that by aligning handout design with the principles of CLT, educators can effectively manage cognitive load, optimize engagement, and enhance learning outcomes. Their research findings emphasize the practical implications of applying CLT in handout design for effective teaching and learning.

METHOD

This research is a preliminary research from development research with the aim of developing teaching materials for abstract algebra courses. Plomp as quoted by Sadra (2007) put forward a general model in an effort to develop learning tools consisting of five stages, namely: (1) initial investigation, (2) design, (3) Realization/construction, (4) Test, evaluation, and revision, (5) implementation. This study conducts a comprehensive literature review to identify effective strategies for reducing cognitive load and proposes a methodology to design and optimize instructional material in alignment with CLT principles.

At this stage activities are carried out to collect and analyze information, identify problems, examine the ongoing abstract algebra lecture model, and plan a follow-up activity. The things that have been done are observing the implementation of ongoing lecture learning, studying the teaching tools and materials used so far to find out the obstacles faced in abstract algebra lectures. This article will explore the application of Cognitive Load Theory in designing handouts for teaching and learning. By understanding the principles of CLT and implementing effective strategies, educators can create handouts that optimize cognitive load, promote meaningful learning, and enhance student engagement. The research was conducted at STKIP PGRI Pacitan, East Java. The research subjects were students in the fourth semester of the 2022/2023 academic year.

RESULTS AND DISCUSSION

Cognitive Load Theory (CLT), developed by John Sweller, is a prominent theoretical framework in the field of educational psychology and instructional design. It seeks to understand how the human mind processes and retains information during learning. CLT posits that learning is influenced by the cognitive load placed on learners during the learning process (Sweller, 1988).

Cognitive load refers to the mental effort required to process information and perform cognitive tasks. CLT distinguishes three types of cognitive load. First, intrinsic cognitive load refers to the inherent complexity of the learning material or task (Sweller, 1988). Topics or tasks that are complex, novel, or abstract naturally require more mental effort to understand and master. For example, learning advanced mathematical concepts or understanding complex scientific theories can impose a higher intrinsic cognitive load.

Second, extraneous cognitive load encompasses the additional mental effort imposed by instructional design, presentation, or the learning environment, which is not directly relevant to the learning task (Sweller et al., 1998). Poorly designed instructional materials, distracting visuals, or irrelevant information can increase extraneous cognitive load and hinder learning. Conversely, well-designed instructional materials that provide clear explanations, eliminate unnecessary distractions, and organize learning materials effectively can reduce extraneous cognitive load.

Third, germane cognitive load involves the mental effort learners actively invest in constructing meaningful schemas or mental representations to integrate new information with their existing knowledge (Sweller et al., 1998). When learners engage in deep processing, make connections, and actively reflect on the material, they enhance their understanding and retention of the information.

The ultimate goal of cognitive load theory is to optimize learning by managing and balancing these three types of cognitive load. Instructional designers can implement various strategies to achieve this. For instance, reducing extraneous cognitive load can be achieved by providing clear and concise instructions, eliminating unnecessary information, and organizing learning materials effectively. Managing intrinsic cognitive load involves sequencing learning tasks in a way that gradually increases complexity, providing worked examples and scaffolding to support learners, and allowing for spaced practice and repeated exposure to the material.

Promoting germane cognitive load can be accomplished by encouraging active learning strategies such as self-explanation, problem-solving, and reflection.

Cognitive load theory has garnered empirical support across diverse domains, including mathematics, science, language learning, and computer-based instruction (Mayer, 2014a). Further research has explored its applications and developments. For example, studies have investigated how to make instructional explanations more effective by reducing extraneous cognitive load (Ayres & Paas, 2007) and the benefits of interactive multimodal learning environments (Moreno & Mayer, 2007). Additionally, research has examined the cognitive science literature on dual sensory information processing and its implications for cognitive load (Tindall-Ford et al., 2019).

Another perspective on cognitive load theory comes from the work of Paas and colleagues, who have contributed to the cognitive load theory literature with their expertise in the field of instructional design and multimedia learning. They have emphasized the role of instructional techniques and multimedia presentations in managing cognitive load and enhancing learning outcomes.

Paas, Renkl, and Sweller (2003) introduced the concept of "split-attention effect" as an aspect of extraneous cognitive load. The split-attention effect refers to the challenge learners face when they have to mentally integrate information from multiple sources that are presented separately, leading to increased cognitive load. They argue that instructional materials should be designed in a way that minimizes this effect by integrating relevant information into a single source, such as aligning visual and verbal representations.

In addition, Mayer and Moreno (2003) proposed the concept of "cognitive load multimedia principle," which suggests that learners can better process and comprehend information when it is presented in a multimedia format that optimizes both visual and verbal channels. They argued that the use of relevant and supportive visuals, such as diagrams, animations, or illustrations, alongside concise and well-coordinated verbal explanations can facilitate learning by reducing extraneous cognitive load and promoting germane cognitive load.

Furthermore, Kirschner, Sweller, and Clark (2006) challenged constructivist approaches to learning, arguing that unguided discovery or problem-based learning methods could overload learners' cognitive resources and impede learning. They proposed the "guidance-fading effect" in which instructional guidance, such as providing explicit instruction or worked examples, can initially help learners manage cognitive load and build effective schemas, which can then be gradually faded as learners gain expertise.

Another perspective on cognitive load theory comes from the field of educational technology and online learning. With the rise of digital platforms and online educational environments, researchers have explored the application of cognitive load theory to understand how to optimize learning in technology-mediated settings.

One area of focus is the concept of "transactive memory" and its relation to cognitive load. Transactive memory refers to the distribution of information and knowledge across individuals and external resources. In online learning environments, learners often rely on external sources such as online forums, discussion boards, or collaborative platforms to access information or seek clarification. Studies have examined how the effective utilization of transactive memory can help reduce cognitive load by offloading some cognitive tasks to the collective knowledge of a group or the resources available in the digital environment (Yoon & Chiu, 2020).

Another aspect of cognitive load theory in online learning is the role of instructional design in managing cognitive load. Online courses often involve multimedia elements, interactive modules, and self-paced learning, which can impact learners' cognitive load. Researchers have investigated strategies such as chunking content into manageable units, providing clear navigation and progress indicators, and designing interactive elements that foster active engagement while minimizing extraneous cognitive load (Huang et al., 2021).

Furthermore, the concept of "adaptive learning" has been explored in the context of cognitive load theory. Adaptive learning systems use algorithms to dynamically adjust the difficulty, pace, and presentation of learning materials based on learners' individual needs and capabilities. By tailoring the learning experience to match learners' cognitive capacities, adaptive systems aim to optimize cognitive load and enhance learning outcomes (Brusilovsky et al., 2018).

To apply Cognitive Load Theory effectively in abstract algebra instruction, instructors should carefully consider the balance between intrinsic, extraneous, and germane cognitive load. By optimizing the instructional design and considering learners' cognitive capacities, educators can enhance the learning experience and promote a deeper understanding of abstract algebraic concepts.

Optimizing instructional materials involves designing them in a way that minimizes cognitive load and maximizes learning. Research by Sweller, Ayres, and Kalyuga (2011) emphasizes the importance of cognitive load theory in instructional design to enhance learning outcomes. Drawing on their work and other scholars in the field, here are some strategies to optimize instructional materials:

It is vital to identify the key concepts and crucial information that learners need to comprehend. Irrelevant or extraneous information can increase cognitive load and hinder learners' focus on the core content (Mayer & Moreno, 2003). According to Mayer (2009), presenting information in a clear and concise manner reduces extraneous cognitive load and promotes learning. To achieve this, instructional materials should use simple and straightforward language that is appropriate for the target audience. Complex concepts should be broken down into smaller, more manageable parts to facilitate understanding. Mayer (2009) emphasizes the importance of removing unnecessary complexity or jargon that may overload learners' cognitive capacity.

Structuring instructional materials in a coherent and organized manner helps reduce cognitive load. Logical sequencing, clear headings, subheadings, and visual aids can enhance comprehension and facilitate information processing (Sweller et al., 2011). Mayer and Moreno (2003) highlight the benefits of incorporating visual aids, such as diagrams, charts, graphs, and illustrations, to enhance understanding and make abstract concepts more concrete. Furthermore, the use of multimedia elements such as videos, animations, and interactive simulations has been shown to engage learners and provide multiple modalities for information processing (Mayer, 2014b).

Intrinsic cognitive load refers to the inherent complexity of the subject matter. Optimizing instructional materials requires considering learners' prior knowledge and adjusting the difficulty level accordingly. Breaking down complex concepts into smaller, manageable chunks can alleviate cognitive load (Sweller et al., 2011). The concept of chunking, as explained by Gagne (1985), suggests organizing instructional material into meaningful chunks or modules. Present information in a logical and sequential manner, with clear headings and subheadings. Using bullet points, numbering, or formatting techniques to highlight key points and important information assists learners in processing and retaining the material effectively. Extraneous cognitive load refers to the mental effort required to process information that is irrelevant or unnecessary for learning. Minimizing distractions such as excessive animations, irrelevant visuals, or complex language can mitigate cognitive load.

Offering appropriate support and guidance, such as examples, step-by-step instructions, or interactive activities, can assist learners in managing cognitive load effectively (Paas et al., 2003). The work of Vygotsky (1978) emphasizes the importance of designing instructional materials in a progressive manner. Start with simpler concepts and gradually build upon them, providing scaffolding by offering support, guidance, and examples to help learners grasp new

ideas. As learners gain proficiency, gradually remove scaffolding to promote independent thinking and problem-solving skills.

It is also important to differentiate instruction by addressing diverse learning needs. Offer flexible learning pathways and resources that accommodate different learning styles and cognitive abilities (Mayer & Moreno, 2003). Provide additional support materials or alternative explanations for learners who require extra assistance, while challenging advanced learners with extension activities or more complex problems. Learners possess diverse levels of prior knowledge, cognitive abilities, and learning styles. Optimizing instructional materials necessitates considering these individual differences and tailoring the content and presentation to accommodate diverse learners (Kirschner et al., 2006).

Research by Mayer (2019) suggests that relating abstract concepts to real-world situations or examples that are relevant to learners' experiences enhances motivation, engagement, and transfer of knowledge. By helping learners understand the practical applications and significance of the subject matter, instructional materials become more meaningful and impactful.

Kirschner, Sweller, and Clark (2006) advocate for incorporating interactivity and active learning in instructional materials. This can be achieved through problem-solving activities, case studies, discussions, or hands-on experiments. Providing opportunities for learners to apply their knowledge promotes engagement and deeper learning.

Formative assessment and feedback play a crucial role in optimizing instructional materials. Research by Hattie and Timperley (2007) emphasizes the importance of regular assessments to check understanding and provide immediate feedback. Constructive feedback helps learners identify areas of improvement and consolidate their understanding.

CONCLUSION

Cognitive Load Theory (CLT) is a theoretical framework that focuses on the cognitive demands placed on learners' working memory during the learning process. It suggests that instructional design should consider the limitations of working memory and aim to optimize the cognitive load imposed on learners. When it comes to developing abstract algebra teaching modules, the application of CLT principles to enhance learning outcomes are:

1. **Reduce extraneous cognitive load:** Extraneous cognitive load refers to the mental effort required to process irrelevant or unnecessary information. To minimize this load, simplify the module's presentation by removing non-essential elements, such as excessive visuals or complex language. Focus on presenting the core concepts and information clearly and concisely.
2. **Manage intrinsic cognitive load:** Intrinsic cognitive load relates to the inherent complexity of the subject matter being taught. Abstract algebra can be challenging for learners, so it's important to break down complex concepts into smaller, more manageable components. Scaffold the learning process by providing clear explanations, step-by-step examples, and opportunities for practice at each stage. Gradually increase the difficulty level as learners gain proficiency.
3. **Utilize worked examples and problem-solving tasks:** Worked examples are instructional materials that demonstrate problem-solving procedures while explaining the underlying principles. They can help reduce cognitive load by providing a model for learners to follow. Include a variety of worked examples in your teaching modules, highlighting different aspects of abstract algebra. Additionally, incorporate problem-solving tasks that allow learners to apply the concepts they've learned independently.
4. **Offer instructional support:** Provide instructional support within the modules to help learners manage their cognitive load effectively. This can include prompts, hints, or explanations strategically placed at challenging points. Use visual aids, such as diagrams or

- graphs, to enhance comprehension. Providing support and feedback during the learning process can help learners better understand the underlying structure of algebraic concepts.
5. Consider individual differences: Recognize that learners have different levels of prior knowledge and cognitive abilities. Differentiate the teaching modules to accommodate learners with varying proficiency levels. Offer additional resources, such as supplementary readings or interactive simulations, to cater to diverse learning needs. Adaptive learning technologies can be particularly useful in dynamically adjusting the instructional content based on individual progress and performance.
 6. Promote active learning and reflection: Encourage learners to actively engage with the content and reflect on their understanding. Incorporate interactive elements, such as quizzes, puzzles, or group activities, that require learners to apply abstract algebra concepts. Provide opportunities for self-assessment and reflection on problem-solving strategies. Active learning promotes deeper understanding and helps transfer knowledge to long-term memory.
 7. Evaluate and revise the modules: Continuously assess the effectiveness of your teaching modules based on learner performance and feedback. Collect data on the learners' understanding, errors, and misconceptions to identify areas where cognitive load may be high. Revise and refine the modules accordingly to optimize the learning experience.

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Effectiveness Utilization Material Natural For Lectures PGSD STKIP PGRI Pacitan students

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Abstract

Education is effort direct development personality Indonesian people completely . Activity learning at school Base must always oriented on need child . Objective implementation study This is For know effectiveness utilization material nature in the environment around for PGSD STKIP PGRI Pacitan students . The method used is a type of descriptive qualitative research. Namely research methods based on the philosophy of postpositivism, are used to examine the condition of natural objects where the researcher is the key instrument, data collection techniques are carried out by triangulation (combined), data analysis is inductive or qualitative in nature and the results of qualitative research emphasize meaning rather than generalization. Results from study This is test use material natural effective become recommendation alternative For overcome limitations tool And material . Test use material natural practice student in matter attitude care environment .

Keywords: *Material nature , lectures , PGSD students*

INTRODUCTION

According to Ainur (2004: 97) education is an effort to direct the development of human personality according to its essence so that it becomes a perfect human being in order to achieve the ultimate goal of life. By Because That For realize matter the maintenance education need improved . this _ in line with objective Education National already _ listed in Constitution Republic of Indonesia No. 22 of 2003 concerning System Education National . based on results Observations obtained , students _ through explanation from lecturer Can use material nature in the environment around For learning at school Basic covering _ management environment live , as source learning , as learning media , and as internal media payload local or development self . Material natural that is material already _ exist in nature that can used become goods beneficial for the user . Material natural Can found around _ nature . Student can do experiment And exploration with use material nature .

METHODS

This research uses a qualitative descriptive research type. According to Sugiyono (2013: 15) a qualitative research method is a research method based on the philosophy of *postpositivism* , used to examine the condition of natural objects where the researcher is the key instrument, data collection techniques are carried out in triangulation (combined), data analysis is inductive or qualitative in nature and the results of qualitative research emphasize the meaning rather than generalizations . Descriptive research This qualitative aims to describe what is currently happening in which there are efforts to describe, record, analyze, and interpret conditions that are currently happening or existing. In other words, this qualitative descriptive research aims to obtain information about the existing situation.

A. Data collection technique

Data collection techniques are the first step that must be taken in conducting a research with the aim of obtaining the required data precisely. Without knowing data collection techniques, researchers are unable to obtain standard data that has been set. The data collection techniques that the authors did in this study were:

a. Observation Techniques

Observation is a process of observing and recording systematically, logically, objectively and rationally regarding several phenomena, both in actual situations and in artificial ones to achieve certain goals (Lisa Sartika: 2022). The tools used in making observations are called observation guidelines, in the evaluation of learning observations can be used to assess the processes and results of students. The function of the observation technique is to collect data and information about an event and observe the learning process and the activeness of students.

b. Documentation Techniques

Qualitative research does not only refer to social factors as they occur in people's lives, but can also refer to materials in the form of documents. The various documents are like text (in the form of readings, in the form of audio recordings, or in the form of audio visuals) (Nursapiah: 2017). The function of the documentation is to get relevant data at the research site directly.

c. Questionnaire Technique

The questionnaire technique is a technique or method of collecting data indirectly (researchers do not directly ask questions to respondents) (Sugiyono, 2015). In this questionnaire, the questionnaire was scored using a *Likert scale* with information, namely: Strongly Agree (SS), Agree (S), Disagree (TS), and Strongly Disagree (STS). The effectiveness questionnaire was categorized into three categories, namely high, medium and low. To find out these results the researcher uses the data from the answers and to find out the activity category can use the following formula:

$$\begin{array}{ll} \text{(Height)} & : X < (\mu - 1.0 \sigma) \\ \text{(Medium)} & : (\mu - 1.0 \sigma) \leq X < (\mu + 1.0 \sigma) \\ \text{(Low)} & : (\mu - 1.0 \sigma) \leq X \end{array}$$

Information :

X : the value of the effectiveness questionnaire

μ : the average value of the questionnaire for all students

σ : standard deviation

(Azwar, 2010:109)

B. Technique Data analysis

Data analysis in qualitative research is carried out when data collection takes place, and after completing data collection within a certain period. Miles and Huberman in Sugiyono (2013: 337) argues that the activities in qualitative data analysis are carried out interactively and take place continuously until complete, so that the data is saturated. Activities in data analysis include:

1. Data Reduction (*Data Reduction*)

Data reduction is a sensitive thinking process that requires intelligence and high breadth and depth of insight. One way to do this is through the discussion process. With discussions, researchers' insights will develop so that they can reduce data that has significant value findings and theory development.

2. Data Presentation (*Data Display*)

After the data is reduced, the next step is *displaying* or presenting the data. Presentation of data is used to make it easier for researchers to understand what happened and plan further work. Sugiyono (2013: 341) states that data presentation can be done in the form of brief descriptions, charts, relationships between categories, *flowcharts* and the like.

3. Conclusion Drawing and Verification (*Conclusion Drawing and Verification*)

The third step in qualitative data analysis is drawing conclusions and verification. The initial conclusions that have been put forward are still temporary and will change if strong evidence is not found to support the next data collection stage.

RESULTS AND DISCUSSION

Results

Data collection in this study was carried out in June using observation, questionnaire and documentation techniques. The first procedure carried out by the researcher was an observation technique in which this procedure was focused on observing primary data and observing documentation (secondary data). Then it was carried out by filling out the PGSD student response questionnaire . Data collection was carried out according to the research procedure the instruments used were in accordance with the active learning indicators.

Table 1
Effectiveness Indicator Material Natural

Aspect	Indicator
effectiveness	Listening to Learning
	Ask
	Engage in problem solving
	Discuss _
	Doing assignments



Figure 1.
Example usage Material Natural Leaf



Figure 2.
Example Use Material Natural rhizome

Presentation of the results and analysis of this data was carried out to find out how effective it is use material natural in learning .

Observation Results

- a. In the observation technique, the researcher made a research instrument in the form of an observation sheet, in accordance with the aspects described above, 4 indicators were determined which included indicators of student involvement in solving problems, asking questions, answering questions, and concluding material. This observation activity is carried out optimally by utilizing the best possible time according to the researcher's goals.

The first indicator, namely involvement in solving problems, shows that students look very enthusiastic to find answers. In addition, many pay attention when delivering material by the lecturer, it can be seen from the learning process by listening carefully to the explanation from the lecturer, even though there are some who pay less attention, but this can be overcome by guiding them to explain what the lecturer has conveyed.

The ability to ask is the second indicator, this indicator can be seen when the lecturer gives the opportunity to ask some active students even though some are still just silent, from that it is possible that some already understand the material well and may also not understand the material presented. Besides that, they are also able to discuss well and exchange information about problems .

Answering questions is a third indicator, this can be seen when the teacher asks questions related to the material being studied by many students actively answering questions. Although there are some who try to answer the question but not quite right.

Concluding material is the fourth indicator that can be seen from behavior at the end of lectures when students requested to think again and conclude the material looks quite active.

Effectiveness Response Questionnaire Results

The activity questionnaire was categorized into three levels of activity, namely low, medium and high. Based on the activity questionnaire that has been filled in by the selected data source as follows:

Table 4.4 Results of the Activeness Questionnaire

No	subject	Score	Category
1.	Data Source 1	35	Tall
2.	Data Source 2	33	Currently
3.	Data Source 3	25	Low

Table. 4.5 Description of the Questionnaire

range	Category
<28	Low
28-34	Currently
34>	Tall

Effectiveness response questionnaire data, the following results were obtained:

1. feel more active in science lectures .
2. feel helped to understand the questions
3. I don't feel like I have any difficulties while studying
4. feel excited while following the lecture
5. likes learning with a practical model material natural

From the explanation above, it can be concluded that the results of the responses were quite good, seen from the results of filling out the questionnaire, meaning they were more active in participating in science lectures .

Discussion

In the process of implementing science lectures using materials nature has basically been done quite well based on the observations made. In this study the effectiveness can be

seen through student response questionnaires and observations. The results of the response questionnaire student become more active . This is the same as the results of observations made by researchers during lecture activities took place, which was seen from the students who began to actively ask questions, express opinions, discuss with other friends and were very enthusiastic when participating in practicums .

Based on results study students And lecturer role active in activity care environment on campus . Environment family And public influential to development attitude care environment on students . There is receptacle concentrated activity _ to activity care environment very help in grow attitude the . Based on research This can is known that care environment become base from development another character .

Use material natural will increase attitude care environment . The value contained within _ activity care environment between other mark religious . Where student must love all that was created True God . Activity This including in matter activity development self . it _ in line with opinion Lickona emphasized _ the importance of the 3 components education character , that is *moral knowing* (moral knowledge), *moral feeling* (moral feelings), and *moral action* (moral action) .

The character of caring for the environment according to the Ministry of Education and Culture (2010: 11) is attitude And always action _ make an effort prevent damage on environment the nature around it as well as develop efforts _ _ For repair damage already nature _ happened . The attitude structure consists of three mutually supporting components, namely the cognitive component (beliefs), the affective component (feelings), and the conative component (tendency to act). If Wrong One between third component attitude manipulated , then will influential on other components so cause emergence mechanism change attitude (Azwar , 2003: 28).

CONCLUSION

- a. Test use material natural effective become recommendation alternative For overcome limitations tool And material .
- b. Test use material natural practice in matter attitude care environment .

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Analysis of the validity of the Well Being instrument items used Confirmatory Factor Analysis

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Abstract

Measurement of well being in students after online learning must be carried out. But before the measurement as a whole, it is necessary to process the validity of the well being instrument. The purpose of instrument validity is to obtain items that are able to reflect valid well being. The well being instrument used is the well being instrument developed by Riff with a 42 item version consisting of 6 aspects. This study was conducted using a quantitative descriptive approach. The number of respondents who participated in this study were 284 PGSD STKIP PGRI Pacitan students. Determination of validity is done by the concept of confirmatory factor analysis. The types of validity that are calculated are construct validity, convergent validity and discriminant validity. The results of the analysis show that construct validity is met with the criteria RMSEA = 0.78 and GFI = 0.908 by excluding 18 items because they have a very small loading factor. then the results of convergent validity are two factors that have an AVE value of less than 0.5 these two factors namely Positive Relations dan Environmental mastery. Lastly, discriminant validity is fulfilled which is indicated by the absence of cases of multicollinearity in the items used. These results conclude that the well being instrument that can be used to measure well being consists of 24 items, with each aspect consisting of 4 factors.

Keywords: well- Being, Validity, Measurement

INTRODUCTION [Constantia n bold]

Well-being (WB) is a component of mental health. Even psychology is a core feature of mental health (Tang et al., 2019). Well-being features consist of hedonic happiness (enjoyment, pleasure) and eudaimonic (meaning, fulfillment), as well as resilience (coping, emotional regulation, healthy problem solving) (Report., 2018; Ryff, 1995). Well-Being has elements that balance each other, namely emotions, thoughts, social relations and search (Feller et al., 2018). Emotion regulation is defined as the process by which we influence which emotions we have, when we have them, and how we experience and express them. Furthermore, psychological well-being refers to the degree to which people feel that they have meaningful control over their lives and activities

At the tertiary level, well-being levels that are less than optimal can affect the academic success of undergraduate students (Kovich & Simpson, 2019). Less optimal well-being in students can be caused by pressure that comes from academic activities and non-academic factors (Park et al., 2020). Academic activity sometimes results in negative effects which can increase levels of anxiety, depression, and stress (Freire et al., 2016; Park et al., 2020; Udhayakumar & Illango, 2018). This negative effect can interfere with student mental health, and will automatically affect student psychological well-being (Barbayannis et al., 2022). Apart from academic activities, non-academic activities can also affect student well-being. Non-academic activities can take the form of sudden changes in student social life, adaptation to new environments (Park et al., 2020). Schofield et al., (2016) explained that depression experienced by college students has a strong relationship with unhealthy behavior, such as binge drinking,

physical activity, poor eating patterns, high stress, anxiety, loneliness, poor body shape. bad behavior, interpersonal problems, discrimination, and other mental health symptoms.

Psychologically, students are in a transition period from adolescence to adulthood. This phase will be experienced when aged 18-29 (Arnett et al., 2014). This phase is called emerging adult, in the phase according to Murray & Arnett (in Simanjuntak et al., 2021) students will generally explore and experience instability in the world of career, education, and love. During the transition phase, students may experience life events at different levels, from entering college, leaving home and moving to a new city, building new networks, to taking finals and looking for work (Compas et al., 1986). These life events become potential stressors for increasing personal responsibility and independence and making consistent adjustments, including personal, emotional, and social adjustments (Hiester et al., 2009).

The well-being of students in Class of 2020, 2021 and 2022 is greatly affected by the existence of the corona virus 19. The corona virus pandemic includes emergency and gripping events and emergencies can have many psychological effects on students, which can be expressed in the form of anxiety, fear, and anxiety (Sharp & Theiler, 2018). This condition can affect mental well-being. Apart from that, the use of learning media that does not have good online learning standards, the availability of internet networks and facilities owned by students are also factors in the mental decline of students. Not to mention the experience of most lecturers in online learning which is still lacking, resulting in independent task-based learning being applied. The large number of student assignments each week results in many cases of student experiencing stress and depression.

As explained above, well-being is one of the main keys in measuring a person's mental health. Positive mental health has been shown to predict negative and positive mental health indicators over time (Margraf et al., 2020). Furthermore, the relationship between academic stress and mental well-being is an important concern, because poor mental well-being has been shown to affect academic achievement in tertiary institutions. So, it is important to have data on student academic stress levels, stress level data due to the corona virus, data on stress due to online learning, and student well-being data. These data are important to have in order to make decisions and formulate ways to deal with stress that may occur.

Based on the explanation above, the researcher is interested in measuring mental well-being in PGSD STKIP PGRI Pacitan students. The concentration of this research is to prove the validity of the WB instrument so that valid items are obtained using Confirmatory Factor Analysis (CFA).

METHOD [Constantia 11 bold]

This study was conducted using a quantitative descriptive approach. The well being instrument used adopts the Well-Being instrument which was developed by the 42-point version of Riff. Instruments can be seen on the link <https://danrobertsgroup.com/wp-content/uploads/2018/02/PWB-Scale.pdf>. This instrument consists of 6 aspects or factors which can be seen in table 1. 41 item itemsTabel 1.

Table 1. Blue print of Well Being

Aspect	Items	n
Autonomy	1,7,13,19,25, 31, 37	7
Environmental mastery	2,8,14,20,26,32,38	7
Personal Growth	3,9,15,21,27,33,39	7
Positive Relations	4,10,16,22,28,34,40	7
Purpose in life	5,11,17,23,29,35,41	7
Self-acceptance	6,12,18,24,30,36,	7

Based on the table there are 20 items with negative statements including items with numbers 3, 5, 10, 13,14,15,16,17,18,19, 23, 26, 27, 30, 31, 32, 34, 36, 39 , and 41. In addition to these items are items with positive statements. Each statement consists of 4 responses, namely Strongly Agree, Agree, Disagree, and Strongly Disagree. The scoring for positive items, the responses strongly agree to strongly disagree, were given a nominal score of 4, 3, 2, and 1 respectively. On the other hand, for negative items with the same response, they were given a nominal score of 1, 2, 3 and 4.

Students who became respondents were students who experienced online learning during the Covid 19 period. So that the respondents who fulfilled were PGSD students for the 2020, 2021, and 2022 batches. Many students participated, namely 284 students.

Construct validity was carried out using *Confirmatory Factor Analysis* (CFA). The CFA technique used for construct validity used is based on opinion (Hair et al., 2018). The steps for construct validity were carried out, namely 1) determining the fit model and selecting items with a loading factor > 0.4 (Susanto & Retnawati, 2023). The criteria for the steps used to determine the fit model are RMSEA < 0.85 and GFI > 0.9 (Awang, 2012). 2) determine the convergent validity of each factor. This type of validity is proven by the value of Average Variance Extracted (AVE) >= 0.5 for each factor. 3) Determine Construct reliability (CR). Minimum CR value of 0.6, 4) determines discriminant validity. This validity can be proven by the interitem correlation which must be < 0.9 (Awang, 2012; Hair et al., 2018; Susanto & Retnawati, 2023). CFA calculations are performed using package *Lavaan* (Rosseel, 2012) on R program (Posit team, 2023; R Core Team, 2023).

RESULTS AND DISCUSSION

Results

In this section, the validation process will be explained according to the steps described.

1. Construct Validity

The calculation of the fit model shown is obtained from the process by selecting items based on their loading factor. Model fit can be done by removing items that have a loading factor < 0.4. Of the 42 items used, 18 items were dropped. These items have a loading factor value < 0.4, namely items 2,3,4,5,6,8,13,18,19, 23, 26,27, 28, 33,34,36, 37,41, and 42. The CFA calculation results obtained the criteria RMSEA=0.078<0.085 and GFI=0.908>0.9. based on the results, the instrument with items that are not dropped can be said to have valid construct validity. The construct of the instrument can be seen in Figure 1.

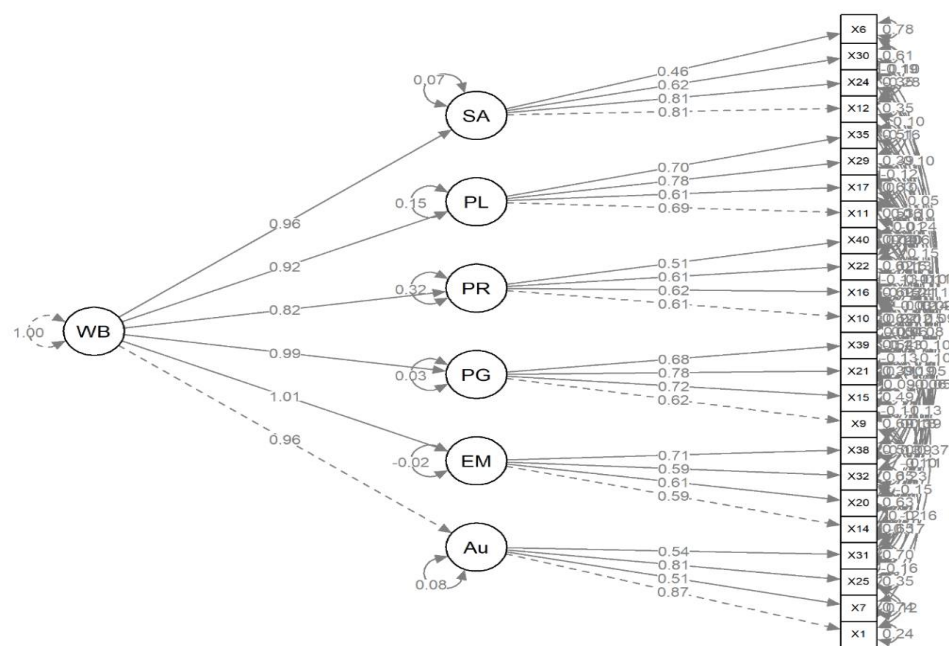


Figure 1. Well Being Construct
SA:Self-acceptance; PL:Purpose in life; PR:Positive Relations ; PG:Personal Growth;
EM:Environmental mastery; AU:Autonomy ; WB: Well Being

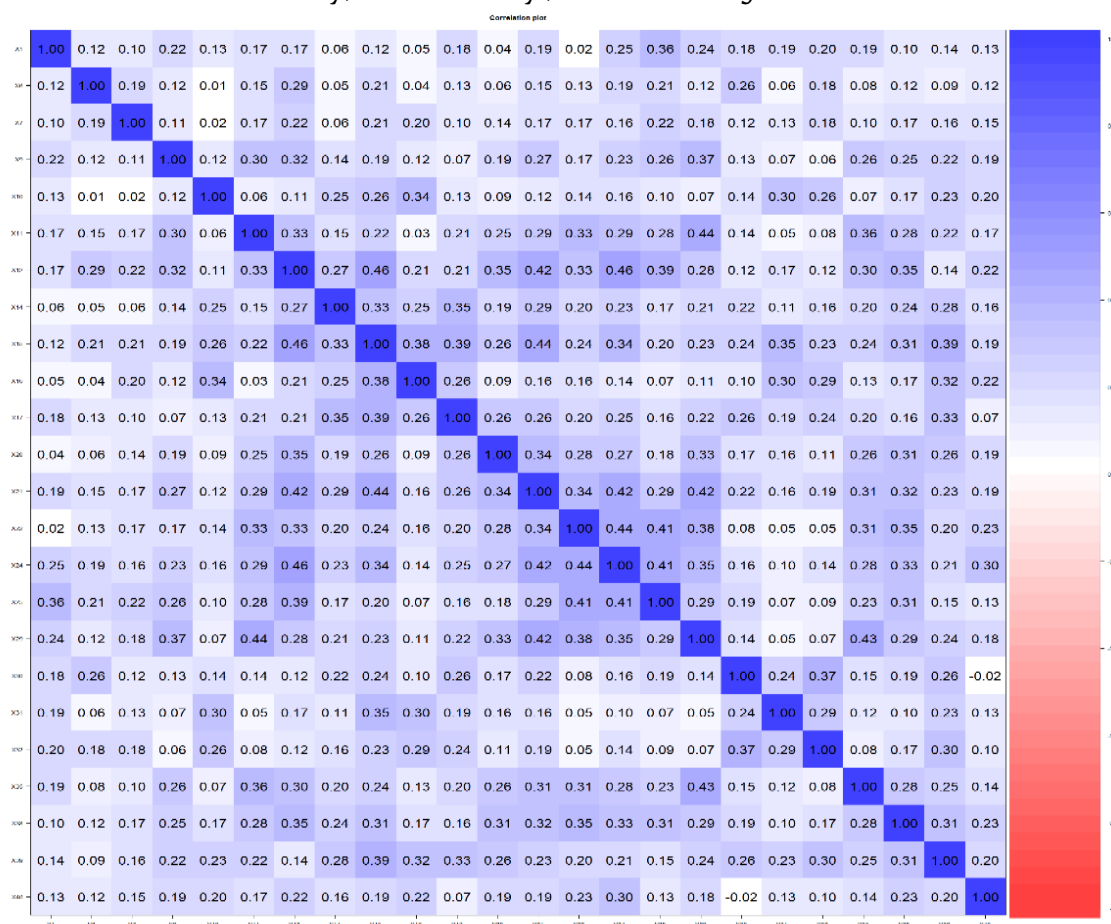


Figure 2. Inter Item Correlation

2. Convergent validity and construct reliability (CR)

Next, determine the AVE and CR values by utilizing the information obtained from Figure 1. The results of the AVE and CR calculations are shown in Table 2. In table 2, information can be obtained that there are two factors that do not meet the AVE value, namely the PR and EM factors. Furthermore, the items contained in each factor have constancy in reflecting the factors in the medium category.

3. Discriminant Validity

This validity can be known by using inter-item correlation. In Figure 2 it can be seen that the maximum value other than the values on the main diagonal is 0.46. this value indicates that the interitem correlation does not exceed 0.9. The value of 0.46 also explains that the inter-item correlation is in the medium to low category, which means that there is no multicollinearity in the items used.

Tabel 2. AVE and CR value and level for each factor

<i>factor</i>	<i>Item</i>	<i>Loading</i>	<i>Variance</i>		<i>AVE</i>	<i>CR</i>	<i>CR Level</i>
<i>SA</i>	6	0,46	0,21				Medium
	12	0,81	0,66	0,5	Full fill	0,78	
	24	0,81	0,66				
	30	0,62	0,38				
<i>PL</i>	11	0,69	0,48				Medium
	17	0,61	0,37	0,5	Full fill	0,79	
	29	0,78	0,61				
	35	0,7	0,49				
<i>PR</i>	10	0,61	0,37				Medium
	16	0,62	0,38	0,3	Not Full fill	0,68	
	22	0,61	0,37				
	40	0,51	0,26				
<i>PG</i>	9	0,62	0,38				Medium
	15	0,72	0,52	0,5	Full fill	0,79	
	21	0,78	0,61				
	39	0,68	0,46				
<i>EM</i>	14	0,59	0,35				Medium
	20	0,61	0,37	0,4	Not Full fill	0,72	
	32	0,59	0,35				
	38	0,71	0,50				
<i>Au</i>	1	0,87	0,76				Medium
	7	0,51	0,26	0,5	Full fill	0,79	
	25	0,81	0,66				
	31	0,54	0,29				
<i>WB</i>	<i>SA</i>	0,96	0,92				Very High
	<i>PL</i>	0,92	0,85				
	<i>PR</i>	0,82	0,67	0,9	Full fill	0,98	
	<i>PG</i>	0,99	0,98				
	<i>EM</i>	1	1,00				
	<i>Au</i>	0,96	0,92				

Discussion

The validity construct of the instrument was achieved by removing 18 items, so that the remaining 24 items had the smallest loading factor of 0.46. The RMSEA and GFI criteria used are based on (Awang, 2012). Based on the RMSEA and GFI values, it has been shown that the instrument has fulfilled a theoretical construct that is fit with the empirical data used. The value

of this criterion is obtained by modifying indice. This modification is carried out by entering several covariance errors between several redundant items and setting redundant items as a "free parameter estimate" (Awang, 2012). Items that are redundant to each other can be seen in the Appendix section.

Furthermore, Convergent validity indicated by an AVE value greater than 0.5 explains the extent to which the items are able to explain the factors they reflect. The greater the factor loading value, the higher the AVE value, and the result is a lower error rate in reflecting the factor. The results of the analysis show that SA, PL, PG and AU each have a value of AVE=0.5, this value explains the variance that can be explained by the items in the factor conversion of 50% and 50% reflects the resulting error. Furthermore, the EM and PR factors can be reflected by the items that represent 30% and 40%, respectively. The items on these two factors have a larger error in reflecting that is 70% and 60%. These two factors are still used and not dropped on the grounds that construct validity has been fulfilled. If the AVE value does not meet, it does not mean that the items on both factors must be dropped, because mathematically these items still contribute to reflecting the EM and PR factors, although not optimally.

Furthermore, the factors used are able to reflect the WB latent variable with AVE 0.9. These results explain that these factors are able to reflect a WB of 90%, so that the resulting error is only 10%. These results prove that WB can be explained by SA, PL, PG, AU, EM and PR(rif) aspects.

Finally, the validity of the determinant explains that there is no redundancy between items with more familiar language, there is no multicollinearity between the items used (Awang, 2012; Susanto & Retnawati, 2023). The WB instrument with items that are not dropped proves that there is no multicollinearity, so that the items on the instrument are not redundant with each other.

CONCLUSION

Based on the results of the analysis and discussion of the WB instrument, it has valid construct validity with each aspect consisting of 4 instrument items. However, the convergent validity of the EM and PR factors is still not fulfilled, so that the items on these two factors have a less than optimal contribution.

The instrument which consists of 24 items can then be used to measure the WB variable of all PGSD students. Furthermore, the results can be used to determine the score of each factor with several existing methods. Factor scores and WB latent variables will be discussed in future studies.

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Endurance Fitness of Beginner Volleyball Athlete

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Abstract

The research aims to determine the Cardiac Pulmonary Endurance Fitness of Beginner Athletes. Research using descriptive method using a survey. The research population is all beginner volleyball athletes who are members of the West Sleman association. Retrieval of research data using tests and measurements. The instruments used were multi-stage tests with a reliability level of 0.9 and a validity of 0.6. The analysis of the data used is descriptive analysis of percentages with the norm of 5 categories, namely special, good, moderate, bad and very bad categories.

The results showed that novice athlete cardio-pulmonary endurance fitness, there were 0 athletes (0%) in very bad category, 1 athlete (7.14%) in bad category, 10 athletes (71.43%) in moderate category, 3 athletes (21.43%) in good category, 0 athletes (0%) very good category and 0 athletes (0%) special category. It can be concluded that the Cardiac Pulmonary Endurance Fitness of Beginner Volleyball Athletes of the West Sleman volleyball association is moderate.

Keywords: *Fitness, Athlete, Volleyball.*

Introduction

Volleyball championships in the current millennial era have been carried out at various levels. Not only the classification of youth, junior and senior groups. In the era after the Covid 19 pandemic, volleyball championships at the beginner age group level have been intensively held in the regions. This is in preparation for talent scouting for volleyball in order to produce athletes who can perform optimally.

Each volleyball match is carried out at least 3 sets to 5 sets. This requires athletes to be primed and fit in facing every competition that is held. Physical condition is one component of the exercise that must be considered. Athletes with an excellent level of physical condition will be better prepared to face a match in volleyball. Cardiac pulmonary endurance fitness is one of the physical components that must be trained and prepared from novice athletes. Cardiac lung endurance fitness will affect the performance of athletes, especially with physical conditions. An athlete who has excellent cardio-pulmonary endurance fitness will have a high level of efficiency in the circulatory system and respiratory system in the body in sending oxygen throughout the body to the muscles that are working before experiencing fatigue.

West Sleman is a volleyball association in Sleman Regency, Yogyakarta. The West Sleman volleyball association has been training athletes, especially beginners. From the observations made, the coaches gave more training to technical and tactical exercises, so that exercise programs related to the physical, especially increasing heart-lung endurance, were less prominent. From observations, there is limited time for training in the sports hall, so the coaches give more homework for physical improvement, especially those related to increasing heart-pulmonary endurance. This exercise needs to be improved because it is one of the important factors in volleyball in supporting the appearance of success in a match. From the preliminary presentation, it is intended to examine the fitness level of heart-lung endurance of beginner volleyball athletes with the object of West Sleman volleyball association beginner athletes.

Expectations for the condition of cardiorespiratory endurance fitness level in beginner volleyball athletes are good, related to various constraints of the same physical condition, not all athletes have a good cardiac pulmonary endurance fitness level.

Fitness

According to Judith Rink et al and Brent Q Hafen et al in Sajoto Mochamad (1988: 43), physical fitness is a person's ability to complete daily tasks without experiencing significant fatigue, with considerable energy expenditure, to meet the needs of movement and enjoy free time and to meet emergency needs at any time needed.

Power Stand

According to Sukadiyanto (2005: 60) endurance based on the use of energy systems is divided into: aerobic endurance, lactic anaerobic endurance and alactic anaerobic endurance. According to Djoko Pekik (2004: 27), lung-cardiac endurance is the functional ability of the lungs-heart to supply oxygen for long-term muscle work.

Cardiac Pulmonary Endurance Measurement

There are many tests used for aerobic measurement. One of the tests in the lab is the heart EKG test. This test is more valid, but very expensive when compared to other tests. Other aerobic fitness tests, such as: (1) Field physical fitness tests, including: (a) *Harvard step test*. The purpose of this test is to measure the body's ability to adapt to the workload and determine the origin of the workload. The advantage of this test is that it is suitable for physical education student sportsmen, while the drawback of this test is that the rhythm of going up and down the bench is too fast and too heavy for ordinary sportsmen. (b) *Cooper test*. This test is used to measure a person's maximum aerobic capacity by running for 12 minutes. The drawback of this test is that a testee must have high motivation to take the test because the results of this test depend on the testee's motivation. The advantage of this test is that when running for 10 minutes a person will adjust his pace so that oxygen demand will reflect his aerobic work capacity. (c) *Multi-stage fitness test*, which is running back and forth to the rhythm of the tape with a 20-meter track. The run is made on or after the "bib" signal. Reversal of running after crossing the *finish line* or *starting* while still following the instructions from *the tape recorder*. The rhythm in this run will get faster and faster.

Cardiac pulmonary endurance fitness is the ability of the heart and lungs to take in oxygen and distribute it adequately to carry out various activities. Good cardio-pulmonary endurance fitness is very important for a volleyball player at various levels from beginners, junior youth and seniors, because volleyball athletes must have basic fitness to carry out exercises that include physical, technical, tactical and mental exercises that are not light. Good cardio-pulmonary endurance fitness is obtained by getting used to special training disciplines. Athletes who have good cardiovascular endurance will not easily experience fatigue during training and matches. Cardiac pulmonary endurance fitness for athletes needs to be evaluated by conducting a cardiac pulmonary endurance fitness measurement test.

Research methods

This research is shaped descriptive -quantitative using surveys. Collecting data using tests and measurements. Data were analyzed using descriptive statistical techniques per percentage. The research variable is fitness, heart-lung endurance in beginner volleyball athletes. The research population for men's volleyball athletes in West Sleman was 14 athletes. This study uses a *multistage* running instrument.

Results and Discussion

This research was conducted at the West Sleman volleyball association. The research was carried out in January 2023. The research subjects were all athletes of the West Sleman volleyball association in the male beginner category, totaling 14 athletes. The following are the results of the Cardiac Pulmonary Endurance Fitness Test for Beginner Volleyball Athletes of the West Sleman volleyball association.

Table 1: Cardiac Pulmonary Endurance Fitness Research Data.

No.	Athlete	Levels	Shuttles	VO ₂ Max (ml/kg/min)
1.	ABR	9	8	45.90
2.	GLG	7	8	39.20
3.	PSY	7	7	38.85
4.	SVA	7	9	39.55
5.	VIN	8	11	43.30
6.	HSE	9	7	45.60
7.	ADP	11	1	50.60
8.	DMS	8	6	41.80
9.	RGA	8	1	40.30
10.	DVD	8	11	43.30
11.	RZA	7	10	39.90
12.	PNJ	7	5	38.15
13.	HST	8	11	43.30
14.	ACLs	8	11	43.30

Table 2. Frequency Distribution of Cardiac Pulmonary Endurance Fitness.

No	Interval Class	Category	Frequency	Percentage
1	> 55.9	Special	0	0%
2	51.0 - 55.9	Very good	0	0%
3	45.2 - 50.9	Good	3	21.43%
4	38.4 - 45.1	Currently	10	71.43%
5	35.0 - 38.3	Bad	1	7.14%
6	< 35.0	Very bad	0	0%
Amount			14	100.0%

From the table it can be explained that Cardiac Pulmonary Endurance Fitness Beginner Volleyball Athletes West Sleman volleyball association, there are 0 athletes (0%) in very bad category, 1 athlete (7.14%) in bad category, 10 athletes (71.43%) in moderate category , 3 athletes (21.43%) good category , 0 athletes (0%) very good category and 0 athletes (0%) special category. The highest frequency was in the medium category , so it was concluded that the fitness of the heart - pulmonary

endurance of beginner volleyball athletes in the West Sleman volleyball association was moderate . From The information above can be presented in the form of a histogram as follows:

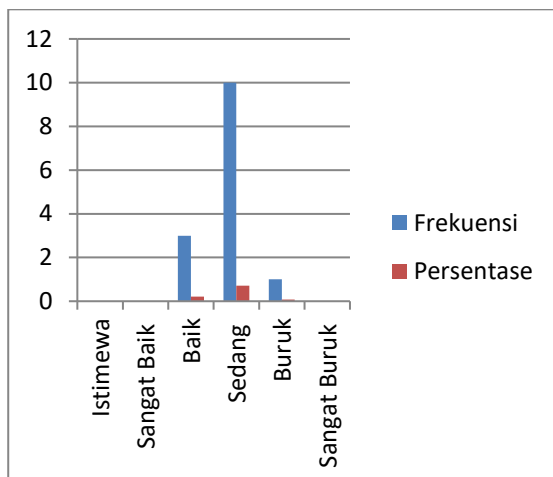


Figure 1. Athlete Cardiac Pulmonary Endurance Fitness Histogram.

Cardiorespiratory fitness is referred to as an important component of a person's physical fitness. Cardiac endurance is defined as the ability of the heart and lungs to absorb and distribute oxygen to the lungs muscles that work in the human body as needed. Aerobic fitness is influenced by the exercise habits of athletes and will form good aerobic fitness.

Conclusion

Based on the results of analysis, research testing and discussion, a conclusion was drawn: overall the Cardiac Pulmonary Endurance Fitness of Beginner Volleyball Athletes of the West Sleman volleyball association was moderate.

Suggestion

There are several suggestions that need to be conveyed in relation to the results of this study, including:

1. Research development with complex research subjects.
2. Conduct advanced research activities on physical fitness.

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The Impact of Social Studies Learning on Student Learning Independence in The Digital Era at Public Elementary School Pendem II Sumberlawang Sragen

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Abstract

Social studies education has an extraordinary effect on human resources in a country. IPS learning also provides many benefits to everyday life. The independence of elementary school students will be tested in learning in the digital era which is completely modern and full of challenges in its use. Social studies features are determined in elementary school in such a way that students can systematize pre-existing material, information and skills about people and their environment. The purpose of this socialization was to find out the impact of social studies learning on student learning independence in the digital era at PUBLIC ELEMENTARY SCHOOL Pendem II Sumberlawang. The data collection techniques used were observation, interview and documentation techniques. All data obtained then goes through the stages of data validity and data analysis. The results of this study are that the impact of learning that is felt is that students are able to find their own learning resources so that they can optimally utilize social studies learning. IPS learning, which is known as a whole, produces a breakthrough in new efforts to shape student independence. The existing obstacle is the lack of parental assistance in using digital media

Keywords: Digital Media, Social Studies, Student Independence and Learning

INTRODUCTION

The provision of quality human resources for children in the future must be planned in such a way that they can grow and develop optimally according to their abilities, Maghfiroh (2020: 242). The role of technology undeniably covers all areas of life, including education. The learning ability of students is also greatly influenced by the times. The development of an increasingly advanced era in the digital era forces students to learn to use technology. Therefore, the ability of students to learn independently in the digital era needs to be considered because now they have started mixed learning, namely face-to-face and distance.

Education and training are the forerunners of the learning process for children. Education takes an important role in the learning process of students to achieve the goals of learning. Learning is a conscious effort made by someone who originally did not know to know. Moreover, the desire to know elementary school children is greater because they are still at a very unstable age. Education here plays a role in the process of guiding students in an effort to acquire knowledge and skills. Especially now that students' attitudes also have a great effect on daily life. Through good learning, all the goals of education are achieved. Education will be said to be successful if students can be directed according to what is expected. Nowadays, most elementary school students are big first because of the times.

Social studies learning is very important because it covers all social aspects of everyday life. (Pane et al., 2018). Social studies learning is very important in elementary and secondary schools because students who come to school come from their own communities with different social problems. Depending on the level of development, elementary school students may not yet fully understand the breadth and depth of social problems, but they can become familiar with them through social studies lessons. Social studies features are determined in elementary schools in such a way that students to systematize pre-existing materials, information and skills about people and their environment to make more sense, so that students can become more sensitive and able to respond rationally and responsibly to various social problems. Students can strengthen a sense of tolerance and brotherhood in their own environment and among others. Elementary age students need to emphasize how to interact with people around them in order to be equipped for tomorrow. Very complex social studies learning is also the main reason for social studies learning in elementary schools. So, social studies learning is so important for elementary age students.

Technological advances that are growing rapidly have a tremendous impact on all aspects. The impact is not only on the community but also on the field of education. Education in the digital era focuses more on learning that utilizes technological developments. Growing technology demands teachers in an effort to manage learning. Learning in the digital era inevitably has to use technology such as learning media so that learning is more colorful (Sugiyarti et al., 2018: 440). The 21st century itself is an era where technological progress is growing very rapidly. Currently, there are still many elementary age children who cannot take advantage of technological advances as learning but rather play or game. After getting used to the expected times, children are not surprised and can live well.

The impact of learning in the digital era varies, ranging from children who mostly use technology just to play, not to learn. The ability of teachers, parents and the community greatly affects the ability of students to learn independently in the digital era. There needs to be assistance and guidance from teachers, parents and the community in shaping children's ability to learn independently. Moreover, this digital era not only has a positive effect but also has a negative effect that even harms elementary age children. This kind of impact needs to be addressed so that children are not wrong in choosing the wrong path. Social studies learning which is very important for life if it is wrong in guiding children, it even makes the purpose of social studies learning unsuccessful. So, there needs to be guidance from all parties.

Based on the various problems above, social studies education has a tremendous effect on human resources in a country. Social studies learning also provides many benefits to everyday life. The independence of elementary school students will be tested in learning in the digital era that is all modern and full of challenges in its use. All of these things triggered researchers to conduct research on "The Impact of Social Studies Learning on Student Learning Independence in the Digital Age at public elementary school Pendem II Sumberlawang, Sragen".

LITERATURE REVIEW

The purpose of education is to educate the lives of the nation's children. Based on these goals, students should have the basic ability to absorb all information from the teacher. One of the basic abilities of students is the ability to speak and read, (Loeziana, 2017). Literacy is the basis for children to master various educations. When students cannot read and write, they face many difficulties to learn various subjects in class. According to the purpose of education is to educate the lives of the nation's children. Based on these goals, students should have the basic ability to assimilate any information or knowledge provided by the teacher. One of the basic abilities of students is the ability to speak and read. Reading can help children acquire and explore knowledge and skills (Loeziana, 2017). Literacy is the foundation for children to master

various fields of education. If students are not literate, they face many difficulties to learn different areas in the classroom.

Learning is a relatively permanent change in behavior resulting from previous experience or intentional or planned learning. Learning is the activity of each individual in the educational process whose purpose is to cause behavioral changes in the form of knowledge, skills and attitudes. Learning is a functional process and a very basic element in the implementation of the type and level of education. Learning is not just a hoarding of knowledge, but a mental process that takes place within a person (wina sanjaya). Basically, learning is interaction with all situations that exist around the individual. Student learning must evoke experiences of knowledge change or knowledge acquisition through experiencing, remembering, gaining experience, knowledge acquisition or knowledge search (Maghfiroh, 2020). When students are physically present in class, they automatically become mentally active and vice versa. In the learning process, two activities (physical activity and moral activity) can be connected, so that learning objectives can be carried out properly and correctly. The use of devices is also needed for children in the learning process to support the learning process in the future.

Social studies learning is very important because it covers all social aspects of everyday life. (Saputra, 2009). Social studies learning is very important in elementary and secondary schools because students who come to school come from their own communities with different social problems. Depending on the level of development, elementary school students may not yet fully understand the breadth and depth of social problems, but they can become familiar with them through social studies lessons. The social studies features specified in elementary schools are such that students to systematize pre-existing materials, information and skills about people and their environment to make more sense, so that students can become more sensitive and able to respond rationally and responsibly to various social problems. Students can strengthen a sense of tolerance and brotherhood in their own environment and among others. Elementary age students need to emphasize how to interact with people around them in order to be equipped for tomorrow. Very complex social studies learning is also the main reason for social studies learning in elementary schools. So, social studies learning is so important for elementary age students.

Technological advances that are growing rapidly have a tremendous impact on all aspects. The impact is not only on the community but also on the field of education (Eem Kurniasih, 2013). Education in the digital era focuses more on learning that utilizes technological developments. Growing technology demands teachers in an effort to manage learning. Learning in the digital era inevitably has to use technology such as learning media so that learning is more colorful. Learning 21st century learning is required to be technology-based to balance the demands of the millennial era with goals, later students will get used to 21st century life skills, Sugiyarti (2018: 440). The 21st century itself is an era where technological progress is growing very rapidly. Currently, there are still many elementary age children who cannot take advantage of technological advances as learning but rather play or game. After getting used to the expected development of the times, children are not surprised and can live well. The impact of learning in the digital era varies, ranging from children who mostly use technology just to play, not to learn. The ability of teachers, parents and the community greatly affects the ability of students to learn independently in the digital era. There needs to be assistance and guidance from teachers, parents and the community in shaping children's ability to learn independently. Moreover, this digital era not only has a positive effect but also has a negative effect that even harms elementary age children.

IMPLEMENTATION METHOD

This type of research research is qualitative because the problem is related to humans and is essentially observational. Qualitative research is research that aims to describe and analyze

phenomena, events, social activities, attitudes, beliefs, perceptions, and thoughts of individuals or groups (Sukmadinata, 2017: 60). Qualitative research uses multiple descriptions to uncover principles and explanations that lead to conclusions. Qualitative in the form of descriptions based on the skills of researchers and quality based on the results obtained. Qualitative research should focus holistically on the description of words and language in specific natural contexts, and use natural methods to describe participants' perspectives or views.

The research was carried out at public elementary school pendem ii which consisted of 6 classes. this research was conducted at public elementary school ii pendem. in this study, the resource persons or informants were teachers and students of public elementary school pendem ii. access to informants is a gateway for researchers to enter the world of informant life. access can be through introductory sessions or even through researchers who are alumni of the school. in this case, the researcher is a graduate of public elementary school pendem ii which makes it easier for researchers to understand the character of teachers, parents and students. Therefore, the investigation is carried out at the usual place carried out by the complainant or at an agreed place. The main factors from the research side are the convenience of informants and ease of access.

Observation, interview and documentation techniques are used as data collection techniques. In participant observation, the researcher engages in the activity of the observed person. But in practice, researchers are not very involved in the activities of the informant under study. Therefore, researchers are passive participants, where researchers participate in relevant activities, but are not directly involved in those activities. The interviews used in this study were semi-structured interviews. This interview selection is because there are three types of research topics, so researchers need to use flexible interviews that do not follow the arrangement of interview instructions. Researchers can also get accurate information with continuous questioning.

RESULTS AND DISCUSSION

Geographically, public elementary school Pendem II is located in Sumberlawang District, Sragen Regency, precisely in Barong Hamlet, which is approximately 3.5 from the center of Sumberlawang District. public elementary school Pendem II has 40 students and has 6 classroom support facilities, 1 teacher room, 1 UKS room and 3 sanitation rooms. The uks room itself has a complete P3K drug to anticipate unwanted events. Electricity also uses 900 watts of power and access to the school can be reached by 2 wheels and 4 wheels. Computer devices are also available with supported internet connection via wifi for the online reporting process. Please also note that Pendem Village is very difficult to obtain a network signal so wifi is the main option to support internet connection. The learning process becomes very comfortable because it is very quiet from the hustle and bustle of vehicles because the location is a bit far into the protocol road.

The data obtained from grade IV public elementary school Pendem II used three data collection techniques, namely using observation sheets, interview sheets and distributing student questionnaires. All research results were carried out sequentially starting from observing students and teachers using observation sheets, then interviews with teachers and students using interview sheets and the last was the distribution of questionnaires to grade IV students totaling 7 children filled directly by the students themselves. So, questionnaires in the form of statements are electives and fill-ins directly from grade IV students.

All test results are recorded or stored to facilitate further processing. The purpose of this writing is also to provide valid data and not be lost, because in the end it will be used as a discussion material. Documentation is also needed to provide a direct picture of the learning process and how students react before learning using digital media and before using digital media. Everything that is considered important in collecting data is used as a record in addition

to strengthening the research data. Whatever is considered important will be used as its own notes for researchers to facilitate the discussion later. Digital media is used with the aim of increasing learning motivation and efforts in increasing reasoning on the learning material that is being done. Learning motivation is also very low marked by students who start to be lazy with learning because they often play at home. Online learning carried out is also not very effective considering that the Pendem Village area is located in remote areas with very minimal internet network. So, offline learning must be carried out so that children do not forget their task as students, namely learning. The use of learning media is expected to be an alternative to increasing student motivation which has a direct impact on learning outcomes.



Research conducted directly uses various stages from the preparation of RPP to the final evaluation. The study was conducted for 2 days considering that researchers would obtain differences in the use of learning media before and after. Everything about data collection is prepared by the teacher assisted by the researcher himself which is done at the homeroom teacher's house. The subjects chosen were one class teacher and seven IV grade students. Learning begins with greetings and presentation of material about learning at that time. In the use of digital media, class teachers only provide a little reinforcement of material and do not forget to always maintain health during the Covid-19 Pandemic season. After being given reinforcement, motivation and reflection by the teacher, students are screened digitally which takes from the internet which contains material and practice questions to see feedback after learning using digital media. Digital media itself has a duration of 45 minutes which is very interesting for students in learning. Various stages of learning are carried out briefly, approximately only 2 hours of implementation.

Aspects	Answer
Media used	LCD which is the school's own
Use of digital media	Digital media is able to make modern learning that needs to be developed at this time
Digital media can increase student independence	Digital media is able to attract students' attention to be more enthusiastic in following learning so that it can cause learning motivation
Digital media barriers	The main obstacle is the unavailability of digital media in schools due to lack of facilities and infrastructure .

The digital media used in public elementary school Pendem II learning varies in offline and online modes. Digital media can be used offline or online as needed, because digital media is flexible. The use of online digital media uses several electronic media such as computers and smartphones (Kurniawati & Baroroh, 2016). Offline digital media includes the use of LCD projectors and televisions. For offline implementation, you can get a loan to study through digital media at the community center. Students get a great impression after using digital media because learning with the help of digital media is more interesting. The use of digital media can make learning more effective (Gold, 2016: 12). Digital media itself spoils students with applications in accordance with the material provided. The material given during this

observation is Learning Topic theme 7. When delivered through digital media, it was found that most students engaged in continuous learning.

Research conducted offline with various stages starting from the preparation of RPP to the final evaluation. The study was conducted for 2 days considering that researchers would obtain differences in the use of learning media before and after. Everything about data collection is prepared by the teacher assisted by the researcher himself which is done at the homeroom teacher's house. The observations in learning themselves are listed in the observation table of teachers and students.

Research is carried out directly with various stages starting from the preparation of RPP to the final evaluation. The study was conducted for 2 days considering that researchers would obtain differences in the use of learning media before and after. Everything about data collection is prepared by the teacher assisted by the researcher himself which is done at the homeroom teacher's house. The observations in learning themselves are listed in the observation table of teachers and students.

No	Guru	Siswa	Ya	Tidak
1	The teacher makes lesson plans from the material given then monitors attendance and focuses attention	Students are ready to learn and respond to the teacher's greeting	V	
2.	The teacher gives an opinion	Students pay close attention and observe the teacher	V	
3.	The teacher gave a little encouragement	Students listen carefully		V
4.	Teachers set up digital media devices	Students begin to enjoy what the teacher does	V	
5.	The teacher provides instructions and conditions to students so that they can follow the teacher's learning	Students begin to focus and pay attention to the screen	V	
6.	Teachers display learning materials	Students are impatient and curious. Students' motivation begins to grow when they see their movements	V	
7.	The teacher explains the digital environment displayed and places it in relation to the material	Students begin to actively ask the teacher for good things	V	
8	The teacher gives questions as feedback in learning	Students answer questions well and the classroom atmosphere is quite lively	V	
9	Teachers show ice breaking to maintain students' abilities	Students begin to enjoy the given videos and laugh at the topic	V	
10	The teacher closes the lesson	Students look cheerful and quick in answering greetings	V	

Through direct interviews with class students, it was concluded that the use of digital media has a more pleasant effect because in addition to watching learning take place, you can also watch some animations that give a funny impression so as not to create a burden for students. The presence of digital media provides a new learning experience for grade IV students. Recent years have seen a strong increase of digital in teacher education (Garabedian et al., 2015). Students prefer to learn using digital media that is more varied. Besides being able to be listened to, it can also be seen with visuals that are able to provide a realistic and real

picture. Students aged between 7-12 years are imitating stages, so the use of digital media is very suitable because it contains digital that is packaged systematically and can be easily captured by students.

The impact of learning that is very noticeable is that students are able to find their own learning resources so that they can make optimal use of social studies learning. Social studies learning which is known as a whole produces a breakthrough new effort in shaping student independence. Students who actually use digital media only to play are expected to be able to use media to get a positive impression. The use of digital media is expected to be able to provide good results for the world of education which is increasingly tempted by the times. The rapid development of technology is expected to be utilized in student learning efforts at public elementary school II Pendem.

Based on the results of observations and interviews, it can be concluded that various obstacles affect the use of digital media in learning. The main obstacle is the lack of facilities and infrastructure, which means the use of digital media takes a long time due to the sudden need to prepare equipment (Freiberger et al., 2023). The use of digital media offline takes a long time, because the preparation for the implementation and subsequent evaluation must be started first which takes a long time. Other limitations include external factors such as electricity, as electronic devices require energy to operate. Internet barriers are increasingly caused by network factors, quota availability or even the availability of mobile devices. There is no denying that this requires an internet connection and internet quota to use WhatsApp. If something is not filled, WhatsApp cannot be used. In addition, mobile phones are usually still owned by both parents who have to take turns to learn to use it.

CONCLUSION

The impact of learning that is very noticeable is that students are able to find their own learning resources so that they can make optimal use of social studies learning. Social studies learning which is known as a whole produces a breakthrough new effort in shaping student independence. Students who actually use digital media only to play are expected to be able to use media to get a positive impression. The use of digital media is expected to be able to provide good results for the world of education which is increasingly tempted by the times. The rapid development of technology is expected to be utilized in student learning efforts at public elementary school II Pendem.

Based on the results of observations and interviews, it can be concluded that various obstacles affect the use of digital media in learning. The biggest obstacle is the lack of facilities and infrastructure, which means that the use of digital media takes a long time due to the unforeseen need to prepare equipment. The use of digital media offline requires a long time, because the preparation and evaluation of the next implementation must be started first which takes a long time. (Anam et al., 2021). Other obstacles are also external factors such as electricity because electronic devices require energy to operate.

Students should be more actively involved in learning, with the hope that students can improve their listening skills by asking and solving questions. Teachers should strive to optimize learning in the form of a learning environment and for example use digital media as needed. Schools should improve the quality of teaching and in the implementation of facilities and infrastructure, especially in the acquisition of a learning environment that truly supports learning, stimulates student interest and activity, increases learning motivation, which focuses on optimal learning outcomes. Other researchers can develop research with broader goals and topics and use other data collection techniques to obtain more detailed research results.

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Tere Liye's Authorization in Modern Indonesian Literature

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Abstract

The purpose of this study is to reveal the authorship of Tere Liye. Specifically, this research aims to reveal 1) the packaging technique of social problems by Tere Liye in his work; 2) Tere Liye's views on social issues which are the main themes of his works; and the important role of Tere Liye in the development of Modern Indonesian literature. This research includes qualitative research and also as literature research. The collection technique uses literature study techniques. The theory used to solve this research problem is the theory of semiotics and the theory of genetic structuralism. The research approach uses a textual approach. Data analysis uses a qualitative research analysis pattern and applies a dialectical way of working because this research examines two sides of literary works, both in terms of textual and social structure of the author. The results of the research are that Tere Liye packs social problems into his works by prioritizing integration, harmony, and brightness in various story elements so that they become interesting stories. Tere Liye has an objective and factual view of various social problems that exist in society. Tere Liye also offers solutions to these problems either implicitly or explicitly in his works. Tere Liye as one of the young writers who has contributed in no small way to the development of Modern Indonesian literature both now and in the future

Keywords: Homology, Authorship, Worldview, Literature, and Textual

INTRODUCTION

It is no exaggeration that the author named Tere Liye is one of the phenomenal novelists in Modern Indonesian literature. Tere Liye can be categorized as a prolific writer. Works are displayed in major bookstores, one of which is Gramedia. Apart from that, Tere Liye's works have also become a topic of conversation among academics and the general reading public. In academic circles, Tere Liye's works are used as research objects, both published in journals and as theses, and others. On social media, especially Facebook, Tere Liye has thousands of followers. This is proof that Tere Liye is a writer who is popular among the literary reading community in Indonesia.

The existence of literary works cannot be separated from the existence of the author. Authors with all experience can create and imagine creating literary works. This is because in social life, the author, apart from being an individual, also plays a role as a member of society. In other words, the creation of literary works is not only due to the author as an individual subject, but the author as a collective subject. Collective subject is not a collection of individuals that stand alone, but is a unit, a collectivity (Faruk, 2010: 63). In this context, Tere Liye can be said to be a collective subject so that his works do not only reflect the uniqueness of a Tere Liye but also reflect certain social conditions which are often referred to as socio-cultural phenomena.

Like other authors, Tere Liye also raises socio-cultural events in Indonesia, especially important events, which often become a model for Tere Liye's creations and imagination in creating his literary works. In general, these important events have broad implications in society, including the author himself, as a component of society. Literary works produced by

authors cannot be separated from the socio-cultural conditions that surround them. The author with the deposition process of his imaginative, emotional, and intellectual experience gave birth to this literary work. Literary works contain social facts because the author can act as a recorder and observer of events, as well as a predictor who reveals events that will occur in the future as a reaction to events that are recorded and observed (Mahayana, 2007: 226). In literary works, it is clear that there are social problems that the author responds to. In addition, as a product of an ever-changing social world, literary works are dynamic entities that are meaningful and as an embodiment of the important values of their time (Damono, 1984: 40).

Literature is an imaginative composition that contains aesthetic values. Literary works are created to be enjoyed by readers. So an author creates a work that cannot escape from linguistic aspects and also the elements of beauty that exist in literary works. Literary works are created based on the thoughts, experiences, ideas and feelings of the author. The resulting literary work has beauty or aesthetic elements. In literary works there are elements of beauty, these elements of beauty can be seen textually. In addition to beauty, in literary works there is also a typical view of an author in interpreting social events with his literary works. Both of these aspects can be understood by analyzing the author's work textually and in terms of its social structure

Research on Tere Liye's authorship both in terms of work and Tere Liye's self is important to do. This is based on several things, including 1) Tere Liye as a unique author in the context of Modern Indonesian literature; 2) Tere Liye has a high sensitivity towards social issues, as evidenced by the works with titles with "brave" diction; 3) Tere Liye is one of the authors whose role needs to be considered in the development of modern Indonesian literature today; and 4) there is no research that specifically reveals the works of Tere Liye from the textual perspective of literary works and their social structure. This research uses the theory of Genetic Structuralism put forward by Lucien Goldmann.

Research on Tere Liye's authorship was carried out by Lamsike Pateda with the title "Tere Liye's Authorship Style in the Novel *May Mother Be Loved by Allah*. A Review of Rhetoric-Stylistics". This research uses rhetorical and stylistic theory and reveals that with good rhetoric and style, the novel *Moga Bunda Disayang Allah* becomes the best novel. Thus, it is not limited to research, Lamsike Pateda also evaluates or criticizes the novel. The research conducted by Pateda is different from the research planned. The difference lies in the theory used as well as the focus of the research.

METHODS

This type of research is qualitative research because the data are in the form of words, sentences, and discourses that come from the work of Tere Liye and other literature documents. This research is also in the category of central research because the object as well as the data source is in the form of literature. The bibliographical method is a type of qualitative research method where the location and place of research is carried out in libraries, documents, archives, and the like. In the words of Nyoman Kutha Ratna (2022) the library method is a research method in which data collection is carried out through places where research results are stored, namely libraries.

Because this research includes library research, the data collection technique uses library research, namely by conducting a review study of books, literature, notes, and reports that have a relationship with the problem to be solved. This technique is used to obtain the basics and opinions in writing which is done by studying various literature related to the problem under study.

Literature study in this research is to conduct a review of Tere Liye's work and written documentation that contains information about the author. This technique is supported by other techniques, namely reading and note-taking techniques. Thus the data collected is expected to answer research problems.

Qualitative data analysis is an effort made by working with data, organizing data, sorting data into units that can be managed, synthesizing it, looking for and finding patterns, finding what can be told to others (Lexy, 2008: 148). In accordance with the research, the data analysis technique used to analyze the data in this study is an interactive model of qualitative analysis.

RESULTS AND DISCUSSION

Results

In this research, three things are discussed, including how Tere Liye textually packages various social issues in his works, Tere Liye's views on various social issues that become the themes of his works, and Tere Liye's important role in the development of Modern Indonesian literature. To answer this research problem, a study was conducted on three of Tere Liye's novels, namely *Rembulan Di Wajahmu* (4th printing, 2022), *Sesuk* (2023), and *Rindu* (6th printing, 2022).

Discussion

Textual Packaging of Social Problems by Tere Liye in his work

Tere Liye, as a young writer, is unique in managing themes to make works acceptable to readers. Social issues are one of the focuses worked on by Tere Liye. The novel *Rembulan Tenggelam Di Wajahmu* in *Your Face* was first published in 2007. This novel tells about the life journey of a man named Rehan Rajana or who is usually called Ray. The man is sixty years old. He is a man who owns the largest business partnership ever. The man who owns a business empire. He was dying and had no family. When he woke up from his death he felt he met a friendly person in the orphanage so he felt he had a family. The main theme in it is the secret of life, the bitter sweetness of injustice that is felt by humans. The social problems expressed in the novel are problems of education, public facilities (fasum), and morals. With that, the novel becomes meaningful. The novel is also built on the basis of the story. Storytelling is a technique used by authors to select and arrange story details (events and incidents) into meaningful patterns (Stanton, 2012).

In the novel *Rembulan Tenggelam Di Wajahmu* the problems of education, public facilities, and morals are packaged with various building elements of the novel. Tere Liye describes and narrates the themes and sub-themes in the novel *Rembulan Tenggelam Di Wajahmu* in *Your Face* in a good and coherent manner. For example, characters, characterizations, and settings are very unified. As in everyday life, story characters have different characters. Even in terms of language, the arrangement of sentences in several parts is able to direct the reader to feel as if he is experiencing the event directly. It is as the following quote.

No! He was standing in the middle of the crowd.
Unbelievable. What a noisy crowd. The sound of a car horn
ringing. reply. People passing by (Liye, 2022).

The events of the story are told with a different plot in each part. In the early part, the backward plot is marked by the character Ryan flashbacks as if he is returning to his normal life even though he is dying. As for the end of the story, the plot is mixed. On the other hand, the setting of place, time and atmosphere as time is in fact in reality so that it can be accepted in the imagination as well as the reader's experience. Therefore reading the novel readers seem to imagine real life. The point of view used is third person omniscient because it uses pronouns for the character's name. With this point of view, Tere Liye as the author is more flexible in conveying the intended direction of the story and is able to explain in detail the various elements in the story. Tere Liye uses the omniscient narrator technique. The narrator knows more than the characters in the story do. the narrator may know various facts about several characters, their physical form, movement, way of thinking, to their feelings.

Next is the novel *Sesuk*. Novel *Sesuk* is Tere Liye's latest work. This novel has just been published by Sabak Grip Publisher in August 2022. The novel with a total of 327 pages will offer a different theme from Tere Liye's usual works. This *Sesuk* novel tells about the family of a girl who is only 12 years old. Girl has 2 younger brothers named Bagus and Ragil.

The house that the girl's father bought recently, some years back. The reason for the purchase was because the girl's family chose to move house, because of an incident at the old house that was enough to hit them. The younger brother, Ragil, fell from the second floor terrace. The incident is considered as a very tragic event.

At first, their life was peaceful and happy. Her father and mother, who are busy, always make time for their three children. However, strange occurrences began to appear. Starting from the disappearance of Bagus, to the appearance of a mysterious boy.

In short, *Sesuk's* novel tells about the dynamics of family life as well as the problems that are commonly faced at this time. The story in this novel is more dominant on the psychological side of the child. Because of this, *Sesuk's* novel is full of psychological content, especially child psychology.

Tere Liye succeeds in packaging the theme in *Sesuk's* novel which can captivate its readers with its flowing storytelling style and story ideas that readers don't think of. Tere Liye succeeds in providing more than one plot that promises to surprise readers and encourage imagination.

Tere Liye packs the story in *Sesuk* by building characters in the characters with strong characters and can be firmly deposited as memories in the hearts of readers. Like the character of a girl who is strong, responsible, independent, and loving. Then, Tere Liye also uses the names of characters who imaginatively bring a spirit of intimacy because there are characters who are greetings, namely the figures of Father and Mother

Readers can dissolve in a strange feeling while reading this story. However, this alienation has an impact on the conclusion of *Sesuk's* novel as a good novel, which makes them have to read this novel in its entirety. However, if you look closely, the plot is very long and convoluted, so you need patience to follow it.

The thing that also stands out in *Sesuk's* novel is the relationship between children and parents. Novel *Sesuk* emphasizes that the presence of parents is always needed by children even though children already feel independent, or even have a higher education than their parents. Besides that, there is also the need for responsibility according to their respective roles both as children and as parents. Based on *Sesuk's* novel, it can also be seen that humans must avoid selfishness, indifference, excessive ambition, and greed. If humans continue to allow that nature in themselves, then humans will harm themselves.

Last is the novel *Rindu*. This *Rindu* novel by Tere Liye is about a heartbreaking past. About hatred for someone who should be loved. About losing a sweetheart and true love. Also about hypocrisy. This novel is set in 1938, a time when Indonesia was not yet independent. A Blitar Holland ship, started its journey from the port of Makassar to Mecca, carrying a group of pilgrims. In the past, the round trip to Hajj would take months.

The novel *Rindu* has a social theme, mainly religious elements, namely the pilgrimage journey by indigenous people during the colonial period. *Rindu's* novel is packed with backwards plots. The characters in *Rindu's* novel are Daeng Andipati and his wife, Anna, Elsa, Ahmad Kareng, Mother Upe, and others. The novel *Rindu* has a time and social setting in the colonial period. The location settings include Makassar port, Surabaya port, Blitar Holland ship, and others. The novel *Rindu* is told using an all-knowing third person perspective.

Tere Liye's Views on Various Social Problems that Become the Themes of His Works

In the three novels that are the object of this research, namely *Rembulan Drowned in Your Face* (4th printing, 2022), *Sesuk* (2023), and *Rindu* (6th printing, 2022), Tere Liye's views

on various social issues can be revealed. The social problems in these novels include problems of education, injustice, services in public facilities, morals, and religion.

First, the problem of education. Tere Liye's focus on education issues is very universal, not only education at the formal level but applies in various areas. The main thing in educating the younger generation for Tere Liye is the example of the educator/older generation and discipline. Education may be carried out physically with a fixed record based on the intention of directing it in a better direction. In addition, discipline in the context of educating must also be carried out by not hurting and hurting but giving awareness.

For Tere Liye, education will be successful if students and teachers can work together well. Both must be aware of their respective roles and positions. Students who study diligently wherever they are will have quality education (Liye, 2023).

Second, injustice. Injustice from Tere Liye's point of view can happen everywhere. Injustice can be found at home in the context of relations between family members and also at the community level. Tere Liye thinks that injustice can have a negative impact psychologically. Injustice can take the form of physical violence or symbolic violence by certain parties. The object of injustice is basically a subject who has no capital either economically or socially.

In the novel *Rembulan Tenggelam Di Wajamu in Your Face*, it is narrated that Reyhan experienced injustice when she was young while living in an orphanage. The injustice he received when he was accused of stealing and without any evidence and opportunity to defend himself, Reyhan was subjected to violence in the form of being beaten with rattan by some of the orphanage guards. Rehan's condition at that time was as a street child who had no family so he was in the position of a weak subject without bargaining power in front of the orphanage guards. It was as if the caretaker of the orphanage as the ruler was free to do anything to Rehan (Liye, 2022).

Third, services in public facilities. The inconvenience of public facilities for the community has also been addressed by Tere Liye, such as the terminal. In several regions/cities in Indonesia, terminals as public facilities seem rundown, inconvenient in providing services to the community. The terminal should be managed properly so that people feel comfortable and safe so that people can travel and do their activities smoothly. The chaos shown at the terminal is a reflection of the inability of certain parties to manage public facilities which have become their duties as well as the chaotic social life in Indonesia.

Justice in society has not been realized. Even injustice still occurs in society. this is evidenced by the presence of beggars, buskers, and people with other social disabilities. Economic development as determined in the fifth precept of Pancasila, namely Social Justice for All Indonesian People is still far from the fire. In other words, a few people in this country still enjoy economic stability (Liye, 2022).

Fourth, morals. Moral issues are also not spared from Tere Leye's discussion through his works. In life, moral issues are always important because with morality, humans are able to control themselves in life. With human morality will behave carefully. In general, morals can be understood as things related to the understanding of good and bad in life. Mainly related to behavior.

Tere Liye understands the moral problems that exist in society as something that really arises in Indonesia. Moral issues should be the concern of all parties. Because with moral decline, the order of social life will also experience problems.

From several parts of the novel, an understanding can be obtained that consuming alcoholic beverages is the beginning of carrying out behavior that violates norms or is immoral. Liquor as a cause of drunkenness, chaos. Even liquor also coexists with other deviant moral practices, namely gambling. If these two social diseases persist in society, the moral condition of society is always in serious trouble (Liye, 2022).

Fifth, religious issues. Religion is closely related to belief or religion which is one of the elements in society. In the novel *Rindu*, Tere Liye expresses his views regarding religious aspects, especially Islam. Novel *Rindu* tells the story of a pilgrimage journey undertaken by natives during the Dutch colonial period. Even though it has a social and colonial setting, basically the content of the story is still very much in the current context in Indonesia. The difference lies in the departure and transportation systems used. In the novel, it is narrated that the departure of the hajj became the full authority of the Dutch colonial government and only certain people. The mode of transportation used is not airplanes but ships, so it takes longer time to get to Mecca. There were 46 pilgrims who boarded from Bengkulu Port, more or less the same as pilgrims from Lampung. Thirty male congregations, the rest female congregations (Liye, 2022). The views related to religion by Tere Liye can be seen in Tere Liye's understanding of the importance of prayer. Prayer will be even more effective if recited by parents for their children. Belief in the power of prayer is one manifestation of religious values. Prayer can communicate the intentions of creatures to the Kholik. "That's a beautiful name, son. Your parents must be praying for the best when giving that name. Ambo Ulang, a boy who shines like the moon." (Liye, 2022).

The Important Role of Tere Liye in the Development of Modern Indonesian Literature

Tere Liye as one of the most prolific novelists in Indonesian literature. Works can be found in various leading bookstores in Indonesia. In fact, these works have become material for study in various Indonesian Literature departments/studies at universities in Indonesia. Until now, Tere Liye has succeeded in publishing more than 50 books of various types and genres. Tere Liye writes various types of books, namely novels, poetry collection books, quotation books, short story collection books, to children's picture books. Tere Liye is Dervish's pen name. In terms of words, Tere Liye is taken from the Indian language which means 'only for you'. Tere Liye was born in South Sumatra on May 21, 1979. Tere Liye has 5 brothers and one sister because he is the 6th child of 7 siblings.

Described by Julia Anjarwati, "Tere Liye Short Biography", accessed on September 2, 2020. <https://languages.foresteract.com/biographyshort-tere-liye/> Tere Liye has a distinctive look by often wearing T-shirts, skullcaps and casual clothes. Tere Liye's works always prioritize knowledge, the Islamic religion, and the morals of life. In each of his works, Tere Liye always emphasizes gratitude for everything he has. With a unique and simple delivery so that the reader can feel directly the message the author wants to convey. Tere Liye revealed that he did not intend to write a moving novel, but only intended to write a simple novel.

Even though as a young writer in the field of Indonesian literature, Tere Liye has been able to provide new colors and nuances as well as contribute to the development of Modern Indonesian literature. Tere Liye as an individual and also in terms of his work has received various appreciations from readers, students, and literary critics. This is proof that Tere Liye is a writer who is reckoned with in the constellation of Indonesian literature in the present era.



Figure 1. Tere Liye is a novelist

Source: <https://www.suamerdeka.com>

As a writer who has produced quality works, Tere Liye is an important novelist. There are several roles of Tere Liye, including (1) Tere Liye opens the understanding that novel writers can take various themes that are directly related to human life both individually and socially. There are Tere Liye's works on the themes of religiosity, poverty, women's issues, and others. Tere Liye offers fresh thoughts. This was stated by Rokhani (2022).

In this case, Tere Liye tends not to make a strict dichotomy between men and women. However, Tere Liye expands the roles and functions of women so that the construction that is built shows the dependence of men on the existence of women. Thus, the position, existence, and existence of women are not functioned to control and suppress men's positions, but to support men's lives (Rokhani, 2022).

(2) Tere Liye provides an alternative repertoire of reading and research within the scope of Modern Indonesian literature. Based on the review given by Masykuri on one of Tere Liye's works, he thinks that Tere Liye is able to present literary works that are narrated in interesting language and can be understood by readers.

Novel ini mantap! Tere-Liye sangat piawai menulis dengan hati dan berkisah tentang kebaikan tanpa perlu menggurui. Enak dibaca dan perlu menjadi bahan renungan orang tua masa kini. (Ni'am Masykuri, Editor in Chief Majalah Parents Guide & Hipoo)

(Source: <http://repository.umsida.ac.id/bitstream/handle/>)

(3) Tere Liye as a novel writer who tends to be realism in Modern Indonesian literature. Therefore, its existence is able to refresh and stimulate modern Indonesian literature, especially related to the flow of art. Tere Liye's works tend to present social reality facts into fictional reality in literary works. Thus readers/connoisseurs of Tere Liye's works seem to be involved in direct experience when reading/enjoying his works.

(4) Tere Liye has the fighting spirit for the development of Modern Indonesian literature by adhering to social, cultural and political conditions. At the same time, Tere Liye acts as a motivator for other writers because Tere Liye is always firm against cheating by other parties of the author's rights. Tere Liye was an ardent opponent of piracy of his works. Tere Liye thinks that if piracy continues to be allowed, writers will be lazy to work because their rights are taken away by other parties. As a result, literary works will experience a decline

CONCLUSION [Constantia **11 bold**]

Based on the discussion that has been done, it can be concluded the following things. 1) Tere Liye packs social issues into his works by prioritizing integration, harmony, and brightness in various story elements so that they become interesting stories. 2) Tere Liye has an objective and factual view of various social problems that exist in society. Tere Liye also offers solutions to these problems either implicitly or explicitly in his works. 3) Tere Liye as one of the young writers who has contributed in no small way to the development of Modern Indonesian literature both now and in the future.

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Impact of Media Infocus on English Language Learning

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Abstract

This study aims to investigate the impact of Media Infocus on English language learning among a sample of 30 eighth-grade students, out of a population of 120 students. The research followed an experimental research design and was conducted from April to June. The study sought to determine the effectiveness of Media Infocus as a tool to enhance English language learning. The research employed quantitative measures to assess the progress of the students in the experimental group who received English language instruction with the integration of Media Infocus. The control group received traditional classroom instruction without the use of media. Pre- and post-tests were administered to both groups to evaluate their English language proficiency. The findings of this study indicate a significant positive impact of Media Infocus on English language learning. The experimental group, exposed to Media Infocus during their English language instruction, demonstrated a substantial improvement in their language skills compared to the control group. The experimental group showed higher scores on the post-test, suggesting that the integration of Media Infocus facilitated a more effective and engaging learning experience. These results highlight the potential of multimedia tools, such as Media Infocus, to enhance English language learning outcomes. The findings support the integration of technology in language education, emphasizing the importance of incorporating media resources into instructional practices. This research contributes to the existing literature on language learning strategies and provides insights into the benefits of using media in the language classroom.

Keywords: Media Infocus, English language learning, experimental research

INTRODUCTION

English language proficiency is increasingly recognized as a vital skill in today's globalized society (Aghayan & Hajmohammadi, 2019; Arianda et al., 2021; Dwiyanti & Arie, 2021; Mairani, 2022; Sari et al., 2019). The ability to communicate effectively in English opens doors to academic, professional, and personal opportunities. As a result, educators and researchers have sought innovative and effective approaches to enhance English language learning (Hidjrah et al., 2018; Indah & Utari, 2021; Sidauruk et al., 2020).

In recent years, multimedia technology has emerged as a powerful tool in education, offering new avenues for language instruction. Among the various multimedia tools available, Media Infocus has gained attention for its potential to enhance language learning experiences. Media Infocus incorporates visual and auditory elements, including videos, images, and interactive content, to deliver instructional materials in a captivating and interactive manner (Ristika et al., 2020; Wirawan, 2020).

Research on the integration of multimedia tools in language education has shown promising results. Studies have demonstrated that multimedia resources stimulate student engagement, motivation, and information processing, leading to improved language acquisition (Kosanke, 2019). Moreover, the integration of multimedia tools in language instruction provides learners with authentic and immersive language contexts, enabling them to develop their communicative skills in a more natural and realistic way (Aini, 2013).

While research has explored the effectiveness of multimedia tools in language learning, there is a need for further investigation specifically focusing on the impact of Media Infocus in English language learning settings, particularly among middle school students (Ardena et al., 2021; Meidasari, 2016; Rahmi, 2014). Middle school marks a crucial period in language development, and understanding the effects of Media Infocus during this stage can offer valuable insights into optimizing language instruction.

Therefore, this study aims to examine the impact of Media Infocus on English language learning among eighth-grade students (Pande Nyoman et al., 2022; Sofian & Anggraeni, 2021). By utilizing an experimental research design, the study will compare the language learning outcomes of a group of students exposed to English language instruction with the integration of Media Infocus to a control group receiving traditional classroom instruction without multimedia enhancements (Akmal, 2019; Hadi, 2019; Lasaiba Djamila, 2015; Petina et al., 2023). Throughout the research period, which spans from April to June, a sample of 30 eighth-grade students will be selected from a population of 120 students. The study will utilize quantitative measures, including pre- and post-tests, to assess the students' English language proficiency. The experimental group, receiving instruction with Media Infocus, will be compared to the control group to evaluate the impact of the multimedia tool on language learning outcomes.

The findings of this study are expected to contribute to the existing body of research on language learning strategies and the integration of multimedia tools in language instruction. The results will provide empirical evidence regarding the effectiveness of Media Infocus in improving English language proficiency among middle school students. Additionally, the study will shed light on the benefits of incorporating multimedia resources into language instruction, supporting educators in making informed decisions about instructional practices (Fauzi & Fandayani, 2023).

By understanding the impact of Media Infocus on English language learning, educators, curriculum developers, and policymakers can gain insights into effective strategies for enhancing language instruction (Aisyah & Haryudin, 2020; Nasution, 2019). These findings can inform the design and implementation of language programs, facilitating the creation of engaging and interactive learning environments for students.

In conclusion, this research seeks to bridge the gap in knowledge by investigating the impact of Media Infocus on English language learning outcomes among eighth-grade students. Through an experimental research design and quantitative measures, the study aims to provide empirical evidence on the effectiveness of multimedia tools in language instruction. The findings will contribute to educational practices and support the integration of Media Infocus, ultimately fostering more successful language learning experiences for students.

METHOD

This research utilizes an experimental research design to investigate the impact of Media Infocus on English language learning. This approach is chosen to allow for the control of relevant variables and to obtain strong evidence regarding the cause-effect relationship between the use of Media Infocus and the improvement of English language proficiency. The research population consists of 120 eighth-grade students, and a sample of 30 students is randomly selected from this population. The sample of students is divided into two groups: the experimental group and the control group.

The experimental group receives English language instruction involving the use of Media Infocus. The instructional materials are delivered using various multimedia elements such as videos, images, and interactive content. Students are provided with opportunities to directly interact with the instructional materials and utilize Media Infocus as a tool to deepen their understanding and mastery of the English language. Meanwhile, the control group receives

conventional English language instruction without the use of Media Infocus. Students in the control group receive instruction using traditional methods such as textbooks and whiteboards.

Prior to the commencement of the instructional intervention, an initial measurement will be conducted to assess the students' English language proficiency. The measurement will be administered to both the experimental and control groups (Siyoto & Sodik, 2015). During the research period, which spans from April to June, the experimental group will receive English language instruction with the integration of Media Infocus, while the control group will receive conventional instruction. Both groups will undergo the same instructional hours and follow the curriculum requirements. At the end of the research period, a post-test will be administered to assess the students' English language proficiency in both groups. The post-test will be based on standardized language assessment tools and will measure various aspects of language proficiency, including listening, speaking, reading, and writing skills.

The collected data will be analyzed using appropriate statistical methods to determine the effectiveness of Media Infocus in enhancing English language learning outcomes. Statistical techniques such as t-tests or analysis of variance (ANOVA) will be employed to compare the performance of the experimental group and the control group on the post-test.

The findings of this research will provide valuable insights into the impact of Media Infocus on English language learning outcomes among eighth-grade students. The experimental research design allows for the establishment of a causal relationship between the use of Media Infocus and improvements in English language proficiency. The results will contribute to the existing body of knowledge on effective language teaching methods and provide practical implications for educators and curriculum developers in incorporating multimedia tools in language instruction.

RESULTS AND DISCUSSION

Results

The findings of this study demonstrate a significant impact of Media Infocus on the improvement of English language skills among the experimental group of eighth-grade students. The integration of Media Infocus in language instruction resulted in notable enhancements in various aspects of English language proficiency.

Firstly, in terms of listening skills, the experimental group showed a substantial improvement compared to the control group. The use of Media Infocus allowed students to engage with authentic audio materials, such as recorded conversations and interviews, which contributed to their ability to comprehend spoken English more effectively. The experimental group demonstrated higher scores on listening comprehension tasks, indicating a positive influence of Media Infocus on this particular skill.

Secondly, the experimental group exhibited significant progress in their speaking skills. Through the utilization of Media Infocus, students had opportunities to practice oral communication in simulated real-life scenarios. The interactive nature of Media Infocus facilitated active participation, enabling students to develop their fluency, pronunciation, and confidence in speaking English. Consequently, the experimental group demonstrated improved performance in speaking tasks compared to the control group.

Thirdly, there was a noticeable improvement in the reading skills of the experimental group. Media Infocus provided engaging reading materials, including online articles, news reports, and multimedia texts. The visual elements and interactive features of Media Infocus motivated students to actively engage with the content, resulting in improved reading comprehension, vocabulary acquisition, and reading speed. The experimental group outperformed the control group in reading assessments, indicating the positive impact of Media Infocus on reading skills.

Lastly, the experimental group displayed significant progress in their writing skills. The incorporation of Media Infocus in language instruction offered students opportunities to practice various writing tasks, such as composing emails, writing blog posts, and participating in online forums. The multimedia resources provided by Media Infocus stimulated students' creativity and critical thinking, leading to enhanced writing proficiency in terms of organization, grammar, and overall coherence. The experimental group exhibited higher scores in writing assessments compared to the control group.

Overall, the findings of this study demonstrate that the integration of Media Infocus in English language instruction has a substantial positive impact on the improvement of listening, speaking, reading, and writing skills. The use of multimedia resources in the form of Media Infocus provides a dynamic and engaging learning environment, which fosters students' language acquisition and proficiency. These results support the effectiveness of multimedia tools in language education and highlight the potential of Media Infocus as an effective aid in English language learning.

These findings have implications for educators and curriculum developers, suggesting the importance of incorporating multimedia resources, such as Media Infocus, in language instruction to enhance students' language learning experiences and outcomes. By leveraging the benefits of technology and multimedia tools, educators can create more interactive and engaging learning environments that promote the development of English language skills.

Additionally, the findings reveal a distinct contrast between the experimental and control groups in terms of overall language skill improvement. The experimental group, which received English language instruction with the integration of Media Infocus, demonstrated a significant increase in their language skills compared to the control group.

In the experimental group, the students exhibited substantial progress across all language skills, including listening, speaking, reading, and writing. The use of Media Infocus as a multimedia tool facilitated a more interactive and engaging learning experience, resulting in notable advancements in their language proficiency. The experimental group consistently outperformed the control group in assessments and tasks related to these language skills.

Conversely, the control group, which received conventional English language instruction without the use of Media Infocus, did not experience the same level of improvement. Their language skill development showed minimal growth or remained relatively stagnant throughout the research period. This disparity highlights the influence of Media Infocus in enhancing language learning outcomes, indicating that the integration of multimedia tools has a significant impact on students' language proficiency.

These findings emphasize the importance of incorporating media resources, such as Media Infocus, into language instruction to foster more effective language learning. The interactive and immersive nature of Media Infocus offers students a unique and engaging learning experience, enabling them to develop their language skills more comprehensively compared to traditional instructional methods. These results underscore the potential of multimedia tools in transforming language education and improving students' language proficiency.

Discussion

Firstly, in terms of listening skills, the experimental group showed a substantial improvement compared to the control group. The use of Media Infocus allowed students to engage with authentic audio materials, such as recorded conversations and interviews, which contributed to their ability to comprehend spoken English more effectively. The experimental group demonstrated higher scores on listening comprehension tasks, indicating a positive influence of Media Infocus on this particular skill.

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learning experience, enabling them to develop their language skills more comprehensively compared to traditional instructional methods. These results underscore the potential of multimedia tools in transforming language education and improving students' language proficiency.

CONCLUSION

The integration of Media Infocus in English language instruction resulted in significant improvements in listening, speaking, reading, and writing skills among eighth-grade students. The experimental group demonstrated higher scores in listening comprehension, improved speaking performance, enhanced reading comprehension and vocabulary acquisition, as well as improved writing proficiency compared to the control group. These findings highlight the positive impact of Media Infocus as a multimedia tool, providing dynamic and engaging learning experiences that foster language acquisition and proficiency. The results underscore the importance of incorporating multimedia resources in language instruction to enhance students' language learning outcomes and create interactive learning environments.

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Developing English Children Storybook With Reference to Sarinah's Book to Gender Equality Values Introduction for Young Learners

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ABSTRACT

Dela Prastisia. **DEVELOPING ENGLISH CHILDREN STORYBOOK WITH REFERENCE TO SARINAH'S BOOK TO GENDER EQUALITY VALUES INTRODUCTION FOR YOUNG LEARNERS**. Thesis. English Education Study Program Teacher Training and Education College STKIP PGRI Pacitan.

This study was a research and development which had a purpose to reveal the process of developing the learning media such English children storybook entitled "*Grow Up Together*" with reference to Sarinah's book written by Soekarno to introduce and teach about gender equality values for young learners. Given this point, the researcher unearthed the young learners responses toward the existing product in the preceding the English children storybook.

The research was done through two major discussions: (1) product development' stages; (2) and exploration of young learner's responses. These stages are divided to be five stages as follows: (1) analysis; (2) design, (3) development, (4) implementation; (5) and evaluation. All of this development stages resulted the information of quality the product. Moreover, the exploration of young learners' responses was the stages of implementation the product. This stages revealed the positives and negatives responses of the young learners toward the English children storybook. Data collection techniques used in this study included response questionnaires, interviews, observation, and documentation. Meanwhile, data analysis uses product feasibility-level technique.

According to the findings of the research, it can be concluded that (1) An English children's story book entitled "*Grow Up Together*" which aimed to introduce and teach about the values of gender equality for young learners was developed using the ADDIE (Analysis, Design, Development, Implementation, Evaluation) model procedure; (2) Product quality based on the assessment of design expert, material expert, and teacher got very good criteria, with a total percentage of 93.18%; (3) Product quality based on the student's responses of 17 students got very good criteria, with a total percentage 91.52%.

Keywords : *ADDIE Model, English Children Storybook, Gender Equality, R&D, Sarinah.*

INTRODUCTION

One of the demands on education today is the issue of justice and gender equality. In the process of education in Indonesia, gender inequality still occurs frequently. In general, society still assumes or thinks that women are a second-class group and that their position is always below men. Conditions like this occur not without reason but are caused by many things, including patriarchal thinking, which is deeply rooted in society and always assumes that men have a higher position than women.

Gender equality in education is a matter of social justice related to rights, opportunities, and freedoms. Gender equality in education is essential for sustainable development, peaceful societies, and individual well-being. At local, national, and global levels, gender equality in education should be a priority area. Gender-equitable education systems empower both girls and boys and foster the development of life skills that young people need to succeed, such as

self-management, communication, negotiation, and critical thinking. They reduce skills gaps that perpetuate pay disparities and help entire countries succeed. School-based gender-based violence and harmful behaviors, such as child marriage and female genital mutilation, can be reduced through gender-equitable education systems. Gender-equitable education systems encourage both girls and boys to attend school, resulting in increased national prosperity.

The mind development of children is essential for achieving gender equality. According to Indarni (2012), educational institutions provide children with a situation in which they can study things that are not directly relevant to them. The introduction of the concept of gender, which includes values of gender equality rather than gender disparity, is one example of the type of knowledge that should be imparted to children through educational means.

Actually, children need to be educated about gender equality from an early age as well as adults. This is due to the fact that gender identity and how others are perceived start in early childhood. Every culture had traditions that children learn to adopt as part of the socialization process. The basis for many of these roles and actions is identification with a specific gender. Children's self-perception and how they are treated by peers and adults depend on how their gender role identity develops. Children's perception of gender identity is influenced by people's attitudes toward the gender roles that are prevalent in each society. Gender role stereotypes are a condensed version of these general nations.

In fact, teaching the values of gender equality to children is a very important responsibility that must be carried out. By learning the values of gender equality from an early age, children would know that everyone had the same rights, resources, opportunities, and protections that can help them fulfill their potential and be considered whole human beings. The more equal the roles of men and women are, the less the gap between men and women is in any sector. Furthermore, the more equal men and women are in their self-actualization, the easier it would be for them to achieve better nation-building.

Until now, it had been very important to improve the gender-oriented learning process in education. Because symptoms of gender bias are still often found in the world of education, the elementary school years are the best time to instill ideas about gender equality and break the wrong stereotypes. Many things can be done to introduce and teach about gender equality values to children, through formal and informal curriculum, extracurricular activities, and revamping children's books that are gender-friendly.

Based on the problems above, the researcher took the initiative to develop an English children's storybook with reference to Sarinah's book to introduce gender equality values as one of the efforts to improve gender-friendly books. The researcher believe that this products would be beneficial and practical for the young learners in learning about gender equality values then implement it in their daily lives.

LITERATURE REVIEW

1. Storybook

Storybook derives its name from the stories that are booked. According to Malu (2013), storybooks are books with pictures and text that present a story with a suitable theme for children. The children's storybook is a story with educational elements, the plot is simple and straightforward, and it is situated in or around the child's world. Storybooks feature good characters and characterizations' the language style is simple to comprehend but capable of developing children's language and the perspective of the correct people and imagination are still within children's reach (Puryanto, 2008).

2. Sarinah

Sarinah is divided into two types, namely Sarinah as a figure and Sarinah as a concept. The first is sarinah as a figure. Sarinah is a very great women figure for Soekarno. Sarinah was Soekarno's nanny when he was small; Sarinah is the one who educated Soekarno from

childhood, and she taught Soekarno about the science of manners. The second is sarinah as a concept, sarinah's concept is the result of Soekarno's thoughts to fight for women's rights, emphasize women's obligations, and realize gender equality in nation and state. On the concept of sarinah, Soekarno emphasized that women and men must work together, support each other, and complement each other to create a harmonious and balanced life. The concept of Sarinah was written by Soekarno in his book entitled "*Sarinah : Kewajiban Perempuan dalam Perjuangan Republik Indonesia*".

3. Gender Equality

Gender equality is the similarity of the conditions for men and women to have the opportunity as well as their rights as human beings, to be able to contribute and participate in the activities of political, legal, economic, social, cultural, education and national defense and security as well as similarities in the enjoyment development results.

A general definition is provided by UNESCO's Gender Mainstreaming Implementation Framework (2003) as follows :

Gender Equality means that women and men have equal conditions for realizing their full human rights and for contributing to, and benefiting from, economic, social, cultural, and political development. Gender equality is therefore the equal valuing by society of the similarities and the differences of men and women, and the roles they play. It is based on women and men being full partners in their home, their community, and their society.

Furthermore, the UN institution for gender equality and women's empowerment (UN Women) defines gender equality as equal rights, responsibilities, and opportunities for men and women, as well as girls and boys. Equality does not imply that men and women will become equal, but that men and women's rights, duties, and opportunities will not be determined by whether they are born male or female. In other words, women and men should have equal rights and chances in life, as well as equal access to assets without being treated or valued differently (Wodak, 2005).

4. Young Learner

Cameron (2001), states that young learners as those between five and twelve years of age. Other opinion also came from Nunan (2010), who states in his book entitled "Teaching English for Young Learners" that the term "young learner" covers a large chronological age span. It is from around 3 years of age to 15. On the contrary, some writers and also the researchers categorize the age of the young learners according to age : 3 to 5 years old, 6 to 8 years old, and so on.

METHOD

1. Research Design

The researcher used Research and Developing (R&D) method, because this method is product oriented. Research and Development (R&D) is the term commonly used to describe the activities undertaken by firms and other entities such as individual entrepreneurs in order to create new or improve products and processes (Hall, 2006). Research and Development (R&D) is not only used for technology and science but also for education. It aimed to develop and validate the educational product such as media, module, lesson plan, syllabus, and other device like textbook material in order to support teaching learning process. Here, the researcher used the ADDIE model.

The ADDIE model is based on the theoretical foundation of learning design. As such, the program was developed related to problem-solving efforts from the analysis results following the student's needs and characteristics. The ADDIE model was also utilized as a guide in creating a product since it had simple basic stages, can use technological media, and is easy to use (Kurniawan, Kurniasari, & Rakhmawati, 2021). In addition, ADDIE is an iterative process,

where each phase can suggest improvements to the previous phase. Meanwhile, the ADDIE model consists of analysis, design, development, implementation, and evaluation.

Data obtained from the following sources: 1) the existing product of the English children's storybook resulting product; 2) the evaluation from each expert (1 media expert, 1 material expert, and 1 teacher); and 3) the students' responses. The researcher got the following source data;

2. Population

Population is the important element of research. The population is all of research object that have characteristics as data sources which used in research. The population of this research is students of SD Alam Pacitan in academic year of 2022/2023.

3. Sample

For the sample of this research, the researcher chooses one class from the samples. The samples are taken from fifth grade A students at SD Alam Pacitan in the academic year 2022-2023.

4. Place of the Research

This research is held in the fifth grade A students at SD Alam Pacitan. It is located at Sidoharjo Village, Pacitan Regency, East Java.

In this study, researchers used several instruments, including checklists, recorders, cameras, field notes, and questionnaire sheets. Meanwhile, there are several kinds of data collection techniques, which include observation, documentation, interviews, validation sheets, and student response sheets. To analyze the data, researchers used Arikunto's formula (2008: 235). It would be shown below.

$$P = \frac{\sum Si}{s} \times 100 \%$$

P = Score Percentage
 $\sum Si$ = The amount of gain score
s = Maximum score

Then, the researcher converted the mean of each aspect to be qualitative data by using the term which was proposed by Purwanto (2002:102) as follows :

Scale (%)	Letter Grade	Category
86 – 100	A	Very Good
76 – 85	B	Good
66 – 75	C	Enough
55 – 65	D	Poor
≤ 54	E	Very Poor

Table 1 : Category Scale Proposed by Purwanto (2002)

FINDINGS AND DISCUSSION

1. Expert Validation Result

The data obtained from the results of the assessment against the English Children's Storybook was conducted by 1 media expert, 1 material expert, and 1 teacher. The question form of assessment spread out on different days.

a. Media Expert

The media expert who gave an assessment of the product that the researcher made was Mr. Zainal Fanani, S.Pd., a lecturer at STKIP PGRI Pacitan. He is a design expert and highly competent in graphic design and animation. The researcher chose Mr. Zainal Fanani as a media expert because one of the elements of this product is linear with the field he is good at.

The researcher arranged 17 questions for media experts. The question consists of five aspects, including aspects of design, format, organization, consistency, and attractiveness. Of the 17 questions, the questions on the design aspect consisted of 2 questions, the format aspect

consisted of 7 questions, the organizational aspect consisted of 3 questions, the consistency aspect consisted of 3 questions, and the attractiveness aspect consisted of 2 questions. The researcher compiled an assessment sheet with 4 types of answers, including 'Very Good' with a score of 4, 'Good' with a score of 3, 'Poor' with a score of 2, and 'Very Poor' with a score of 1.

The results of the media expert's assessment in more detail and completeness can be seen in Appendix 4. Then, the media expert provides an assessment of the product with the following details:

No.	Aspect	Score	Total Score
1	Desain	3,3	6
2	Format	4,4,3,4,4,4,4	27
3	Organisasi	4,4,4	12
4	Konsistensi	4,4,4	12
5	Daya Tarik	4,4	8
			TOTAL : 65

Table 2 : Expert Validation Result from Media Expert

Based on the details of the assessment above, media experts gave a score of '4' in the "Very Agree" category for 14 questions and a score of '3' in the "Agree" category for 3 questions. After being accumulated by researchers, the total score of assessments from media expert is 65.

b. Material Expert

The material expert who provides an assessment of the content of this English children's story book is Mr. Anis Sutrisno, S.Pd., M.Si. He is a lecturer in English education at STKIP PGRI Pacitan and a teacher at SMK N 1 Pacitan. The researcher chose him as a material expert because researcher got recommendations from the advisor 2 and because he is competent in terms of grammar and the content of English books.

For material experts, the researcher arranged 12 questions consisting of three aspects: content quality, language, and consistency. Of the 12 questions, questions about content quality aspects consisted of 5 questions, language aspects consisted of 6 questions, and consistency aspects consisted of 1 question. The researcher compiled an assessment sheet with 4 types of answers, including 'Very Good' with a score of 4, 'Good' with a score of 3, 'Poor' with a score of 2, and 'Very Poor' with a score of 1. The material expert provides an assessment of the product with the following details:

No.	Aspect	Score	Total Score
1	Kualitas Isi	3,4,3,3,3	16
2	Kebahasaan	3,3,3,3,3,3	18
3	Konsistensi	3	3
			TOTAL :37

Table 3 : Experts Validation Result from Material Expert

Based on the details of the assessment above, the material experts gave a score of 4 in the "Very Agree" category to 1 question in the content quality aspect and a score of 3 in the "Agree" category to 11 other questions. The result of the material expert's assessment of the product is 37 score.

c. Teacher

The teacher who gave an assessment of this English children's storybook was Mrs. Maya Nurhidayati. She is the homeroom teacher for class 5A at SD Alam Pacitan. The researcher chose her to be the assessor because her educational background is English education, and she is also the homeroom teacher in the class that I used as a product trial.

For the assessment of teacher, the researcher arranged 26 questions consisting of six aspects: content quality, language, consistency, design, format, and attractiveness. Of the 26 questions to teacher, questions about content quality aspects consisted of 5 questions, language aspects consisted of 6 questions, consistency aspects consisted of 4 questions, design aspects consisted of 2 questions, format aspects consisted of 7 questions, and attractiveness aspects consists of two questions.

The researcher compiled an assessment sheet with 4 types of answers, including 'Very Good' with a score of 4, 'Good' with a score of 3, 'Poor' with a score of 2, and 'Very Poor' with a score of 1. Teacher provide an assessment of the product with the following details :

No.	Aspect	Score	Total Score
1	Kualitas Isi	4, 4, 4, 4, 4	20
2	Kebahasaan	4,4,4,4,4,4	24
3	Konsistensi	4,4,4,4	16
4	Desain	3,4	7
5	Format	4,4,4,4,4,4,4	28
6	Daya tarik	4,4	8
			TOTAL : 103

Table 4 : Expert Validation Result from Teacher

The assessment from the teacher above shows that the teacher gave a score of 4 in the "Very Agree" category for 25 questions and a score of 3 in the "Agree" category for 1 question in the design aspect. The results of the assessment given by the teacher to the product are 103 score.

Based on the overall assessment above, so obtained the results from each validator. The total point are different each other. First, from media expert got 65 score, from material expert got 37 score, and from teacher got 103 score.

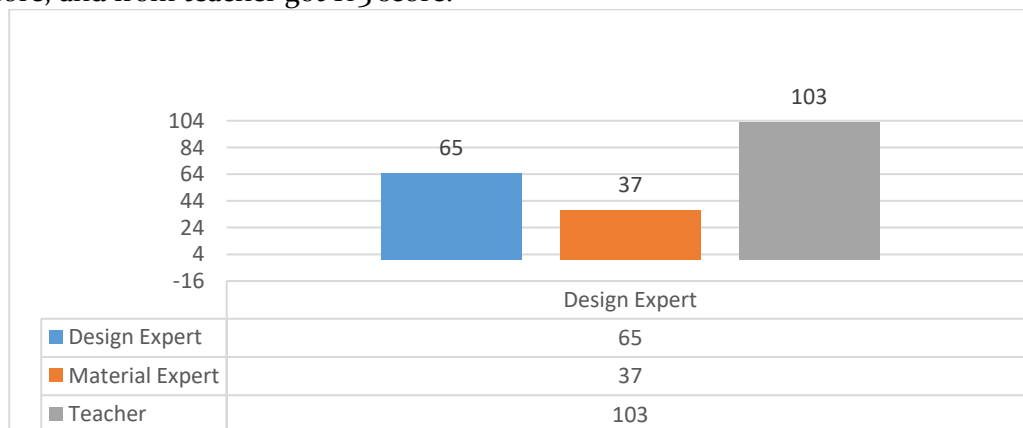


Figure 1 The Validation Result

Generally, the results of the assessment provided by the validators have been 'Very Good' and 'Good' criteria.

2. Product Trial

Data from trials of an English children's storybook are presented in the form of questions from students' reactions after reading the product (English children's storybook). The product trial was carried out on fifth grade A students in SD Alam Pacitan.

No	Pernyataan	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13	S 14	S 15	S 16	S 17
1	Isi cerita yang disajikan dalam buku cerita ini sangat	4	4	4	4	4	3	4	4	4	4	4	4	3	4	3	4	4

	<i>bermanfaat dan menambah wawasan saya tentang pentingnya kesetaraan gender</i>																	
2	<i>Isi cerita dalam buku ini dapat saya pahami dengan baik</i>	3	3	4	3	3	3	3	3	4	4	4	4	3	4	3	4	4
3	<i>Isi cerita yang disajikan runtut, tidak rancu, dan sistematis</i>	4	3	4	4	4	4	4	4	4	4	4	4	3	3	3	4	4
4	<i>Isi yang disajikan dalam buku cerita ini membantu memperkaya vocabulary saya</i>	3	3	3	4	3	4	4	4	3	4	4	3	3	3	3	4	4
5	<i>Cerita yang disajikan dalam buku ini sangat menarik dan tidak membosankan</i>	3	3	4	3	3	3	4	4	4	3	4	4	4	3	3	4	4
6	<i>Isi cerita yang disajikan dalam buku ini sangat jelas dan tidak menimbulkan makna ganda</i>	4	3	3	3	3	3	4	4	3	3	4	3	4	3	4	4	4
7	<i>Isi cerita yang disajikan dalam buku ini menurut saya sudah lengkap untuk mempelajari tentang nilai kesetaraan gender</i>	4	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4
8	<i>Buku cerita ini menggunakan Bahasa yang mudah dipahami</i>	4	3	4	4	3	4	4	4	4	4	4	4	4	3	3	3	4

No	Pernyataan	S 1	S 2	S 3	S 4	S 5	S 6	S 7	S 8	S 9	S 10	S 11	S 12	S 13	S 14	S 15	S 16	S 17
9	<i>Pengetahuan saya tentang pentingnya kesetaraan gender meningkat karena membaca buku ini</i>	4	3	3	4	4	4	4	4	4	4	4	4	3	3	4	3	4
10	<i>Buku cerita ini layak saya gunakan untuk meningkatkan pemahaman saya tentang nilai-nilai kesetaraan gender</i>	4	3	3	4	4	3	4	4	4	4	4	4	4	4	4	4	4
11	<i>Buku cerita ini berkualitas baik</i>	4	3	4	3	3	4	4	4	4	4	4	4	4	4	4	3	4
12	<i>Buku ini memudahkan saya dalam memahami pentingnya kesetaraan</i>	4	3	3	4	3	3	4	4	4	4	4	4	3	4	4	4	4

	<i>gender terutama dalam dunia Pendidikan</i>																	
13	<i>Buku cerita ini membuat saya termotivasi untuk belajar tentang pentingnya kesetaraan gender</i>	4	3	3	4	4	4	4	4	4	4	4	4	4	4	3	4	4
14	<i>Desain cover buku cerita ini menarik dan membuat saya ingin membacanya halaman demi halaman</i>	4	3	3	4	3	4	4	4	4	4	4	4	4	4	2	4	4
15	<i>Ilustrasi yang digunakan pada buku cerita ini sangat menarik sehingga saya tertarik untuk membacanya</i>	4	3	4	4	4	4	4	4	4	4	4	4	4	4	3	4	4
16	<i>Variasi pemilihan warna dari segi tulisan, lay out, dan garis yang ada dalam buku ini menarik, sehingga membuat saya ingin membaca ceritanya dengan seksama</i>	4	3	3	4	4	4	4	4	4	4	4	4	4	4	2	4	4
17	<i>Ilustrasi yang disajikan dalam buku ini sangat menarik dan imajinatif</i>	4	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TOTAL SCORE : 1068																		

Table 5 : Students Assessment

Description :

- S₁ : Adwa Rafie Zulfadhli
- S₂ : Arfa Fatkhi Dama Firdausy
- S₃ : Brian Shaka August
- S₄ : Claudia Jasmine Rakasiwi
- S₅ : Ganendra Maheswara Hafizudin
- S₆ : Jocelyn Widya Kristanto
- S₇ : Kazuhiko Arkan Nasukha Setiaji
- S₈ : Kirana Pramudita Kamil
- S₉ : Pelangi Embun Kinanthi
- S₁₀ : Phyla Delphia Daniella Prayitno
- S₁₁ : Raffasya Auffa Tsaqif
- S₁₂ : Roro Pradnya Dewi
- S₁₃ : Shaka Aqila
- S₁₄ : Yesaya Gemilang Betarisa
- S₁₅ : Yudika Danish Naufal Khalfani
- S₁₆ : Humaira Izza Latifa
- S₁₇ : Muhammad Gibran Pradipta

From the data above, the assessment of the product got a good response. From a total of 289 questions, there were 287 assessments and positive responses from students, and there were two assessments and negative responses from students. Of the 287 positive assessments, each student gave a score of '4' and a score of '3' with the 'Very Agree' and 'Agree' categories. Then, two questions received a negative assessment and a negative response by giving a score of '2' with the 'Disagree' category. Researchers got negative assessments and responses on the motivational and visual aspects; there were students who felt less motivated to learn about gender equality and less interested in product design appearance.

3. Data Analysis

Data analysis in this research consisted in two kinds, namely the validation results of data analysis of experts and trial results in the form of student's responses. Data analysis technique have been described in the previous chapter.

a. Data Analysis of Expert Validation Result

From the calculation results of the overall aspects obtained as indicated in the table below. The acquisition of average obtained from the media expert 65 with a maximum score 68. In the second column is the acquisition from the material expert is 37 with maximum score 48. And the third is the average acquisition value of teachers 103 with maximum score 104. Thus the total overall average is 205 and maximum score is 220. Total acquisition then retrieved the calculation of a percentage of suitability of product is **93,18%**. Thus, it can be said that the product of English children storybook development got **"Very Good"** criteria with an **"A"** grade and worthy of being used as a reference for learning about gender equality values.

Experts	Average	Max. Score
Media Expert	65	68
Material Expert	37	48
Teacher	103	104
TOTAL	205	220
Percentage suitability of product = $\frac{205}{220} \times 100\% = 93,18\%$		

Table 6 : Percentage of Suitability of Product

However, despite the result of the calculated overall assessment indicating that the product is already good and usable, it must be developed through the stages of revision. According to the calculation results of each expert, researcher obtained a result that still needs revision. The calculation of the percentage of each validator, including media expert is 96% in the "Very Good" category with revision; the percentage of material expert assessments is 77% in the "Good" category with revision; and assessments from teacher is 99% in the "Very Good" category with revision. For more details, the percentage of each validator is shown in the chart below.

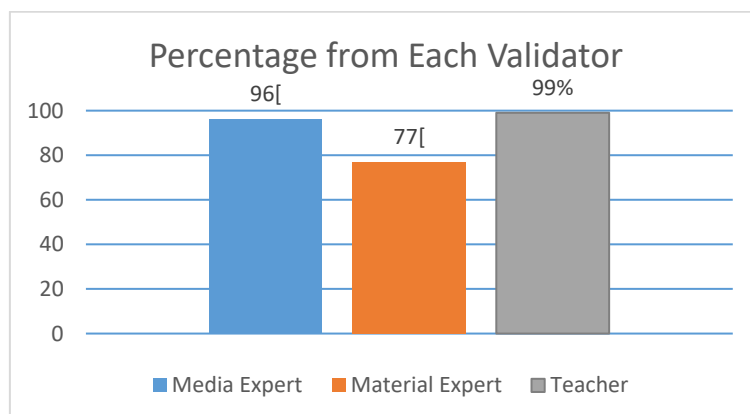


Figure 2 : Percentage from Each Validators

b. Data Analysis of Student's Responses

The percentage result retrieved from the data processing question form of students' responses. The subject consists of 17 students, each student got 17 questions with a maximum total score of 68. The results of the assessment provided by the students are listed in Table 7

SUBJECT	SCORE	MAX. SCORE
S ₁	65	68
S ₂	56	68
S ₃	64	68
S ₄	59	68
S ₅	60	68
S ₆	59	68
S ₇	66	68
S ₈	61	68
S ₉	63	68
S ₁₀	65	68
S ₁₁	64	68
S ₁₂	63	68
S ₁₃	65	68
S ₁₄	59	68
S ₁₅	62	68
S ₁₆	60	68
S ₁₇	67	68
TOTAL	1058	1156
Percentage of Students Responses : $\frac{1058}{1156} \times 100 \% = 91,52\%$		

Table 7: Data Analysis of Students Responses

The result of the assessment by S₁ is 65, S₂ is 56, S₃ is 64, S₄ is 59, S₅ is 60, S₆ is 59, S₇ is 66, S₈ is 61, S₉ is 63, S₁₀ is 65, S₁₁ is 64, S₁₂ is 63, S₁₃ is 65, S₁₄ is 59, S₁₅ is 62, S₁₆ is 60, and S₁₇ is 67 with each maximum score of 68. The score obtained is entirely 1058, and the maximum score is 1156. From the acquisition of the total score, the percentage from student responses and assessments is **91.52%**. It means that the students' responses and assessments towards the activities and learning in the product got a **"Very Good"** response with an **"A"** grade.

4. Product Revision

After the researchers got the assessments and suggestions from experts and teacher. Next, the researcher revised and improved the product based on the assessments and suggestions given by experts and teacher. In development stages, the researcher got several comments and suggestions from them. The comments and suggestions are presented in the table below.

No	Validator	Comments/Suggestions
1	Design Expert	<ul style="list-style-type: none"> - Gunakan font yang lebih bagus untuk bagian dialog - Cover dibuat lebih menarik lagi supaya terkesan elegan - Font cover dibuat lebih menarik lagi sebagai ikon atau karakter
2	Material Expert	<ul style="list-style-type: none"> - Alur penulisan sudah bagus tetapi redaksi bahasa antara Indonesia dan Inggris tidak berbanding sama - Masih ada sedikit kekurangan tentang penggunaan struktur kalimat dan penempatan tanda baca - Setelah disempurnakan, bisa dijadikan sebagai bahan pendukung untuk pembelajaran Bahasa Inggris anak
3	Teacher	Buku yang dibuat sangat menarik dan memotivasi siswa untuk memahami kesetaraan gender. Terdapat sedikit masukan untuk penulis, yaitu pada bagian judul buku dan judul per bab / per tema mungkin bisa dibuat lebih menarik lagi. Terimakasih sukses selalu.

Table 8 : Comments/Suggestions from Validators

Based on the suggestions from media expert, material expert, and teacher, the researcher revised the product in several aspects, mainly design aspects and content quality aspects. Then, the researchers also improved the display quality of the product to make it even more interesting and not bore all readers. Moreover, this product is prioritized for children, so the attractiveness of the design must be prioritized.

5. Final Product

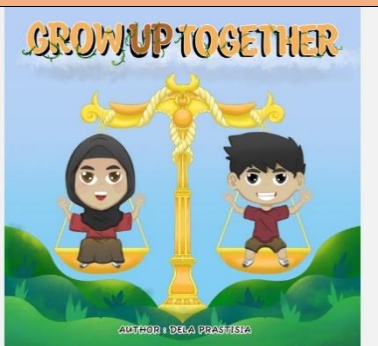
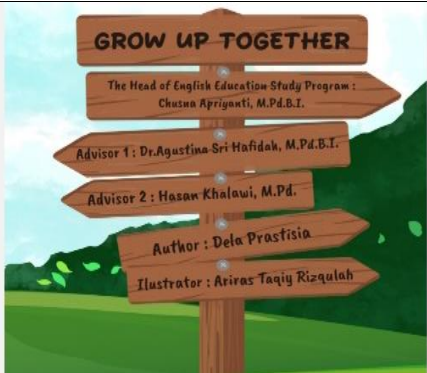
The final product is the result of the development of an English children's storybook. English children's storybooks are reading books for young learners. The English children's story book is entitled 'Grow Up Together,' which contains four different themes, and each theme teaches the values of gender equality to readers. The book 'Grow Up Together' used bilingualism (Indonesian and English) to make it easier for readers, especially for young learners. In addition,

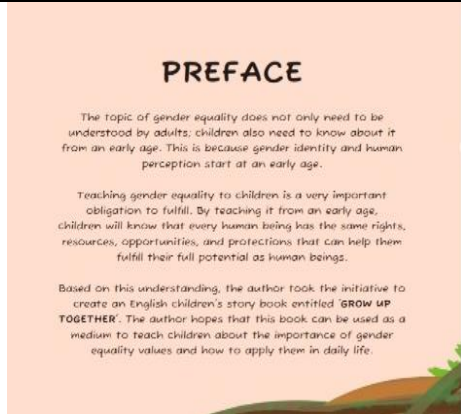
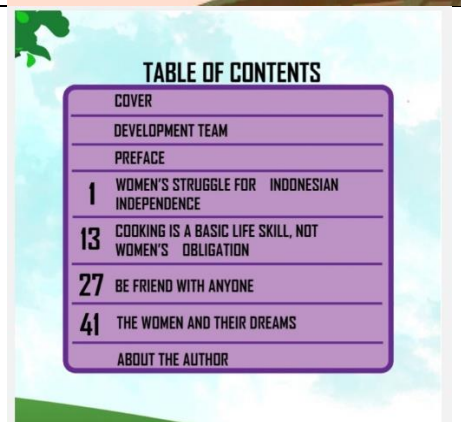

the messages about gender equality contained in the storybook can be conveyed properly and maximally.

The English children's storybook had several benefits, including :

1. As a medium for learning about gender equality, especially for young learners
2. It can be used as a reading book for young learners, which can improve the quality of good character
3. Helping young learners improve their imagination abilities
4. Increase the motivation of young learners to learn about gender equality and then apply it in daily life
5. Improving the ability to read English story books
6. And other good benefits

After going through several stages and getting corrections, suggestions, and comments from media experts, material experts, and English teachers, and having received assessments from students and getting the criteria of "**Very Good**", the English children's story book can be used as a reading book to increase understanding of the importance of learning and applying gender equality values, especially for young learners. Then, the final product overview is in the table below.

No.	Picture	Description
1		On the cover page, there is a description of the title and author's
2		Description of the development team from the "Grow Up Together" book

3	 <p>PREFACE</p> <p>The topic of gender equality does not only need to be understood by adults; children also need to know about it from an early age. This is because gender identity and human perception start at an early age.</p> <p>Teaching gender equality to children is a very important obligation to fulfill. By teaching it from an early age, children will know that every human being has the same rights, resources, opportunities, and protections that can help them fulfill their full potential as human beings.</p> <p>Based on this understanding, the author took the initiative to create an English children's story book entitled 'GROW UP TOGETHER'. The author hopes that this book can be used as a medium to teach children about the importance of gender equality values and how to apply them in daily life.</p>	The preface sheet contains a brief explanation of the reasons for writing the story book 'Grow Up Together'								
4	 <p>TABLE OF CONTENTS</p> <table> <tr><td>COVER</td></tr> <tr><td>DEVELOPMENT TEAM</td></tr> <tr><td>PREFACE</td></tr> <tr><td>1 WOMEN'S STRUGGLE FOR INDOONESIAN INDEPENDENCE</td></tr> <tr><td>13 COOKING IS A BASIC LIFE SKILL, NOT WOMEN'S OBLIGATION</td></tr> <tr><td>27 BE FRIEND WITH ANYONE</td></tr> <tr><td>41 THE WOMEN AND THEIR DREAMS</td></tr> <tr><td>ABOUT THE AUTHOR</td></tr> </table>	COVER	DEVELOPMENT TEAM	PREFACE	1 WOMEN'S STRUGGLE FOR INDOONESIAN INDEPENDENCE	13 COOKING IS A BASIC LIFE SKILL, NOT WOMEN'S OBLIGATION	27 BE FRIEND WITH ANYONE	41 THE WOMEN AND THEIR DREAMS	ABOUT THE AUTHOR	On the table of contents sheet, there are sections of the contents of the book and its pages
COVER										
DEVELOPMENT TEAM										
PREFACE										
1 WOMEN'S STRUGGLE FOR INDOONESIAN INDEPENDENCE										
13 COOKING IS A BASIC LIFE SKILL, NOT WOMEN'S OBLIGATION										
27 BE FRIEND WITH ANYONE										
41 THE WOMEN AND THEIR DREAMS										
ABOUT THE AUTHOR										
5	 <p>THEME 1 WOMEN'S STRUGGLE FOR INDOONESIAN INDEPENDENCE</p> <p>TEMA 1 PERJUANGAN PEREMPUAN UNTUK KEMERDEKAAN INDONESIA</p>	The contents of the book 'Grow Up Together' consist of four themes: women's struggle for Indonesian independence; cooking is a basic life skill, not a woman's obligation; be friend with anyone; the women and their dreams. Each theme begins with the title sheet of the theme.								

6	 <p>The image shows a circular portrait of a woman wearing a black hijab and glasses, smiling. Below the portrait is a decorative frame containing the text 'About the Author' and a paragraph about Dela Prastisia's background and interests.</p>	<p>The author's biodata sheet, which contains the biography of the author of the book 'Grow Up Together'</p>
7	 <p>The image shows the back cover of a storybook. It features a text box with a description of the book, its purpose, and its content. Below the text box is a colorful illustration of a landscape with green hills and a blue sky.</p>	<p>The back cover contains information and a brief description of the book 'Grow Up Together'</p>

Table 9 : Final Product Review

CONCLUSSION AND SUGGESTION

Based on the results of the stages of development, the quality of the products achieved a value of 93.18%. It can be concluded that the English children's story book meets the criteria of "Very Good," had good quality, is very suitable for use as reading material for young students, and can be used as a medium to learn about the importance of applying gender equality values in daily life. Further, this score was the result of accumulated scores at all stages of development. Further, the development's stages consist of five stages. The five stages are analysis, design, development, implementation, and evaluation.

The general result showed that total collected responses were 289 responses which consisted of 287 positive responses and 2 negative responses. All the responses were divided to be five aspects such as aspect of content, language, motivation, application, and visualization. The researcher got a value of 91.52% for the student response category, so it can be concluded that based on student assessments, the product got the criteria of "Very Good" and feasible to use.

Based on the conclusions above, the researcher draws some suggestions for the young learners, teachers, and other researchers as follows :

1. For young learners

- a. Learning about gender equality values should start at an early age, because an early age is a golden age and the right time to learn a lot of good knowledge, including about gender equality.
- b. Gender equality needs to be studied and applied because the output of gender equality is common welfare, both for girls and boys.
- c. Young learners can use the storybook 'Grow Up Together' as a medium for learning and promoting the importance of gender equality. Through this storybook, young learners can also socialize with their friends about the importance of gender equality.

2. For teachers :

- a. Teachers must use many innovations to teach their students about the importance of gender equality, perhaps by conducting regular or scheduled education and conceptualizing it in an interesting way so that students don't get bored easily.
- b. Teachers must be pioneers or examples for their students in applying the values of gender equality, especially in the school environment.
- c. Teachers must always motivate students to always apply the values of gender equality, especially in the school environment.
- d. Teachers can use this product as a medium to teach the values of gender equality to students in a fun way.

3. For other researcher

- a. Other researchers can use this product as a reference or stimulant in developing learning media or reading books that aimed to increase students' understanding of gender equality.
- b. The researcher suggests to the next researcher to develop learning media or reading books about gender equality with a more interesting and better concept.

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Grammar Instruction in Communicative Language Teaching Classrooms: Students Teachers' Perceptions

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Abstract

This study aimed to investigate the perceptions of teachers and students regarding grammar instruction in communicative language teaching (CLT) classrooms. The participants in this research were two instructors and four students from an Islamic junior high school (Madrasah). A case study approach was utilized to examine the perceptions of teachers and students in the context of grammar instruction in communicative language teaching classrooms. Data were collected through interviews and analyzed using thematic analysis. The findings revealed five key indicators of the students' and teachers' perceptions: 1) Grammar was recognized as an essential element for improving English skills; 2) Classroom activities were employed to enhance communicative language activities; 3) Error correction was considered a means to help students master the materials; 4) In CLT classrooms, teachers acted as motivators and facilitators to address students' needs; 5) Students were encouraged to actively participate in the learning process. These findings contribute to a deeper understanding of the perceptions and attitudes towards grammar instruction within the communicative language teaching framework, offering valuable insights for educators and curriculum developers

Keywords: *grammar instruction, communicative language teaching, perceptions,*

INTRODUCTION

Language mirrors nations and carries a profound metaphor. Deepening our understanding of the connection between language, attitudes, and behaviors among speaker groups can enrich our wisdom. Moreover, language structure encompasses its system and framework of meaning (Rabiah, 2020). Every dialect possesses its distinctive usage, and individuals who speak the same dialect can effortlessly communicate due to their inherent comprehension of the grammatical structure. This structure is composed of rules that convey meaning (Adhelia & Triastuti, 2023). According to (Fitrawati et al., 2023; Sumardi & Muamaroh, 2020), In the absence of grammar, language descends into chaos, making it challenging to grasp and comprehend without a solid grasp of this essential system. Therefore, it is impossible to effectively learn grammar without following structural rules. Grammar plays a crucial role in the study of language, aiming to enable English users to express their thoughts accurately both orally and in writing. Statement by (Charbel & Nour, 2018; Rombot et al., 2020; Saini et al., 2021; Yuliantini, 2021) demonstrates that The significance of grammar in language instruction is undeniable, as it is an integral and inseparable element. As a result, instructors integrate communicative activities into teaching grammar knowledge. Consequently, when teaching English as a foreign language, it is crucial to consider not only how learners acquire grammatical competence but also how they learn to communicate, ultimately developing their communication competence.

In the context of teaching English grammar as a foreign language, various methods and approaches have been employed to enhance learners' competence. (Setiyadi et al., 2019; Tahrur et al., 2017; Wahyuni & Arieffiani, 2022; Yuliani & Barokah, 2017) stated summarize approaches that significantly impact grammar instruction, including the Grammar-Translation Strategy,

Direct Strategy, Audio-Lingual Strategy, Cognitive Approach, Natural Approach, and Communicative Approach.

According to (Arifin et al., 2023; Gumartifa et al., 2022; Sulastris et al., 2022), Among the various approaches, the Communicative Approach stands out as the most meaningful, aiming to foster communicative competence by incorporating discourse, sentence construction, and verb tenses. It is a teaching methodology that encompasses diverse language uses and functions, differentiating between formal and informal oral and written expressions.

Based on the aforementioned statements, it can be concluded that grammar should be taught in communicative ways that focus on developing language skills. Utilizing the Communicative Approach in teaching grammar in second-language classrooms is an effort to shift students' attitudes toward language learning and positively influence their learning process. Placing emphasis on grammatical mistakes and fear of making grammar errors has a negative impact on students. These findings align with a study conducted by (Baharuddin et al., 2021; Hadijah et al., 2020; Sulastris et al., 2022), The findings indicated that students experience boredom during English grammar lessons due to the confusing nature of the subject matter, which hinders their ability to memorize effectively.

Additionally, (Aniuranti et al., 2021; Firdaus & Mayasari, 2022) The proposal put forth a national syllabus that placed less emphasis on grammar structure and instead prioritized learners' interpersonal interaction. This indicates that the core of the Communicative Approach lies in language learning through communication, rather than the mechanical presentation of grammatical forms.

The use of the Communicative Approach in teaching grammar in second-language classrooms serves as a means of changing students' attitudes toward language learning and positively impacting their learning process. Moreover, Samad (2016) Outline the fundamental principles of the Communicative Approach, which encompass the principal objective of fostering communicative competence. These principles encompass utilizing authentic materials to promote language use, embracing a trial-and-error learning approach, engaging in collaborative work within pairs and small groups, recognizing that grammar is best acquired through communication, assigning teachers as facilitators and monitors, and empowering students as negotiators who assume accountability for their own learning and comprehension throughout the communication process.

From the aforementioned explanation, it can be concluded that using the Communicative Approach provides students with opportunities for repetition, accuracy, and memorization of grammar patterns, but it also requires students to organize meaning and interact authentically in real-life contexts. Additionally, teachers should design activities in the Communicative Approach classroom that facilitate effective language learning. The shift from teacher-centered to student-centered teaching culture brought about by the Communicative Approach has also influenced the concept of how to teach grammar. Ilmudinulloh (2022) Within Communicative Language Teaching (CLT), there are two main approaches to teaching grammar: the shallow-end approach and the deep-end approach. The shallow-end approach employs an inductive teaching method known as consciousness-raising, where grammar is taught explicitly. In contrast, the deep-end approach emphasizes the implicit learning of grammar within communicative contexts, without direct instruction. Hence, teaching grammar in a communicative manner enables students to become acquainted with language rules and patterns, either consciously or unconsciously, by attending to their individual needs.

The specific approach chosen by teachers, whether explicit or implicit, depends on their perceptions and knowledge. Some teachers believe that explicit grammar instruction is beneficial in a CLT classroom, while others may not find it effective. Teachers' beliefs and experiences influence their grammar teaching practices. Similarly, according to (Haryanto, 2016; Mali, 2016), Teachers' perceptions are constructed through a complex interplay of their unique

experiences, perspectives, and understanding of a subject matter. These perceptions are not static but evolve over time as educators engage in various teaching practices, reflect on their classroom experiences, and interact with students. Teachers' past encounters, such as their own education, professional development, and interactions with colleagues, play a crucial role in shaping their perceptions. Moreover, teachers' beliefs, values, and personal ideologies also contribute to their perception formation. These internal factors influence how teachers interpret and make sense of the information they receive, guiding their decision-making processes and instructional approaches. For instance, a teacher who values student-centered learning may have a different perception of effective teaching strategies compared to a teacher who prioritizes discipline and adherence to traditional methods.

METHOD

In this research, qualitative research was employed. Qualitative research focuses on understanding complex phenomena and exploring the meanings attributed to them (Fraenkel et al., 2012; Sugiyono, 2015). In the specific context of this study, the population consists of teachers and students from the "MA Ahlul Qur'an" in Palembang. The total sample size includes 70 students and 2 teachers.

Qualitative research is a type of research that aims to understand complex phenomena and study the meanings contained within them. This method centers on collecting data in the form of texts, images, sounds, or other non-numerical materials, and analyzing the data in a descriptive, interpretive, and contextual manner. Data collection in qualitative research is conducted through various techniques, such as in-depth interviews, participant observation, case studies, content analysis, or narrative analysis. Researchers diligently record and document the data, and then analyze it through processes of categorization, thematization, and the identification of emerging patterns or themes.

Data analysis in qualitative research entails interpretation, description, and the construction of meaning from the collected data. Researchers identify patterns, trends, or relationships that emerge from the data and describe and explain these findings in a narrative manner. Additionally, researchers also consider the social, cultural, or historical contexts that influence the phenomena being studied.

RESULTS AND DISCUSSION

Results

The data gathered from interviews underwent a thorough analysis using topical examination. The results were then described as follows:

Teachers' Perceptions

The discussion on teachers' perceptions regarding "The importance of grammar, Classroom activities, Quality and quantity of error Correction, The role of teacher in classroom" is as follows:

1. The importance of grammar: Teachers have different perceptions about the importance of grammar in the learning process. Some teachers may believe that grammar plays a crucial role as the foundation of effective communication. They may emphasize systematic and consistent grammar instruction to help students understand language structures effectively. However, there are also teachers who adopt a more flexible approach, considering grammar as a tool where understanding context and using language in real-life situations are prioritized.
2. Classroom activities: Teachers' perceptions of classroom activities can vary. Some teachers may view them as essential for engaging students and promoting active learning. They may design a variety of activities such as group work, discussions, projects, or hands-on exercises

to enhance students' participation and understanding. Other teachers may focus more on traditional teaching methods, relying heavily on lectures and textbook-based activities.

3. Quality and quantity of error correction: Teachers' perceptions regarding error correction in student work can differ. Some teachers may prioritize accuracy and pay close attention to correcting every mistake to ensure students develop good language habits. They may provide detailed feedback and offer opportunities for students to revise their work. On the other hand, some teachers may adopt a more holistic approach, considering the balance between error correction and encouraging students' creativity and fluency in language use.
4. The role of the teacher in the classroom: Teachers' perceptions of their role in the classroom can vary widely. Some teachers may see themselves as facilitators, guiding students' learning and fostering a student-centered environment. They may encourage active participation, critical thinking, and independent learning. Other teachers may adopt a more authoritative role, where they are primarily responsible for knowledge transmission and classroom management.

It is important to note that teachers' perceptions can be influenced by their educational background, teaching experience, cultural factors, and personal teaching philosophies. Creating a supportive environment for open discussions and professional development can help teachers explore and refine their perceptions, leading to effective teaching practices.

The Students' Perception

The discussion on students' perceptions regarding "The importance of grammar, Classroom activities, Quality and quantity of error Correction, The role of teacher in classroom" is as follows:

1. The importance of grammar: Students' perceptions of the importance of grammar may vary. Some students may recognize grammar as a fundamental aspect of language learning, understanding its role in effective communication and clear expression of ideas. They may value grammar instruction as it helps them construct grammatically accurate sentences and enhances their overall language proficiency. However, there may be students who view grammar as tedious or less important compared to other aspects of language learning, such as vocabulary or fluency.
2. Classroom activities: Students' perceptions of classroom activities can differ based on their learning preferences and experiences. Some students may appreciate interactive and engaging activities that promote active participation, collaboration, and hands-on learning. They may find such activities more enjoyable and effective in acquiring and applying knowledge. On the other hand, some students may prefer more traditional instructional methods or independent study, depending on their individual learning styles and preferences.
3. Quality and quantity of error correction: Students' perceptions of error correction may vary. Some students may value detailed error correction and feedback from their teachers, considering it essential for improving their language skills. They may see it as an opportunity to learn from their mistakes and enhance their accuracy in language use. Conversely, some students may find excessive error correction discouraging or demotivating, preferring a more balanced approach that focuses on both error correction and providing positive reinforcement for their efforts.
4. The role of the teacher in the classroom: Students' perceptions of the teacher's role in the classroom can differ. Some students may view the teacher as a knowledgeable authority figure who guides and facilitates their learning process. They may appreciate teachers who create a supportive and stimulating classroom environment, provide clear explanations, and offer guidance when needed. However, other students may have a more independent

perspective, where they prefer a teacher who acts as a facilitator, allowing them to take more responsibility for their own learning and providing guidance as needed.

It is crucial for educators to consider students' perceptions and incorporate them into instructional strategies. By understanding their perspectives, teachers can tailor their approaches to meet students' needs, engage them effectively, and create a positive and inclusive learning environment. Additionally, providing opportunities for students to express their opinions and preferences can empower them and contribute to their overall learning experience.

Discussion

Teachers' and students' perceptions regarding the importance of grammar, classroom activities, quality and quantity of error correction, and the role of the teacher in the classroom play a crucial role in shaping the teaching and learning process. These perceptions can significantly impact instructional strategies, student engagement, and learning outcomes, making it essential to understand and address them.

Teachers' perceptions of grammar vary widely, ranging from considering it as a fundamental element for effective communication to adopting a more flexible approach that emphasizes contextual understanding. Some teachers view grammar as a central focus and prioritize explicit instruction, while others see it as an integrated aspect of language use and emphasize its natural acquisition through meaningful communication. These differing perspectives influence the selection of instructional materials, lesson planning, and assessment methods.

Classroom activities also elicit diverse perceptions among teachers. Some educators value interactive and engaging activities that promote active student participation, collaboration, and critical thinking. They may incorporate group discussions, project-based learning, and real-life communication tasks to enhance students' language skills. On the other hand, some teachers rely on more traditional teaching methods, such as lectures, drills, and textbook exercises, believing they provide a structured and disciplined approach to learning. Regarding error correction, teachers' perceptions encompass a wide range of approaches. Some teachers prioritize accuracy and provide detailed feedback to help students correct errors and improve their language proficiency. They believe in addressing errors promptly and explicitly, focusing on precise grammar and language use. In contrast, other teachers adopt a more holistic approach, balancing error correction with promoting creativity, fluency, and risk-taking. They may view errors as valuable opportunities for learning, emphasizing overall communication effectiveness rather than strict adherence to grammatical rules.

The role of the teacher in the classroom is another aspect influenced by varying perceptions. Some teachers see themselves as facilitators of learning, creating a student-centered environment where students take an active role in their learning process. They foster autonomy, critical thinking, and self-directed learning, guiding students through inquiry-based activities and providing guidance when needed. Conversely, other teachers may adopt a more authoritative role, maintaining control over the classroom environment, and delivering knowledge through direct instruction.

Students' perceptions of grammar also differ. While some students recognize the importance of grammar in language learning and view it as essential for clear communication, others may find it tedious or less important compared to other aspects, such as vocabulary or fluency. These perceptions can influence their level of engagement, motivation, and effort in learning grammar.

Similarly, students have varied perceptions of classroom activities. Some students appreciate interactive and engaging activities that promote active participation, collaboration, and practical application of language skills. They enjoy tasks that are relevant, interesting, and

connect with their real-life experiences. Conversely, other students may prefer more traditional or independent study methods, seeking a structured learning environment or relying on individual work.

In terms of error correction, students' perceptions also vary. Some students value detailed feedback as an opportunity for improvement and appreciate corrections that help them enhance their language accuracy. They view error correction as a valuable guidance tool. However, excessive error correction may discourage some students, leading to decreased confidence and motivation.

The role of the teacher in the classroom is perceived differently by students as well. Some students value the teacher as a knowledgeable guide who provides expertise, support, and guidance throughout their learning journey. They appreciate clear explanations, constructive feedback, and a nurturing learning environment. On the other hand, other students may prefer a more independent learning approach, where they have greater autonomy and take responsibility for their own learning.

To ensure effective teaching and learning, educators must take into account these varying perceptions. By understanding and incorporating teachers' and students' perceptions, teachers can create a supportive and inclusive learning environment that meets the diverse needs of their students. Open discussions, professional development opportunities, and reflective practices can further help refine and improve teachers' and students' perceptions, leading to more effective teaching practices and meaningful learning experiences. It is crucial for teachers to engage in open dialogues with students, allowing them to voice their perspectives and concerns, and involving them in the decision-making process. By actively listening to students and valuing their opinions, teachers can create a classroom environment that fosters mutual respect, collaboration, and active engagement in the learning process.

Furthermore, ongoing professional development opportunities can help teachers expand their understanding of different perspectives and pedagogical approaches. Workshops, conferences, and collaborative discussions with colleagues can provide valuable insights and new strategies for addressing diverse perceptions in the classroom. By continuously refining their teaching practices based on the latest research and feedback from students and peers, educators can ensure that their instructional methods remain relevant, engaging, and effective.

In conclusion, teachers' and students' perceptions greatly influence the teaching and learning process, shaping instructional strategies, student engagement, and learning outcomes. Recognizing and addressing these perceptions is essential for creating a supportive and inclusive learning environment that meets the needs of all students. By actively involving students, engaging in professional development, and promoting open discussions, teachers can adapt their teaching approaches to align with diverse perceptions, leading to more effective teaching practices and meaningful learning experiences.

CONCLUSION

In conclusion, teachers' and students' perceptions regarding the importance of grammar, classroom activities, quality and quantity of error correction, and the role of the teacher in the classroom vary significantly. Teachers have diverse views on these aspects, influenced by their educational background, teaching experience, cultural factors, and personal philosophies. Similarly, students' perceptions are shaped by their learning preferences and experiences. It is essential for educators to consider and incorporate these perceptions into instructional strategies to create a positive and inclusive learning environment. Open discussions and professional development can aid in refining these perceptions and improving teaching practices for better learning outcomes.

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The Teacher's Obstacles in Implementing The *Merdeka* Curriculum in Teaching English at Primary Schools in Pacitan

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Abstract

The research aims to identify the obstacles faced in implementing the Merdeka curriculum. The qualitative analysis method was used with a descriptive qualitative design approach. The data were collected through an open-ended questionnaire and documentation. Thirty-five teachers from sixteen elementary schools in Pacitan were asked to fill out a questionnaire regarding the obstacles they had faced in implementing the Merdeka Curriculum. The questionnaire showed that implementing the Merdeka Curriculum posed challenges for many teachers. These challenges were as follows: 1) the unavailability of English teachers. From the data obtained, 60% of elementary schools did not have English teachers. In comparison, only 40% had them, 2) increased teacher workload, 3) lack of teacher competence, 4) students' lagging English language proficiency, and 5) inadequate facilities. As a result, implementing the Merdeka Curriculum in English language learning at the Elementary School level was generally carried out but was not yet optimal.

Keywords: Teacher's obstacles, Implementation of Merdeka Curriculum, Teaching English

INTRODUCTION

Education is crucial in preparing human resources to face the highly complex challenges and compete in the 21st century. Therefore, graduates must have high competitiveness to succeed in this competition. Language plays a central role in students' intellectual, social, and emotional development and is a crucial determinant of success in all fields of study. Language dramatically influences one's thinking process, serving as the primary tool for thinking. In the face of dynamically evolving challenges in the 21st century, teaching English is essential as it deals with the global market (Gavran, 2013). Proficiency in English as a foreign language for students cannot be denied as it has become a vital means of communication in the global arena. English is often used in official touch by many countries worldwide and is widely utilized. Almost every country in the world uses English when communicating. Therefore, as time progresses, the government and educators are united in realizing a generation that can master international language effectively and correctly.

In Indonesia, foreign language learning has a long history. During the colonial period, foreign languages such as Dutch, English, and German were taught in specific schools, particularly to nobility and Dutch children. This practice created a high social difference or respect among the native population during the Dutch colonial era, which has continued until today. However, as time has progressed, foreign language teaching is no longer exclusive as anyone can now quickly learn it, and even English has started to be introduced to children at an early age. By learning English at an early age, it was believed that children would have basic English language skills. In other words, children would master essential English grammar useful for their future education while pursuing higher studies.

Young learners' positive development begins in Elementary School, as this is their golden age. Teaching in Elementary Schools poses challenges for teachers. Young learners' characteristics differ from adult learners (Rolandas, 2018). They are active, quickly bored, have

difficulty distinguishing things, have a low level of concentration, and enjoy playing in learning. Young learners have their learning world within the classroom. Therefore, support from competent teachers is crucial to achieving optimal results, as teachers are the most essential element in the teaching and learning process in the classroom.

Several supporting factors need to be considered to organize quality teaching programs, such as institutions, teachers, teaching processes, and students. Among these factors, the role of teachers is crucial in the teaching process (Aivazidi & Michalakelis, 2021). Teachers are the most critical factor in determining the success of the teaching and learning process. A teacher must be able to implement teaching while considering the students' quality. Moreover, a teacher must have professional and pedagogical competencies in teaching English in Elementary School. Professional competencies include mastery of the English language, licensing, and teaching training, while pedagogical competencies are related to the ability to teach young learners (Lungu, 2015).

In line with the importance of teacher competence in teaching and learning activities, Ashadi & Rice (2016) suggest that the quality of teachers in a country affects the average income of that country. Therefore, teachers must be able to face the evolving challenges of teaching and learning, considering the changes in the education system that occur in each period. The *Merdeka Curriculum* is a follow-up to the refinement of the previous 2013 curriculum. The *Merdeka Curriculum* aims to improve and address learning loss due to the COVID-19 pandemic. The *Merdeka Curriculum*, previously known as the prototype curriculum, is a more flexible curriculum framework that focuses on essential content and the development of student's character and competencies. It has a project-based approach to developing soft skills and character following the Pancasila learner profile (Kemendikbudristek, 2022).

The new curriculum not only underwent a name change but also its structures. These changes include many things, such as how the curriculum is structured, the training objectives to be achieved, the cycle of educating, learning, and assessment, and how the education program will prepare students for entry (Kasman & Lubis, 2022). The lesson plan is one of the reforms that need to be considered in the *Merdeka Curriculum*. Currently, lesson plans have been provided by the government and give teachers the freedom to use them, change them, or create new modules according to student characteristics and needs, including elements of the Pancasila Learner profile. In addition, the lesson plans for the previous curriculum had too many components and required teachers to study each section, which included an additional five pages of lesson plans. In *Merdeka Curriculum*, teachers can only concentrate on three main elements: teaching and learning objectives, process learning, and assessment. These components complement each other and can be condensed into one page of lesson plans (Marliana, 2021).

Therefore, teachers need to have a deep and comprehensive understanding of the concept of the *Merdeka Curriculum*. They need to change their thinking regarding reforms in this curriculum to understand well what the *Merdeka Curriculum* is and how the system works. In addition, it is necessary to consider the teachers' desire to innovate and develop themselves in the face of changes in the curriculum. Suppose a teacher is unwilling to make changes and cannot apply the principles contained in this curriculum. In that case, the expected educational goals will not be fully achieved.

The *Merdeka Curriculum* has been implemented in various educational institutions, especially at the Elementary School level in Pacitan. However, in reality, teachers have not been able to create a curriculum-based learning process. This statement is made by the researcher based on observation results, indicating that the interest and ability of Elementary School students to receive English language learning are still low. This creates a gap between expectations and reality. Several issues are found in English language learning, such as teachers feeling rigid with implementing the *Merdeka Curriculum* and teachers lacking specific training

for the *Merdeka* Curriculum. Additionally, students perceive English as a complex subject to understand, as it is crucial for them to learn English. As a result, productive, creative, and innovative students have not yet been fostered in every teaching and learning activity in the classroom.

Previous research has been conducted on the constraints of English teachers in implementing the new curriculum. Sundayana (2015) has researched implementing the 2013 curriculum as a new curriculum related to teachers' understanding, ability, and confidence in preparing lesson plans based on the principles of syllabus development. The study showed that most of the time, the teachers lacked understanding or did not understand the basics of the curriculum, making it challenging to use it effectively in the classroom. Therefore, further research needs to be conducted on teachers' attitudes, motivation, confidence, and commitment to implementing the 2013 curriculum.

Hence, studies related to research on the teachers' constraints in implementing the new curriculum (*Merdeka* Curriculum) are essential to determine strategies or elements that need to be strengthened, especially for English language teaching in Pacitan. From the above analysis, the researcher is interested in investigating "The teacher's obstacles in implementing the *Merdeka* Curriculum in teaching English at Primary Schools in Pacitan."

METHOD

The research article used a qualitative research design. According to Creswell (2018), qualitative research investigates understanding based on methodological traditions that explore social and human problems. In line with this statement, Huberman & Miles (2014) state that qualitative research is carried out through intense contact with participants in naturalistic settings to investigate the daily life of individuals, groups, and organizations. This descriptive qualitative research aimed to describe the phenomenon of information obtained from conditions based on observation so that later the researcher could describe it naturally and objectively.

The object of this research was some teachers chosen from Elementary Schools in Pacitan. The sample is part of the number of characteristics possessed by the population. Arikunto (2018) states that the sample is part or representative of the population studied. In this study, the researcher used purposive sampling. The researcher used purposive sampling because the researcher has determined sampling by determining specific characteristics that follow the research objectives. Thirty-five respondents from sixteen Elementary Schools in Pacitan voluntarily acknowledged the teaching of English in the *Merdeka* Curriculum. This research focused on the teachers' obstacles in implementing the *Merdeka* Curriculum in teaching English at Primary Schools in Pacitan.

The data were taken from March 20 to May 8, 2023. The data were collected by questionnaire and documentation. The questionnaire consisted of 5 questions in the form of open-ended and four questions in the form of closed-ended. The questionnaire was conducted due to the distant location of the schools. The steps in collecting data consisted of 1) processing and preparing the data for analysis, 2) reading the entire data, 3) coding the data, 4) applying the coding process to describe the setting, 5) presenting the data description in narrative form, and then 6) interpreting the data.

RESULTS

The data of this study were gathered through a questionnaire, with a total of 35 respondents from multiple schools, revealing various new pieces of information or data regarding the challenges experienced by teachers when teaching English at the elementary school level. The significant findings in this qualitative study were classified based on the

research questions and the intended research objectives. The researcher drew the research results of the questionnaire analysis as follows:

1. Teaching English in Primary Schools

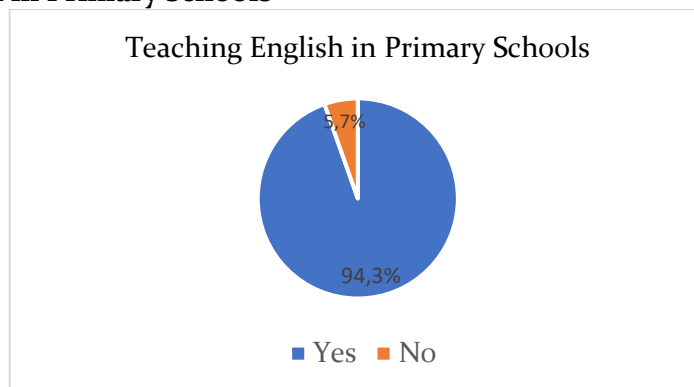


Figure 1. Teaching English in Primary Schools

Based on the data from a questionnaire on implementing the *Merdeka* Curriculum in teaching English from 35 teacher respondents at the elementary school level, specifically in Pacitan, not all fully implemented the *Merdeka* Curriculum in teaching English. Of the 35 respondents, 32 (94.3%) stated that they had implemented English language teaching, while the remaining 3 (5.7%) had not implemented it yet.

2. Availability of English Teachers

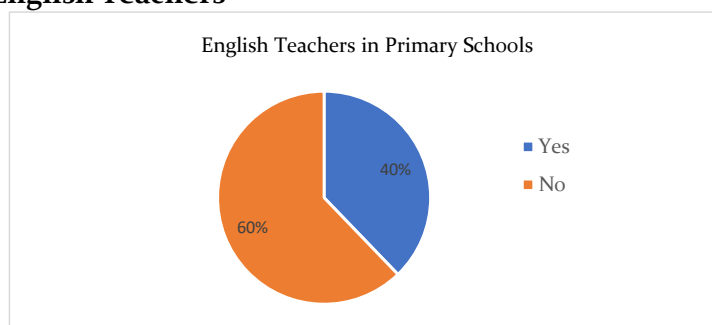


Figure 3. Availability of English Teachers

Based on the data from the open-ended questionnaire regarding the availability of English teachers at the elementary school level in Pacitan, 60% indicated that there were no special English teachers. In comparison, the remaining 40% reported the presence of English teachers. The data showed that most elementary schools did not have special English teachers, with regular classroom teachers tasked with teaching English in their respective schools.

The unavailability of English teachers in Elementary Schools creates new obstacles in the implementation of the *Merdeka* Curriculum, including the following: increased workload for teachers, lack of teacher competence, students' lagging English language proficiency, and inadequate facilities. The challenges above indicated that teaching young learners was not easy. The changes in the education system required educators to have high-level thinking abilities, as they had to be prepared to face various challenges in the field of education. The introduction of the *Merdeka* Curriculum made the English language a permanent subject at the elementary school level. The lack of preparation from schools could hinder teaching English effectively to students.

DISCUSSION

The teacher's obstacles in implementing the *Merdeka* Curriculum in teaching English at Primary Schools in Pacitan were generally carried out but did not reach their full potential. The *Merdeka* Curriculum became a transformative policy in education, bringing about various changes that teachers experienced. These changes presented teachers with multiple challenges that needed to be addressed effectively. One of the challenges was English language learning at the elementary school level, where English was previously taught as local content but became a core subject. Based on the research data, the researcher found various challenges experienced by teachers, including:

1. Unavailability of English Teachers

Another challenge was experienced by several primary schools that offered English language instruction: the unavailability of specialized English language teachers. Based on data from research findings, respondents expressed their concerns regarding this issue. "*Kendala yang dihadapi karena tidak ada guru khusus bahasa Inggris, jadi untuk pelajaran Bahasa Inggris dipegang guru kelas*". The statement indicated that teachers did not meet the standard competence in teaching English during its implementation. The abilities and skills of teachers who taught English in elementary schools were considered low. In particular, classroom teachers tasked with teaching English in their respective schools fell short of meeting qualifications and language competence expectations. Those lacking teaching abilities in English Education taught as they were without appropriate packaging that aligned with the language development of elementary school students.

2. Increasing Teachers' Workload

The implementation of the *Merdeka* Curriculum, unfortunately, led to a negative perception among educators, as expressed by the respondents in response to questions regarding the challenges experienced while implementing English language learning in the classroom. "*Menambah beban guru*". It was evident from the sentence that teachers felt burdened by the changes in the education system, particularly the mandatory teaching of English starting from the elementary school level.

The emergence of this issue was undoubtedly influenced by the qualifications of teachers in teaching English at the elementary school level. Teachers may have felt worried and lacked confidence in delivering topics due to their inadequate educational background. Respondents who conducted English language teaching lacked qualifications in English education and had never undergone English language training or courses. This led to suboptimal learning outcomes. Naturally, teachers like this encountered problems in teaching because they were unaware of the characteristics of language instruction. It was an English teacher in elementary school who required proficiency in English or at least had undergone student teaching training. This way, teachers could indirectly improve their teaching abilities. The role of teachers in understanding children's learning habits in foreign languages is crucial. Therefore, the government, schools, and society needed to enhance their attention to the qualifications of English teachers in elementary schools.

3. Lack of Teacher Competence

The importance of teacher competence in carrying out teaching and learning activities was one of the factors that contributed to student learning success. Without the necessary competence, the learning process did not proceed smoothly. As expressed by the respondents in response to questions regarding the challenges faced while implementing English language learning based on the *Merdeka* Curriculum. "*Mungkin memang standar pendidikan, perkembangan teknologi informasi, dan ilmu pengetahuan yang berkembang sangat cepat. Guru generasi lama seperti saya sudah tidak relevan dengan pendidikan sekarang*". It was indeed true based on the statement above. Older generation teachers found it increasingly challenging to keep up with the ever-evolving modern era. The implementation of the *Merdeka* Curriculum

required teachers to have the ability to adapt quickly. *“Pelajaran Bahasa Inggris disetiap kelas ada, tapi sangat jarang diajarkan”*. The added statements by the respondents proved that the learning process did not run smoothly without the necessary teacher competence. Although the school had implemented the *Merdeka Curriculum*, its implementation in the classroom was still lacking.

In line with the importance of teacher competence in teaching and learning activities, Ashadi and Rice (2016) suggest that the quality of teachers in a country affects the average income of that country. Therefore, teachers must be able to face the evolving challenges of teaching and learning. The teachers were capable of designing lesson plans before conducting teaching activities in the classroom. This aimed to ensure the structured implementation of the learning process. Additionally, changes were needed in organizing the classroom, teaching methods, instructional strategies, as well as the attitude and characteristics of the teacher in managing the teaching and learning process. Teachers were facilitators and managers of the teaching and learning process, striving to create an effective learning environment. To meet the required competence standards, it was recommended that teachers participate in various training programs on student teaching. By acquiring these skills and knowledge, they could improve their students' learning quality and enhance their teaching effectiveness.

4. Students Lag in English Language Proficiency

Based on the data from research findings, teachers experienced numerous challenges in teaching English to elementary school students. Implementing the new curriculum made English a compulsory subject to be taught from an early age. Naturally, this posed a significant challenge for educators to start English language instruction anew. *“Harus memulai dari awal karena Kurikulum sebelumnya tidak ada mata pelajaran Bahasa Inggris”*. Before implementing the *Merdeka Curriculum*, English language learning was not included at the elementary school level. However, at present, the English language subject was reintroduced into the world of children. Consequently, educators had to start introducing foreign languages to the learners again. Many students did not yet understand the English language materials in its implementation. *“Sulitnya siswa dalam mengingat dan memahami materi yang diajarkan, sehingga guru harus lebih sering melakukan pengulangan materi supaya siswa ingat dan paham kembali”*.

The other respondents also expressed that: *“Materi Bahasa Inggris yang terdapat di kurikulum terbilang sulit untuk anak usia sekolah dasar khususnya kelas 1”*. In practice, the *Merdeka Curriculum*, some teachers encountered difficulties in teaching English. They hoped the learning process could create an enjoyable atmosphere for the students. However, the teachers found it challenging to fulfill this expectation. Teaching a foreign language, which was crucial for children, presented challenges for educators to provide understanding to their students. For instance, many students struggled with reading, pronouncing English vocabulary, translating, and memorizing. Consequently, these challenges led to a lack of interest among students in learning English. Therefore, additional support was needed to teach young learners effectively.

5. Inadequate Facilities

Based on the data from research findings, it was found that one of the challenges experienced by teachers in implementing their teaching was the lack of adequate facilities. *“Kendala yang kami alami yaitu peserta didik kurang fokus pada saat guru menerangkan kelas kurang kondusif, karena media pembelajaran yang disediakan sekolah kurang menarik bagi peserta didik”*. The statement indicated that instructional media was one of the critical factors in the teaching and learning process. Teachers needed to prepare instructional media to enhance the learning experience indirectly. However, children would have felt more engaged if attractive learning media had been incorporated into the learning process. The school was

responsible for providing optimal teaching by ensuring sufficient facilities to enhance the quality of teaching and learning.

Based on the results of the research conducted by Tiruneh (2020), it was shown that infrastructure facilities directly impacted the success of implementing the 2013 curriculum. It was expected that schools had the complete infrastructure to assist teachers and students with the available facilities, such as teacher and student handbooks, learning media, suitable buildings, various types of resources, and other school facilities. The completeness of facilities and infrastructure could enhance the motivation of teachers and students. The lack of infrastructure would result in a decrease in students' learning abilities.

CONCLUSION

The *Merdeka* Curriculum was widely implemented in various educational institutions, especially at the primary school level. Since implementing the *Merdeka* Curriculum, many changes have been made in the education system. English language teaching, which had been eliminated, was reintroduced at the primary school level. The *Merdeka* Curriculum offered options for the English language subject, which could be implemented from grade one to grade six based on the readiness of each educational institution. The freedom in its implementation resulted in differences in teaching English in the classroom among schools.

In practice, the implementation of the *Merdeka* Curriculum faced many challenges, including the unavailability of English teachers in schools, teachers feeling overwhelmed, a lack of teacher competence in teaching due to not meeting the teaching qualification standards for English, students lagging in English language materials, requiring extra support to achieve student success, and insufficient facilities. Providing adequate facilities is crucial to ensure higher-quality teaching and learning activities. Implementing the *Merdeka* Curriculum in teaching English at the primary school level in Pacitan was generally carried out but did not reach its full potential.

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Examining the Use of Technology in English Language Teaching: A Constructivist Perspective

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Abstract

This study examines the use of technology in English language teaching from a constructivist perspective. The aim of this research is to investigate how technology integration aligns with constructivist principles in enhancing language learning outcomes. The study explores the benefits, challenges, and pedagogical implications of incorporating technology in English language classrooms. Data were collected through classroom observations, interviews with teachers, and surveys with students. The findings indicate that technology, when used in a constructivist manner, can promote student-centered learning, collaborative interactions, and authentic language experiences. However, certain challenges related to access, technical proficiency, and pedagogical implementation need to be addressed for effective integration. The implications of this research provide insights for English language educators on leveraging technology to foster constructivist learning environments.

Keywords: technology, English language teaching, constructivist perspective.

INTRODUCTION

In recent years, the rapid advancement of technology has significantly influenced various aspects of education, including language teaching and learning (Sri Mertasari & Candiasa, 2022; Yüksel & Gündüz, 2017). English language educators have increasingly embraced technology as a means to enhance instructional practices and engage students in meaningful language learning experiences (Masruddin, 2014; Sinha, 2022). However, the integration of technology in English language teaching should be approached with a pedagogical perspective that aligns with established theories of learning (Ahmadi, 2018; Syathroh et al., 2021). One such theoretical framework that has gained prominence in educational contexts is constructivism.

Constructivism posits that learning is an active and social process, where learners actively construct knowledge and meaning through interactions with their environment and peers. It emphasizes the importance of hands-on experiences, collaborative learning, and the construction of knowledge based on prior experiences and understanding. In the context of

English language teaching, a constructivist approach encourages students to actively engage with the language, connect it to real-life situations, and construct their own meaning (Nugroho et al., 2020; Prayudi et al., 2021).

The purpose of this study is to examine the use of technology in English language teaching from a constructivist perspective. By exploring the benefits, challenges, and pedagogical implications of integrating technology in the language classroom, this research aims to shed light on how technology integration can align with constructivist principles and enhance language learning outcomes (Haswani, 2014; Mariono et al., 2021; Sari, 2019).

The integration of technology in English language teaching has the potential to offer various benefits (Firdaus & Education, 2023; Irwanto et al., 2022). Technology tools, such as multimedia presentations, online resources, language learning apps, and communication platforms, can provide authentic language input, create interactive learning environments, and foster student engagement (Ilmudinulloh et al., 2022; Mwanda & Midigo, 2019). Through technology, students can access a wide range of authentic materials, practice language skills in meaningful contexts, and collaborate with peers locally and globally (Ardena et al., 2021; Erbas et al., 2021).

However, the use of technology in the language classroom also presents challenges that need to be addressed. Issues such as access to technology, technical proficiency of teachers and students, and the proper integration of technology into the curriculum can pose barriers to effective implementation. Furthermore, it is essential to ensure that technology integration aligns with constructivist principles, promoting student-centered learning, collaborative interactions, and the development of critical thinking and problem-solving skills (Cakrawati, 2017; Suherdi & Mian, 2017).

By examining the use of technology in English language teaching through a constructivist lens, this study contributes to the existing body of research on technology integration and pedagogical approaches in language education (Mita, 2018; Octaberlina, 2023). The findings of this research can inform English language educators on how to effectively leverage technology to create constructivist learning environments that enhance language learning outcomes.

The subsequent sections of this paper will provide a comprehensive review of the relevant literature, discuss the research methodology employed, present the findings, and offer pedagogical recommendations for integrating technology in English language teaching from a constructivist perspective.

METHOD

This study employs a qualitative research design to gain in-depth insights into the use of technology in English language teaching from a constructivist perspective. The qualitative approach allows the researcher to understand the complexities of the language learning context and learners' perceptions in greater detail. This research adopts a case study approach, which allows for an in-depth examination of a specific setting or group (Fauzi & dkk, 2022). The participants in this study are English language teachers and students from a secondary school in an urban area. A purposive sampling technique will be used to select participants who have experience in integrating technology in their English language classrooms. The sample size will be determined by data saturation, where new information and themes no longer emerge from the data. Data Collection Methods used Classroom Observations and Interviews.

The collected data will be analyzed using thematic analysis. The classroom observation notes, interview transcripts, and survey responses will be transcribed, coded, and categorized into themes and sub-themes. The coding process will involve a systematic and iterative approach to identify patterns, recurring ideas, and key findings. The themes will be organized and analyzed to answer the research questions and draw conclusions about the use of technology in English language teaching from a constructivist perspective. By utilizing a

qualitative research design, involving teachers and students as participants, employing various data collection methods, and conducting rigorous data analysis, this study aims to provide valuable insights into the use of technology in English language teaching and its alignment with constructivist principles.

RESULTS AND DISCUSSION

Results

After conducting this research using a qualitative approach and the described data collection methods, the following are the findings of the study:

1. Benefits of Using Technology in English Language Teaching:
 - a. Enhanced Language Engagement: The integration of technology in English language teaching was found to increase student engagement and motivation. Interactive multimedia resources, language learning apps, and online platforms provided opportunities for students to actively participate in language learning activities and practice language skills in authentic contexts.
 - b. Access to Authentic Materials: Technology facilitated access to a wide range of authentic language materials, such as videos, articles, and audio recordings. This exposure to real-world language helped students develop their language proficiency and understanding of cultural aspects embedded within the language.
 - c. Collaborative Learning Opportunities: The use of technology supported collaborative learning among students. Online communication tools and platforms enabled students to interact with their peers both locally and globally, promoting the development of their communicative and intercultural competence.
2. Challenges in Incorporating Technology from a Constructivist Perspective:
 - a. Access and Infrastructure: Limited access to technology and reliable internet connectivity posed challenges for some schools and students. Inadequate technological infrastructure hindered the seamless integration of technology in the language classroom.
 - b. Technical Proficiency: Teachers and students encountered challenges related to their technical skills and knowledge in using specific technology tools. Training and support in technology integration were necessary to overcome these challenges.
 - c. Pedagogical Integration: Effectively integrating technology in a constructivist manner required thoughtful planning and pedagogical expertise. Teachers faced challenges in aligning technology use with constructivist principles, ensuring that it promoted student-centered learning and meaningful language experiences.
3. Student and Teacher Perceptions of Technology Use in Language Learning:
 - a. Positive Student Attitudes: Students generally held positive attitudes towards the use of technology in language learning. They perceived technology as enjoyable, engaging, and helpful in improving their language skills. They appreciated the interactive and multimedia elements that technology provided.
 - b. Teacher Perspectives and Practices: English language teachers acknowledged the potential of technology to enhance language teaching and learning. However, they expressed a need for professional development and support in integrating technology effectively. Teachers emphasized the importance of balancing technology use with other instructional strategies and ensuring its alignment with constructivist principles.

These findings highlight the benefits of integrating technology in English language teaching, such as increased engagement, access to authentic materials, and collaborative learning opportunities. However, challenges related to access, technical proficiency, and pedagogical integration need to be addressed to maximize the potential of technology in the language classroom.

The implications of this research suggest the importance of providing teachers with professional development opportunities to enhance their pedagogical skills in integrating technology effectively. Additionally, efforts should be made to improve access to technology and ensure a robust infrastructure that supports technology integration in language education.

Discussion

The findings of this study have significant implications for the integration of technology in English language teaching from a constructivist perspective. In this section, we will discuss the implications of the research results and highlight the benefits of integrating technology while avoiding repetition of the research results.

Alignment between Technology Integration and Constructivist Principles:

The integration of technology in English language teaching aligns well with constructivist principles. Constructivism emphasizes active, experiential learning, and the use of technology can provide opportunities for students to engage actively in their learning process. By utilizing interactive multimedia resources, online platforms, and language learning apps, students can construct their own knowledge and understanding of the language in a meaningful context. This alignment supports student-centered learning and encourages students to take ownership of their language learning journey.

Implications for Student-Centered Learning and Collaborative Interactions:

The integration of technology in English language teaching has significant implications for promoting student-centered learning and facilitating collaborative interactions. Technology tools offer students the opportunity to explore and engage with the language at their own pace and according to their individual needs and interests. By providing access to a variety of authentic language materials, technology enables students to personalize their learning experiences and develop their language skills more effectively.

Additionally, technology integration supports collaborative learning by facilitating communication and collaboration among students. Online communication tools and platforms enable students to interact with their peers, locally and globally, promoting cultural exchange and enhancing their communicative and intercultural competence. Collaborative learning through technology also fosters the development of critical thinking, problem-solving, and teamwork skills, which are essential in the constructivist approach.

Addressing Challenges and Barriers to Effective Technology Integration:

While the benefits of integrating technology in English language teaching are evident, there are several challenges and barriers that need to be addressed. One of the significant challenges is ensuring equal access to technology and reliable internet connectivity for all students. Efforts should be made to bridge the digital divide and provide equitable access to technology tools and resources.

Another challenge is addressing the technical proficiency of both teachers and students. Professional development programs should be implemented to enhance teachers' digital literacy and pedagogical skills in utilizing technology effectively. Students, too, should receive support and guidance in developing their technical skills and using technology tools for language learning purposes.

Furthermore, pedagogical integration is crucial for effective technology integration. Teachers need training and support to align technology use with constructivist principles, ensuring that it promotes student-centered learning and meaningful language experiences. Providing teachers with strategies and resources to design technology-mediated activities that encourage active engagement, critical thinking, and collaboration is essential.

CONCLUSION

In conclusion, the integration of technology in English language teaching from a constructivist perspective offers numerous benefits. It supports student-centered learning, facilitates collaborative interactions, and enhances language learning outcomes. However, to fully harness these benefits, it is crucial to address challenges related to access, technical proficiency, and pedagogical integration. By doing so, educators can create effective technology-enhanced constructivist learning environments that promote active student engagement and meaningful language learning experiences.

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Interrogating AI-Driven Professional Development in Higher Education: A Quad-Theoretical Analysis

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Abstract

A paucity of theory-informed research addressing the integration of artificial intelligence (AI) in professional development persists, notably within higher education. This study investigates the innovative usage of ChatGPT, an AI tool, for fostering professional growth among early-career lecturers. The investigation pivots around four central inquiries: How can Adult Learning Theory, Technological Pedagogical Content Knowledge (TPACK), Sociocultural Theory, and the Theory of Planned Behavior elucidate the potential efficacy of ChatGPT in professional development? How can these theories address the gaps in extant research? Furthermore, why are these theoretical applications crucial for higher education? Utilising a multi-theoretical approach, this research extends prior explorations by offering a comprehensive theoretical framework to examine ChatGPT's role in professional development. A unique blend of content analysis and theoretical scrutiny reveals how ChatGPT facilitates autonomous, self-directed learning, offers a nuanced intersection of content, pedagogy, and technology, encourages social interaction in learning, and highlights the factors influencing behavioural intentions towards AI usage. The significance of these findings lies in their potential to reshape the understanding of AI integration in professional development, providing fresh perspectives on the implementation and benefits of such tools in higher education.

Keywords: *Adult Learning Theory; Artificial Intelligence; ChatGPT; Professional Development; Technological Pedagogical Content Knowledge*

INTRODUCTION

AI emerges from the fray in an era marked by accelerating digital transformation, securing a pivotal role in redefining professional development (Al-Zyoud, 2020; Miao & Yao, 2021; Walsh, 2020). Across academia, its imprint is felt, shaping pedagogical strategies and fostering an environment conducive to continuous learning. An archetype in this domain, ChatGPT, serves not merely as an AI tool but as an intellectual ally, a bridge architect constructing connections across knowledge gaps (Gil & Kaur, 2023; Ray, 2023). Powered by OpenAI's advanced language model, it interacts to echo human discourse, inviting engagement and sparking intellectual curiosity (Mhlanga, 2023; Roumeliotis & Tselikas, 2023).

ChatGPT, as an ever-ready mentor, bestows a revitalised understanding of professional development, where learning is a constant dialogue, unrestricted by temporal or spatial boundaries (Atlas, 2023; Grassini, 2023). It presents a paradigm where professional development is not episodic but a ceaseless journey navigated with the assistance of AI (Hassani & Silva, 2023). This nuanced perspective, brought into sharp focus by our study, lends a fresh lens to perceive AI's role in professional development. The exploration herein provides a comprehensive analysis, casting light on the multifaceted dimensions of AI in the context of professional development. Each revelation serves as a thread, weaving a detailed tapestry that encapsulates the full potential of AI in the ever-evolving landscape of education.

As AI continues to weave its intricate pattern across the broad fabric of educational landscapes, the need for rigorous, theory-informed research becomes ever more apparent. AI's expansion echoes through classrooms and lecture halls, prompting pedagogical adjustments and curriculum modifications (Qureshi, 2023; Rudolph, Tan, & Tan, 2023). Nevertheless, in the face of this burgeoning field, a lacuna persists; an in-depth understanding of how AI directly impacts professional development through a theoretical lens remains at large. A structured exploration of these phenomena, primarily at the intersection of AI and education, can potentially illuminate areas hitherto left in the shadows, enriching our collective understanding of this transformative trend.

Within this context of a limited theory-oriented investigation, the present study anchors itself, placing its spotlight on ChatGPT, a notable exemplar in the realm of AI (Baidoo-Anu & Owusu Ansah, 2023; Lo, 2023; Zhai, 2022). By focusing on this tool, we navigate the intricate pathways of AI-driven professional development, untangling its complexities by applying theoretical frameworks. This pursuit, therefore, goes beyond mere surface observations, striving instead to unearth more profound implications and latent potentials hidden within the labyrinth of AI-enabled professional development (Atlas, 2023). It becomes a journey of discovery, a foray into the uncharted territory that lies at the intersection of theory and practice in the realm of AI in education.

Embarking on an exploratory journey, this investigation endeavours to cast a theoretical lens on ChatGPT to magnify its role in professional development. The investigative path is illuminated by the glow of four distinctive theoretical frameworks - Adult Learning Theory, Technological Pedagogical Content Knowledge (TPACK), Sociocultural Theory, and the Theory of Planned Behavior (Ajzen, 1991; Lantolf, 2000; Merriam, 2008; Schmidt et al., 2009). Each theory serves as a cardinal point, guiding our exploration and enabling us to traverse the complex landscape of AI in professional development. These theoretical lenses bring into sharp focus the myriad facets of ChatGPT, revealing its intricate patterns, refined structures, and distinctive contributions to professional development.

By leveraging these theoretical frameworks, we can take a multi-dimensional approach in our analysis, dissecting the unique characteristics and influences of ChatGPT in professional development. Such a comprehensive perspective allows for more in-depth exploration, peering into the nuanced layers of AI's role in education (Ahmad et al., 2021; Ouyang et al., 2022; Zhai et al., 2021). This methodological strategy, therefore, extends beyond mere understanding, striving to decode the inherent complexities associated with AI and professional development. As such, our study steers the discourse forward, transforming our understanding of ChatGPT by interrogating it through a robust, theory-driven prism.

Anchoring investigations of AI tools within robust theoretical frameworks transcends academic curiosity; it offers an illuminating lens for practical applications. Deepening our understanding of AI in professional development through an array of theoretical perspectives serves to unlock its potential and helps steer us around the obstacles. Thus, theory becomes our compass, guiding us towards best practices, shedding light on potential pitfalls, and highlighting the nuanced dynamics of AI within higher education contexts. This approach enables us to navigate the multifaceted complexities of AI integration as we chart a course through the challenging professional development landscape.

METHOD

Grounded in the inquiry principle through multiple lenses, our investigation uses a multi-theoretical approach (Creswell, 2013). With a diverse palette of theories, including Adult Learning Theory (Knowles, 1984), TPACK (Mishra & Koehler, 2006), Sociocultural Theory (Vygotsky, 1978), and the Theory of Planned Behavior (Ajzen, 1991), we aim to paint a comprehensive picture of the complex relationship between AI and professional development.

Adult Learning Theory, known for its roots in understanding adult education, presents a unique opportunity to explore how ChatGPT facilitates self-guided and experiential learning (Merriam & Bierema, 2014). This approach empowers us to consider how professionals might interact with and learn from this AI model, fostering a more learner-centric approach (Knowles, 1984).

In furtherance of our comprehensive study, TPACK, a framework central to the seamless integration of technology, provides a lens to scrutinise how ChatGPT amalgamates elements of technology, pedagogy, and content (Mishra & Koehler, 2006). From a Sociocultural Theory perspective, an emphasis on learning as a socially mediated process enables us to delve deeper into the role of ChatGPT in fostering learning communities and cultivating social interaction (Vygotsky, 1978). We also gaze towards the Theory of Planned Behavior, a popular model within behavioural studies. It offers a framework for decoding the factors influencing educators' intentions to use ChatGPT, thereby contributing to our comprehensive understanding of AI's role in professional development (Ajzen, 1991).

An argumentative review methodology forms the bedrock of this research, an approach that allows for a nuanced, theory-guided exploration of the role of ChatGPT (Jensen & Allen, 1996). This methodological choice stands apart from conventional literature reviews, characterised by a detailed, critical evaluation of existing research (Grant & Booth, 2009). It fosters a platform for penetrating analysis of multifarious perspectives, encompassing the breadth and depth of scholarly discourse around AI in professional development (Creswell, 2013). More importantly, the use of argumentative review permits the integration of a rich tapestry of theoretical insights into the analysis and bolsters our understanding of ChatGPT's role in fostering professional growth (Jensen & Allen, 1996).

Utilising the argumentative review, we synthesise and critique a broad range of literature viewed through our selected theoretical lenses (Grant & Booth, 2009). Through this process, we aim to elucidate convergences and divergences while unearthing gaps in understanding that call for further exploration (Creswell, 2013). Consequently, the methodological approach adopted in this study is a potent combination of a multi-theoretical framework and an argumentative review (Jensen & Allen, 1996). This potent mix, we posit, cultivates a rigorous and nuanced understanding of the role of AI, precisely that of ChatGPT, in professional development. The methodology bridges the gap between theory and practice, fostering informed discussions around the implementation of AI in professional development contexts (Creswell, 2013).

Our methodological approach uniquely blends a multi-theoretical framework with an argumentative review, creating a layered and nuanced understanding narrative (Jensen & Allen, 1996). Employing a diverse theoretical panorama enables our investigation to harness a broad spectrum of insights, with each theory illuminating disparate facets of AI's application in professional development (Creswell, 2013). Each theory acts as a unique lens, refining our focus on specific dimensions of ChatGPT's influence on professional growth and enhancement. The cross-pollination of theories facilitates a versatile and multifaceted comprehension that remains open to myriad interpretations and possibilities (Creswell, 2013).

Meanwhile, our choice of an argumentative review methodology assures a profound depth of analysis (Jensen & Allen, 1996). This approach accentuates strengths, limitations, and potential areas for further scholarly investigation within the existing corpus of literature (Grant & Booth, 2009). Unlike a passive repository of information, our methodology actively critiques, dissects, and builds upon the extant knowledge base (Creswell, 2013). As a result, our research propels the academic conversation concerning AI's role in professional development, pushing its boundaries while expanding its horizons (Jensen & Allen, 1996). Consequently, the methodological approach we employ fortifies the objectives of this study, allowing for an academically rigorous, theory-informed, and comprehensive exploration of ChatGPT within the landscape of professional development (Creswell, 2013).

RESULTS

Our exploration of ChatGPT through the lens of Adult Learning Theory exposes an exciting alignment between AI and principles of self-directed learning (Lin, 2023; Kim et al., 2023; Tsai, 2023). A vital aspect of this theory is learner autonomy, characterised by the ability to guide one's learning trajectory and engage with information critically. In the realm of AI, particularly in the case of ChatGPT, such autonomy finds its expression through functionalities that permit independent inquiry (Biswas, 2023; Firat, 2023; Fuchs, 2023). Users can explore topics at will, formulating queries aligning with their interests and knowledge gaps. As such, ChatGPT promotes an environment conducive to self-driven learning, a testament to AI's potential to cultivate intellectual independence.

Further insights into this symbiosis manifest when we consider the aspect of immediate, personalised feedback. Adult Learning Theory accentuates the significance of learning experiences that are relevant and grounded in the learner's context (Merriam, 2001). ChatGPT's real-time, individualised feedback mechanism echoes these principles (Biswas, 2023; Firat, 2023; Fuchs, 2023). The AI adapts to the learner's knowledge level and preferences, tailoring responses to ensure maximal relevance and comprehension. As a result, learning becomes an experiential process intertwined with personal growth and contextual understanding.

Taking a step further, one can appreciate how the flexible nature of AI can further support self-directed learning. With ChatGPT, learning transcends the bounds of pace and direction typically imposed by traditional educational setups. Users can steer their learning journey at a pace that matches their absorption capacity, delving into areas that intrigue them most (Opara et al., 2023). This fluidity, in turn, enhances engagement, depth of understanding, and retention, hallmarks of effective self-directed learning (Confessore & Kops, 1998). Hence, upon examination through the prism of Adult Learning Theory, one can perceive a promising amalgamation of ChatGPT's capabilities with the core tenets of adult education, indicative of AI's transformative potential in this domain.

Observations reveal that applying the TPACK framework to ChatGPT casts light on the complex interplay of technology, pedagogy, and content in an AI-driven educational context (Leahy & Mishra, 2023; Mohammad Ali, 2023). This framework is anchored in the premise that effective education requires a nuanced understanding and seamless integration of these three dimensions. Within ChatGPT, TPACK's triadic interactions find representation in the tool's advanced natural language processing capabilities (Abdullah et al., 2022; Deng & Lin, 2023; Hariri, 2023). Such capabilities permit the AI to comprehend and respond to various inputs, facilitating dynamic interactions. This feature forms the technological cornerstone of TPACK, demonstrating how AI, as embodied by ChatGPT, can catalyse fostering educational effectiveness.

Turning our attention to the content aspect, we discover how ChatGPT's versatility becomes instrumental (Biswas, 2023; Kohnke et al., 2023; Xiao, 2023). ChatGPT exhibits competence in navigating diverse knowledge domains, enabling users to delve into various topics. This content adaptability can have profound implications for learning, catering to various interests and promoting a holistic educational experience. Furthermore, it underlines how AI tools can foster a flexible learning environment that accommodates different knowledge areas, affirming the content-technology intersection of the TPACK framework.

Our exploration of pedagogical strategies paints a compelling picture of AI's potential. ChatGPT, through its interactive design, models adaptive pedagogical strategies that resonate with varied learning styles and preferences (Biswas, 2023). By tailoring its responses based on the user's queries, it essentially mimics the process of individualised instruction, a critical

pedagogical practice (Lee, 2023; Limo et al., 2023; Qadir, 2023). Here, we see the interlocking of pedagogy and technology, wherein AI's adaptive capabilities can enrich learning (Adiguzel et al., 2023). Consequently, a thorough examination through the TPACK lens uncovers AI's unique role, particularly the role of ChatGPT, in harmonising technology, pedagogy, and content. This insight underscores the transformative potential of AI tools in reshaping the educational landscape (Chassignol et al., 2023).

Approaching ChatGPT through the lens of Sociocultural Theory, which emphasises social interactions as integral to learning, allows us to examine its capacity to foster social engagement (Barak, 2017; Polly et al., 2017; Turuk, 2008). Initially, the notion of artificial intelligence, a construct devoid of a biological, social impulse, fostering social interaction may seem counter-intuitive. However, our exploration defies such notions. Observations underscore how ChatGPT, through its sophisticated simulation of human-like dialogue, nurtures an environment rich in social interaction. Such interactions it has the potential to aid learners in constructing knowledge and developing cognitive skills, underscoring the core tenets of Sociocultural Theory.

Further analysis unveils how ChatGPT paves the way for collaborative learning, a concept deeply rooted in Sociocultural Theory (Zhu et al., 2023). Findings indicate that ChatGPT, in simulating intellectual dialogues, offers opportunities for learners to engage in shared problem-solving and collective knowledge construction. This role of ChatGPT echoes the sociocultural perspective that knowledge is socially constructed and that learning occurs when individuals interact with one another. Hence, the tool catalyses communal learning, affirming its alignment with Sociocultural Theory.

Last, focusing on community building highlights another dimension of ChatGPT's potential in embodying Sociocultural Theory. By fostering dialogue and collaboration, ChatGPT subtly contributes to establishing a sense of community among learners, thereby strengthening the social fabric of the learning environment. This sense of community fosters mutual support, encourages sharing of ideas, and cultivates a sense of belonging among learners, all key to fostering motivation and engagement. Consequently, the application of Sociocultural Theory underscores the potential of ChatGPT, and AI in general, to move beyond perceived boundaries and contribute to creating socially vibrant learning spaces. This offers fresh perspectives on AI's potential role in reinforcing the social aspects of learning.

The exploration of ChatGPT through the lens of the Theory of Planned Behavior (Ajzen, 1991) sheds light on the underlying determinants that shape behavioural intentions towards the adoption of AI tools in education. This theory contends that attitudes towards behaviour, subjective norms, and perceived behavioural control collectively impact an individual's intentions to perform a particular behaviour, such as employing ChatGPT for educational purposes (Ajzen & Driver, 1992). Our study shows that educators' attitudes towards AI, including their beliefs, emotions, and attitudes about the potential outcomes of using ChatGPT, significantly influence their intention to adopt this AI tool. Positive attitudes towards AI, from perceived benefits such as enhanced pedagogical capabilities and increased efficiency, emerge as potent predictors of their intentions to incorporate ChatGPT into their educational practice (Chen et al., 2020).

The second dimension of the Theory of Planned Behavior, subjective norms, relates to educators' intentions to use ChatGPT (Ajzen, 1991; Bosnjak et al., 2020; Conner & Armitage, 1998). Subjective norms, understood as perceived social pressure to engage or not engage in a behaviour, wield varying influence in this context. Findings suggest that norms stemming from peer groups, institutional mandates, or societal expectations play a nuanced role in educators' decision-making process regarding the use of AI. While some educators may be motivated to adopt ChatGPT due to the positive endorsement from their peers or leaders in their field, others might express reluctance in the face of perceived pressure.

Lastly, perceived behavioural control, which pertains to one's perceived ease or difficulty of performing the behaviour, also significantly influences the intention to use ChatGPT (Ajzen, 1991). Findings suggest that educators who perceive using ChatGPT as straightforward and within their skill set are more likely to express a solid intention to incorporate it into their professional practice. Furthermore, the potential to overcome the initial resistance to new technology and recognise the manifold benefits of AI can catalyse behavioural intentions. Thus, the Theory of Planned Behavior provides a comprehensive framework for understanding the complex factors influencing educators' acceptance and adoption of AI tools, such as ChatGPT, in their professional development. It provides a robust theoretical foundation for future explorations and practical strategies for promoting AI integration in education.

DISCUSSION

Intersections emerging from the study's multi-theoretical approach carve a novel understanding of AI's place in professional development, spotlighting ChatGPT. One notes that the outcomes of this in-depth analysis ripple beyond isolated observations, weaving together to form a multi-dimensional tapestry of AI's impact on the domain of education. These findings hold substantial implications for academia, policy-making, and educational practice, inviting an enriched discourse on AI's place in educational contexts.

An analysis drawing upon Adult Learning Theory (Knowles, 1984) and the Technological, Pedagogical, and Content Knowledge (TPACK) framework (Mishra & Koehler, 2006) delineates ChatGPT's remarkable potential in the realm of self-directed learning. Adult Learning Theory, which emphasises the significance of autonomous and experiential learning for adults, finds a compelling embodiment in ChatGPT's capabilities (Merriam, 2001). The AI tool facilitates independent exploration and stimulates critical thinking abilities, both essential ingredients for fostering self-directed learning experiences (Brookfield, 1986).

Moreover, TPACK's insights spotlight ChatGPT's adept navigation of diverse content areas and its potential to synergise the dimensions of content, pedagogy, and technology (Mishra & Koehler, 2006). This specific AI model demonstrates its proficiency in handling a wide range of subject matter and deploying adaptive pedagogical strategies (Koehler & Mishra, 2009). It can exploit its technological sophistication to promote practical learning experiences (Koehler et al., 2013). Consequently, the TPACK perspective uncovers a unique manifestation of AI's role in the educational ecosystem (Mishra & Koehler, 2006).

Turning to Sociocultural Theory (Vygotsky, 1978) and the Theory of Planned Behavior (Ajzen, 1991), one can trace AI's nascent role in creating socially vibrant learning environments and its influence on educators' behavioural intentions towards AI adoption. Sociocultural Theory's core tenet, recognising social interaction as an essential learning component, resonates with ChatGPT's abilities. It simulates human-like interaction, nurtures learning communities, and facilitates collaborative learning experiences, thereby enriching the social aspects of learning.

The Theory of Planned Behavior presents a robust framework for understanding educators' acceptance and adoption of AI (Ajzen, 1991). Attitudes towards AI, subjective norms, and perceived behavioural control surfaced as significant factors shaping educators' intentions to employ ChatGPT. This understanding can inform strategic interventions and institutional policies to foster a positive environment for AI adoption in education.

Synthesising these insights, one can observe that AI, embodied in ChatGPT, is a potent instrument in professional development. This AI tool, with its capacity to enhance self-directed learning, foster socially rich learning environments, and navigate the complexities of content, pedagogy, and technology, can harmonise the symphony of learning in the current dynamic educational landscape (Baskara, 2023; Castillo et al., 2023). Thus, by merging distinct theoretical perspectives, we can construct a comprehensive understanding of AI-driven professional

development that bridges theory and practice. This approach aids us in navigating the potential and challenges of AI in higher education, illuminating pathways for effective AI integration.

A nuanced exploration of ChatGPT's role in professional development, facilitated by a multi-theoretical approach, unveils an array of benefits surpassing the limits of its primary analysis. One can note that such a method does not merely serve as an analytic tool but fosters an all-encompassing understanding of AI in education. This understanding manifests as a bedrock upon which stakeholders can rely to decipher AI's capabilities, its far-reaching implications, and areas yearning for improvement. The potential to extract such comprehensive insights is vital, fostering a milieu wherein informed decision-making for implementing and integrating AI in educational contexts becomes feasible.

The robust theoretical grounding of such a multi-theoretical exploration equips educators to forge a more fruitful alignment between AI applications and pedagogical aspirations. A more profound grasp of learning, pedagogy, and technology integration theories equips educators with an essential compass for navigating the vast landscape of AI in education. It enables them to ensure that the technology serves not as a replacement but as a supplement to the invaluable human element in education. Hence, by nurturing this alignment, AI becomes a tool to enhance the educational journey rather than overshadowing the irreplaceable human touch.

Educators can more effectively tailor AI applications to meet learners' diverse needs with this theoretical grounding. In doing so, educators can harness the strengths of AI tools like ChatGPT while mitigating their potential drawbacks, thereby creating an optimal learning environment. A deeper understanding of AI's capabilities and constraints can inform the development of instructional strategies that leverage AI to foster student learning and engagement.

Moreover, the investigation offers insights into the factors that shape AI adoption in the educational realm, which are crucial for designing effective interventions. By understanding these factors, stakeholders can devise strategies to alleviate apprehensions and foster more positive attitudes towards AI. These strategies may include professional development opportunities for educators, support structures for students, and transparent communication about the role and limitations of AI in education.

Such an understanding eases assimilating AI into higher education by creating a more open, accepting, and supportive learning culture. It helps address potential resistance among stakeholders and can guide efforts to ensure that the transition to AI-enhanced education is a positive and empowering experience for all involved.

Viewing ChatGPT through a multi-theoretical lens is not merely an academic exercise but a necessary step towards illuminating the path for a well-rounded, theory-informed, and efficacious incorporation of AI in higher education. It presents a rich tapestry of insights that, when stitched together, form a holistic picture of how AI can reshape education. Armed with these insights, educators, researchers, and policymakers are better positioned to navigate the complex interplay between AI and education and drive the evolution of teaching and learning in the digital age.

CONCLUSION

This study aims to shed light on the burgeoning role of artificial intelligence, specifically through the unique prism of ChatGPT, in the realm of professional development. In doing so, it uncovers how distinct theoretical perspectives can sculpt our understanding and application of such a potent tool. Integration of Adult Learning Theory (Knowles, 1984), TPACK (Mishra & Koehler, 2006), Sociocultural Theory (Vygotsky, 1978), and the Theory of Planned Behavior (Ajzen, 1991) weaves an intricate portrayal of AI's impact. Notably, it underscores AI's capabilities in catalysing self-directed learning, amalgamating technology with pedagogy and content, fostering vibrant social learning dynamics, and influencing behavioural intentions

towards its use. Adopting such a multi-theoretical framework makes one perceive AI's role in professional development with fresh lenses, thus promoting a theory-driven approach to interpreting, evaluating, and integrating AI tools in educational contexts.

The significance of our study is further heightened by the potential of these theoretical insights to guide the design, execution, and evaluation of professional development programs that leverage AI. Insights unearthed by the study can offer critical considerations for educators, policymakers, and developers alike as they seek to design learning experiences that harness the power of AI while aligning with pedagogical best practices and learner needs. Furthermore, the study enriches the ongoing academic discourse by elucidating the intricate tapestry of AI in professional development. It reveals this landscape from the intertwined threads of theory to the woven fabric of practice, contributing to the construction of a more holistic understanding of the dynamics between AI and professional development in higher education.

Venturing into the domain of AI in professional development has unveiled intriguing insights, yet it becomes evident that this journey is far from reaching its terminus. The multi-theoretical exploration presented in our study signifies merely an inaugural stride into an extensive and still-evolving terrain. As scholars and practitioners continue to navigate the dynamic landscape of AI in higher education, myriad opportunities emerge for theory-informed examination of a plethora of other AI tools. Each of these tools, bearing their unique capabilities and implications, promises to enrich further our understanding of AI's role and potential in educational settings.

Looking forward, future scholarly endeavours could replicate, or even extend, the multi-theoretical approach employed in our study to unpack the subtleties of these additional AI tools. Such investigations would contribute significantly to deepening AI's theoretical and practical knowledge base in higher education. Furthermore, incorporating qualitative inquiries into educators' experiences, perceptions, and challenges with various AI tools could further humanise AI discourse. By bringing human narratives to the fore, we can strive to make the technology more relatable, user-friendly, and aligned with the nuanced needs of diverse educational contexts. Consequently, the prospect of theory-informed exploration of AI tools in higher education steers us towards a future where AI transcends its current status as a mere buzzword, evolving into a transformative learning and development catalyst.

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R Program-Based Application Development to Test Data Normality Using R Shiny

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Abstract

R programming is one of the most comprehensive software that can perform normality testing on data. However, R is not user-friendly for beginners or users who only need occasional analysis. The purpose of this research is to develop an Apps for analyzing normality tests using several methods, namely Jarque Bera, Lilliefors, Shapiro Wilk, and Anderson Darling. This research adopts a Research and Development approach. The focus of this research is to develop an Apps for testing data normality. The development model used is the SCLD-waterfall model. The R packages used in this research include shiny, shinythemes, readxl, writexl, tseries, nortest, gt, stats, and DT. The results of the development are an Apps for normality testing that has the advantage of providing interpretation of analysis results, being free, and available in Indonesian language.

Keywords: normality testing, R programming, R Shiny.

INTRODUCTION

The assumption of data normality is one of the most common assumptions in parametric statistical studies (Ghasemi & Zahediasl, 2012; Mala et al., 2021). This assumption needs to be met in order to use statistical analysis for Pearson correlation, ANOVA, independent samples t-test, paired samples t-test, and residual analysis for regression analysis (Cunningham & James O. Aldrich, 2016; Saculinggan & Balase, 2013). Deviation from normality can lead to substantial inaccuracies in estimation procedures and incorrect inferences (Domański & Szczepocki, 2020). Normality testing in univariate analysis methods (as mentioned above) is done using univariate normality tests. Furthermore, if multivariate analysis is used, the normality testing is done using multivariate normality tests such as the Mahalanobis distance test (Ho, 2013).

There are three ways to perform normality tests: graphical, numerical, and formal methods (Ogunleye, L et al., 2018). Graphical methods include histograms, box plots, and Q-Q plots. Numerical methods include skewness and kurtosis. Formal methods encompass numerous tests such as Anderson-Darling (AD), Chi-square (CS), Jarque-Bera (JB), Kolmogorov-Smirnov (KS), Lilliefors, Shapiro-Wilk (SW) (Ogunleye, L et al., 2018), Kuiper, Ajne, modified Ajne, modified Kuiper, D'Agostino, and Vasicek (Yazici & Yolacan, 2007), among others. There are 40 methods for testing normality from 1900 to 2016 (Arnastauskaitė et al., 2021). Additionally, Uyanto (2022) states that there are 50 methods for testing data normality from 1900 to 2018.

Many studies compare different methods to determine the best approach for assessing normality. The comparative criteria used are the initial distribution shape of the sample data, whether symmetric or asymmetric. This can be observed through skewness graphs. Each shape is divided into two categories: short-tailed (ST) and long-tailed (LT) (Arnastauskaitė et al., 2021; Domański & Szczepocki, 2020; Lee et al., 2016; Mazaheri & Nehi, 2015; Siraj-Ud-Doula, 2019; Yap & Sim, 2011). Based on these criteria, the comparison results suggest that for data: 1) with symmetric LT distribution, the most suitable method is Robust-JB (RJB) (Domański & Szczepocki, 2020; Siraj-Ud-Doula, 2019; Yazici & Yolacan, 2007), JB, and D'Agostino (Domański & Szczepocki, 2020; Yap & Sim, 2011). 2) with symmetric ST distribution, the suitable methods

are Micheaux's XAPD and D'Agostino and Pearson's K₂ (Domański & Szczepocki, 2020), and JB (Siraj-Ud-Douhah, 2019). 3) with asymmetric distribution, the Cabana-Cabana and Zhang-Wu methods (Uyanto, 2022), SW and RJB (Siraj-Ud-Douhah, 2019) are suitable. 4) with both symmetric and asymmetric data, the most recommended method is N-Metric (Arnastauskaitė et al., 2021).

In contrast to the aforementioned criteria, Demir (DEMİR, 2022) compares normality testing methods using skewness and kurtosis. The results of this study indicate that the KS and KS Marsaglia methods are suitable for sample size data. Furthermore, Ogunleye, L et al. (2018) compares several normality testing methods based on the type of data used, whether continuous or discrete. SW is most suitable for continuous data, while the chi-square test is most suitable for discrete data.

Based on the above information, there is no standard criterion for selecting the most suitable normality test for the characteristics of a specific data. Among the various normality testing methods mentioned, the most popular ones are Lilliefors (modified KS), SW, and KS. These three formal methods are popular because they are used in SPSS software, followed by the AD model found in Minitab software, and JB and other methods found in the R programming language.

Among these three software options, R programming has many advantages compared to the other two, as it is not only free (Wickham, 2014), but also allows the use of all normality testing methods and is the most powerful program for statistical analysis. However, R programming also has disadvantages in that the analyses performed require the use of syntax from the provided packages, making it less user-friendly. Users who are unfamiliar with R programming syntax may take longer to use it (Rossiter, 2009) for specific statistical analyses or normality testing. In addition to the syntax, users also need to learn the types of data that can be processed using R programming (Wickham, 2014).

Shiny (Chang et al., 2015) is one of the packages that can overcome the limitations of R programming. Shiny is designed for R programmers to make data analysis and results representation easier to read and more appealing. In other words, Shiny can be used to create a GUI for data analysis packages in R programming, allowing analyses to be performed similar to paid software (e.g., SPSS, Minitab). The same goes for normality testing packages in R programming, which can have their own GUIs created using Shiny.

Based on the information above, an *Apps* will be developed that can be used for normality testing of data. The testing methods used will include Jarque Bera, Lilliefors, Shapiro-Wilk, and Anderson Darling methods.

METHOD

"Research and Development (R&D) approach is used in this study to develop an *Apps* for data normality testing. The focus of this research is the development of an *Apps* that can perform data normality analysis and provide interpretations of the results. The *Apps* development model used is the System Development Life Cycle-Waterfall (SCLD-Waterfall) model (Dennis et al., 2015; Tilley & Rosenblatt, 2016). SCLD encompasses five main activities: (1) Planning, (2) Analysis, (3) Design, (4) Implementation, and (5) System."

RESULTS AND DISCUSSION

Results

In this section, it explains how the normality testing technique is incorporated into the *Apps* developed using the SCLD-Waterfall model. The results of each stage are explained as follows.

1. Planning

The objectives of the *Apps* development have been described in detail in the research objectives section. The developed *Apps* uses the R programming language (R Core Team, 2023) and RStudio software (RStudio Team, 2023).

2. Analysis

This procedure involves conducting functional analysis and analyzing the package requirements. The main functionality of the developed *Apps* is to test the normality of data. This function can be accessed through four steps, as shown in Table 1.

Table 1. Steps for Normality Testing

Layer	Steps
1	Step 1. Input data
2	Step 2. Select variable
3	Step 3. Analysis
4	Step 4. Read results

Subsequently, an analysis of the package requirements is conducted to build the interface, perform the normality testing calculations, import data, and download the analysis results. The results of the *Apps* requirements analysis can be seen in Table 2.

Table 2. *Apps* Requirements Analysis

Fitur	Package	Package Function
Interface	shiny(Perrier et al., 2023),	Building an interactive user interface
	shinyWidget(Perrier et al., 2023)	Designing the interface with appealing themes
	DT(Xie et al., 2023)	Importing data from Excel files
	gt(Iannone et al., 2022)	Saving the analysis results to Excel files
	shinytheme(Chang, 2021)	Performing statistical calculations for normality testing analysis
Normality Test	stats(R Core Team, 2023)	Providing functions for normality tests like Jarque-Bera, Lilliefors, Shapiro-Wilk, etc.
	tseries(Trapletti & Hornik, 2023)	Creating tables to display analysis results
	nortest(Gross & Ligges, 2015)	Performing basic statistical calculations
Save Result	Writexl(Ooms, 2023)	Managing the display and interaction in the result tables
Input data	readxl(Wickham & Bryan, 2023)	Building an interactive user interface

3. Design

In this step, the connectivity design of components in the user interface is created. The connectivity design of Shiny components can be seen in Figure 2.

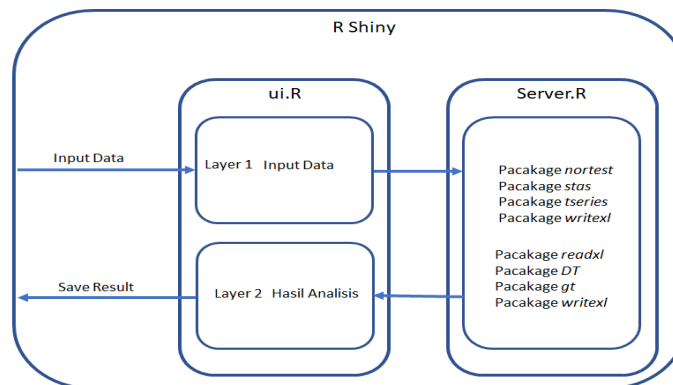


Figure 1. Apps connectivity design

The connectivity design in Figure 1 is displayed in 2 layers, resulting in the user interface designs shown in Figure 2 and Figure 3.

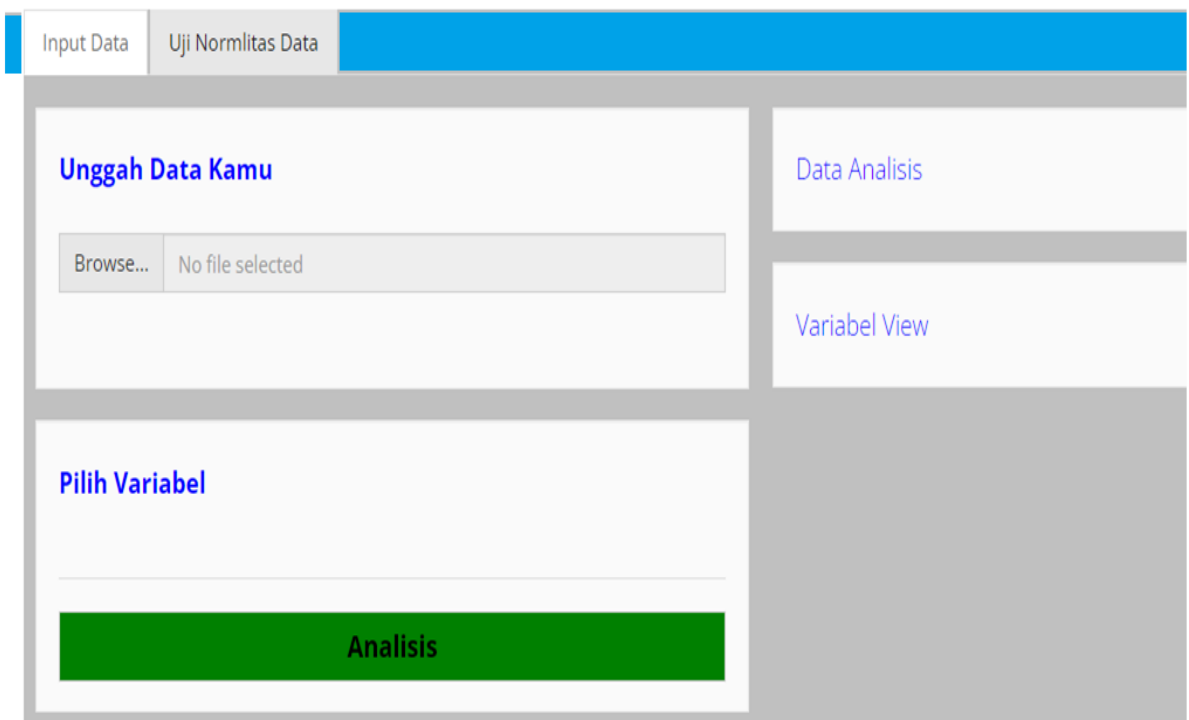


Figure 2. User interface design Layer 1

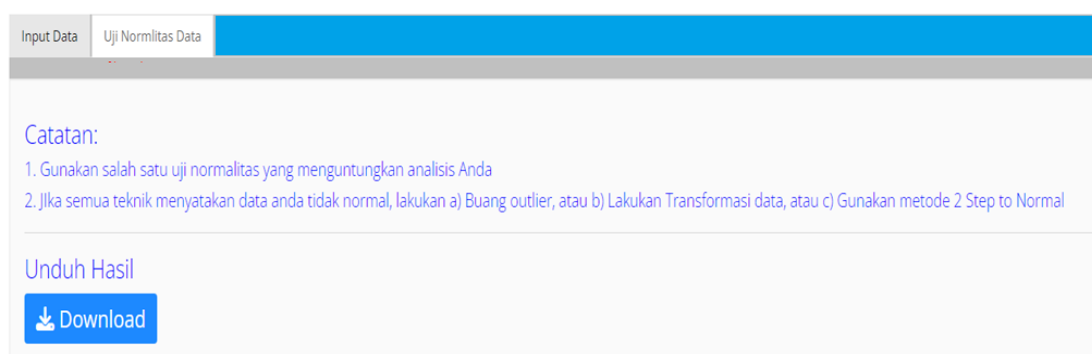


Figure 3. User interface design Layer 2

These figures represent the connectivity design and user interface designs for the *Apps*.

4. Implementation

In this section, the coding procedure, phase 1 testing, and package publication on GitHub will be carried out.

a. Coding

The R programming language is used for coding the developed normality testing *Apps*. The generated program codes are displayed in two main files: (1) the ui.R file contains the user interface control codes, and (2) the server.R file contains the codes from the tseries, nortest, writexl, readxl, and stats packages. These files are stored in a folder and have a file hierarchy as shown in Figure 4.

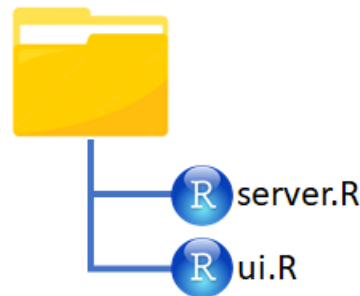


Figure 4. File structure of the normality *Apps*.

5. System

This normality testing *Apps* can be used on a user's computer, provided that R and RStudio programs are installed beforehand. The resulting *Apps* can be run on computers or laptops with Windows, Linux, or macOS operating systems.

Illustration of The Apps

After running the *Apps*, the user interface will appear as shown in Figure 1. Next, to input the data to be tested for normality, click the "Browse" button in the "Upload Data" section, which will display a pop-up view as shown in Figure 5.

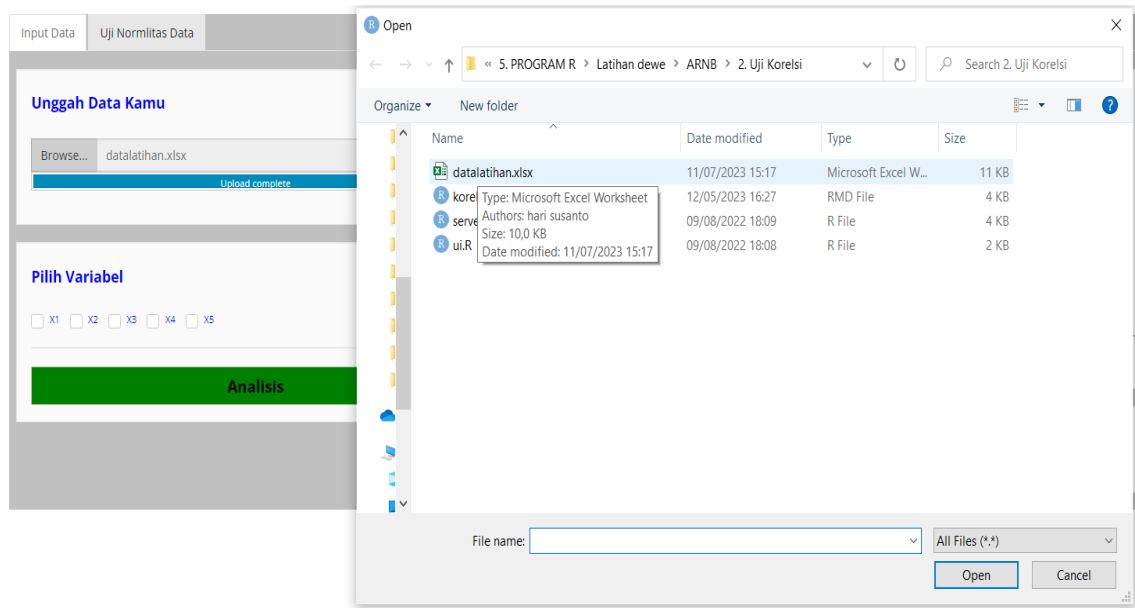


Figure 5. Data Input Process

Figure 5 illustrates the process of uploading the file to be analyzed. The file must have the extension *.xlsx. Select the file that contains the data to be analyzed. Then, double-click or press the "Open" button, which will display the view as shown in Figure 6.

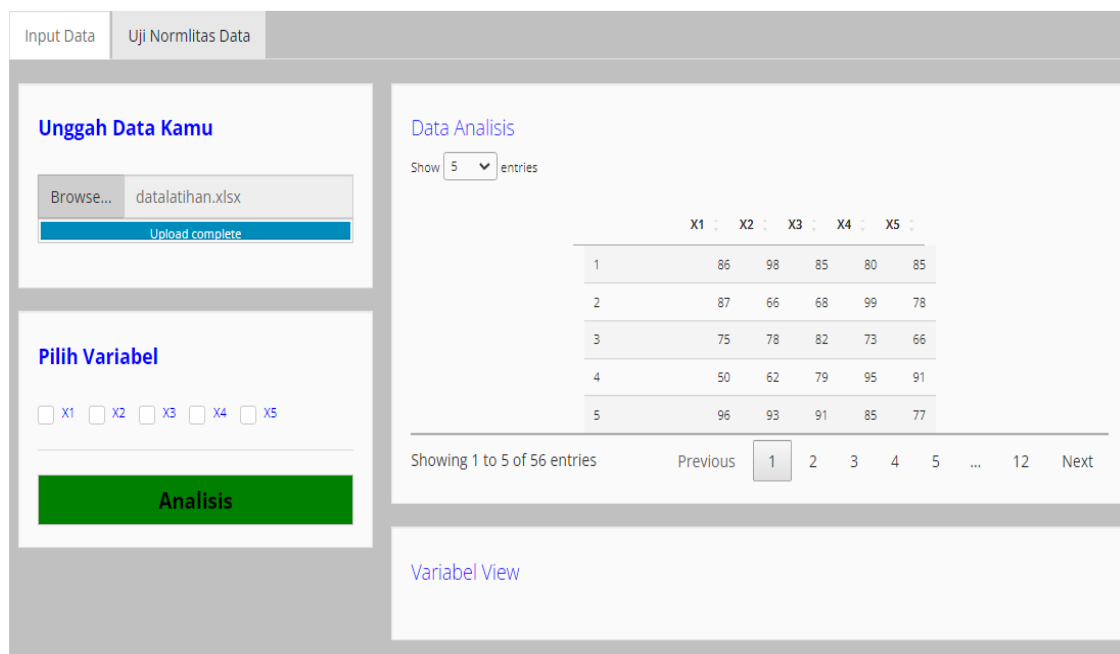


Figure 6. Layer 1 View after Data Upload

Figure 6 shows the Layer 1 view after the data is uploaded. Next, in Figure 6, select the variables that will be tested for normality. For example, select the variables X1, X2, and X4, which will provide a view as shown in Figure 7.

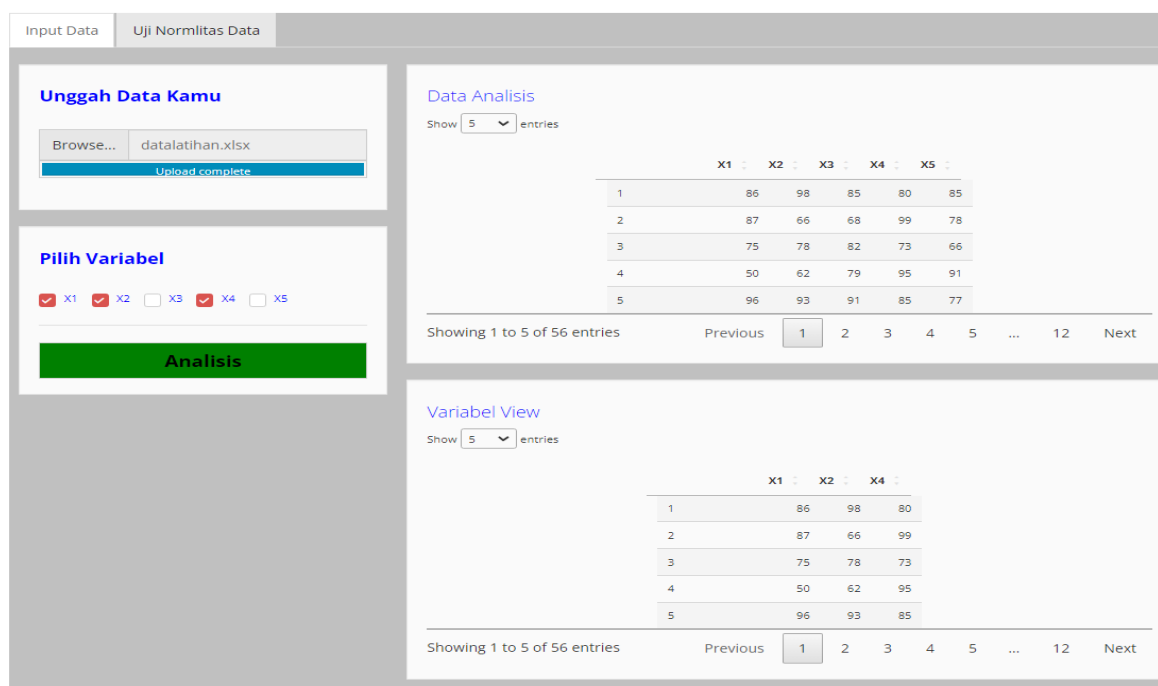


Figure 7. Layer 1 View after Variable Selection

Figure 7 displays the Layer 1 view after the variables are selected. Press the "Analysis" button in Figure 7. The Apps will automatically perform the normality test calculations. Then, press the "Perform Normality Test" button, which will display a view as shown in Figure 8.

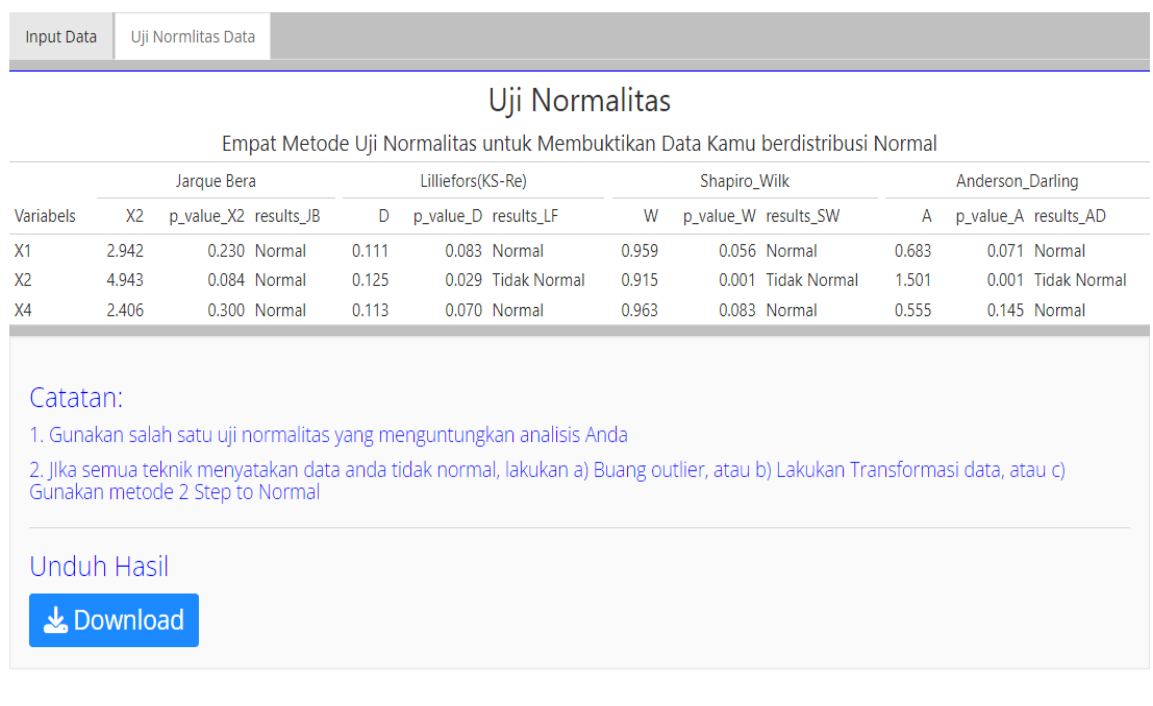


Figure 8. Layer 2 Analysis Data Results View

Figure 8 shows the Layer 2 view of the Analysis Results. Next, press the "Download" button to download the results of the normality analysis. After pressing the download button, a pop-up will appear to save the file. The view can be seen as shown in Figure 9.

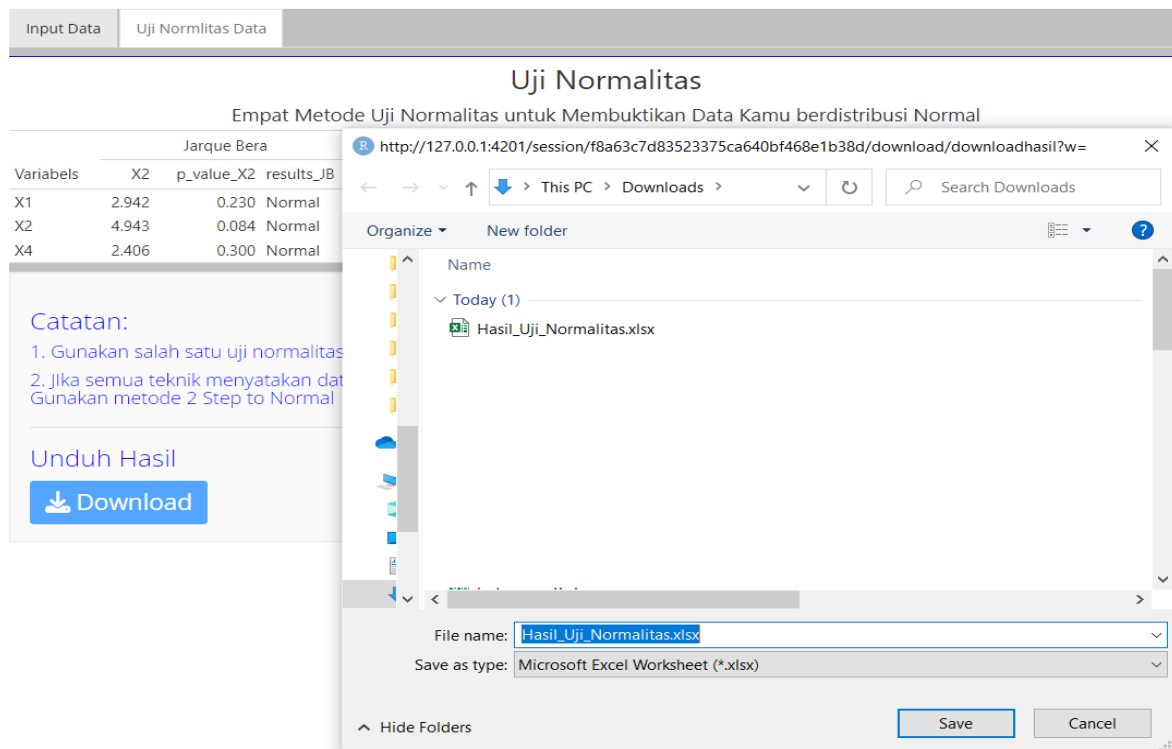


Figure 9. Data Download View

Figure 9 displays the download data view. Press "Save" to save the data. The file named "Hasil_Uji_Normalitas.xlsx" will be automatically saved. Open the Excel file, and it will display the analysis results, which will be similar to Figure 10.

AutoSave Off

Hasil_Uji_Normalitas.xlsx

Search

FileHomeInsertPage LayoutFormulasDataReviewViewAutomateDeveloperHelp

Paste

Cut

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Alignment

General

%

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Number

Conditional Formatting

Format as Table

Styles

P10

	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Variables	X2	p_value_X2	results_JB	D	p_value_D	results_LF	W	p_value_W	results_SW	A	p_value_A	results_AD
2	X1	2,942	0,23	Normal	0,111	0,083	Normal	0,959	0,056	Normal	0,683	0,071	Normal
3	X2	4,943	0,084	Normal	0,125	0,029	Tidak Normal	0,915	0,001	Tidak Normal	1,501	0,001	Tidak Normal
4	X4	2,406	0,3	Normal	0,113	0,07	Normal	0,963	0,083	Normal	0,555	0,145	Normal
5													
6													

Figure 10. Normality Test Results in an Excel File

Figure 10 shows the results of the normality test in an Excel file. The Excel file contains the results of the normality test analysis, displaying four normality test techniques.

Discussion

The normality testing *Apps* developed using the R programming language and the main Shiny package has a simple design. The use of contrasting colors such as blue, gray, and white

for the *Apps* features enhances readability. The use of color contrast to improve readability is in line with the research findings of Hariz (2022).

The main function of the developed *Apps* is to perform normality testing. Based on this function, there should be an input section (Layer 1) for the data to be analyzed and an output section (Layer 2) for the results of the normality testing analysis. Layer 1 consists of three features. (1) The data upload feature allows users to easily select and upload data files. After the data is uploaded, the main page of the *Apps* automatically displays the uploaded data as a confirmation that the correct data has been selected for analysis. (2) The variable selection feature requires users to specify the variables to be tested for normality by using the provided buttons. After selecting the variables, the main page automatically displays the chosen variables. (3) The analysis feature is a button that triggers the analysis process. If this button is not pressed, no information about the analysis results will be displayed in Layer 2. These three features in Layer 1 are easy to operate and remember.

Layer 2 consists of two main features. (1) The normality testing analysis results feature. After the analysis button is pressed, the results of the normality tests using four techniques (Jarque-Bera, Lilliefors, Shapiro-Wilk, and Anderson-Darling) are automatically displayed. Users are provided with the convenience of selecting and viewing the analysis results from the different techniques. Additionally, the interpretation of the analysis results, whether the data is normal or not, is automatically displayed. This feature facilitates users in reading and interpreting the analysis results without the need to memorize the criteria required for normality testing. (2) The download feature. The download button allows users to easily save the analysis results in an Excel file format (.xlsx).

The use of the R programming language for data analysis typically requires users to have proficiency in R programming (Hackenberger, 2020; Paura & Arhipova, 2012). However, with the developed *Apps*, R users do not need to write code to perform normality testing on their data. The features provided in each layer of the user interface make it easy for users to learn, remember, and interpret the analysis results.

By utilizing the user-friendly interface and functionality of the *Apps*, users can perform normality testing without the need for extensive knowledge of R programming. This allows users to focus more on the analysis itself and the interpretation of the results, rather than spending time and effort on coding and technical implementation.

The *Apps* simplifies the process of conducting normality tests and enhances accessibility for users who may not have strong programming skills. This makes it a valuable tool for researchers and practitioners who want to perform normality testing without the need for extensive programming knowledge.

CONCLUSION

Based on the testing and discussion results, it can be concluded that the *Apps* can be used to analyze the normality of data. The developed *Apps*, which is in Indonesian language, is user-friendly, easy to learn, easy to remember, and helps in interpreting the analysis results.

However, there are some limitations to the application. (1) Dependency on R programming language: The *Apps* relies on the R program installed on the device. If R is not installed, the *Apps* cannot be run. For future research, the *Apps* will be developed as a standalone software that does not depend on R. (2) Limited functionality: The current version of the *Apps* only supports normality testing for univariate data. For future research, it is necessary to develop the *Apps* to also handle multivariate

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Students' Writing Viewed from Error Analysis Perspective

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Abstract

Man is inseparable from language because he or she should study 'language' for the pursuit of knowledge. In this matter, learners who learned English as a foreign language underwent inevitable errors during the process, especially in writing skills. Errors are not justified to be corrupted processes but are believed to be inevitable common processes of language learners. Therefore, Error Analysis (EA) was a must in the need. To explore the phenomenon, qualitative method type error analysis was used. Moreover, the subject of this study was students in journalism class. The primary source was students' writing documentation. The data was then analyzed using EA procedures. The research revealed that the emerging hindrance of writing was mostly in the form of omission category (52%) followed by misinformation (30%), addition (11%), and misordering (7%). Solutions proposed by the researchers are the employment of Collaborative Learning Techniques (CoLTS) focused on writing.

Keywords: *English, Journalism, Error Analysis (EA), Collaborative Learning Techniques (CoLTS)*

INTRODUCTION

A human is a speaking being; a living being that speaks (al Attas, 2015). It means he or she is always articulating the known reality in life with reference to his or her ability to grasp and bind the meaning. From this truth and reality, man is inseparable from language need — exactly means — to learn the language along life in both natural and learning conditions. It means a man should study 'language' for the pursuit of knowledge. The process of language study is commonly known as 'language learning'.

Learning language activity has different 'naming' concerned with some conditions: learner, teacher, source of material, environment, and opportunity to learn the language. One type is 'foreign language learning' and another one is 'second language learning'. Foreign language learning and teaching refer to the teaching or learning of a non-native language outside of the environment where it is commonly spoken. A language is considered foreign if it is learned largely in the classroom and is not spoken in the society where the teaching occurs (Moeller, 2015; Nation, 2020). It implies that in foreign language learning, enjoyment, supportive peers, challenging activities, as well as with FL positive teachers is the key to the success of the target language learning. Furthermore, students will be more successful and willing in foreign language lessons when they hear and understand it correctly and they can speak it correctly and effectively (Mierzwa, 2019; Klimova, 2021).

The counterpart of the foreign language learning is 'second language learning': the learner resides in an environment where the acquired language is spoken (Moeller, 2015). It implies that the 'second language learning' process provides more exposure for the learners because the learned language or the target language is spoken widely in the environment. The learners are immersed in the target language-speaking society. Moreover, the learners have a chance to have metacognitive skills: repetitive correction and evaluation of the learned target language while studying.

Then why should people or children need to learn a foreign language, even at an early age? The first reason is pragmatic demands. It is inevitable that at present the geographical

barrier between regions or even between countries has begun to collapse, falling one by one due to globalization. The development of communication and information technology seems to be one of the factors responsible for the increasingly open relations between people in this global era (Chanifa, 2020). The development may not be ignored as the consequence of modern civilization. However, learning a foreign language should not leave the 'local wisdom' of the learners: native language and culture as the important identity.

However, what is learned in this age is the so-called *lingua franca* which is beneficial in the pursuit of knowledge to overcome such barriers. The term '*lingua franca*' emerge from the fact that the world needs to connect ideas using the same mediation via a language. From the facts, alternatively, people choose to save the native language and use the *lingua franca* as 'the communicative medium of choice'. In this age, English tends to be the attribute so-called '*lingua franca*'. English as a *lingua franca* is prevalent in today's globalized world and affects large parts of society. A key point for English to become the world's *lingua franca* is that an enormous number of people around the world speak or understand English (Zikmundová, 2016; Chen, 2019). English has become the widely used language in activities around the world. As the emergent *lingua franca* of international publishing, it has mediated the vast majority of the world's scientific output through the early years of the millennium (O'Neil, 2018). The world activity amid fast science and technological development triggers people to access 'ideas' as a new primary need for modern existence using English. Even a decade ago, articles written in English accounted for 80–85% of publications in the social sciences, 90% in the natural sciences, and as high as 95% in specific fields such as physics and mathematics. English has also expanded into international domains such as business, entertainment, travel and tourism, and computer technology (O'Neil, D., 2018).

Furthermore, in today's world, the English language holds a unique and important position. It may not be the language with the highest number of native speakers but it is a language that holds a dominant position and has far-reaching influence around the globe mastered by more than 750 million nonnative speakers. No other existing language can boast of such a high volume of people learning it as a foreign language (Zikmundová, 2016; Chen, 2019). When looking at the global status of the English language, it is hard to deny that English has spread across the world as a *lingua franca* (ELF), especially during the 21st century (Fang, 2017). From the statements, factually speaking, English is beyond prestigious effort as before; on the other hand, it has been the 'human need' to learn to join today's civilization.

In such an effort of learning English, it is viewed from the setting and dimension the learner engages inside. First, the learners live where the target language (learned language) is spoken and used in daily activity (naturalistic exposures); the so-called second language learning. In second language learning, the students are able to immerse themselves in English speaking-environment in or out of class. Accordingly, the learners have enough exposure to the approximative system of the target language. Second, learners live where the target language (e.g. English) is spoken and used in a restricted setting and milieu (usually in the class). This process is called foreign language learning. In this case, foreign language learners lack exposure and opportunities to do self-repetitive corrections (Moeller, 2015; Mierzwa, 2019; Nation, 2020). Consequently, learners who learn English as a foreign language will be inevitably undergoing errors, especially in writing skills. Errors are not justified to be corrupted processes but are believed to be common processes of the language learners. Errors are unavoidable and a necessary part of the learning curve.

Those errors occur because of internal and external sources of the learner's mother tongue or the learners themselves. The source of error is termed as interlingual: an error that results from language transfer, that is, which is caused by the learner's native language error or intralingual error: much connected to the grammatical errors of the target language pattern (Richards and Schmidt, 2002). In reference with the researchers' observation in the teaching

and learning process, the indication of such errors are found: e.g., the addition of 'be' in the verbal sentence construction or vice versa. Moreover, students form the wrong verb from subject and verb agreement, etc. Therefore, Error Analysis (EA) is a must to employ.

Error Analysis (EA) is "a technique for identifying, classifying and systematically interpreting the unacceptable forms of a language in the production data of someone learning either a second or foreign language (Richards & Schmidt in Napitupulu)." Such systematic analysis of errors eventually provides useful insights about the system operating in the learners' minds and reveals the learners' knowledge about the grammatical systems of the target language. It is a kind of applied linguistic work — bridging between linguistic theories and practice in the class.

In the extent of the researchers' search, the error analysis issues in the same locus are minimally investigated or even have not been carried out. From this fact, the researcher believes that employing the error analysis in language teaching is a contextual need to find out a solution in the English learning process, especially at STKIP PGRI Pacitan. Therefore, this research was aimed at revealing the theory of writing; Error Analysis (EA); Errors with reference to surface strategy taxonomy found in the students' writing, and proposed solutions for the errors.

METHOD

The place of research

The place of research activity was at STKIP PGRI Pacitan located in Pacitan on Jln. Cut Nya' Dien No 4a Ploso, Pacitan 63515 east java.

The method of research

With reference to the need for non-numeric data exploration, the qualitative method type error analysis study was employed by the researcher. Qualitative research is concerned with qualitative phenomena i.e., phenomena relating to or involving quality or kind, exploring attitudes, behavior, and experiences through such methods as interviews or focus groups (Dawson, 2002; Khotary, 2004).

The subject of research

The subject of this research was class A fourth-semester student of STKIP PGRI Pacitan. It consisted of 20 Students.

Source of data

The primary data of this research is the students' writing documentation. Meanwhile, the secondary source is the relevant document and publication.

The technique of collecting data

The technique of collecting the data employed in this research is archival review or documentation which comes from students' writing test and also observation to strengthen the ideographic exploration in the field to determine a solution.

Credibility and dependability

The credibility of this research will be acquired through triangulation: the use of multiple methods, theories, peer debriefing, and member checking. Whereas, dependability will be acquired through an audit, and critique of the research process from other parties (Moon, 2016).

The technique of analyzing the data

The technique of data analysis is as the following procedures: 1) collecting the data; 2) analyzing the errors from the students' sheets; 3) classifying errors based on: types of used tenses and types of errors (addition, omission, misformation, misordering); 4) describing errors based on their types; 5) counting the frequency of errors in a diagram; 6) computing the results in the following diagram of errors:

Errors percentage = The number of errors of each category × 100%

The total number of error

RESULTS AND DISCUSSION

Writing

Writing is normally understood as people's 'activity' at moving invisible ideas into visible ones on paper. However, the dimension is deep and beyond what is seen. The writing had longly been attempted to define by some professional writers themselves. Writing is also complex, cognitive process (Zimmerman, 1992). While according to Oshima and Hogue (1997: 2) writing is never a one-step action; it is a process that has several steps. In other words, writing is an invaluable process to accomplish the production from beginning to the last, there is a structuralized cycle done by the writer. The emphasis of writing is process rather than production. Raimes (1983: 3) indicates that writing is an integral part of communication when the other person is not right there in front of us, listening to our words and looking at our gestures and facial expressions. From these statements, writing is the writer's activity which needs enough knowledge before writing. Besides, they also have to be able to manage writing from its 'process' to production.

Furthermore, Byrne (1997: 1) states that writing is the use of graphic symbols which are arranged according to a certain convention to form words and sentences. Olshtain in Celce-Murcia (2001:207) defines writing as an act of communication that takes place between the writer and the reader via the text in an interactive process. Bell and Burnbay (in Nunan, 1998: 36) point out that writing is a complex cognitive activity in which the writer is demanded to demonstrate control of a number of variables simultaneously at the sentence level-include control of content, spelling, and letter formation and beyond the sentence structure and integrate information into cohesive and coherent paragraph and text. These three statements also emphasize that writing is sensitive activity considering essential aspects such as certain conventions, audience target, and also micro parts of writing such as grammar, cohesive device, etc.

Good Writing

Good writing means a good outcome of man's writing. Whereas, a good outcome is a result of a good process in writing. Therefore, we need to know both 'good outcome and good process of writing'. Good writing is writing that is appropriate to the specific writing situation for which it was produced. Good writing is writing that is appropriate for the audience and purpose of a specific writing situation. The content, organization, sentence structure, and word choice of an effective piece of writing should be appropriate for the writer's audience and purpose (Zimmerman, 1992). In this position, writing is not about micro aspects (word choice, structure, etc) but also the macro one which considers target and context sensitivity. Moreover, those are in line with Zimmerman (1992) that the characteristic of good writing: 1) general features of good writing: appropriate for the purpose, appropriate for the audience, appropriate for content, appropriate for style, appropriate for tone; 2) specific features of good writing: effective organization, effective sentence structure, effective word choice, effective visual display of information.

Furthermore, Bailey (2003: vi) splits up the accuracy in writing as follow: 1) abbreviations (abridgment or shortened phrase); 2) adverbs (a part of speech comprising a class of words that modify a verb, an adjective, or another adverb); 3) articles (Any of a class of words used to signal nouns and to specify their application. In English, the indefinite articles are a and an and the definite article is the); 4) caution (e.g. Poor education tends to lead to crime); 5) conjunctions (A part of speech such as and, but, as, and because that serves to connect words, phrases, clauses, or sentences, Eg: furthermore/however); 6) formality in verbs (e.g speed up/accelerate); 7) modal verbs (may/could/should); 8) nationality language (e.g. Spain/Spanish); 9) nouns and adjectives (e.g. efficiency/efficient); 10) nouns: countable and uncountable (e.g. business/businesses); 11) passives (e.g. The gases were discovered); 12) prefixes and suffixes

(Prefixes, an affix such as dis- in disbelieve, put before a word to produce a derivative word or an inflected form. Suffixes An affix added to the end of a word or stem, serving to form a new word or functioning as an inflectional ending, such as -ness in gentleness, -ing in walking, or -s in sits); 13) prepositions (e.g. The purpose of this paper); 14) prepositions after verbs (concentrate on); 15) punctuation (The use of standard marks and signs in writing and printing to separate words into sentences, clauses, and phrases in order to clarify meaning (e.g. ' ? '); 16) referring verbs (e.g. Martins (1975) claimed that ...); 17) relative pronouns (e.g. that/which); 18) singular/ plural (e.g. the team is/are); 19) tenses (e.g. Few scientists dispute/have disputed); 20) time words and phrases (e.g. since the nineteenth century). These are important properties for good writing aspects.

Error Analysis

The sketch of Error Analysis

Error Analysis (EA) is "a technique for identifying, classifying and systematically interpreting the unacceptable forms of a language in the production data of someone learning either a second or foreign language in speech or written performance. The term error is distinguished from mistake. Errors are associated with failures in competence and mistakes with failures in performance (Richards & Schmidt, 2002; Amiri, 2017; Connolly, 2020).

Error analysis attempts to explain the errors within the language of the second language learners by comparing the language produced by the learners to the standard norms of the target language. Error analysis is important for teachers to discover and analyze language learners' mistakes, allowing for opportunities for growth and optimization of their language learning to work out a solution for teaching and learning (Salehi, 2018; Sarasua, 2021).

Error description taxonomies

The following discussion of error description taxonomies is based on the presentation given by Dulay, et. al., (in Napitupulu, 2017): a) addition errors: such errors refer to the presence of an element or a form which must not appear in a wellformed utterance. Addition errors are sub-categorized into: regularization i.e applying rules used to produce the regular ones to those exceptions to the rules; double marking, a kind of addition error in which one feature is marked at two levels; simple additions are those which are neither regularizations nor double-markings; b) omission errors: the absence of an item that must appear in a well-formedwell-formed utterance; c) misordering errors: caused by incorrect placement of a morpheme or group of morphemes in a given utterance; d) misformation errors: refer to the use of a wrong form of a morpheme or a structure in an utterance.

Process of error analysis

Ellis and Barkhuizen outlined the process of error analysis in four steps including: a) collection of a sample of learner language; b) identification of errors; c) description of errors; and d) explanation of errors (Amiri, 2017). From this model, the researcher follows the general steps for this research accomplishment.

Students' errors found in the journalism class

With reference to the students' writing documentation on journalism class followed by 20 students, the errors of the word, phrase, and sentence constructions were indicated in the following data: 1) Javanese is language **that used** by almost people who lives in Java island; 2) Surabaya java and Solo **java is contrast**; 3) the accent of **Surabaya also** unique; 4) **there are** many people **hard distinguish** the above case; 4) different spelling two word is same and right; 5) the registration can **be access** on instagram @ pbi STKIP Pacitan; 6) this **cultur a pear** in 2000; 7) one **of them in Indonesia**; 8) the crisis **situation caused** by Corona virus; 9) the virus **give** impact in education; 10) so **student learning** at home ; 11) it **is gather** any diversities in Indonesia; 12) the language **choosen** without any **reason**; 13) why **did youth** during *sumpah pemuda* at 1928; 14) bahasa Indonesia **also don't** have social strata; 15) why Bahasa Indonesia **choosen** as linguafranca; 16) learning process **have been turn**; 17) students **that life** in village

witout internet connection cannot access the online learning; 18) it **have** many **problem** to practice; 19) English is the international language **that entering** various **field**;

20) in learning English, we **should mastering** four skills; 21) writing as practical skill **is required** the ability to construct ideas into text; 22) it **is become** main problem for majority of writer; 23) internet **have** important function on learning; 24) if teacher **not have** good technique, the purpose of learning **not be getted**; 25) Indonesia will **be have** best generation in new era; 26) Java is the **crowdest are**; 27) the Javanese **language from island** in Indonesia; 28) the **people Javanese** always have Javanese language in activity; 29) beautiful Javanese language **have a values** in Indonesia; 30) *Adkar* is organization **for learn** Arabic gravity; 40) **why in maulid nabi** era?; 41) usually, *Adkar* **give** some event to studies with benefit knowledge; 42) this ritual **can also tightly local** community relation; 43) we can **life** happily; 44) this learning **start** when virus Covid-19 **attack** at 2019.

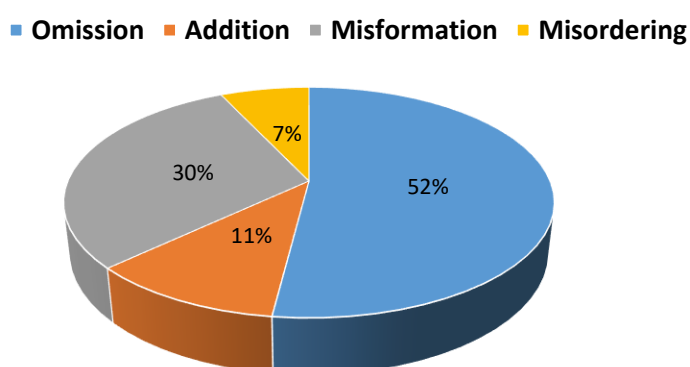


Figure 1. Percentages of the errors based on surface strategy taxonomy

Referring to the data analysis, the emerging hindrance of writing was mostly in the form of omission category (52%) followed by misinformation (30%), addition (11%), and misordering (7%).

Percentages of errors

Omission errors, as the most frequent error, are caused by the innate capacity of the first language or mother tongue of the students. As we know that there are no tenses and the auxiliary verb "be" does not exist in the Indonesian language. It causes free construction of a sentence to a target language, here is English. The learners tend to use pre-capacity (Indonesian language) to produce the target language (English). E.g., the learners produce a sentence: Ani bahagia — without any auxiliary verbs "be" in non-verb construction (ie., subject followed by adjective phrase). The sentence is also not affected by tenses (transformation of a "be" because of a time effect). On the contrary, in the English sentence Ani is happy (Ani bahagia) is affected by tenses and the use of "be" to denotes a particular time and non-verbal construction. Therefore, Indonesian learners producing errors are inevitable. They were in a process or approximative system of the target language.

Misinformation also indicates the second place of error of the learners. Misinformation is characterized by the use of the wrong form of the morpheme or structure (Dulay, et.al., 1982). In the case of Indonesian learners, this category is a risky construction. For instance, the regular formation of English bound morpheme is added by the small marker like "ed" to show past tense verb or "es" to show a plurality of noun or singular present tense verb, etc. Whereas, there are also exceptions in English or irregular formation to denote past tense or plurality. For instance,

in regular formation, "ed" (past simple) is added into morphemes like study-studied, and learn-learned but not in the case of irregular formation (past simple) like go-went or read-read. In the matter of irregular plural formation is "teeth" (plural form of a tooth), "geese" (plural form of goose), etc. From these examples, the regularization source is also a source of learners' errors.

Even, the problems of forming verb from present to past simple also happens in the formation of past participle in English — the form of a verb, usually made by adding -ed, which is used in some grammatical structures such as the passive or perfect tenses (CALD, 2023). On the contrary, in the case of the Indonesian language, there will be a constant form of a verb used to denote diverse tenses or times. E.g., the verb "makan" will not become "makaning" or "makaned" to express present or past tense as well as perfect tense. It will always be "makan". Saya "makan" untuk hidup (present tense), saya "makan" di rumah nenek kemarin (past tense), saya telah "makan" beberapa jam lalu (perfect tense).

In the matter of omission and misformation, the errors are caused by some aspects. It is ignorance of small items or details in English morphemes. Moreover, the nature of language learning (usually based on the first language acquisition reference) is concerned with macro aspects instead of micro ones or shifting from motivation, care, and love of a target language to shifting of its details. It means, in these cases, the learners need hundred flight hours of learning and applying the target language to overcome the complexity.

Finally, addition and misordering errors are the third and fourth place of learners' errors. In this matter, the adult learners seem to have avoided addition and misordering. Their learning process had led them to be sensitive to the macro construction level of a language. Moreover, they had also been sensitive in some additional items to the unnecessary formation of morphemes, phrases, or sentences.

Examples of errors

From the documents of the students' writing, some errors were found which are categorized based on error surface strategy taxonomy. There were instances of those errors:

Javanese is language that used by almost people who lives in Java island

The sentence initially seems to be grammatical. However, in the writing case, the learner had omitted the auxiliary "is" to form a relative clause or adjective clause to modify the noun "language". Moreover, the writer also omitted the indefinite article "a" for a general statement. Additionally, redundancy also occurred. The sentence should be "Javanese is a language that is used by almost people living on Java" or "Javanese is a language used by almost people living on Java".

The accent of Surabaya also unique

In the second example, the learner had also ignored the use of the auxiliary verb "is" she or he treated the construction of language like his or her mother tongue which has no tenses or auxiliary properties. The sentence should be "The accent of Surabaya is also unique".

It is gather any diversities in Indonesia

In the third example, the learner assumed that to join subject and predicate always need auxiliary verbs "is, am, and are" in all cases of English sentence construction: verb or non-verb sentence constructions. Moreover, the learner was also distracted by the grammatical properties of the word "gather". In English, a word can have diverse grammatical properties; namely, the word "gather" can be a noun or verb with reference to the co-textual use. Therefore, in this case,

the double marking — the use of “is” and “gather” i.e. two verbs— occurred. The sentence should be “It gathers any diversities in Indonesia”.

There are many people hard distinguish the above case

In the fourth example, the learner underwent confusion of putting and making an order of some words into an appropriate sentence. The process of learning caused him or her to freely locate the words into sentences intuitively. In such case, the exceptional adverb “hard” (without suffix ‘ly’) is better placed after object position. Additionally, the writer should avoid using dummy subjects (i.e., generally occur in phrases like ‘there is’, ‘there are’, ‘there was’, ‘there were’, ‘it is’, and ‘it was’) whenever possible; especially, in academic writing. It should be written as “Many people distinguish the above case hard”.

The people Javanese always have Javanese language in activity

In the fifth example, the learner also committed an error. He or she placed inappropriate and reversed phrasal construction. The researchers assumed that it was an interlingual error as a result of language transfer caused by learners’ first language or mother tongue, that is, the Indonesian language. In the Indonesian language, the phrasal noun is H-T (Head-Tail) construction. E.g., orang Jawa (directly transferred into English as ‘the people (orang) Javanese (Jawa)’ or ‘orang Indonesia’ directly transferred into English as ‘the people Indonesia’. In English, the phrasal noun should be in T-H (Tail-Head) construction to be ‘Javanese people’ or ‘Indonesian people’.

Solutions

Solutions proposed by the researchers are the employment of Collaborative Learning Techniques (CoLTS) focused on writing. Since the CoLTS are appropriate to be applied for academic purposes or university students. The techniques focusing on writing such as a) dialogue journals; b) round table; c) dyadic essays; d) peer editing; e) collaborative writing; f) team anthologies; g) paper seminars (Barkley, et. al., 2005). Certainly, the treatment should also pay attention to the major errors committed by students. In this case, the researchers had employed the peer editing technique to teach journalism class. Based on the observation, the students engaged in contributing their critical findings on the errors made by their peers for revisions. Additionally, the criticized pairs will be responsible for the corrections before publishing the writing. In this class, the critical contributions (micro or macro aspects of writing) will be accounted as invaluable participation during the class for a judgment of class evaluation.

CONCLUSION

Referring to the data analysis, it could be concluded as follows: a) writing is sensitive activity considering essential aspects such as a certain convention, audience target, and also micro part of writing such as grammar, cohesive device, etc.; b) Error analysis, attempts to explain the errors within the language of the second language learners by comparing the language produced by the learners to the standard norms of the target language. The error analysis is important in this age for teachers to reveal language learners’ problems, allowing for opportunities for growth and optimization of their language learning to work out a solution for the teaching and learning as well as to optimize the use of authentic human mind instead of totally depending on technology; c) the emerging errors of writing was mostly in the form of omission category (52%) followed by misformation (30%), addition (11%), and misordering (7%). In the matter of omission and misformation, the errors are caused by some aspects. It is ignorance of small items or details in English morphemes. Moreover, the nature of language

learning (usually based on the first language acquisition reference) is concerned with macro aspects instead of micro ones or shifting from motivation, care, and love of a target language to shifting of its details. It means, in these cases, the learners need hundred flight hours of learning and applying the target language to overcome the complexity; d) solutions proposed by the researchers are the employment of Collaborative Learning Techniques (CoLTS) focused on writing. Since the CoLTS are appropriate to be applied for academic purposes or university students. The techniques focusing on writing such as dialogue journals; round table; dyadic essays; peer editing; collaborative writing; team anthologies; paper seminar.

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The Students' Ability Analysis to Distinguish Gerund and Present Participle

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Abstract

This research aims to determine the student's ability to distinguish between Gerund and Present Participle. The researchers used the qualitative research method to collect the data using two instruments: a paper test and an interview. The researchers tested 26 second-semester students in the Practical English Grammar class. There are 20 numbers of questions in the tests. This research shows that students' ability is still not good or far from what is expected. This is evidenced by the results of trials where the average value of students is 64.04. The results of this test are included in the fair classification. Of 26 students, there are 6 (23%) students followed Murcia's theory, 4 (16%) students followed Solahudin's theory, 5 (19%) students did not follow one of the theories described, and 11 (42%) students followed a combination of both views (Murcia and Solahudin).

Keywords: *students, ability, Gerund, present participle*

INTRODUCTION

English grammar is a necessary component that must be learned. However, because mastering English grammar is frequently challenging, many students believe this is a problem. English grammar consists of the principles used to communicate in English, allowing speakers and listeners to understand the language clearly. The range of topics covered by English grammar includes verb tenses, question tags, gerunds, present participles, past participles, and infinitives, among other things. Using verbals, or words that appear like verbs but are used instead as nouns, adjectives, or adverbs in sentences, is one of the more confusing aspects of English grammar. Verbals contain participles, gerunds, and infinitives (Haryanti et al., 2022). Although they have the same written form as the Present Participle in Verbals, the Gerund serves different purposes. Thus, English language learners must distinguish between the two to avoid confusion when using English grammar.

The Gerund represents one of grammar's basic building blocks, and learners know how to use it. While understanding grammar is crucial to learning English, there remain many gerund errors, even though students themselves are aware of this. Students will use spoken and written English inaccurately as long as they lack knowledge of the Gerund in grammar. A gerund is a verb with a -ing form and functions as a noun (Lado, 2014). Gerund is the base verb (verb-1) ending with -ing. Gerund is used as a noun and has some functions as the subject, direct object, as an object after the preposition, and appositive (Maria et al., 2019). Ignoring the use of gerunds in grammar will lead to misunderstandings when conveying or communicating ideas, especially in writing (Irianti et al., 2022).

The Gerund, as well as the present participle, have the same form. It is generated using the base verb (verb-1) and adding the suffix "-ing." Despite having the same form, they are used for diverse purposes. Present participle acts as an adjective, adverb, and verb, while Gerund acts as the sentence's noun (Lumbanbatu: 2019). Discussing the use of Gerund and present participle becomes essential because it is the basis of building an integrative comprehension of grammar. Many Indonesian students face problems differentiating between gerund and present participle because gerund and present participle have the same form (Akib, 2018).

It is essential to initially differentiate between the -ing participle and the Gerund before discussing participles. Anyone attempting to distinguish between a sentence's subject and verb may be perplexed by the similar aspect of a gerund and a present participle. In addition to having varied forms, the -ing participles and gerunds had many different uses. The best way to determine a gerund from a -ing participle is to remain in consideration that the gerunds act as nouns, but -ing participles function as adjectives. Therefore, a verb that can replace a noun and uses the -ing form is a gerund (Murcia, 1983). The distinction between a present participle and a gerund can be seen in their respective roles in a sentence. A present participle denotes "that/which," as in boiling water (the water is boiling), and functions as both an adjective and a verb. A gerund, on the other hand, denotes "for/to," as in a boiling bottle (a bottle of boiling water), and functions as both a noun and an adjective (Solahudin, 2014).

Murcia and Solahudin view the distinction between the Gerund and the present participle differently. Due to Murcia's statement, one approach to distinguishing between verbal and nonverbal communication is considering the verbal's role. In the words of Solahudin, one must comprehend the verbal's function and significance to identify it. The verbal can be determined using either of the two statements. The definitions of Gerund and present participle and their functions must be considered. That is why the researchers must determine if students can differentiate between a gerund and a present participle in a sentence. The problem statement is: 1) How can the students use the Gerund and Present Participle?; 2) How do students identify and distinguish gerunds and present participles in a sentence?

METHOD

One hundred twenty-one students of the English Education Study Program of STKIP PGRI Pacitan were taken as a population. Using purposive sampling, twenty-six second-semester students in the Practical English Grammar class were taken as the research sample.

The instruments used in this research were tests and interviews. The test consisted of twenty identification tests to obtain data about the student's ability to use Gerund and Present Participle. While in the interview, the researchers asked the students about the manner that the students use to identify Gerund and present participle. This dialogue will be recorded and laden in data transcription.

After giving a paper test, the data obtained is used as material to be analyzed by the researchers. To analyze the data, the researcher has several criteria: an excellent score is specified by 80-100 score achievement; a good score is expressed by 66-79 score achievement; a fair score is determined by 56-65 score achievement; a poor score is known through 40-55 score achievement; and an inferior is known through 0-39 score achievement. Student score explanation: Excellent and Good are able; Fair is a relative score; however still far from being expected. In contrast, the Poor and Inferior are unable. Students with an excellent score mean they have understood the function and form of the Gerund and Present Participle. Easy for them to tell the difference. Students with a good score show that they understand both but are not focused when identifying them, so error checking occurs. The Fair, Poor, and Inferior scores mean that students could not understand verbal, especially gerunds and present participles. That is, students are still confused about the function of the gerund and present participle. Their achievement scores are still very far from what was expected.

RESULTS AND DISCUSSIONS

Results

1. The Finding of the Data Analysis Collected through the Test

One hundred twenty-one students of the English Education Study Program of STKIP PGRI Pacitan were taken as a population. Using purposive sampling, twenty-six second-semester students in the Practical English Grammar class were taken as the research sample.

The rate percentage of the student's score for the second semester of the English Education Study Program of STKIP PGRI Pacitan is shown as follows:

Table 1. The Rate Percentage of the Students' Scores Obtained through the Test

No.	Classification	Score	Frequency	Percentage
1	Excellent	80 - 100	5	19.23%
2	Good	66 - 79	7	26.92%
3	Fairly	56 - 65	6	23.08%
4	Poor	40 - 55	5	19.23%
5	Inferior	0 - 39	3	11.54%
Total			26	100%

According to the data gained through the test, it was found that the level of students' ability was still far from being expected. The result of the data analysis proved it through the trial in which there were 3 (11.54%) out of 26 students got an inferior score, 5 (19.22%) students got a poor score, 6 (23.08%) students got a fair score, 7 (26.92%) students got a good score, and 5 (19.23%) students gained an excellent score.

Table 2. Statistic of Students' Test Results

	Name	Value
N	Valid	26
	Missing	0
Mean		64.04
Std. Error of Mean		3.453
Median		65
Std. Deviation		17.608
Variance		310.038
Skewness		-0.619
Std. Error of Skewness		0.456
Kurtosis		0.394
Std. Error of Kurtosis		0.887
Range		75
Minimum		20
Maximum		95
Sum		1665

Moreover, it was found that the mean score of the students was 64.4, which is classified relative score. It means that the ability of second-semester students of the English Education Study Program of STKIP PGRI Pacitan in Practical English Grammar class was still far from being expected, where all of the students hoped should minimum have a good score.

2. The Finding of the Data Analysis Collected through the Interview

Interview in this research was used to get data about the level of teaching implementation success. It is the last step that the researchers do to complete the study. In this interview, the researchers asked the students how they used to identify Gerund and present participle. This interview was recorded and laden with data transcription.

The researchers have theorized about the way to differentiate Gerund and present participle. The interview outcome showed the number of second-semester students of the English Education Study Program of STKIP PGRI Pacitan in Practical English Grammar class that followed the theories. Murcia and Solahudin have different views to differentiate Gerund and present participle. Both statements can be used to identify the verbal. The result of the interview related to the theories used by the students is presented as follows:

Table 3. The Theories Used by the Students

No.	Theories	Frequency	Percentage
1	Murcia	6	23.07%
2	Solahudin	4	15.38%
3	Do not follow one of the theories that have been explained	5	19.23%
4	Combination both theories (Murcia and Solahudin)	11	42.30%
Total		26	100%

Based on the data gained through the interview, it was found that the students followed the theories in identifying gerund and present participle. The result of the data analysis proved it through the interview in which of twenty-six students, there are six students follow the theory of Murcia, four students follow the view of Solahudin, five students do not follow one of the theories that have been explained, and eleven students follow the combination both theories (Murcia and Solahudin).

From the sum of the frequency of students who used those theories displayed in the table above, the percentage numbers of students who follow the theories can be illustrated in the diagram as follow:

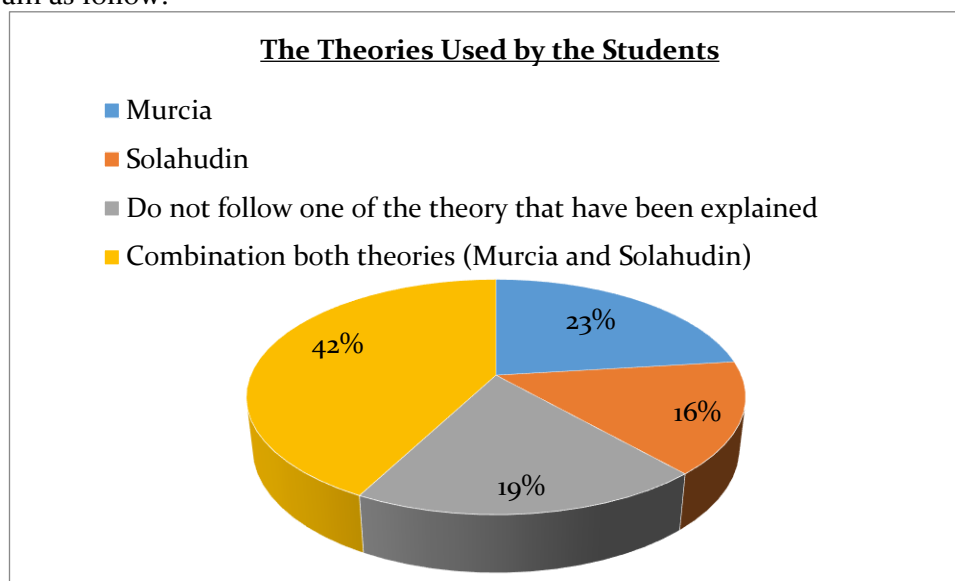


Diagram 1. The Percentage of the Students Who Follow the Theories

Based on the diagram above, it can be seen that 23% of students follow the theory of Murcia, 16% of students follow the theory of Solahudin, 19% of students do not follow one of the theories that have been explained, and 42% of students follow the combination both theories (Murcia and Solahudin).

Discussion

1. The Finding of the Data Analysis Collected through the Test

Based on the data gained through the test, three out of twenty-six students got an inferior score, five got a poor score, six got a fair score, seven got a good score, and five got an excellent score. The percentage numbers of students' scores were there was 11.54% out of 26 students got an inferior score, 19.22% of students got a poor score, 23.08% of students got a fair score, 26.92% students got a good score, and 19.23% students gained an excellent score.

Additionally, it was found that the mean score of the students was 64.4, which is classified relative score. It means that the ability of second-semester students of the English Education Study Program of STKIP PGRI Pacitan in Practical English Grammar class was still far from being expected, where all of the students hoped should minimum have a good score.

2. The Finding of the Data Analysis Collected through the Interview

At the end of the research, the researchers gained interviews with the students. The scope of the questions is related to the theories used by the students to distinguish between Gerund and Present Participle. Four options were used: the theory of Murcia, the theory of Solahudin, does not follow one of the theories that have been explained, and the combination of both theories (Murcia and Solahudin).

Murcia's statement says that the way to differentiate verbal is to look at the function of the verbal itself. Solahudin states that the way to identify verbal is to understand the meaning and function of the verbal. Both of these statements can be used to identify verbally. Some students may follow the researchers' theory, but some may use their way.

Based on the diagram above, it can be seen that there were six (23%) students followed Murcia's theory, four (16%) students followed Solahudin's theory, five (19%) students did not follow one of the theories described and eleven (42%) of students followed a combination of the two theories (Murcia and Solahudin).

CONCLUSION

Based on the previous findings and discussion, this study produced several conclusions, namely:

1. The ability of English Education Department STKIP PGRI Pacitan students is still not good or far from what is expected. This is evidenced by the results of tests where the average value of students is 64.04. The results of this test are included in the fair classification.
2. Of twenty-six students, there are six (23%) students followed Murcia's theory, four (16%) students followed Solahudin's theory, five (19%) students did not follow one of the theories described, and eleven (42%) students followed a combination of the two theories (Murcia and Solahudin).

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The Philosophical Meaning of The Slametan Wetonan Tradition of Pacitan People, East Java

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ABSTRACT

The slametan weton tradition is one of the traditions of the Javanese people who have faith in the Javanese knowledge of their ancestors. This study will tell the story of a tradition of community weton slametans held in Pacitan Regency. The purpose of carrying out this tradition is to ask Allah SWT so that those whose weton at slameti always get guidance, health, safety, a happy, prosperous life both in this world and in the hereafter. The Javanese people still have a belief that one's weton is a sacred and historic day, therefore it is used as an important moment in carrying out a prayer and supplication to Allah swt.

The method used in this study is the historical method. Within the scope of the scientific field, historical research methods are divided into four parts. First, heuristics are the stage of gathering sources. The second is Criticism, namely the source verification stage. The third is Interpretation, namely the stage of integrating one source with other sources so that it becomes a coherent and chronological historical story, and the last is Historiography, namely the writing stage. Based on the results of the study, it shows that the tradition of the weton slametan, especially in Pacitan, is still highly trusted and well-developed. They think of it as a means of supplication to Allah SWT at the right time and is sacred. In addition, there are many other practices as a result of a series of traditional activities. Apart from that, this wetonan slametan is believed to have a great influence on the life of the person concerned.

Keywords: *Acculturation, Tradition, Slametan*

A. INTRODUCTION

Javanese society is a society that always upholds the customs of ancestral cultural traditions. This ancestral tradition is believed to be very sacred and has an impact on one's life both in this world and in the hereafter. In essence the Javanese community is a group that lives in a community in a place and interacts with each other and forms or creates new habits (Koentjaraningrat, 2005: 16). Javanese Society are the majority and even bigger in position in Indonesia when compared to other tribes. With this majority eating, of course, produces a diverse culture as well. This has become one of the factors that has strengthened and developed Javanese culture in the archipelago. This article explains that the life of the Javanese people is very complex and diverse. Adhering to the teachings of ancestral traditions, always prioritizing etiquette, being arrogant for the sake of creating harmony and safety of life.

Tradition is a custom or belief passed down by the ancestors, (Poerwadarminta, 1939:1088) Meanwhile, a ceremony or ritual tradition of the Javanese community is an illustration of all the rules, manners and values of the order of life which are passed down from generation to generation. Therefore, it is not surprising that the order of the Javanese people's life rules is embodied by a traditional ceremony or ritual which is believed to have sacred values. The Javanese people in their lives have many very meaningful symbols. All life arrangements are always symbolized by something that is usually more natural symbols. This is what makes the life of the Javanese people unique and full of meaning. Basically, the traditional ceremonial activities carried out by the Javanese people are a means of praying to Allah SWT so that what

is their wish or desire can be carried out properly, safely and smoothly, free from all obstacles and obstacles.

Javanese culture has various works that reflect a thought, behavior or norms as well as demands on humans in order to live a social life as social beings (Heru Arif Pianto, 2022:2). Humans who are cultured, of course, can improve the quality of life that is more perfect. This is what the Javanese people always uphold in their daily lives. The term "Nguri-Uri" ancestral culture is still very strong. They believe that by "nuri-uri" they will always get safety in their lives. Conversely, if the tradition is not "uri-uri" then it will get an unfavorable impact or in Javanese terms they call it the word "kualat". This factor causes the Javanese tradition to be carried out well today.

However, in subsequent developments today, Javanese culture is experiencing a shift due to the increasingly strong influence of external culture. Many of today's young people do not understand their own culture. They prefer and enjoy foreign culture which they say is more interesting and more modern. More than that, many of them view Javanese culture with only one eye. They do not understand historically, where they were born, grew up and the development of their socio-cultural life, none other than in Java. This kind of thing is supposed to be something

special attention. Don't let the term "Peanut Forget the Skin" appear. Even though the earth that we walk on, the source of water and food that we consume every day is on the island of Java, because of that it is appropriate for us to know how we must act in accordance with the rules and regulations of this noble Javanese society. Do not let it happen that in an increasingly advanced era we are swept away by currents which sometimes conflict with the personality of the nation itself, especially the personality, customs, ethics, manners of the Javanese people who have developed so far.

Especially as someone who is involved in the world of education, historians, and humanists, we must be able to take firm action in view of the symptoms that are emerging in the life of Javanese society today. There should be no term "Wong Jawa Ilang Jawane". Times may change, times may progress, science may progress rapidly, but one thing, Javanese culture must not collapse, it must continue to develop in the midst of the wider community. This is the heavy duty and responsibility of all of us. We must have a sense of "Handarbeni" or feel that we belong to this Javanese culture. When this feeling has grown, of course there is a sense of responsibility morally to help preserve Javanese culture. In our body and soul we have ingrained a culture and all kinds of knick-knacks of Javanese people's life. The culture or tradition of the Javanese people is a local asset that must be maintained.

Basically a form of this Javanese tradition is a symbol of life which is meaningful, has meaning and important values in life. The combination of the values of Javanese and Islamic traditions makes the Javanese tradition even stronger and full of meaning. In addition to the Javanese traditional values, the planting of Islamic values is always practiced in every ritual or traditional ceremonies. This is a symbol that Javanese culture always adheres to religious sharia law. We also both understand that the emergence and development of Islam in the land of Java cannot be separated from the role of culture, which has been taught by the walisongo as figures of propagating Islam in the land of Java. One of the traditions raised in this study is the tradition of the weton slametan. This is a tradition full of symbols of life. From a symbol of life which is part of this culture will produce a person's personality in social life (Dalyono, 2007:106).

B. RESEARCH METHOD

Writing this article the research method used is the historical research method. The historical method is a guide in technical implementation in carrying out each step. The historical method can be interpreted as a process of critically examining and analyzing records and relics of the past based on imaginative reconstructions (Louis Gottschalk, 1986:32). While

the steps that must be taken in the method There are four stages in this historical research, namely, gathering sources, criticizing sources, interpreting or formulating facts and presenting them (Gilbert J, Garraghan, 1940)

The first step is heuristic or often called the collection of historical sources. Historical sources used to write a historical story must be relevant to the theme or topic. This historical source is divided into three parts, namely oral sources, written sources and sources of relics. Oral sources can be obtained by interviewing the narrator. The narrator in question can be from witnesses or even historical actors directly. For written sources, it can come from archives, books, meeting notes, magazines, newspapers, documentation or written sources in other relevant forms. Meanwhile, the source of relics can be in the form of relics that are in accordance with the theme that has been proposed to be written down.

The second step is source criticism. In this step, assessment, testing, and selection of historical traces that have been collected are carried out. At this stage it is divided into two kinds, namely internal criticism and external criticism, (IG. Widya, 1998: 21-22). In order to find out the authenticity and credibility of written historical sources in particular, one can also look at their physical form, such as paper, ink, and the style of the language in which they are written. As for oral sources, their credibility can be tested by studying the background and physique of the storyteller and comparing it with information obtained by other storytellers. (Muhammad Risalul Amin, 2022: 30-31).

The third step is interpretation or interpretation. This step can be done by drawing conclusions from sources that have been verified. This interpretation stage has at least two main stages, namely the description of sources and the merging of historical sources that have been collected and verified for their validity. In interpreting a historian, he must be able to act wisely, meaning that the historian must include the source and where the source was obtained. This method of interpretation is often directed at the views of philosophers, so that historians can get possible solutions in dealing with a historical problem. . While the final step in the historical research method is Historiography. This stage is the final stage of the historian (Heru Arif Pianto, 2022:20). At this stage, the reconstruction of past events is carried out in the form of a story or historical story as outlined in the form writing. (Sartono Kartodirdjo, 1982: 60-61). In writing this history, historians will also be tested for the ability to compose a good, beautiful and meaningful sentence. Therefore, it requires certain abilities to maintain the quality standards of a historical story such as serialization, chronology, causality, and imagination. From all the steps that have been taken, it is hoped that the results of historical research can be written down and be able to provide a clear picture of the process of the course of an event from the beginning to the end of the story. It is hoped that this will be able to reveal a historical event in a transparent, open manner, and prioritize the objectivity and truth of an event.

C. RESULTS AND DISCUSSION

1. History of the Wetonan Slametan Tradition

In essence, human birth is a choice of a historic day in a life. The number of days in a week there are 7 days and wetonan according to the belief of the Javanese people there are 5 The traditional slametan wetonan pasar there are five (wage, kliwon, legi, pahing and pon). According to the Javanese, this has a high meaning as a symbol of life. Humans are born to have a weton which is symbolized by the number of numbers according to the traditional Javanese culture. According to the Javanese, each number of weton also has a different character. This is what is unique and interesting in the art of Javanese life. The following table weton according to Javanese paugeran,

Day	Neptu	Market	Neptu
Sunday	5	Legi	5
Monday	4	Pahing	9

Tuesday	3	Pon	7
Wednesday	7	Wage	4
Thursday	8	Kliwon	8
Friday	6		
Saturday	9		

Basically, the slametan weton tradition in Pacitan has existed since ancient times. Regarding its initial origins, it is not possible to trace the source with certainty. This is an ancestral legacy from generation to generation that continues to be preserved. Because humans from the first birth is an event that is very meaningful and will affect in the following times. Humans are born on earth, of course there are those who are "Nguwat-uwati". Humans are born of course there is an afterbirth which is then planted as well

Humans are born with a weton and a weton has a great influence on the behavior of the person in question, so it is necessary to give it a massage. Besides that, humans born on earth are always uwat-uwati by the papat five pancer brothers and sisters. One of them is the placenta that is planted and it must be sacrificed every birth weton in order to get safety and blessings from Allah SWT. Results of an interview with Mr. Katemin, a community leader in Karanganyar Village on November 20, 2022.

You have to bancak i every day with the weton with the hope that it is a request to Allah SWT to hope for safety, prosperity in life.

The Javanese tradition when a baby is born to eat the placenta must be planted around the house. Even more than that how to groom, plant and even the layout according to Javanese tradition there is a rule. An example is when the baby is a boy, the placenta must be planted on the right side of the front of the house, if the baby is a girl it must be placed on the left. In addition, at night the placenta that has been planted must also be given a lighting lamp for about 36 days. So this is how the life of the Javanese people always respect historical days by holding several rituals or other forms as a means of asking for protection from Allah SWT.

So in general it can be said that the tradition of the weton slametan in Karanganyar Village historically cannot be explained with certainty about the emergence of clouds, only this is a legacy from the ancestors from generation to generation. This tradition besides asking for protection from Allah SWT is also a form of respect for the ancestors who have provided education, teachings, practices and even good role models to their offspring from time to time. Thus it will become an identity of a region regarding the implementation of the traditions of the Javanese people in finding noble identity and identity. Until now, there are still many traditions of the slametan wetonan being carried out solemnly. It's not that they are forced to be afraid of the term "Kualat", but more than that in carrying out this tradition they are conscious of the important role of this tradition. They feel they have a moral responsibility to continue the culture that has existed since the time of their ancestors.

Meanwhile, to find out the number of one's weton can be done by looking at the weton table. For example, the birth of Monday Kliwon, Monday: 5 and Kliwon: 8, the total is 13. So people born on Monday Kliwon have weton 13. This weton in Javanese society is also commonly used as a calculation in certain events, such as circumcisions and weddings. To determine the day of circumcision or marriage is also calculated with the wetonan in the hope that all wishes and events will run smoothly and all wishes will be fulfilled by Allah SWT.

2. Implementation of the Wetonan Slametan Tradition

The slametan weton in Pacitan is held during the day by inviting several relatives or neighbors to attend the ceremony. By inviting relatives and neighbors, the intention is to ask for blessings so that the person who is slameti weto can get health and blessings from Allah SWT. This activity is usually carried out in a simple manner but contains a very meaningful value. Simple means that all the dishes provided are not too fancy, the number of invitees is also

not too many, only relatives and a number of close neighbors. But what cannot be avoided or forgotten is "ubo rampe" or assembly/pasodaqohan in the form of food that is processed in such a way.

different meanings too. From the existing ubo rampe, it will then be realized by community leaders who are able and understand the Javanese tradition. One thing that becomes our concern is that there are very limited figures or people who are able to understand the assembly of traditional symbols. There should be regeneration so as not to lose successors.

The next generation of Javanese culture must always be sustainable and sustainable, meaning that when the older generation is gone, someone must continue. In fact, there are no official rules, but it is an awareness of each person to care for and share in this culture that needs to be developed. This tradition has been created, carried out by our ancestors with great difficulty and in such a way, so we should respect and appreciate his services by positioning ourselves as good next generations. In fact, all the elements of tradition that are taught are also good, polite, have a high meaning and do not violate religious teachings.

One of the meanings contained in this wetonan slametan tradition is to function as a starting point for timber. Rejection is a term used to refer to a result of a cultural tradition that aims to reject, expel or eradicate anything that is considered bad, such as disease (Pratika Riszki Dewi, 2021: 20). This is also manifested in a symbol of rerakitan or pasodaqohan in the ubo rampe of this wetonan tradition. So with the hope that someone whose weton is commemorated will be free from all kinds of disturbances, diseases or anything that threatens the safety of what was ritualized by the weton. Everything in every meaning of this pasodaqohan tradition is for good purposes, only because the Javanese are full of philosophies, everything is embodied in a meaningful symbol.

Meanwhile, a set of equipment used to commemorate the slametan wetonan tradition is usually called pasodaqohan or ubo rampe. Ubo rampe which is used all in the form of food that is packaged in such a way with different purposes and meanings. The ubo rampe that is usually used in this wetonan slametan is,

- a. Tumpeng Lima, in Javanese terms, is called the mill of a pancer gang. There are 5 tumpeng in total, with the composition of a large tumpeng being placed in the middle, while four smaller tumpeng are placed on the edges of the four sides. On the sidelines of the tumpeng is given a vegetable or urap with a side dish in the form of an egg. The egg dish also provides a symbol of the origin of human creation. As for the number of eggs, there is also a paugeran. The Javanese usually give eggs with the number of pitu (seven) or eleven (eleven). The number of pitu contains the intention of begging for a pitulungan from Allah SWT, while sewelas contains the meaning "nyuwun piwelas" to Allah SWT. For the meaning of tumpeng milled friends. gangsal pancer itself as a form of respect for Kanjeng Prophet Muhammad SAW, his family, and four of his friends. By being given respect in the hope of getting his intercession in yaumul qiyamah.
- b. Tumpeng Tunggal, in Javanese terms is called memule memetri. This tumpeng literally only consists of a main tumpeng of medium size and is served with vegetables or ointment on the side without any side dishes. This memule memetri has the intention of being a form of respect for the Prophet Adam and Mother Eve. Apart from that, there is also the "Seduler Papat Lima Pancer" tradition. By being given respect, it means to get blessings so that you get a happy and prosperous life.
- c. The sacred sekul ulam sari, rerakitan or pasodaqohan is in the form of rice placed on a plate with chicken meat on top or some putting ingkung on it. This is a manifestation of respect for the Holy Prophet Muhammad SAW who has given instructions to mankind from the dark ages to the glittering times as it is today. Apart from that, he also always hopes for the intercession of Kanjeng Prophet Muhammad SAW on the Day of Resurrection.

- d. Jenang Abang, Jenang Abang is made from rice flour sprinkled with brown sugar. In the tradition of the wetonan slametan, two jenang abang are usually given, each of which has its own meaning. First, it functions as a wilujengan or slametan for his family, or a symbol of supplication to Allah SWT so that his household gets happiness, safety and peace. Second, as a starting point for the respective wetonan day, meaning that if on the wetonan day there are obstacles, disturbances or all things that are not good, hopefully they will disappear, all that remains is to get safety and happiness and prosperity.
- e. Semoyo, semoyo consists of a series of market snacks. The meaning contained in this semoyo is a symbol to fulfill all kinds of existing promises/ vows that have not been fulfilled so far.

So that's a series of ubo rampe or pasodaqohan as equipment in the slametan wetonan tradition in Javanese society. Each of them has a meaning as a symbol of community life which has been preserved so far. By holding this slametan, it is hoped that the life of the person who is slameti wetona will have a better and more prosperous life and that of the whole family.

Based on the symbol of life, the slametan wetonan tradition turns out to contain many benefits in social life. This means that one traditional activity includes many benefits that can be obtained. These benefits include the following,

- a. As a means of prayer, a request to Allah SWT for the safety, welfare and serenity of life and that of all families.
- b. As a form of gratitude to Allah SWT for the blessings, especially long life, health, safety and for the abundance of sustenance that has been received so far.
- c. As a means to develop and preserve Javanese culture, as well as pass it on to the younger generation. Carrying out activities like this will indirectly provide education to the younger generation to always continue the traditions of their ancestors.
- d. Means of giving charity, by inviting relatives, neighbors and relatives, of course, they are given a dish that is quite delicious, meaning that it is a charity, as a form of gratitude for favors or all kinds of sustenance that God has given by sharing with others.
- e. A vehicle for establishing friendship between relatives and neighbors. With the invitation of fellow brothers and neighbors, mutual friendship is established, gathering, and communicating in an intimate way. This will also add to the harmony of family relations among people in social life.

There are many other benefits that can actually be taken from this Javanese wetonan slametan tradition. It's just that we, especially the younger generation, do not really understand and are not very interested in participating in exploring the values contained in this element of community tradition. This, of course, must be instilled as early as possible on how we can explore the historical and cultural values of all kinds of Javanese traditions that are currently developing. Besides that, there is a wise attitude that must be instilled in responding to all these Javanese traditions. Do not let the wrong perception that will lead to a misunderstanding in the community.

D. CONCLUSION

The slametan wetonan tradition is a tradition that is still developing in Java, especially in Pacitan Regency, East Java. This tradition is a legacy from ancestral times as a means of asking for prayers for salvation to Allah SWT. Wetonan is a combination of birthday and market which is then symbolized by a number. This number is considered sacred and because of that it is always greeted according to the customs and traditions of the local community. Historically, this tradition, especially in Pacitan, does not know the exact year of its emergence, because the only historical source available is a story or information from local community leaders. However, with a strong belief in ancestral traditions, the community will realize that it will bring a blessing in life. Apart from that, it is also a form of nurturing or preserving ancestral culture.

The implementation of the wetonan slametan tradition is carried out at the house that has an intention by inviting relatives, relatives and closest neighbors. They were invited in order to ask for their blessings for those whose weto is greeted so that they always get safety, prosperity and happiness in their lives. In this slametan, various traditional ritual devices or better known as ubo rampe are also presented. This ubo rampe is mandatory because each ubo rampe will explain the meaning contained in it. One thing that is interesting and needs to be studied is that this wetonan slametan activity can actually produce many benefits for the local community. Harmony in society, a form of gratitude, until unity can be realized through the means of this wetonan slametan activity.

By looking at the current reality on the ground, it is appropriate for us as Javanese/Javanese youth to continue and always preserve this tradition. In addition to the many benefits, it is also a form of respect for the ancestral traditions of the land of Java. As Javanese, we shouldn't have the term "Wong Jowo Ilang Jawane". Even though how we live, eat and drink and all things are in the land of Java, it is only fitting that we serve the earth where we stand, one of which is by appreciating and developing the existing culture. We all have to have the character of "handarbeni" or the nature of a sense of belonging to Javanese culture. In this way, we directly feel a moral responsibility to participate in the development of civilization in Java, including a culture that has been developing for a long time. Nurturing culture is not only the duty of the older generation, but it is the duty and responsibility of all of us in order to find a national identity that advances civilization.

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Bibliometric Analysis and Research Trends on Problem Based Learning (PBL) Integrated STEM in Physics Learning

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Abstract

Abstract. Physics is one of the subjects that is quite difficult and challenging for students. So we need an approach or learning model to make it easier for students to learn physics. This study examines problem-based learning (Problem Based Learning), which is integrated into Science, Technology, Engineering, and Mathematics (STEM). This study aims to identify trends in the PBL integrated model in physics learning. The method used in this study is the bibliometric analysis method. Articles obtained from google scholar amounted to 980 articles consisting of proceedings and scientific journals, national and international, which were collected from the Publish or Perish (PoP) application. The collected articles were analyzed using the VOSviewer Application to obtain information and synthesize it. The result of this study is that in recent years, Problem Based Learning (PBL) integrated STEM has become one of the trends and has become an option in the implementation of physics learning in schools. This can be seen from the amount of studies and discussions on PBL integrated STEM in physics education. Based on the results of this literature study, several recommendations for further research were also obtained, namely, so that PBL integrated STEM can be even better, it is necessary to try adding various learning media in it, especially electronic modules that develop critical thinking skills.

Keywords: PBL-STEM, Physics learning, Bibliometric, VOSviewer, PoP

INTRODUCTION

Education is the most important thing for society because education allows us to build curiosity and creativity in children, which will lead them to individual fulfillment, problem-solving at the personal, community, or global level, and build creativity and innovation, especially in the field of science. Science is a science in which we learn about natural phenomena around us through a series of processes that we know as scientific processes that will produce scientific attitudes and scientific products, which are composed of the three most essential components in the form of concepts, principles, and theories that apply universally (Trianto, 2012).

Learning difficulties are one of the symptoms of the learning process, which is characterized by various behaviors that have a background within and outside of the learner (in this case, students) (Samudra et al., 2014). Not only students but also the general public have the same interpretation of physics subjects. Some students indicated that physics is one of the most challenging subjects to learn. Not only difficult to learn, but physics has also even become one of the subjects hated by students. The general opinion/view of students and the public is that Physics is a complex subject and most hated by students, exceptionally high school students. This results in students being less motivated to learn physics (Chusni, 2016). Physics learning is still teacher-centered, rote in nature, and has not been linked to real life and technological developments.

Teachers are responsible for the teaching and learning process, so they should understand the problems faced by their students in studying physics. In addition, by knowing the problems

faced by students in studying physics, appropriate steps can be analyzed to overcome these problems so that they do not become an obstacle in student learning. Research in the field of education can also test strategies that are more appropriate to the problems that occur so that they are more targeted and valuable in the teaching and learning process.

One of the models and approaches that can be developed by teachers and student-centered is the Problem Based Learning (PBL) model. PBL is a learning model that uses real problems found in everyday life and aims to enable students to build knowledge about science. The PBL model requires students to instill the basics of scientific thinking and develop cognitive thinking, which is very much needed in 21st-century learning (Diani et al., 2019). Other abilities that can be developed through the application of PBL in learning include problem-solving skills, planning, reasoning critically and creatively, stress management, self-assessment, active team collaboration, independent learning, interpersonal skills, decision making, time management, and problem definition skillfully and precisely (Newman, 2005). The application of learning using PBL can also improve higher-order thinking skills.

In addition to PBL, current learning needs to keep up with the times in the era of globalization, one of which is by integrating Science, Technology, Engineering, and Mathematics (STEM). The linkages between science and technology, as well as other sciences, cannot be separated in science learning. STEM is a discipline that is closely related to one another. Science requires mathematics as a tool in processing data, while technology and engineering are applications of science. The STEM approach to learning is expected to produce meaningful learning for students through the systematic integration of knowledge, concepts, and skills. Some of the benefits of the STEM approach make students better problem solving, innovators, inventors, independent, logical thinkers, and technological literacy (Stohlmann et al., 2012).

The PBL model can be integrated with the science technology engineering mathematical (STEM) approach. STEM is an effective way to facilitate and maintain the integration of science, technology, mathematics, and engineering (Estapa & Tank, 2017). The descriptions of these four terms are: (1) science deals with concepts and laws related to nature; (2) technology is a skill used in knowledge by using an artificial tool that can facilitate work; (3) engineering is knowledge to design a stage/procedure that can solve problems; and (4) mathematics is a science that relates quantities, numbers, and spaces based on logic without any empirical evidence (Torlakson & Bonilla, 2014). Integrating PBL with STEM can actualize environmental literacy and student creativity (Farwati et al., 2017). Applying PBL integrated STEM can also improve students' scientific literacy based on gender and improve students' cognitive, psychomotor, and character abilities (Yulianti et al., 2019). Integrating PBL and STEM requires students' motivation and confidence in advancing their careers (Laforce et al., 2017).

Based on the explanation that has been presented, the author tries to do a literature study. This study examines research trends in physics learning, especially PBL integrated STEM with bibliometric analysis. Organizing and examining research trends can help identify areas of interest from the past and milestones for future research directions. First, researchers can examine important issues in the field of physics education by identifying the extent to which problems are addressed in pedagogical research. Second, information about research physics education trends can be obtained by studying how interest in a topic has changed over time. Third, topics that have been marginalized or neglected can be explored and used in determining future research topics (Solihin et al., 2021).

A review of PBL integrated STEM trends was carried out by compiling results from the scientific journal literature. Representative articles were collected, and data was retrieved using the Publish or Perish (PoP) application. The data is a collection of titles, abstracts, and other data that is searched based on keywords and the limitation of the search time range. Once collected, the data is then processed using the VOSviewer application. VOSviewer is software

for creating maps based on network data and for visualizing and exploring these maps. VOSviewer can be used to build a network of scientific publications, scientific journals, researchers, research organizations, countries, keywords, or terms. Items in this network can be linked by co-authoring, co-occurrence, citations, bibliographic merging, or co-citing links. Data from Web File Science, Scopus, PubMed, RIS, or Crossref JSON can be used to build a network. VOSviewer is used to view the relationship between documents. This trend review significantly contributes to the literature, listing articles individually and categorizing them by features.

This review also discusses articles with an inductive approach by focusing on the current situation, advantages, and challenges associated with PBL integrated STEM in physics learning and examines the PBL integrated STEM learning model. This study aimed to identify trends in PBL integrated STEM in physics learning. The method used is the bibliometric analysis method. Bibliometric analysis is applied to measure and quantitatively analyze certain indicators in the published literature in a particular domain and to generate knowledge maps based on large databases. This allows researchers to summarize published information regarding the distribution of articles by year, author, institution, journal, and discipline, a collaboration between authors and institutions, and co-word analysis. The results of this study are expected to provide various information to physics teachers about the trend of PBL integrated STEM so that teachers can find new ideas for improving the quality of physics learning in schools.

METHOD

This type of research is library research using the bibliometric analysis method. Bibliometric analysis is carried out by looking at the distribution of publications to evaluate the contribution of articles to the advancement of knowledge of various literature using a statistical approach and can provide a broader understanding of all disciplines (Ayudha & Setyarsih, 2021). The data collection technique of this research used secondary data. The research data is from research articles related to Problem Based Learning integrated STEM in Physics Learning. Data collection was carried out using the Publish or Perish (PoP) application with the keywords "Problem Based Learning integrated STEM" and the limitation of the search time range for the last five years, namely between 2018 and 2022. Then data collection was carried out, and 980 articles were obtained for analysis from proceedings and journal articles. The data for this article is exported in RIS format and will be processed using the VOSviewer application. VOSviewer application is software that can visualize and explore the results of bibliometric studies.

The data analysis technique in this study refers to the results of bibliometric mapping from the VOSviewer application that applies Co-Occurrence calculations. Co-occurrence analysis reveals the research topic statistically, with the condition that the more often the two keywords are paired, the closer the relationship between these keywords (Ayudha & Setyarsih, 2021). In this analysis, VOSviewer extracts the titles and abstracts of the articles obtained by the binary counting method, meaning that every word found related to one or more topics will be considered one. The minimum number of occurrences of a term is 10, meaning that the word displayed is a word with ten relationships. Therefore, out of 120 words found, only 72 words met the threshold. The following is the flow of data collection and data processing methods that have been carried out:

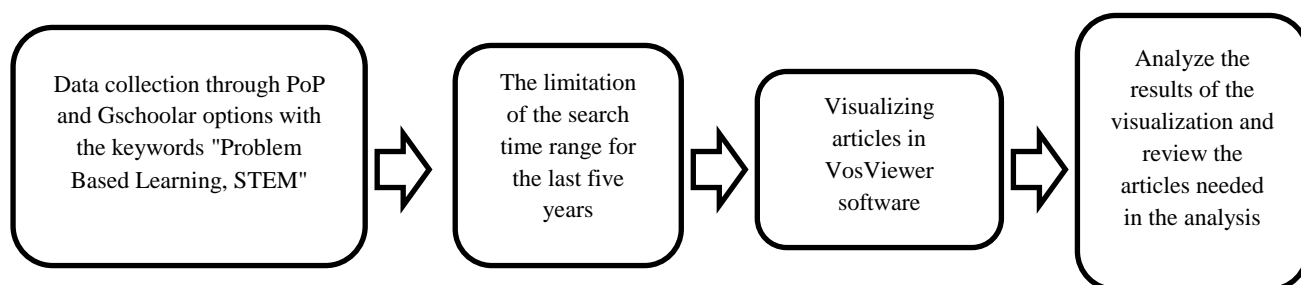


Figure 1. Data collection and processing methods.

RESULTS AND DISCUSSION

The study results obtained at the beginning of the gradual selection using the Publish or Perish (PoP) application obtained 980 articles with PBL integrated STEM keywords. The results of the PoP on Problem Based Learning (PBL) integrated STEM in Physics Learning were analyzed using VOSviewer software. This was done to determine the research variables regarding Problem Based Learning (PBL) integrated STEM in physics learning. Based on the VOSviewer mapping, several parameters of the relationship between variables related to learning can be found, including design, research, development, approaches, models, implementation, effectiveness, and learning outcomes. Figure 2 shows the mapping of the similarity of article keywords results, obtained in four groups (clusters) according to each color with 72 related keyword terms regarding Problem Based Learning (PBL) integrated STEM in Physics Learning. The selection of keywords is then carried out according to the research objective: identifying trends in PBL integrated STEM using bibliometric analysis methods. Based on Figure 2, it is known that the red cluster is about the learning model supported by STEM. This is reinforced by the keywords STEM, learning model, and integrated stem education. The green color cluster indicates a relationship between the Problem Based Learning model and STEM. This is indicated by the keywords stem subject, Problem based learning, innovation, and physics. So, in the green cluster, there is a relationship between Problem based learning and STEM. Blue clusters indicate a link between STEM activities; this is indicated by the presence of keywords that are parts of STEM. The last cluster is yellow, which describes active learning, indicated by the keywords active learning and pedagogy.

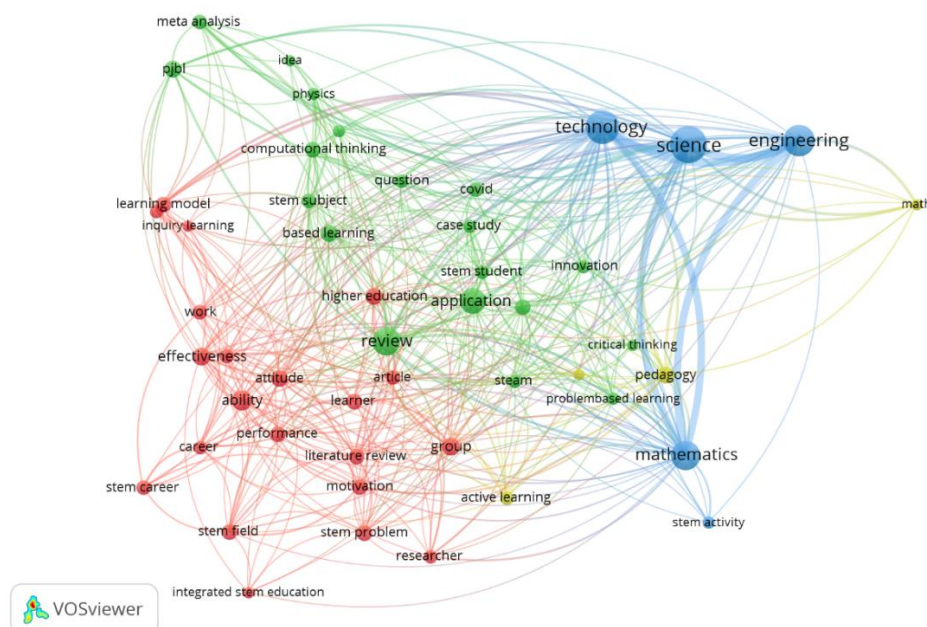


Figure 2. Keyword network visualization map

The larger the circle on a keyword, the more widely used by the article's author, and it has a strong relationship with other keywords. Figure 2 has a large circle for each cluster, namely Problem Based Learning and STEM, which shows a relationship between Problem Based

Learning (PBL) and the STEM approach. Even the integration of the PBL model and the STEM approach is one of the preferred learning models that can be implemented among the existing learning models. From the results obtained, it can be seen that the Problem-based learning model can be integrated with STEM. The keywords Problem based learning and STEM are related to critical thinking skills. That way, these models and approaches can improve 21st-century capabilities of Critical thinking, Collaboration, Creativity, and Communication. When combined with other learning models such as PBL, STEM learning can foster positive things such as improving students' critical thinking, creativity, communication, and collaboration needed in this 21st century. From Figure 2, it can be seen that there is a relationship between PBL-STEM and active learning so that the model can be used to develop teaching materials in the form of LKPD or learning modules.

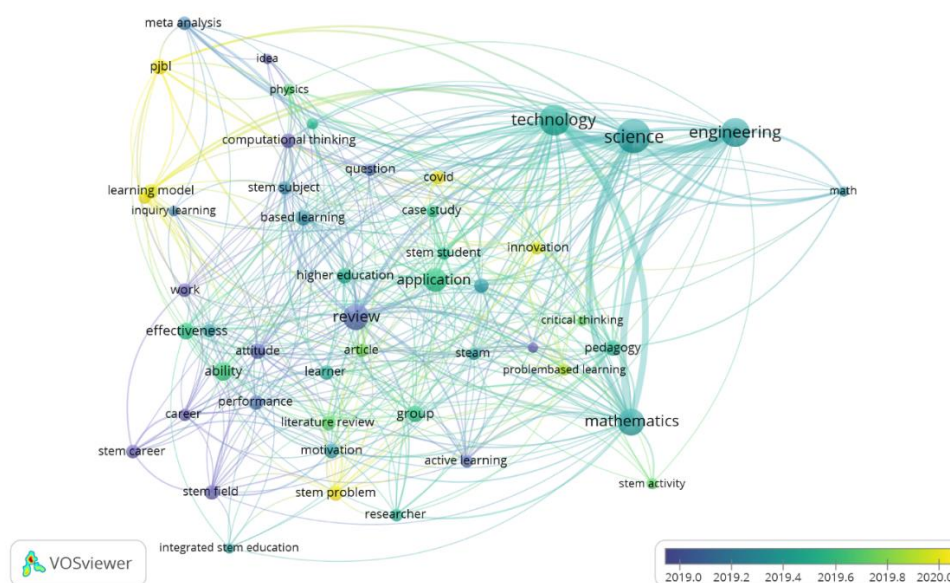


Figure 3. Overlay Problem Based Learning (PBL) integrated STEM

Based on Figure 3, the overlay visualization analysis describes the evolution of the focus of research topics on PBL integrated STEM in physics learning during the 2018-2022 period. In the figure, the bluish nodes represent popular (i.e., frequently used) keywords at the beginning of this period, while the yellowish nodes account for more recent popularity. It was found that the keyword Problem-Based Learning was published in mid-2019, and the STEM subject was published in 2019. The latest articles (2018 to 2022) were mostly related to STEM, Problem, Learning model, innovation, and critical thinking (yellow circle). This data can reference that research trends related to PBL integrated STEM have much to do with these keywords. This data can be used to conduct new research that connects the Problem Based Learning integrated STEM model.

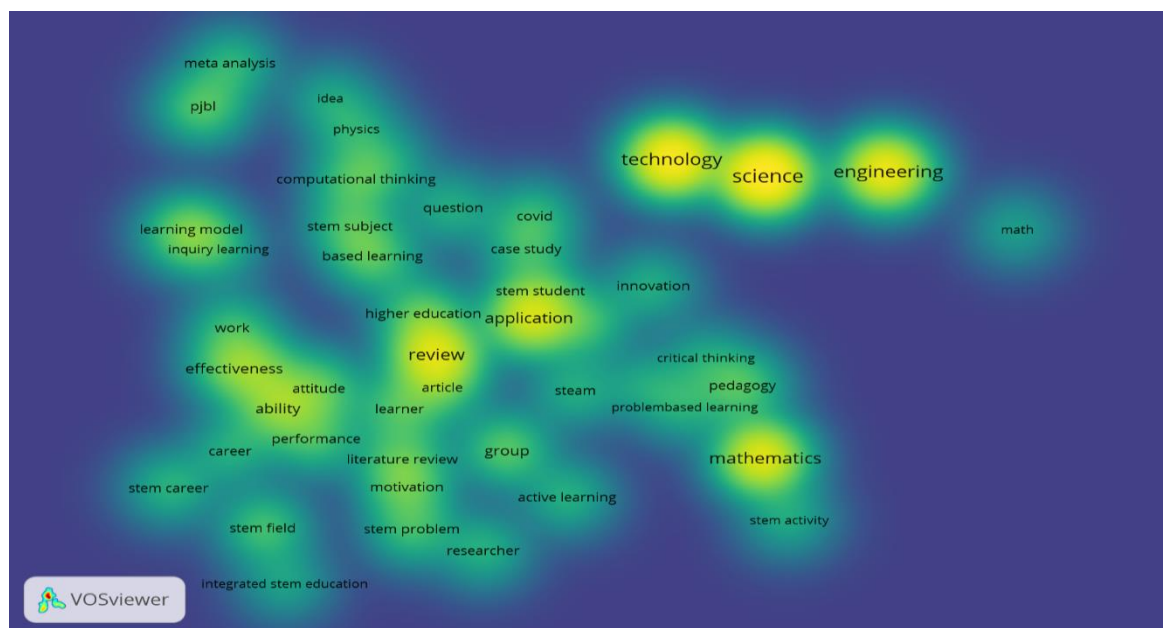


Figure 4. Keyword Density Visualization

The density visualization analysis (figure 4) shows that the lighter the color, the more often the keyword is used. Of all the keywords obtained, no keywords mention student achievement in developing 21st-century skills. This opportunity is a new thing for further research, namely developing learning methods, Problem Based Learning integrated STEM and student achievement in developing 21st-century skills. Figure 4 shows one of the keywords, namely critical thinking skills that can be improved through PBL integrated STEM learning models and approaches. It can also be seen that the keyword critical thinking will be used around 2020. This shows that there have not been too many Problem Based Learning (PBL) integrated STEM studies that have observed an increase in critical thinking skills. This is also an opportunity for further research to try and find alternative learning media that can be used in Problem Based Learning (PBL) integrated STEM. Thus, the learning process and the expected results will be even better in improving students' critical thinking skills. PBL-STEM learning is a learning system based on the philosophy that students can absorb lessons if they can capture the meaning in the academic material they get. Students can capture meaning in school assignments when linking new information with previous knowledge and experience (Putri et al., 2020). Critical thinking is a systematic process that provides opportunities for students to formulate and evaluate their beliefs and opinions. Critical thinking is a process of thinking that is precise, directed, reasoned, and reflective in making reliable decisions (Kusumaningsih & Marta, 2017).

The keyword innovation (innovation) takes a learning media such as learning modules. A learning module is a tool that can transfer messages or information from an educator to students, which aims to facilitate the learning process in the classroom. Using the learning module during the learning process in the classroom, it is hoped that the thoughts, feelings, concerns, and interests of students can be raised, and students can receive and understand the subject matter from the teacher well. In this digital era, an educator must be an expert in creating creative and innovative learning modules based on electronics.

CONCLUSION

Based on the results and discussions that have been carried out, identifying trends in PBL integrated STEM using bibliometric analysis, it can be concluded that in recent years PBL

integrated STEM learning has become one of the trends and has become an option in the implementation of physics learning in schools. This can be seen from the many studies, studies, and discussions on PBL integrating STEM in physics education. In future research, it can be done with an integrated PBL-STEM model to improve critical thinking skills and use these models and approaches to develop learning modules.

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Analysis of Student Learning Responses to Learning in Linear Algebra Courses

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Abstract

The research objective was to find out how students respond to learning linear algebra. This response was obtained from a questionnaire distributed to 26 semester 2 students of the Mathematics Education Programme at STKIP PGRI Pacitan. This research is a qualitative descriptive research. The results of the questionnaire calculation obtained positive response data in the range of 25 - 40 values of 84.6%. While the negative response is in the range 10-24 of 15.4%. The results showed that the students' response to learning Linear Algebra was very high.

Keywords: Response, Learning, Linear Algebra

INTRODUCTION

Mathematics is a branch of science that, according to some people, the material is difficult and the way to understand it is not easy (Huzaimah, et al. 2021, 534). Actually, learning maths is not as difficult as you might think, it's just that maths needs a lot of practice. The existing concepts are actually clear, but sometimes they also require thought processes, skills, accuracy, understanding and the ability to solve mathematical problems.

Linear Algebra I is a compulsory subject in mathematics education programmes that must be taken at the first level (Harleni. 2020, 427). The material provides students with knowledge about the concept of problems with linear equations, determinants, matrices and vectors. The thinking process of the students can go well if there is the participation of the teacher (in this case the lecturer) who can later help the students to get good and correct results as desired.

At the beginning of the course, the lecturer will always hand out the Lecture Contract. The content of the lecture contract includes the learning objectives and outcomes, the materials that will be provided for a semester, the lecture process up to the assessment. Lecture contracts are agreements between lecturers and students that serve to explain the roles and responsibilities of students and lecturers in order to increase learning efficiency (AM, et al. 2020, 79).

Linear algebra courses provide an in-depth look at the nature of matrices and vectors. In this material, there is an understanding that is needed from relating a problem to form a mathematical model, to solving a mathematical model, to reasoning in concluding a solution. Students are expected to learn the material with enthusiasm. How does the lecturer convey the material in learning to assessment.

The Merdeka Belajar Campus Curriculum aims to enhance the competency of graduates by equipping students with the soft and hard skills needed in the world of work. The independent learning curriculum gives teachers and students the freedom to develop learning. This is certainly very useful in improving the mindset and skills of students. Understanding mathematical material requires an attitude that shows participation, both active and inactive, to engage in an activity.

Response is an action taken to show a reaction to something or certain stimuli. In learning, a response is needed to show good communication between teacher and student. On the other hand, it is also to see how enthusiastically students pay attention to the material provided by the teacher. According to Zarkasyi (2017: 93), a response is an attitude that shows active participation in an attempt to engage in a learning activity.

Student response is very important to increase student efficiency in terms of learning (Fernando, 2020: 10). Response has a significant effect in terms of increasing the level of student learning. Responses are developed when students can play an active role in learning. The success of a learning process is a part of the teacher's success in conveying material in teaching and learning activities, because learning outcomes are not only measured by numerical values, but by student behaviour in the learning process that takes place. The response is a suitable indicator to measure the learning conditions so that the learning process can be carried out effectively and efficiently (Agustya. 2017).

The formulation of the problem in this study is how students respond to learning linear algebra. This response was obtained from a questionnaire distributed to the students of the 2nd semester of the Pacitan STKIP PGRI Mathematics Education Study Programme.

METHODS

This research involves qualitative descriptive research. This seeks to describe the students' responses to their learning from the beginning of the session to the final assessment. Qualitative research is a research method based on the philosophy of postpositivism, which is used to investigate the condition of natural objects (Sugiyono, 2011: 9). Meanwhile, descriptive research is research that aims to describe a situation or phenomena as they are (Sukmadinata, 2010: 72).

Student response data were obtained from questionnaires distributed to students at the end of linear algebra courses. These data were then used for analysis. The data analysis technique used in this study is descriptive qualitative using the Miles and Huberman model. Miles and Huberman in (Sugiyono, 2011: 246) state that activities in qualitative data analysis are carried out interactively and directly continuously, continuously until completion, so that the data are saturated. In a structured way, data analysis techniques are carried out in several stages with the Miles and Huberman models. The stages are data reduction, data presentation and data verification.

The research was conducted on the second semester students of the Mathematics Education programme at STKIP PGRI Pacitan. There are 26 students consisting of 24 female students and 2 male students.

RESULTS AND DISCUSSION

Results

Students were given questionnaires to measure their level of satisfaction with learning linear algebra. The response consists of 10 statement indicators in the form of a questionnaire. The questionnaire statement consists of 4 choices that refer to the Likert scale, namely strongly agree, agree, disagree and strongly disagree.

The student-completed data record information on the percentage of student responses. Positive responses were obtained when students agreed and strongly agreed with each statement and negative responses were obtained when students' responses were between disagreed and strongly disagreed with each statement.

Table 1. Research Result Data Recap

Response Category	Score Category	Frequency	Percentage
Very Positive Response	34 - 40	3	11.5%
Positive Response	25 - 33	19	73.1%

Negative Response	18 - 24	4	15.4%
Very Negative Response	10 - 17	0	-
Total		26	100%

Positive responses are in the range of values 25-40, in this study data obtained by 84.6% and negative responses are in the range of 10-24 and when the percentage is 15.4%. The summary was obtained from the statement items which contained 10 questions including (1) At the beginning of the meeting, the lecturer gave a lecture contract; (2) Lecturers make rules with students in lectures; (3) The linear algebra material is presented in its entirety according to the initial lecture contract; (4) Linear algebra I course emphasises the concept of relationships between existing concepts; (5) Before giving practice questions, the lecturer first gives an example; (6) SST is a very interesting material that needs to be studied in more depth; (7) The lecturer always gives time for discussion and provides a final solution; (8) I am motivated to find information from different sources (books, internet, etc.) needed in discussion activities.) needed in the discussion activities; (9) The matrix is one of my favourite materials and there are many alternative solutions; (10) Learning linear algebra is interesting.

Discussion

The positive response given is a reference that learning linear algebra statement numbers (1), (2), (3), (4), (5), (7), (8) and (9), if it is observed that by submitting a lecture contract, achieving a lecture contract, agreeing on lecture regulations, understanding the concept of emphasising the relationship between existing concepts in the course, providing examples before working on questions, holding discussions and providing final settlement solutions, fostering motivation in finding reference sources, and having favourite material has a positive impact.

He conveyed that the lecture contract has changed the learning process of linear algebra (Prastyo & Q udsiyah. 2022, 55), as it is important for students to understand the lecture objectives. Lecture objectives define what students will master in a semester or in a face-to-face session. Changes in positive attitudes in the form of enthusiasm for understanding the material, searching for reference sources, and increasing students' numerical literacy.

The achievement of the lecture contract can measure the level of readiness of students in learning linear algebra material. The in-depth material that was previously explored at the beginning of the submission of the lecture contract is used to rediscover the interrelationships of the material (Wasito & Kurniawa. 2018, 49). The interrelationships of linear algebra materials are explored using the most up-to-date approach, using recently developed terms that attract students' attention, in the hope of fostering a positive attitude towards learning linear algebra. In this way, the agreement on the syllabus builds an understanding of concepts that emphasises the relationship between concepts in the course.

The choice of interesting terms in the context of giving examples before working on the questions was well received by students and encouraged active discussion activities. The liveliness of the discussion in relation to the final completion of the problem-solving activity requires mathematical connections (Aspuri. 2018, 131), which can foster motivation to find reference sources, as well as the positive impact of having favourite materials.

CONCLUSION

The results of the calculation of the questionnaire gave positive response data in the range of 25-40 values of 84.6%. While the negative response is in the range of 10-24 of 15.4%. The results showed that the students' response to learning Linear Algebra I was very high. This research has not fully provided solutions to problems related to learning linear algebra for students, more variations of learning are needed in teaching linear algebra 1 material so that students have a high willingness to learn. This is followed by the availability of interactive and interesting learning resources for students.

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IMPROVING STUDENTS' VOCABULARY MASTERY BY USING SPELLING BEE GAME (APPLICATION) IN SDN 1 JETAK

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Abstract

This research aims to describe whether the Spelling Bee Game (Application) could improve students' vocabulary mastery. This research was Classroom Action Research. The research subjects were fourth-grade students' of SDN 1 Jetak in the Academic Year 2022/2023. There were 11 students as a research subject. Data collected from students' test and observation. The results of the test were analyzed using the quantitative method and the observation was analyzed using the qualitative method. The indicator of success was the average score of students ≥ 75 . The results showed that the students' score average of pre-test was 55.9. In cycle I, the students' score average was 68. In cycle II, the students' score average was 90. Based on the observations showed that students' responses to the application of Spelling Bee Game media in learning vocabulary were excellent. As a result, Spelling Bee Game was an appropriate media to teach vocabulary for fourth-grade students in SDN 1 Jetak in the Academic Year 2022/2023.

Keywords: Vocabulary, Spelling Bee Game, Classroom Action Research

INTRODUCTION

Language is the most effective communication tool (Amalia, 2018). Without language, communication in this life will not run optimally. Especially in the era of globalization, language skills significantly influence a person's ability to gain knowledge about culture, science, and also the social sciences that develop in society. A German philosopher Johann Wolfgang von said, "Those who know nothing about a foreign language, they have nothing about their own." This proverb implies that mastering a foreign language is very important besides the mother tongue and the national language (Handayani, 2016). One of the foreign languages that a language learner must learn was English.

In Merdeka Curriculum, English was taught in elementary school, especially first grade and fourth grade as the main subject. Then vocabulary was the most fundamental aspect of language to be learned by every language learner. The learners needed to learn vocabulary before learning the English language. The purpose of teaching English vocabulary is to facilitate the students or young learners to improve and develop their English skills. Most of young learners at the golden age can memorize and remember the vocabulary more than adults. According to Emery, (2018), young learners are described as children between 5 years old and 12 years old. From 5 years old until 12 years old is the right age to learn the English language because the children have a good brain condition to receive something new.

Teaching English to young learners is a very challenging activity. Students, especially young learners, easy to feel bore and also distracted. This phenomenon is normal because they are playful. Therefore, media is needed to attract their attention so that learning vocabulary can run well and be conducive. Playing game is one of the methods to develop students'

vocabulary mastery (Megawany, 2020). Games are fun and help the students improve vocabulary, pronunciation, spelling, grammar, and the four skills in English, namely speaking, reading, listening, and writing. The purpose of using games in the learning process is to make learning seem fun and the application of different media in learning new vocabulary. According to Handayani&Zaharani, (2021), when education and games are combined, it can be educative and can be entertaining for education environment. The point is vocabulary and games combined have benefits for the students. The students can enjoy to learn vocabulary and very enthusiastic, and this can attract students' motivation to learn vocabulary.

This research focusses on applying the Spelling Bee Game to teach vocabulary to young learners. A Spelling Bee is a type of competition where participants are required to spell words, and this competition can be held at any level from schools to the national level (Ningrum&Pusparini, 2020). Spelling Bee is a simple media to teach vocabulary to young learners. Spelling Bee is a simple education game to spell English vocabulary. The purpose of Spelling Bee is to help students to improve their spelling, increase their vocabulary, and also develop correct English usage (Pratiwi et al., 2021).

In general, the Spelling Bee Game is a competition to spell words in front of an audience which is usually done by children, especially elementary school-age children. In the Spelling Bee competition, there are people who read the word and the children must spell the word individually. However, in an increasingly advanced era, technology is also developing rapidly. There is a new way to play the Spelling Bee Game, namely by using an application that can be downloaded on the gadget. By using the Spelling Bee Game application, there is no longer a need for speakers to read out the vocabulary. Students simply press the word it would sound automatically, and students only need to write down what letter is missing in the word.

The Spelling Bee Game application is a new breakthrough for learning vocabulary in a more modern way, according to the times, and of course up to date for the current generation. As already explained that children of primary school age are the age of playing and learning, besides that students get bored easily and are easily influenced by their surroundings.

Some researchers have applied Spelling Bee game to teach vocabulary. The previous study (Ningrum&Pusparini, 2020) found that teaching English through Spelling Bee game gave positive changes to students' attitudes and habits. The implementation of Spelling Bee game made students pay more attention, be active, have abilities, and are motivated in learning English. The management of teacher activities gave encouraged influenced students to motivate them in learning English. The other research (Navaratna et al., 2022) showed that using the Spelling Bee game was effective. Then, the other research (Yusuf et al., 2017) found that the used of Spelling Bee game in the classroom improved the students' English vocabulary. This game helped students improve their vocabulary mastery in English by learning in a fun and interesting way. The results of the previous study show that spelling bee game has a positive impact on students' vocabulary mastery.

The researcher found vocabulary problems faced by students of SDN 1 Jetak in the Academic Year 2022/2023. Fourth-grade students at SDN 1 Jetak prefer to play than studied English, get bored easily in learning English, most of students had not been able to write vocabulary correctly because there was still a shortage of letters when writing vocabulary and the learning media used by the teacher was just textbook. Therefore, the new learning media are needed to increase students' enthusiasm, students' comprehension and also students' interest in learning English, especially vocabulary lessons. With this problem, the researcher thought that the Spelling Bee game has the potential to become a media in teaching English to fourth-grade students who are categorized as young learners.

METHOD

The research design in this research was Classroom Action Research (CAR). In this research, the classroom action research used the design by Kemmis and Mc Taggart (2014). Action research activities always involved a repeating cycle. Then, each cycle consists of four steps: planning, action, observation, and reflection. The researcher conducted this research at elementary school. The subjects of this research were the fourth-grade students of SDN 1 Jetak. This class consist of 11 students. In fourth grade, there were 5 girls and 6 boys. The school was located in Jetak Village, Tulakan Sub-district, Pacitan Regency, East Java Province.

In this research, the researcher uses some instruments to get the data. The researcher used worksheet, handphone and field-notes. The researcher used two tests, namely pre-test and post-test. Pre-test was the test given before the researcher applied the Spelling Bee Game media. Pre-test was used to know the students' abilities before the research' treatment. Then post-test was given after the researcher applied the Spelling Bee Game media. Post-test aimed to know the students' abilities after the media was given to the students. In this research, the researcher conducted two cycles of treatment. So, because there were two cycles, there were two post-tests. The researcher used the handphone as a tool while playing Spelling Bee Game. The researcher used eleven phones during the treatment. Then, field-note is used as an observation sheet based on real condition during the research activities.

There were two techniques of data collection, that were used test and observation. In test, there were pre-test and post-test. The time for pre-test was 30 minutes and post-test was 30 minutes for each cycle. Pre-test and post-test used the paper. The qualitative data collected by using observation. Observations made by researcher included class observations, the level of student activity during the treatment, observations when pre-test and post-test.

The quantitative data in this research came from the test results of the students. To determine if the reaching-learning process was successful or not, the researcher compared the pre-test and post-test results to determine the students' test scores. To determine each student's average test score, the mean score used to assess both test results. The students claimed to be successful if they reached the standards of completeness ($75 \geq$). The students' score calculated using the formula:

$$N = \frac{sm}{S_i} \times S_{\max}$$

Detail:

N = Mastery level

sm = Score obtained by students

si = Score to be achieved in a test

S_{\max} = Scale used

The average of students' vocabulary calculated with the arithmetic mean

$$M = \frac{\sum Fx}{N}$$

Detail:

M = Mean

$\sum Fx$ = The result of multiplying the frequency with the score obtained

N = Number of students

Observation was the qualitative data in this research. The first stage in analyzing qualitative data was familiarization and organization. In this research, the researcher focused on field notes. After familiarizing the data, the researcher began coding and reducing process.

In this coding, the researcher read and reread the data and sort them by looking for the data needed. Interpreting involved reflecting the words and a stracting important understanding from them. Interpretation in this research, the researcher brought out the meaning and providing because interpreting qualitative data there were no set rules to follow. The researcher confirms what the researcher known to support the data and known the important things that the researcher did not know but should have known. Representation involved how the data were presented. The researcher reported the data by using descriptive detail.

RESULTS AND DISCUSSION

Results

Pre-activity

There were two activities carried out before the research. the activities carried out were pre-test and observation. The pre-test was carried out on Friday, 05th May 2023, at 07.15 am.-07.45 am. The test was carried out for 30 minutes and there were 20 questions. The results of the pre-test carried out by 11 students were unsatisfactory. There was one student who got a score 50. Two students who got score 55. Three students got score 60. Then two students got the highest score during the pre-test, namely 65. The total score that all students got was 615 and the average only 55.9. The results of pre-test did not meet the level of completeness that had been set by the teacher, namely (≥ 75).

The researcher made observations of the condition of the school, the condition of the fourth-grade room, observed the teacher when taught English, and the students' enthusiasm when learning English. The results of observations related to the condition of the school were very well, and the classrooms were still well maintained and proper for used. In fourth-grade' room used whiteboard for the learning process. Then, fourth-grade students tend to get bored quickly in learned English. Indeed, the methods and learning resources used by the teacher were appropriate, but the monotonous techniques and learning resources made students bored. Many students played alone and did not focus to the teacher's explanation. The results of observation during pre-test was good because the students were silent and focused.

Cycle I

In cycle I there were four activities carried out by the researcher namely, planning, action, observation dan reflection. The first was planning. At this step, the researcher made and prepared everything needed for the learning process. The researcher prepared a lesson plan, prepared eleven hand phones, and also prepared instruments for the post-test cycle I.

After planning was action. The action cycle I was held on Wednesday, 10 May 2023 and on Thursday, 11 May 2023, from 07.00 – 08.00 am. This meeting began with greeted students, prayed, asked how students news, and checked student attendance and students' readiness to learn English. Then, the researcher explained the activities to be carried out during the English learning process in cycle I. The students learned English vocabulary material which consists of music, beauty, sports, food, colors, cosmos, and nature. The researcher explained in detail the procedure for using the Spelling Bee Game application to learn vocabulary, started from how to open the application and how to play the Spelling Bee Game. How to play the Spelling Bee Game was very easy. Students only needed to press the material to be played, then the material would open in the Spelling Bee application. Students listened to what native speakers spoke and wrote the letters that were still blank in those words. After writing letters, students checked by pressing the "Check!" button. If the words written by the students were correct, a green color would appear with the word "Amazing!", "Awesome!", "You are a genius!", "Very good!" "Nice!" or "Great". If students made mistakes in writing letters in words, then when pressing the "Check!" would appear red with emoticons like "Doesn't seem right," "Not Correct!", "You'll get it next time!" or "Almost, but not quite!".

In addition, when a red color appears with emoticon, it also appears what word is meant by the native speaker by writing the correct letter. If the student wrote the wrong letter, the student could replace it with another letter as long as the student had not pressed the "Check!" button. After explaining the use of the game in detail, the researcher lent eleven hand phones to eleven fourth-graders to learn how to use the Spelling Bee Game application. After the students felt understood enough how to play the Spelling Bee game, the researcher asked students to play the game with a maximum playing time was 14 minutes for one play. Then the researcher asked all students to send their scores via the WhatsApp application that available on the hand phone lent by the researcher.

From eleven students who played the Spelling Bee on the first day, the highest score was 630 while the lowest score was 200. Then on the second day with the same students, the highest score was 700 and the lowest score was 350. In Spelling Bee Chapter 1, the maximum score when seven materials were combined was 700.

After treatment, the researcher conducted a post-test cycle I. Post-test cycle I was held on Thursday, 11 May 2023, at 07.20 – 07.50 am. Students who took part in the post-test were 11 students. The test duration was 30 minutes. In the post-test cycle I, there were 20 questions that must be answered by students. The questions came from all the material that had been studied using the Spelling Bee Game.

The results of the post-test cycle I were quite good. One student got the lowest score, namely 50. There was one student who got score 55. There were three students who got score 65. There was one student who got score 70. Then one student got score 80 and two students got the highest score, namely 90. The total post-test score was 750 with an average of 68. From the post-test cycle I, three students or 27% achieved the level of completeness (≥ 75). Meanwhile, eight students or 73% did not reach the level of completeness. After carrying out the post-test cycle I, the researcher and fourth-grade students reviewed the material in the Spelling Bee game.

During cycle I, the researcher made observations. The aspects observed by the researcher consisted of students' enthusiasm when playing the Spelling Bee Game and the level of students' concentration while playing the Spelling Bee Game. When the researcher explained the activities, all students were excited, especially when the researcher said that all students would play game using the hand phones provided by the researcher. In day 1, ten students still had difficulty. During the first day of learning, all students actively asked questions and also paid attention when the researcher explained something in front of the class. The conclusion that the researcher was able to get on the first day was that almost all of the fourth-grade students were still having difficulty to play the Spelling Bee game. Different from the first day, on the second day, only four students still needed help to play Spelling Bee, namely two male students and two female students. With the helped from the researcher, finally, the four students were able to play even though they were not very fluent. During the first and second days of observation, no students played alone, talked alone, or wandered out of class.

The last step was reflection. The results of the post-test in cycle I showed that the learning process in class had not reached the standards of completeness yet. Then, based on the results of observations made during the two meetings that were held, it was found that there were students who had difficulty playing the Spelling Bee Game.

Cycle II

In cycle II, there were four activity that were planning, action, observation and reflection. First activity was planning. The researcher prepared a lesson plan, prepared instruments for the vocabulary test. The researcher also prepared eleven hand phones to lend to students when played the Spelling Bee Game.

After planning was action. The action cycle II was held on Friday, 12 May 2023 and on Saturday, 13 May 2023, from 07.00 am. – 08.00 am, and attended by 11 students. The researcher started the class by greeted students, prayed, asked how students news, and checked student attendance and students' readiness to learn English. Just like in cycle I, students would learn English vocabulary, which consists of music, beauty, sports, food, colors, cosmos, and nature. Then the way to play the Spelling Bee Game was still the same as in cycle I.

The results of playing the Spelling Bee Game in cycle II were better when compared to cycle I. on day-1, there were two students who got score 700. Then the lowest score was 340. On day-2, the students' lowest score was 420. There were four students who got 700 points. This showed a significant increasing.

After all the students played the Spelling Bee Game, the researcher discussed with the students about the questions of post-test cycle I and the difficult vocabulary in Spelling Bee Game. The researcher and students wrote difficult words together on the whiteboard, then spelled and read them together.

The researcher also gave post-test cycle II to students. Post-test cycle II was held on Saturday, 13 May 2023. The time duration was 30 minutes. In the post-test cycle II, there were 20 questions that must be done by students. The questions came from all the material that has been studied using the Spelling Bee Game. The result of post-test cycle II was amazing. The lowest score was 80 which was obtained by two students. Then there were three students who got score 85. Two students got score 90. Only one student got score 95. Then there were two students who got perfect score of 100. The total post-test cycle II score was 990. The average score was 90. From the results of the post-test cycle II, 11 students reached the level of completeness made by the teacher. The results of cycle II had been satisfactory, and the research could be said success. Therefore, this classroom action research stopped in cycle II.

The researcher also made observations during cycle II activities. The researcher made observations of students' responses during class learning. Then, the student's responses during the teaching-learning activity were written down by the researcher using a field note. The researcher observed the students' enthusiasm when played the Spelling Bee Game and students' concentration while played the Spelling Bee Game.

All students were enthusiastic when the researcher lent the hand phones to students, and the students immediately opened the Spelling Bee Game application with enthusiasm. On the first day, all students were able to use the Spelling Bee Game fluently. When the researcher asked students to play, all students played independently, focused, and concentrated, no one spoke, and no one left the class. The conclusion that the researcher got on cycle II was that all fourth-grade students were familiar with the Spelling Bee game. It's just that mastering beauty and colors were still difficult for some students.

The last activity in cycle II was reflection. the researcher compared the results of the pre-test, post-test cycle I and post-test cycle II. The scores of students in the post-test cycle II were higher than the post-test score cycle I. The highest score in the post-test cycle I was 90, and in the post-test cycle II was 100. Meanwhile, the lowest score obtained by students in the post-test cycle I was 50, but the lowest score in the post-test cycle II was 80. Then, the average score in the post-test cycle II was 90. In addition, all 11 students managed to achieve the standards of completeness (75). It means that the indicator of success from this research had been achieved. Based on the results of post-test II, it could be concluded that this Classroom Action Research (CAR) had been successful. So, this would not be continued to the next cycle because the results of cycle II had successfully. This means that the Spelling Bee Game could improve students' vocabulary mastery.

Discussion

In the implementation of Spelling Bee Game media, researcher used three stages there were pre-activity, cycle I and cycle II. In the pre-activity, the researcher gave vocabulary test and also observation. Vocabulary test is used to evaluate the students' improvement and to know the result of the scores that students improved. The English teacher made 75 as the standards of completeness in English lesson especially in vocabulary. The number of the students who took the test was 11 from the result of vocabulary test in pre-test. The total score of the students was 615 and the average of the students' score 55.9.

In addition to conducting vocabulary tests, the researcher also made observations of students and teacher. The observation made by the teacher and students showed that fourth-grade students at SDN 1 Jetak get bored quickly in learning English. Students got swiftly bored due to monotonous techniques and learning resources.

In cycle I, the researcher conducted four steps: planning, action, observation, and reflection. In this cycle, there were two meetings which were conducted to the students. A post-test was given in the end of learning process. All plans that have been prepared are carried out in the learning process to get how to teach vocabulary well by using Spelling Bee Game Media. (1) Explained the procedures of Spelling Bee game. Before playing Spelling Bee, the researcher had been doing the explanation about the implementation of Spelling Bee Game to students, in order the students would understand about the learning strategy. (2) Gave the lesson about music, beauty, sports, food, colors, cosmos and nature using Spelling Bee Game. (3) The researcher gave the test to the students. (4) The researcher reviewed the vocabulary in the game with students.

Most students had participated effectively during the learning process. They were enthusiastic and happy with lesson delivered by the researcher in class. Student activity can be seen in the observation sheet by using field note. The researcher gave the post-test in cycle I. The results of the post-test in cycle I showed students' improving when using games in the learning process. Playing game is one of the methods to develop students' vocabulary mastery (Megawany, 2020).

Based on the result of the test score in cycle I, actually the students' score in test of cycle I was improving than pre-test' score. But, the result of the post-test cycle I also showed that there were many students still getting low score. There were eight students got score below the standards of completeness because they still difficult to play Spelling Bee Game and to memorize the vocabulary taught by the researcher. Therefore, the researcher decided to conduct cycle II. In the cycle II, the researcher improved the students' vocabulary which was given to them with the same material.

In cycle II, the researcher explained the lesson about vocabulary based on Spelling Bee Game. Before teaching learning process, the researcher provided a brief explanation about how to play and study the vocabulary used Spelling Bee Game. Spelling Bee was a simple education game to spell English vocabulary. The purpose of Spelling Bee was to help students to improve their spelling, increase their vocabulary, and also developed correct English usage (Pratiwi et al., 2021). After explaining the game, the researcher asked the students to play Spelling Bee Game. After playing game, the researcher discussed with students about the difficult vocabulary that they found in Spelling Bee Game. The researcher and students wrote difficult words on the whiteboard, then spelled and read them together. This activity aimed to increase students' spelling, pronunciation and also students' confidence to speak English well. At the end of the lesson, the researcher gave a simple game without hand phone to students as a reflection to remember the material that has been delivered and as a farewell the researcher with the students.

In this cycle II, the researcher gave post-test for students. The number of the students who took the test was 11 from the result of vocabulary test in post-test cycle II. From the score result showed that students were able to answer the test. In this post-test, all students were

getting score above the standards of completeness (75). It can be concluded that the results of cycle II have been satisfactory. Student vocabulary mastery has been improved.

After learning in cycle II and doing the test, students' ability to master vocabulary increased. They were enthusiastic and happy to learn vocabulary used Spelling Bee Game. Students were more serious when working on tests. Class conditions were also orderly and students have a good response to the researcher' explanation in class. Then from the results of observation at each meeting, it can be concluded that the learning process were run well and successfully.

Based on reflection, there was no need to do the cycle III because the indicator of success from this research has been achieved. From the explanation above, it could be concluded that the results of research showed that the implementation of the Spelling Bee Game media could improve students' vocabulary mastery. This media made students happy when learning English and students' mastery towards English vocabulary were increasing. It could be proven quantitatively by the data which showed that the student score gotten better from pre-test to the post-test cycle I and from post-test cycle I to the post-test cycle II.

CONCLUSION

The researcher would like to conclude the research based on the data findings and discussions. It can be concluded that the application of Spelling Bee Game (*Application*) could improve students' vocabulary mastery for fourth-graders of SDN 1 Jetak in the Academic Year 2022/2023. It was indicated from the improvement of the students' score from pre-test to post-test cycle I and from post-test cycle I to post-test cycle II until the students' score reached the standards of completeness (75). The results of the pre-test showed that the average of the fourth-grade students before learning English vocabulary using the Spelling Bee Game was 55.9. Then, there was no student achieved score more than the standards of completeness (75). Based on the results of the post-test cycle I, it can be seen that three students (27%) got the standards of completeness, and eight students (73%) got a score below the standards of completeness. So that can be seen from the average obtained, which was only 68. Based on the results of the post-test cycle II, it can be seen that all students (100%) got scores above the standards of completeness. Then, from the table presented above, it can be seen that the average score was 90. Facts on the field showed that the average score obtained by students exceed the standards of completeness (75). This Classroom Action Research (CAR) was success because the indicator of success had been achieved. The result of the observation showed that the students' responses positively during the teaching-learning activity by the researcher. All students always gave positive responses toward the researcher.

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INSTRUMENTING ANTI-CORRUPTION EDUCATION THROUGH KETHEK OGLENG SDN 1
TOKAWI EXTRACURRICULARS

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Abstract

This study aims to find out and describe how to inculcate anti-corruption education through extracurricular activities for the art of kethek ogleng at SDN 1 Tokawi. And what is the influence of the implementation of anti-corruption education through extracurricular arts kethek ogleng at SDN 1 Tokawi. The research method used is a qualitative approach. Data collection techniques using in-depth interviews, observation and documentation. In-depth interviews were conducted with school principals, teachers and extracurricular trainers. The results of this research are in instilling anti-corruption education through the kethek ogleng extracurricular, namely through habituation and example where by getting used to anti-corruption values that are built, namely the value of honesty, the value of independence, the value of discipline, the value of responsibility, the value of hard work, the value of simplicity, the value of courage , the value of justice, and the value of caring. The effect of applying the value of anti-corruption education to extracurriculars is that students show an honest attitude in taking assessments, modesty in dress, independence in doing school work, discipline in participating in school activities, and having a sense of responsibility for everything they choose.

Keywords: Anti-Corruption Education, Extracurriculars, Arts, Kethek Ogleng.

INTRODUCTION

It's not foreign anymore, especially for us as Indonesian people. As we know, there are many officials who abuse their position to do various prohibited things related to the rights of many people, or what we usually know as corruption.

In practice, corruptors can reap so much profit, and of course people who do not know anything about it are affected by the corruption of certain elements of the agency. Corruption in Indonesia itself is not surprising, where the public has very often heard of greedy individuals who often commit acts of corruption that are detrimental to the country. In the beginning, corruption started with anti-corruption attitudes that were often taken for granted, such as discipline, honesty, responsibility, fairness, courage, hard work and independence. With the disappearance of these attitudes, corruption mushroomed in Indonesia and hampered the country's development. This of course must be prevented so that it doesn't happen more and

more. One way is to instill the values mentioned above in the younger generation to avoid possible acts of corruption. (Exanti Putri: 2022).

According to the law in Law No. 31 of 1999 concerning the Eradication of Corruption Crimes, it defines the definition of corruption, namely every individual who commits an unlawful act, enriches himself, benefits from or other people (corporation), abuses authority or opportunities or entrusted facilities because position or position that has an impact on the loss of the state economy or state finances. Then from Law No. 31 of 1999 this was changed to Law Number 20 of 2001 which aims to guarantee legal certainty, avoid differences in legal interpretation, and provide protection and justice for the economic and social rights of the community. From the law above we can conclude that the notion of corruption is an unlawful act in the form of abuse of authority or power or an act of using state property or facilities or institutions for personal or group interests. (Auliafirkotin: 2022)

Corruption that occurs in Indonesia is very worrying and has an extraordinary negative impact on almost all aspects of life. Corruption has destroyed the economic system, democracy, law, politics, government and social order. On the other hand, efforts to eradicate corruption that have been carried out so far have not shown optimal results. Corruption at various levels still occurs as if it has become a part of our lives which is even considered as normal. If we let this condition continue, sooner or later corruption will destroy this country.

The involvement of students in efforts to eradicate corruption is certainly not in prosecution efforts which are the authority of law enforcement institutions. The active role of students is expected to be more focused on efforts to prevent corruption by participating in building an anti-corruption culture in society. Students are expected from an early age to act as agents of change by being equipped with sufficient knowledge about the ins and outs of corruption and can take lessons from the local arts of Tokawi Village such as the Kethek Ogleng art. It is from this background that the author is interested in researching "Health Education in Islam in the Pandemic Era in Tokawi village."

METHOD

The type of research used is a qualitative approach, namely by studying intensively related to the problems being faced and knowing the efforts made by the parties concerned individually, groups, institutions or communities. The main data source in qualitative research is words, and the rest of the actions are additional data. In addition to words and actions, it can also be obtained through written data sources, photos, and so on. The sources of this study were the school principal, teachers and extracurricular trainers for the art of kethek ogleng SDN 1 Tokawi

Data collection techniques using interviews or interviews, observation and documentation. The data analysis used in this study refers to the analysis of Milles and Huberman (1992), namely the process of data analysis used simultaneously starting from data collection, reducing, clarifying, describing, concluding and interpreting all information selectively. Data analysis was carried out interactively through the process of Data Reduction, Data Display (data presentation) and conclusion drawing (conclusion).

The location of this research is Krajan Hamlet, Tokawi Village, Nawangan District, Pacitan Regency. Researchers are interested in conducting research at that location because it is one of the elementary schools that implements extra-curricular activities by upholding local wisdom.

RESULTS AND DISCUSSION

Corruption

The word "corruption" comes from the Latin "corruption" or "corruptus" which means changing from a condition that is just, right, honest, to the opposite condition. The word "corruptio" comes from the word "corrumpere", an older Latin language, which means rotten,

damaged, shaken, turned around, bribed, someone who is damaged, enticed, or bribed. From the Latin language, the terms "corruption, corrupt" (English), "corruption (French)" and "corruptie/koruptie" (Dutch) are known. Thus the literal meaning of the word corruption is decay, ugliness, depravity, dishonesty, can be bribed, immoral, deviation from holiness. (PAK Team, 2018: 2)

According to subekti in the PAK Team, 2018: 3 corruptie is corruption, fraudulent acts, criminal acts that are detrimental to state finances. From the understanding above, basically the notion of corruption has 5 components as follows: First, corruption is a behavior. Second: the behavior is related to the abuse of authority or power. Third: done for personal or group gain. Fourth: breaking the law or deviating from norms or morals. Fifth: occurs or is carried out in public settings (government agencies) or private office settings (private corporations). Furthermore, in the Big Indonesian Dictionary (KBBI) several other terms related to corruption were found, such as?

- a. Corrupt means rotten, 1 bad; broken, rotten; 2. Likes to use goods (money) entrusted to him, can be bribed (using power for personal gain)
- b. Corruption means misappropriation or misuse of state funds (companies and so on) for personal or other people's interests.
- c. Corruptors mean people who commit corruption, people who embezzle (embezzle) state (company) money where they work.

Furthermore, citing the opinion of Amien Rais who classifies corruption as follows:

- a. Extortive Corruption: in the form of bribes or bribes made by employers to those in power
- b. Manipulative Corruption: such as asking someone who has economic interests to the executive or legislature to make regulations or policies that are beneficial to their economic endeavors.
- c. Nepotistic Corruption: corruption occurs because there are family ties, friendships, and so on.
- d. Subversive Corruption: those who arbitrarily rob the State's wealth to be transferred to foreign parties with a number of personal benefits.

1. Instilling Anti-Corruption Education through the Kethak Ogleng Arts Extracurricular at SDN 1 Tokawi
 - a. Honesty

One thing that must be held firmly wherever and whenever we are is inseparable from honesty, because this honesty is a very valuable item, because if we lose honesty then we will also lose the trust of anyone, therefore it is the first thing instilled in early childhood is to train how to speak as it is, for example in this art. Always speak and act in accordance with facts (consistently) for example, you cannot participate in activities, do not commit fraudulent acts (take other friends' belongings), do not lie (reasons for not participating extra), do not admit possession others as his own (both from the attributes used) (interview with the Principal), this is in accordance with the opinion written by Sugono that the word honest can be defined as being straight-hearted, not lying and not cheating. Honesty is one of the most important traits in life, without being honest you will not be trusted in your social life (Sugono: 2008). The value of honesty is like a currency that applies everywhere, including in life at school/campus. The principle of honesty must be held by every student / student since these times to cultivate and form a noble character in each individual student / student.

- b. Concern

Maintain yourself and the environment to remain consistent with applicable rules, Always try to be a role model in upholding it discipline, honesty, and responsibility, the value of caring is very important for a student in life at school/campus and in society. As a potential future leader, a student needs to have a sense of concern for the environment, both the environment at school/campus and the environment outside the school/campus. Some efforts that can be made as a form of concern include creating a campus/school atmosphere as a second home. Being a place to work both curricular and extra-curricular without any space restrictions.

c. Independence

Always complete work without relying on help from other people, not giving orders or using his authority to order other people to do something he can do himself (interviews with teachers). namely by not relying on other people to carry out their duties and responsibilities. This is important for the future where students must manage their lives and the people who are under their responsibility, because it is impossible for people who cannot be independent (regulate themselves) to be able to manage the lives of others. With this independence character, they are required to do everything responsibility with his own business and not other people (Supardi: 2004).

d. Discipline

Instilling a disciplined attitude by committing to always behave consistently and sticking to the existing rules in all activities. (interviews with trainers) this is in accordance with Sugono's statement saying that discipline is obedience (compliance) to rules (Sugono: 2008). In managing campus life, both academic and social, students need to live a disciplined life. Disciplined life does not have to live like a military pattern in military barracks but disciplined life for students is being able to organize and manage the available time to be used as well as possible to complete tasks both in academic and social linkup. The benefit of a disciplined life is achieving life goals more efficiently. It is not uncommon to find students' habitual behavior hindering and not supporting the learning process. For example, we often encounter students who are lazy, come late, are often absent, lack motivation in studying, don't do assignments, violate campus/school rules, etc. This shows that there are still many students who do not have discipline.

e. Responsibility

We teach our children to be responsible, such as always completing work or assignments thoroughly with the best results, in the sense that they have to be serious about practicing until they can truly animate the role of each dancer. (interview with the school principal) this is supported by a statement written by Sugono, saying that responsibility is a state of being obliged to bear everything (if anything happens one can be prosecuted, blamed and sued) (Sugono: 2008). Responsibility is accepting everything from a wrong action, whether intentional or unintentional. This responsibility is a manifestation of awareness of the obligation to accept and solve all the problems that have been done. Students/students have many obligations that must be accounted for, for example assignments given by lecturers/teachers, responsibility for learning, responsibility for completing lectures until graduation, responsibility for taking care of themselves.

f. Hard work

Instilling an attitude of hard work accustoms children to always trying to complete a job with the best results. Avoiding instant behavior (shortcuts) that leads to cheating, because every time there is an event in Nawangan Subdistrict, it always features a dance from the kethek ogleng, so we train them to diligent in practicing in

order to produce movements that are in accordance with the rhythm and later the goal can be displayed in public, so with the hard work that children do they should contribute thoughts to children that to get something they want must be with hard work, perseverance in working /train. (interview with the principal). This is in accordance with the opinion of the PAK Team which says that working hard is based on a will. The word "will" evokes associations with determination, perseverance, endurance, workability, stance, self-control, courage, fortitude, firmness, energy, strength, masculinity and unyielding. Working hard is important in order to achieve results that are in accordance with the target. However, hard work is useless without knowledge. Campuses/schools are equipped with a variety of knowledge, that's where students have an important role so that every student/student's hard work and directions to students/students don't go in vain.

g. Simple

This activity also aims to show how children should be able to behave modestly under any circumstances. So far, news has been circulating from officials who flaunt their wealth with a hedonistic lifestyle, for example, always dress as is by understanding the typical clothes worn by the priests. the kethek ogleng dancer suggests that life must be simple, not excessive, not showing off and not being pleased with what one has (interview with the school principal). This is in accordance with the quote written by the 2018 PAK Team saying that the lifestyle of students is important in interactions with the surrounding community. A simple lifestyle should be developed since the child has received his education. With a simple lifestyle, students are accustomed not to live extravagantly, to live within their means and to be able to meet all their needs. Often needs are identified with mere desires, even though needs are not always in accordance with desires and vice versa. The principle of simple life is an important parameter because it will overcome the problems of social inequality, envy, jealousy, greed, selfishness and prevent someone from excessive desires.

h. Courage

If we meet on campus/school there are many students/students who are experiencing difficulties and disappointments. Even so, to cultivate an attitude of courage required to stick to the goal. Sometimes students are still given difficult jobs to increase their courage. Most of the greatest difficulties and difficulties disappear because of self-belief. Students need courage to achieve success. Of course the courage of students will be more mature accompanied by their beliefs. For example, dare to be honest in telling everything they experience during practice, dare to refuse invitations to cheat, if asked by other students not to take part in activities or cheat in tests, dare to report cheating, dare to admit mistakes (interview with the school principal)

i. Justice

The relation to the value of justice that we implement in this activity is like always respecting differences in practice, usually children at a time when they are still vulnerable must be taught how to respect differences in clothing, the tools they carry in the form of scarves, and the second is how children are educated. not to be favoritism in friendship, where it is common for children with systems that are not at their level not to be friends, so we emphasize that these two values must be instilled. (Interview with the school). This is in accordance with the opinion written by the 2018 PAK team which said that fairness is equal, impartial, and impartial. In everyday life, thoughts as a basis for consideration to produce decisions will continue to develop along with the experience and knowledge that a person has. During

lectures/schools students/students really need to be encouraged to seek experience and knowledge from their interactions with others. Thus students / students are expected to be wiser in making decisions where the problems are increasingly complex or complicated to solve (PAK Team: 2018).

2. The influence of the application of anti-corruption education through the kethek ogleng arts extracurricular at SDN 1 Tokawi

The effect of applying the value of anti-corruption education to extracurriculars is that students show an honest attitude in taking assessments, modesty in dress, independence in doing school work, discipline in participating in school activities, and having a sense of responsibility for everything they choose.

CONCLUSIONS AND SUGGESTIONS

CONCLUSION

The implementation of character education based on anti-corruption values through extracurricular activities in elementary schools is the kethek ogleng arts extracurricular activities. Through these extracurriculars teachers can internalize anti-corruption values in students. Even so, it is possible that there are other extracurriculars that can build anti-corruption values. The anti-corruption values built through the kethek ogleng art extracurricular are the values of honesty, the values of independence, the values of discipline, the values of responsibility, the values of hard work, the values of simplicity, the values of courage, the values of justice, and the values of caring. The effect of applying the value of anti-corruption education to extracurriculars is that students show an honest attitude in taking assessments, modesty in dress, independence in doing school work, discipline in participating in school activities, and having a sense of responsibility for everything they choose.

SUGGESTION

The focus of character education research with a local wisdom approach needs to get more attention from researchers, so that references are obtained more easily and varied. Therefore, it is hoped that researchers can work together on the topic of character with local wisdom approaches in order to achieve the goal of a happy life in the afterlife.

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The Implementation of Contextual Teaching and Learning Method in Improving Students' Vocabulary Mastery

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Abstract

This study aims to know the implementation of CTL method to improve students' vocabulary mastery. This research is Class Action Research (CAR) which was conducted in 2 cycles. The subjects were students of grade VII MTs Al-Qalam academic year 2022/2023 which consist of 25 students. The researcher obtained the data from students' test, interviews and observation. The results of data analysis showed that the average score of students' pre-test was 66.4. There were only 32% students reached the standards of completeness and 68% students did not reach. After doing cycle I using the CTL method, there was an increasing from students' average, namely 75.4. There were 76% students reached the standards of completeness and 24% students did not reach. In cycle II the students' score average were 77.2. There were 84% students reached the standards of completeness and 16% did not reach. In other words, students' vocabulary mastery has been improved.

Keywords: Class Action Research, CTL Method, Vocabulary

INTRODUCTION

Nowadays English dominates all aspects of communication. The people can see almost all electronic devices using English. English has become a universal language used in the world of technology, education, politics, business, and others. According to Handayani (2016), mastering of English is one of the basic capitals to be able to face the global era. The ability in communication especially in English is needed in this era to face the development of the world. These communication skills include the ability of public speaking, having opinions, expressing and writing ideas, analysing, and discussing. This is a necessity because the development of science, technology and information is increasing day by day.

In learning English, of course, the students need to learn the vocabulary first, because it is the main step of English speaking ability among the humans. Good vocabulary is an important part of effective communication. Mastering a lot of vocabulary will make learners to be good speakers, listeners, readers and writers. It also can be used to reveal the meaning of a language, both written and spoken. In recent years, teaching vocabulary has taken its proper place as an important fundamental aspect of English language development. Vocabulary is a major concern in teaching English. In addition, there are most of people who argue that vocabulary is more important than grammar. Among them is McCarthy (2002) in his book who states "no matter" how well the student in learning grammar, no matter how successful the L2 sound it cannot happen in a meaningful way. Then, the first to become a master at learning English is vocabulary.

Vocabulary is a fundamental competency that important to be taught to students, so that they can develop language skills. In English as a foreign language (EFL) and English as a second language (ESL) learning vocabulary has an important role in all language skills (listening, speaking, reading, and writing (Nation, 2011). Furthermore, in Indonesia, researchers and practitioners have previously studied the use of vocabulary learning strategies and its relationship to student language skills, student proficiency level, and the use of learning

strategies vocabulary by students. Huyen & Thi Thu Nga in Rouhani & Purgharib (2013) said that the more students' vocabulary mastery will really help students to understand English and the four main skills, namely listening, speaking, reading, and writing. In addition to the language teaching experts above, there are quite a number of experts who view that teaching vocabulary is important in developing language skills.

Considering the importance of learning vocabulary to master English, students need appropriate teaching methods that can make it easier for students to practice speaking English. Roestyah, (2017) said that teachers must have strategies so that students can learn effectively and efficiently, hitting the expected goals. A teacher must be able to manage class conditions so as to create a pleasant learning atmosphere, to produce a quality learning process, a teacher needs good learning methods that are able to have a positive impact on student learning outcomes, so it takes the teacher's ability to apply the learning method in accordance with the characteristics of the students. Indah Puspitasari (2021) said English teaching and learning goal is to enable students to do English communication both orally and in writing form. Hence, the emphasis on English teaching and learning continues to grow the four language skills of students, there are listening, speaking, reading, and writing

CTL is the appropriate method in teaching vocabulary to students especially in bilingual-based schools, because with this method students will learn how to acquire knowledge in an active way that is relevant to everyday life. When learning vocabulary with this method, students expected to be able to use the vocabulary they get during lessons in their daily conversations. Students will also easily memorize the vocabulary they get better. According to Sanjaya (2006) the essence of the CTL learning process is when students are not only passive to take notes, sit and listen. But also learn about how to acquire knowledge in an active way that is relevant to everyday life. In the process, students will look for material and understand for themselves and then actualize it with their environment.

METHOD

This research used class action research method. This research's data obtained from students' pre-test, post-test, interviews and observations in grade 7 MTs Al-Qalam in academic year 2022/2023. The subjects of this research were students in grade 7 MTs Al-Qalam in academic year 2022/2023 which consists of 25 students which consists of 13 male students and 12 female students. In addition, English teacher will also involve in this research. The teacher will be the collaborator who help researcher to carry out each step of the research procedure. Her main responsibility is to observe the implementation of the action and to reflect on the result together with the researcher.

This classroom action research used a model by Kurt Lewin (1946), who stated that in one cycle consists of four the main steps are: (1) planning, (2) acting, (3) observing, and (4) reflecting. The four stages in the CAR form a CAR cycle depicted in a spiral.

RESULTS

Preliminary Study

Before carrying out the first cycle, the researcher conducted a preliminary study. This preliminary study was conducted to determine the increase in students' vocabulary mastery using the CTL method. The pre-test was held on Monday, 27th March 2023, at 09.45-10.30 WIB. The students do the pre-test individually. The test time was only 30 minutes. There were 10 questions of matching words must be done by students.

Based on the test results, it shown that the students' vocabulary mastery was low. This can be seen from the total of students' scores and the percentage of students' scores in the pre-test, there were only 8 or 32% of students who got score up to 75. Meanwhile, 17 or 68% of students did not pass or did not get score up to 75.

Cycle I

Lesson plans were prepared before the researcher conducted the research. First of all, the researcher prepared lesson plans for two meetings. The topics discussed in the learning process were about nouns and adjectives. In carrying out the research the researcher has prepared: (1) lesson plans, (2) material appropriate to the topic of discussion about nouns and adjectives, (3) assignments for students, (4) observation sheets to see the condition of student activity during the learning process in class. Researcher as teachers and teachers as collaborators that observed the learning process carried out using the CTL method.

The first meeting was held on Monday, 03 April 2023, from 09.45-11.15 am. All plans that have been prepared were carried out in the learning process to get how to teach vocabulary well by using the CTL method. (1) explained briefly about CTL method. Before starting the learning process the researcher gave a brief explanation of the contextual teaching and learning method to students, so that they understood the learning strategies using this method. (2) the researcher as the teacher gave the lesson related to nouns and adjectives. (3) the researcher gave the students some texts on a piece of paper. (4) the researcher asked the students to find a new word, then the students filled the word into a blank sheet of paper and wrote the new word on the blackboard along with the meaning they have found (5) The researcher gave the students a test.

The results of the first cycle post test showed that the total of students' scores were 1885 and the number of students who follow test were 25. So, the average of students test scores were 75.4. It can be seen that the students' score in vocabulary increased. The percentage of students' scores from post-test were 19 or 76% students pass or got score up to 75. While 13 or 24% students did not pass or did not get score up to 75. So, the result of the cycle I post-test improved.

Based on the results of the post-test scores in cycle I and also the results of observations, it was necessary to take action to improve students' vocabulary mastery. Even though the students' scores on the cycle I post-test were better than the pre-test scores, their vocabulary needed to be further improved because some of them still found it difficult to understand some English vocabulary. It can be concluded that the students' vocabulary mastery increased but was not successful. So, the researcher decided to do cycle II. In the second cycle, researcher as the teacher increased the vocabulary given to them related to the topic of discussion.

Cycle II

The second meeting was held on Monday, 10 April 2023 at 09.45-11.15 am. In cycle II, the researcher returned to explaining lessons about vocabulary using the CTL method. Before the teaching and learning process, researcher provided a brief explanation to build students' knowledge slowly about what will be learned. In the CTL method this activity called constructivism, namely building student knowledge slowly and then connecting student knowledge with everyday life. After explaining briefly the researcher began to enter the lesson and invite students to discuss. This is in accordance with the CTL component called inquiry, namely the knowledge and skills that students acquire by finding them for themselves. Discussions conducted by the teacher with students also produced communicative learning process.

In this cycle the researcher as the teacher divided students into several groups to carry out conversations in front of the class as a practice. Most of the students looked enthusiastic and take lessons seriously in class. This activity aimed to increase students' confidence to speak English and make it easy for them to remember the vocabulary they have acquired. At the end of the lesson the teacher gave a game to students as a reflection to remember the lesson that has been delivered. They can have fun doing this game. In this second cycle the teacher gave

post-test II for students so that get better results, and researchers emphasize students to be more interested in learning English, especially in mastering vocabulary.

In the observation results there is an increase in the learning process. The researcher has succeeded in increasing the students' vocabulary mastery. In the results of the post-test II cycle II it can be seen that the total score of the students was 1.930 and the number of students who took the test was 25. Thus, the average student test score was 77,2. It can be concluded that the students' scores in vocabulary increased. The percentage of student scores from the post-test II was 21 or 84% of students who passed or got score 75 or more. Meanwhile, 4 or 16% of students did not get score up to 75. So, post-test II in cycle II was successful.

Based on the quantitative data, the results showed an increasing in students' abilities from the score of post-test I to post-test II cycle II. In the post-test I, the students that got score 75 or more were 19 of 25 students (76%). At post-test II cycle II, students that got score 75 or more are 21 out of 25 students (84%). Increase from post-test I to post-test II cycle II is about 8%.

DISCUSSION

In the implementation of CTL method researcher used three stages there were preliminary study, cycle I and cycle II. In During the preliminary study, the researcher gave a pre-test which contained 10 matching words questions about English vocabulary, interviews and observations. The pre-test was used as a material to evaluate students' progress and how their grades increased. English teacher made a score of 75 as the minimum passing grade in English lessons, especially in vocabulary. The number of students who took the pre-test was 25. Based on the results of the pre-test, the total of students' score was 1,660 with students' score average 66.4.

The results of quantitative data above strengthened by the qualitative data taken from the tests results of every meeting, questionnaire and interview. The researcher interviewed the teacher and gave the questionnaire to students. The English teacher's answer about students' vocabulary mastery: *"Ya saya mengalami kesulitan dalam mengajar vocabulary. Ada siswa yang sulit memahami bahasa Inggris, sulit untuk menghafal kosakata, ada siswa yang susah diatur dan ada juga yang tidak memiliki motivasi belajar"*.

The result of researcher's interview with the English teacher showed that with the method applied the teacher still had difficulties in teaching English due to several factors such as students' difficulties in understanding English and the lack of student learning motivation. Most students had difficulties in the test due to several factors. The factor most experienced by students was the lack of vocabulary mastery, so they found it difficult to do the pre-test. When given a questionnaire about the causes of students' difficulties in learning vocabulary on the questionnaire, the student with the initials BFN answered *"Malas, karena pembelajaran vocabulary sangat luas, jumlah vocabulary sangat banyak, dan kata baru juga terus bermunculan"*. Not only that, students with the initials DRM answered the question *"Tidak pernah digunakan, karena tidak percaya diri dengan logat saya"*. These were internal factor faced by students.

There were also students who faced some external factors such as students with the initials BP who answered *"Sulit diucapkan, karena huruf pada bahasa Indonesia dan bahasa inggris berbeda dalam pengucapan"*. Students with the initials MRM also answered *"Saya sering menghafalkan vocabulary tetapi pengucapan saya masih banyak yang salah, jadi saya lebih suka menulis daripada mengucapkan"*. Students with the initials NAR have other reasons for their difficulty in learning vocabulary *"Bosan karena media pembelajaran hanya buku saja, kalau boleh bawa hp bisa belajar dengan cara lain seperti mendengarkan lagu inggris dan sebagainya."* This student found it difficult because of a lack of learning resources. The similar answer was also

given by a student with the initials ZI *“Karena tidak boleh membawa hp jadi tidak bisa translate lewat google, kalau boleh bawa hp mungkin lebih gampang tidak harus membuka kamus.”*

Based on the results of the data analysis, it concluded that some students' difficulties in learning vocabulary was because they find difficulties in understanding the meaning, remembering, pronouncing it well, feeling not confident to practice and the lack of learning resources. The lack of learning resources was because MTs Al-Qalam was a boarding school which in its rules prohibited students from bringing electronic devices such as cell phones, laptops and so on. Students expected learning methods that were not monotonous, fun and also not only memorize but also practice. When doing the pre-test, the researcher did not implement the CTL method. Therefore, to determine the increase in students' vocabulary mastery the researcher conducted the first cycle.

In the cycle I, the researcher has developed four steps: planning, action, observation, and reflection. There were two meetings and each two period of lessons were given to students. In this phase the researcher as the teacher gave the test to students at the end of the learning process. All plans that have been prepared were carried out in the learning process to get how to teach vocabulary well by using the CTL method. (1) explained briefly about CTL method. Before starting the learning process the researcher gave a brief explanation of the contextual teaching and learning method to students, so that they understood the learning strategies using this method. (2) the researcher as the teacher gave the lesson related to nouns and adjectives. (3) the researcher gave the students some texts on a piece of paper. (4) the researcher asked the students to find a new word, then the students filled the word into a blank sheet of paper and wrote the new word on the blackboard along with the meaning they have found (5) The researcher gave the students a test.

The learning process involved the English teacher in the class as a partner and collaborator who acted as the observer. The collaborator helped researcher when there were obstacles in learning activities and recorded all activities that occurred in the classroom. Most of students have participated effectively during the teaching and learning process. They felt enthusiastic and happy with the lessons delivered by the researcher in the class. They were also serious in answering every question given by researcher. Student activity can be seen in the written observation sheet and the picture taken by researcher during the learning process in class. There were shown that the students were happy and enthusiastic than before.

Based on the results of students' test scores in cycle I and also the results of observations that have been made, it was necessary to take improvement action. Although the students' scores on the first cycle test were better than the pre-test scores but, the result of the post-test in cycle I also showed that there were many students still getting low score. These students' initials were BFN, HPH, IH, MRFA, NP, and ZI. They get a score below the standard because they still find it difficult to understand and memorize the vocabulary taught by the researcher. Therefore, the researcher decided to conduct cycle II. In the second cycle, the researcher as the teacher re-applied CTL method to improve students' vocabulary skills related to the topic of discussion.

In cycle II, the researcher returned to explain lessons about vocabulary using the CTL method. Before doing the teaching and learning process, researcher provided a brief explanation to build students' knowledge slowly about what will be learned. In the CTL method this activity called constructivism, namely building student knowledge slowly and then connecting student knowledge with everyday life. After explaining briefly the teacher began to enter the lesson and invite students to discuss. This is in accordance with the CTL component called inquiry, namely the knowledge and skills that students acquire by finding them for themselves. Discussions conducted by the teacher with students also produced communicative learning process.

In this cycle the researcher as the teacher divided students into several groups to carry out conversations in front of the class as a practice. Most of the students looked enthusiastic

and take lessons seriously in class. This activity aimed to increase students' confidence to speak English and make it easy for them to remember the vocabulary they have acquired. At the end of the lesson the teacher gave a game to students as a reflection to remember the lesson that has been delivered. They can have fun doing this game. In this second cycle the teacher gave post-test II for students so that get better results, and researchers emphasize students to be more interested in learning English, especially in mastering vocabulary.

After learning vocabulary by using CTL in cycle II, students' ability to master vocabulary increased continuously. They were been more enthusiastic and serious when they understand. The students were more serious when working on their tests. The class condition was also orderly and students had good responses to the researcher's explanation. The researcher was very satisfied with the results of students. From that last result shows that students are able to answer the test. Most of the students got grades 75 and above. In this phase, all students are able to follow the learning process using the CTL method as a strategy to develop their mastery of vocabulary related to well-covered lessons. Student vocabulary mastery has been improved.

From the results of observations at each meeting, it can be concluded that the learning process applied can run well and successfully. But there were several students whose scores were lower than the post-test cycle I scores with the initials MFS, NAR, and RSF. After conducting in-depth interviews, it was found that their scores decreased in the post-test cycle II because there were several vocabulary words that were unfamiliar to them.

Based on this cycle reflection, there was no need to do cycle III because the total increasing of students' scores from pre-test to post-test cycle II was 52%. From the explanation above it concluded that the results of this research showed that the implementation of the CTL method was effective to improve students' vocabulary mastery. This method made students felt happy when learning English and their mastery of English vocabulary increased well. This can be proven quantitatively with data showing that student scores were increased from pre-test to post-test cycle I and from post-test I to post-test II in cycle II. This can also be proven by qualitative data obtained from observations and interviews.

CONCLUSION

Based on the results of this study it can be concluded that teaching vocabulary using the CTL method was effective in improving students' vocabulary mastery. In the preliminary study, the quantitative data showed that the total score of the students was 1660 and the students' average was 66.4. The percentage of student scores showed that only 8 or 32% of students passed or got score up to 75. There were 17 or 68% of students who failed or did not get score up to 75. Based on the qualitative data shown from the results of observations and interviews, it can be proven that the increasing in students' vocabulary was not good and low on the pre-test.

In cycle I, the results of the quantitative data showed that the total score of the students was 1885 and the score average of the students' tests was 75.4. The percentage of student scores in post-test I was 19 or 76% of students who passed and got a score of 75. Conversely, 6 or 24% of students who failed or did not get score up to 75. So, the post-test cycle I was categorized as increasing. From the qualitative data shown from the observations it can be concluded that students felt happy, confident, easier to understand, and interested in learning vocabulary by using the CTL method.

In cycle II quantitatively shows the total value of students is 1930 and the average student test score is 77.2 the percentage of student scores in the post test II was 21 students who passed and got a score of 75 or up to 75 only 84%. While 4 students did not pass or don't score up to 75 and that's 16%. It is shown from the observation results, there were several students whose scores were lower than the post-test cycle I scores with the initials MFS, NAR, and RSF. After conducting in-depth interviews, it was found that their scores decreased in the post-test cycle II because there were several vocabularies that were unfamiliar to them. Qualitatively, it can be

concluded that post-test II cycle II was successful and it can be proven that CTL method was effective to improve students' vocabulary mastery at grade 7 students in MTs Al-Qalam academic year 2022/2023.

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Summarizing Technique's Influence on Student Reading Comprehension at SMPN 18 Palembang

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Abstract

This study aims to investigate the influence of summarizing techniques on students' reading comprehension achievement. The importance of reading comprehension and the role of summarizing techniques in enhancing students' reading comprehension will be explored. The research design involves an experimental approach, with a sample of students selected for the study. Data will be collected using specific reading comprehension measures and the summarizing technique will be implemented during the study. The results will be analyzed and interpreted, considering the implications for educational practices. The findings of this study will contribute to the understanding of the effectiveness of summarizing techniques in improving students' reading comprehension skills, thus providing valuable insights for educators and researchers in the field of language learning and teaching

Keywords: Summarizing technique, Reading comprehension

INTRODUCTION

Reading comprehension is a critical skill that underpins academic success and lifelong learning (Charbel & Nour, 2018). It involves the ability to understand, analyze, and interpret written texts, enabling individuals to extract information, draw conclusions, and make connections between ideas (Haryanto, 2016; Mali, 2016). Proficient reading comprehension is not only vital for academic subjects across disciplines but also essential for effective communication, critical thinking, and problem-solving skills (Samosa et al., 2021; Yuliantini, 2021).

However, numerous studies have indicated that a significant number of students struggle with reading comprehension. Factors contributing to this challenge encompass diverse language proficiency levels, limited vocabulary, inadequate background knowledge, and insufficient comprehension strategies. These difficulties hinder students' ability to comprehend complex texts, leading to academic setbacks and diminished educational outcomes (Saini et al., 2021; Yulianah & Muzammil, 2020).

To address this issue, educators and researchers have sought to identify effective instructional approaches and strategies to enhance students' reading comprehension abilities. One promising technique that has gained attention is the use of summarizing. Summarizing involves condensing the main ideas, key details, and essential information from a text into a concise and coherent summary (Panjaitan et al., 2023; Sari, 2021; Simamora & Harmayanti, 2021). By engaging in summarization activities, students actively process and synthesize information, identify important elements, and comprehend the overall message of the text.

Research has shown that summarizing techniques can significantly improve reading comprehension. By summarizing, students are required to engage in higher-order thinking skills, such as identifying main ideas, discerning supporting details, making inferences, and synthesizing information. Through these cognitive processes, students develop a deeper understanding of the text and enhance their ability to retain and recall information (Rahayuningsih, 2020).

Although previous studies have provided evidence supporting the effectiveness of summarizing techniques, further investigation is needed to explore the specific impact of these techniques on students' reading comprehension achievement. It is crucial to examine how the application of summarizing techniques influences various aspects of reading comprehension, including students' ability to comprehend complex texts, analyze information, draw inferences, and make connections within and across texts (Fitrawati et al., 2023; Kirana, 2018; Samosa et al., 2021).

Therefore, this study aims to delve into the influence of summarizing techniques on students' reading comprehension achievement. By investigating the effects of summarization, this research endeavors to contribute valuable insights into instructional practices and strategies that can enhance students' reading comprehension skills (Andini et al., 2022; Samosa et al., 2021). The findings of this study have the potential to inform educators, curriculum developers, and policymakers in designing effective interventions and educational programs to support students' reading comprehension development. Ultimately, by improving reading comprehension skills, this research may foster academic success, promote lifelong learning, and equip students with essential skills for their future endeavors.

METHOD

Research Design

This study employs an experimental research design. In this design, two groups of students will be formed: an experimental group that will implement the summarizing technique, and a control group that will not apply the technique. This design allows for a comparison between the two groups to identify the influence of the summarizing technique on students' reading comprehension achievement (Fraenkel et al., 2012; Sugiyono, 2015).

Population and Sample

The population of this research consists of 180 students at the same grade level in a school. From this population, a sample of 33 students will be selected to participate in the study. The sample size is determined based on considerations of feasibility and practicality while ensuring representation of the population. The sample will be selected using a random sampling technique. Each student in the population will have an equal chance of being included in the sample. This random selection method ensures that the sample is representative of the population and minimizes potential bias.

Research Instruments

To measure students' reading comprehension achievement, standardized reading comprehension tests will be administered to both the experimental and control groups. These tests will consist of passages followed by comprehension questions that assess various aspects of reading comprehension, including understanding main ideas, making inferences, and identifying supporting details. The experimental group will receive instruction on the summarizing technique as part of their regular reading comprehension lessons. They will be taught how to identify main ideas, select key details, and synthesize information to create effective summaries of the text. The control group, on the other hand, will receive traditional reading comprehension instruction without the specific focus on summarizing.

Data Collection and Data Analysis

Data will be collected through the administration of the reading comprehension tests to both the experimental and control groups. The tests will be administered under standardized conditions to ensure consistency and validity of the results. The scores obtained from the tests will serve as the primary data for analyzing the impact of the summarizing technique on students' reading comprehension achievement. The data collected will be analyzed using appropriate statistical techniques. A comparative analysis will be conducted to examine the differences in reading comprehension scores between the experimental and control groups.

Statistical tests, such as t-tests or analysis of variance (ANOVA), will be applied to determine the significance of any observed differences and to establish the influence of the summarizing technique on students' reading comprehension achievement.

RESULTS AND DISCUSSION

Results

The results of the study indicated a significant difference in reading comprehension achievement between the experimental group, which implemented the summarizing technique, and the control group, which did not apply the technique. The mean scores of the experimental group on the reading comprehension tests were significantly higher than those of the control group ($p < 0.05$). This finding suggests that the implementation of the summarizing technique had a positive impact on students' reading comprehension achievement.

Furthermore, a closer examination of the data revealed that the experimental group demonstrated better performance across various aspects of reading comprehension. They showed improved abilities in identifying main ideas, extracting key details, making accurate inferences, and effectively synthesizing information from the texts.

The effect size analysis also supported the significant impact of the summarizing technique on reading comprehension achievement. The effect size was found to be moderate, indicating a meaningful difference between the two groups in terms of their comprehension abilities.

These findings support the hypothesis that the use of the summarizing technique enhances students' reading comprehension skills. The summarizing technique provides students with a systematic approach to engage with the text, identify important information, and develop a deeper understanding of the content. By actively summarizing the text, students are able to extract key ideas and connect them coherently, resulting in improved comprehension.

It is important to note that while the results of this study provide evidence for the positive impact of the summarizing technique on reading comprehension, there may be other factors influencing comprehension abilities that were not specifically addressed in this research. Additionally, the sample size of 33 students may limit the generalizability of the findings. Further research with larger sample sizes and in diverse educational contexts is recommended to validate and expand upon these results.

Overall, this study underscores the effectiveness of the summarizing technique as a valuable instructional approach for enhancing students' reading comprehension achievement. The findings have practical implications for educators, highlighting the importance of incorporating summarizing activities into reading instruction to promote deeper comprehension and critical thinking skills.

Comparison between Experimental and Control Groups

Group	Mean Score	Standard Deviation	P-Value
Experimental	82,5	6.3	<0.001
Control	75.2	7.1	

The above table displays the mean scores and standard deviations of the experimental and control groups on the reading comprehension tests. A significant difference was observed between the two groups, with the experimental group scoring significantly higher than the control group ($p < 0.001$).

Discussion

The discussion section describes the results of data processing, interprets the findings logically, and relates them to relevant reference sources. It presents an analysis of the results and their implications, highlighting the benefits of the research findings. Importantly, the discussion section should not repeat the research results section but build upon it to provide a deeper understanding and contextualization of the findings.

In this study, the results indicated a significant difference in reading comprehension achievement between the experimental group, which implemented the summarizing technique, and the control group, which did not apply the technique. The mean scores of the experimental group on the reading comprehension tests were significantly higher than those of the control group, providing evidence for the positive impact of the summarizing technique on students' reading comprehension achievement.

The findings align with previous research that has emphasized the benefits of summarizing techniques in enhancing reading comprehension. By actively engaging with the text and summarizing the main ideas and key details, students are better able to understand and retain information. The summarizing technique provides a structured approach for students to extract essential information, make connections, and develop a coherent understanding of the text.

Additionally, the experimental group demonstrated improved abilities in identifying main ideas, extracting key details, making accurate inferences, and effectively synthesizing information from the texts. These enhanced skills reflect the benefits of the summarizing technique in promoting deeper comprehension and critical thinking.

The effect size analysis further supports the significant impact of the summarizing technique on reading comprehension achievement. The moderate effect size indicates a meaningful difference between the two groups, reinforcing the notion that the summarizing technique is a valuable instructional approach.

It is important to acknowledge the limitations of this study. The sample size of 33 students may limit the generalizability of the findings. Additionally, other factors beyond the scope of this study, such as prior knowledge, language proficiency, and instructional variations, may also influence reading comprehension abilities. Future research with larger sample sizes and in diverse educational settings is recommended to validate and extend the findings.

The practical implications of this study are significant for educators and instructional practices. Incorporating summarizing activities into reading instruction can enhance students' reading comprehension skills and promote critical thinking abilities. By explicitly teaching and reinforcing summarizing techniques, educators can empower students to navigate and comprehend complex texts effectively.

In conclusion, the results of this study provide evidence for the positive impact of the summarizing technique on students' reading comprehension achievement. The discussion section has interpreted the findings logically, related them to relevant reference sources, and emphasized the benefits of the research results. By going beyond a mere repetition of the results, this discussion section provides a deeper understanding of the findings and their implications in the field of reading comprehension instruction.

CONCLUSION

Based on the results of the study, it can be concluded that the implementation of the summarizing technique significantly improves students' reading comprehension achievement. The experimental group, which applied the summarizing technique, showed higher mean scores and better performance in various aspects of reading comprehension compared to the control group. These findings support the hypothesis that the summarizing technique enhances students' ability to identify main ideas, extract key details, make accurate inferences, and

synthesize information effectively. The moderate effect size further emphasizes the meaningful difference between the two groups. Educators are encouraged to incorporate summarizing activities into reading instruction to promote deeper comprehension and critical thinking skills among students, contributing to their overall academic success.

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Implementation of Phonetics Organ of Speech In Speaking Skills of 3rd Semester English Education Study Program STKIP PGRI Pacitan

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Abstract

Speaking English fluently and correctly is very important and needed in this globalization era. This is a great opportunity for a student of literature and English education to play a role in the development and improvement of the community's ability to speak English. English Education students as prospective educators are required to always provide knowledge and corrections for their students. To achieve these competencies, the faculty, especially the English education study program, ensures that students receive the best quality supporting knowledge, one of which is knowing parts of speech and phonology. Researchers as lecturers of this course have obtained data related to students' responses to these two sciences. It was found that during the learning period, most of the students faced learning difficulties, especially related to understand organ of speech. However, they still realize that success in this study is very important. This research is qualitative research that aims to determine the perspective of students on the understanding of phonology and pronunciation improvement.

Keywords: learning, english phonology, english language

INTRODUCTION

There is no doubting that English has been used by persons from all over the world and has been in the spotlight. People attempt to improve their English skills in order to communicate in everyday situations. One of the most highlighted and focused subjects is English communication abilities. All of professional teacher needs to learn, to understand and use English fluently and efficiently in order to start an English class. Discovered that persons who use English as a second language face difficulties in the near future because their mother tongue influences their foreign language, particularly in adulthood. In Indonesia, students are more focused with grammar and structure than with speaking and listening.

Sound that's what gives spoken language its life, and sound is what gives grammar and vocabulary their vitality. Other languages cannot be animated without sound (phonology, or pronunciation). Listening, speaking, reading, and writing behaviors are all dependent on the three domains of knowledge at the heart of language: phonology, vocabulary (lexis), and structure, and these behaviors are all dependent on the three domains of knowledge at the heart of language: phonology, vocabulary (lexis), and structure. Every language, including sign language, contains these elements. This explanation accurately implies that phonology is inextricably linked to other languages, and that phonology is just as important as vocabulary and organization in the four abilities.

In this regard, it is contradictory that, despite its widespread recognition as a critical skill, pronunciation does not receive the same level of emphasis in language classes. Today, the assumption that the learner will pick it up on his own and that pronunciation does not need to be taught (although this belief survives in some circles) is no longer the basis for the fringe status in many language curricula; instead, a number of factors contribute to this prolonged

situation. In performing teaching English phonology, it is impossible to separate teaching and building communicative and language competency toward pupils in order to produce learning motivation. Lecturers would be able to more easily employ learning and teaching simulations, such as describing or simulating the creation of speech sounds and the interpretation of speech sound patterns, if they were equipped with technology.

Shih (2018) concluded that phonological factors and elements need a process and explanation. Shih (2018) suggests that English Phonology research can apply to sound images and perceptions. Kwary dan Fauzie (2018) found that learning English Phonology requires encouraging direct contact between students and instructors, developing reciprocity and cooperation, using active learning techniques, providing direct feedback, emphasizing time. Kwary dan Fauzie (2018) also emphasize that learning is centered on assignments, communicating with students about being expected of them, respecting diverse talents and various ways of learning. Jiang (2018) emphasizes that English Phonology proves important for the activation of first language.

Grammatical knowledge or a "deep seated mental state below the level of language" is what language competency is. The capacity to employ grammatically features of a language in arranging correct phrases and knowing when, where, and to whom those words are uttered for is referred to as communicative competence. Learners could deliver and interpret a message or negotiate meaning interpersonally in a specific situation if they have such skills. The difficult and comprehensive material of phonology causes a number of issues in teaching and learning. Students of English Education Department at STKIP PGRI Pacitan complain about not being able to grasp every element of the phonological material. Despite their strong pronunciation, the majority of students claim to not understanding the phonology content, which is at the heart of pronunciation. Researchers also discovered a consequence of this issue, namely a decline in pupils' commitment to studying. This has a significant impact on their learning outcomes.

In addition to the previously mentioned issues, this study aims to determine the level of knowledge among English Education Department students who are aspiring teachers about the relevance of studying phonology in depth as well as the urgency of doing so in speaking.

METHODS

This study aims to determine the level of knowledge among English Education Department students who are aspiring teachers about the relevance of studying phonology in the material of Organs Of Speech. This research is to uncover the learning of English Phonology related to the conditions of learning, learning methods and learning outcomes.

In this study we use the qualitative data collecting methodology. The qualitative data collecting methodology is the collection of descriptive data, comprehending the data in the form of classified events or other ways such as photos, notes, and regional notes, when conducting the analysis. In this strategy, the researcher conducts a survey and distributes a questionnaire including data from the study. While the people being tested will fill out or reply based on their abilities and knowledge. The researcher gathered the data by picking an existing sample based on the number of pupils in the class.

Eliminary study was from August 2022 to October 2022. Preliminary studies carried out by observation. Meanwhile, to compare observations with facts, researchers then conducted interviews directly to students and lecturers about English Phonology. 3. Result the following is a description of the data that can be revealed based on preliminary results by observation. Observation results can only describe the learning conditions: (1) English Phonology learning is available in every English education study program at STKIP PGRI Pacitan (2) Learning English Phonology goes down in different semesters, namely in the fifth semester and third semester ; and (3) Students in each class are in the range of three to four classes, with a number ranging

from 25 to 38 students. Then, the results of the interview about learning English Phonology revealed several facts.

a. Researchers found: Conditions: that many undergraduate students of English education still do not understand and do not master this knowledge. All this time, students only know that English Phonology aims to sound production or practical learning only. Students can be said not to know what the purpose of learning English Phonology. They are not even interested in learning English Phonology. However, the researcher asked the usefulness of English Phonology. But all of them responded in a compact voice, that English Phonology is very important. Students at least only know that English Phonology is only an additional course. Of course, this contrasts to learn English Phonology.

b. Methods: (1) Mr Samsul Hadi as a lecturer in English Phonology, Faculty of Letters STKIP PGRI Pacitan also realizes the reality of the student's condition. The condition of students is indeed still in the learning process. When Researcher asked the role of English Phonology will be very difficult because students still need to complete the lecture. Because at the same time, students have been and are still discussing English Vowels and Consonants. Mr Sam explained that so far, she had taught this subject. The main obstacle found in the application of appropriate methods to achieve better learning outcomes. Mr Sam added that the English Phonology course is about science, not just practice. Because, sound production practices have integrated into other subjects such as Speaking, Listening, Reading aloud, and others. English Phonology is not just the practice of sound production.

c. Learning outcomes: (1) students emphasizes that later, student learning success is measured by the ability to produce, describe and perceive each sound; and (2) students agreed and shared the same the lecturer. The condition of students, student learning goals and urgency of student learning and student learning outcomes were still not able to master English Phonology as a science and practice it in their speech.

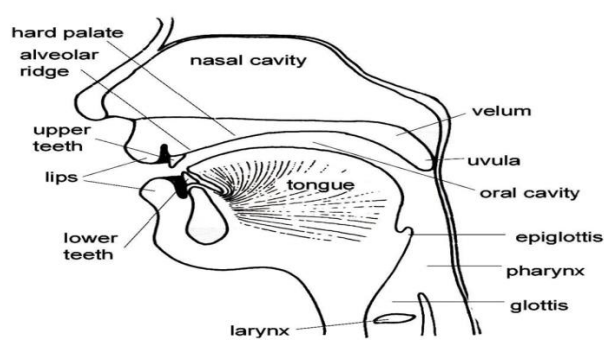
DISCUSSION

Phonetics organs of speech

a. What is phonetics?

Humans are naturally speaking to each other using languages through convention. It has happened since thousand years ago in the initiation of finding meals or avoiding dangers. There are two sub disciplines in linguistics which deals with sound namely phonetics and phonology. Phonetics provides objective ways of describing and analyzing the range of sounds which humans use in their languages (McMahon: 2002). More specifically, articulatory phonetics identifies precisely which speech organs and muscles are involved in producing the different sounds of the world's languages. Those sounds are then transmitted from the speaker to the hearer, and acoustic and auditory phonetics focus on the physics effect those waves have on a hearer's ears and brain. It follows that phonetics has strong associations with anatomy, physiology, physics and neurology (ibid).

It is difficult to make a clear cut between phonology and phonetics since a better understanding of many issues in phonology requires the phonetics to bring into consideration. A common characterization of the difference between phonetics and phonology is that phonetics deals with "actual" physical sounds because they are manifested in human speech, and concentrate on acoustic waveforms, formant values, measurements of duration measured in milliseconds, of amplitude and frequency, or in the physical principles underlying the production of sounds, which involves the study of resonances and the study of the muscles and other articulatory structures used to produce physical sounds. On the other hands, phonology is an abstract cognitive system dealing with rules in a mental grammar: principles of subconscious "thought" as they relate to language sound (McMahon:2002).



Part of The Phonetics

Phonetics has three parts, namely:

1. Articulatory Phonetics

Articulatory phonetics is interested in the movement of various parts of the vocal tract during speech. The vocal tract is the passages above the larynx where air passes in the production of speech. In simple terms which bit of the mouth moves when we make a sound.

2. Acoustic Phonetics

This is the study of the sound waves made by the human vocal organs for communication and how the sounds are transmitted. The sound travels through from the speaker's mouth through the air to the hearer's ear, through the form of vibrations in the air. Phoneticians can use equipment like Oscillographs and Spectographs in order to analyse things like the frequency and duration of the sound waves produced. Acoustic phonetics also looks at how articulatory and auditory phonetics link to the acoustic properties.

3. Auditory Phonetics

This is how we perceive and hear sounds and how the ear, brain and auditory nerve perceives the sounds. This branch deals with the physiological.

The sounds of language are commonly described in articulatory and acoustic terms, and fall into two major types: syllabic sounds (vowels and syllabic liquids and nasals) and non-syllabic sounds (consonant and glides). Sounds may be voiced or voiceless and oral or nasal. Consonants are produced at various places of articulation: labial, dental, alveolar, alveopalatal, palatal, velar, uvular, glottal, and pharyngeal. At the places of articulation, the airstream is modified by different manners of articulation and the resulting sound are stops, fricatives, or affricatives. Vowels are produced with less drastic closure and are described with reference to tongue position (high, low, back, and front). At last, language also shows suprasegmental phenomena such as tone, intonation, and stress.

Sound Tools

The tools that we use in speaking are first used during breathing and eating. The voice tools are located in three areas of the body, namely the chest, throat and head.

Inside the chest are the lungs, which are very important in speech. Because all sounds in English are produced by the flow of air in the lungs. When we breathe air smoothly passes through the vocal tract (throat and mouth). When we speak, various things can happen to this airflow and this disturbance produces sound.

In the throat is the larynx or voice box, which is inside the "adam's apple" (protruding part of the throat) in males, and in the corresponding area in females. That part will open called the sound gap. Which may be changed by two elastic parts called the vocal cords or the band that runs over them. These vocal cords can mix airflow in a variety of ways. Airflow can complete the stop of the vocal cords when they are pulled together. To close the gap you can produce a gap stop pronouncing the vowel beginning as in the words orange, always, enter. When the vocal cords are pulled easily together, air passing between them causes the vocal cords to vibrate. This

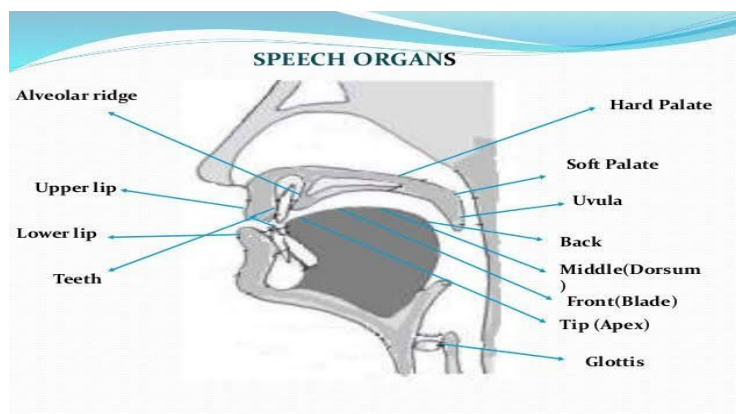
happens when we make a roaring sound like zzz. If the vocal cords are weakened then the air passing between them does not cause vibrations. When we make a narrowing of the sound like sss. In speaking when the vocal cords vibrate, the sound generator can make a sound. When the vocal cords don't vibrate, the sound producer does not make a sound. You can feel the vibration when you speak by placing your hand on the base of your throat or listening to it by covering your ears.

b. Speech Organs

Parts Of The Organs Of Speech

The organs of speech are made up of:

- Lips
- Tongue
- Alveolar ridge
- Teeth
- Hard palate
- Pharynx
- Uvula
- Glottis



Functions Of The Organs Of Speech

Each part of the organs of speech serve a particular function that is relevant to producing sounds. The study of these parts of organs of speech provides a fundamental idea about speech and sounds.

Thus, in furtherance of the aforementioned parts of the organs of speech, the following provides as short description on each organ and their functions.

- **Lips**
The lips as organ of speech create two different sounds which are mainly the labial, bilabial and labio-dental consonant sounds. Thus, both the upper lips and the lower lips are considered important apparatus in producing a speech sound.
- **Teeth**
Just like the lips, the teeth as one of the organs of speech are important. Both the upper teeth and lower teeth are used in producing sounds like dental and labio-dental consonant sounds.
- **Tongue**
The tongue is considered the most important apparatus out of the organs of speech. The tongue is divided into five parts. They are: Tip, Blade, Front, Back, Root. The tongue is effective in moving in different directions or shapes in order to make speech sounds.
- **Alveolar Ridge**

This is the between the upper front teeth and hard palate. Thus, to produce speech sounds, the alveolar ridge and the blade of the tongue are used.

- **Hard Palate**

This is a bony plate located at the roof of the mouth. The interaction between the hard palate and the tongue is necessary for the production of certain sounds. They are, d, t and j.

- **Pharynx**

This helps manipulate the vocal structure.

- **Uvula**

This helps preventing air from escaping through the nose while producing sounds.

- **Glottis**

As the vocal folds vibrate, the resulting vibration produces a buzzing quality to the speech.

Sound production involving only the glottis is called glottal.

Voiced consonants include /v/, /z/, /l/, /b/, /d/, /g/ and /w/.

Ex : These lecture was very difficult.

Voiceless consonants include /f/, /s/, /t/, /p/, /k/, and /h/.

Ex : Do you have any plan in this *summer*?

The air stream provided by the lungs undergoes important modifications in the upper stages of the respiratory track before it acquires the quality of speech sound. First of all, in the trachea or windpipe, it passes through the larynx, containing the so-called vocal cords.

The larynx is cartilaginous, formed of cartilage and muscle, situated in the upper part of the trachea. Its forward portion is prominent in the neck below the chin and is commonly called the Adam's apple. Housed within this structure from back to front are the vocal cords, two folds of ligament and elastic tissue which may be brought together or parted by the rotation of the arytenoid cartilages (attached at the hinder end of the cords) through muscular action. The inner edge of these folds has a length of 23 mm in adult men and about 18 mm in women, the opening between the cords is known as the glottis (Giegerich:1992). Biologically, the vocal cords act as a valve which is able to prevent the entry into the trachea and lungs of any foreign body or which may have the effect of enclosing the air within the lungs to assist in muscular effort on the part of the arms or the abdomen. In using the vocal cords for speech, the human being has adapted and elaborated upon this original open or shut function in the following ways (ibid).

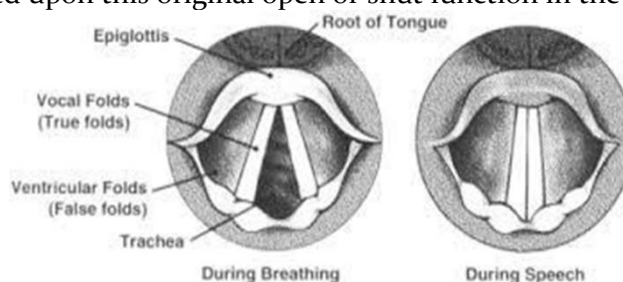


Diagram of the vocal cords: (hal 21)

a) Tightly closed as for [?]

b) Wide open as for breath [h]

c) Closely together and vibrating as for voice [z]

CONCLUSION

Phonetics, the study of speech sounds and their physiological production and acoustic qualities. It deals with the configurations of the vocal tract used to produce speech sounds (articulatory phonetics), the acoustic properties of speech sounds (acoustic phonetics), and the manner of combining sounds so as to make syllables, words, and sentences (linguistic

phonetics). And Organs of speech can be defined as any part of the body, as the tongue, velum, diaphragm, or lungs, that participates, actively or passively, voluntarily or involuntarily, in the production of the sounds of speech. They are the organs of our mouth which are being used to produce sounds. They are also called speech organs.

The application of the phonetic organ of speech in kicking is very important to learn and apply to everyday life. this will make communication easier to understand because applying the phonetic organs of speech in speaking will make it easier for us to pronounce and also affect the context of meaning

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Transposition and Modulation Techniques to Translate Metaphors in Erick Setiawan's *of Bees And Mist* Novel

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Abstract

This research aims to describe the transposition and modulation translation techniques used to translate metaphors or metaphorical expressions in the novel *Of Bees and Mist* by Erick Setiawan and to describe the shifts in meaning that occur in the translation of metaphors or metaphorical expressions in the novel. This research is categorized as descriptive qualitative research. The main data source for this research is a novel entitled *Of Bees and Mist* by Erick Setiawan (2009) and its translation novel entitled *Of Bees and Mist: Kabut Masa Lalu* by M.Fransisca (2011). The research data collected, selected and analyzed are in the form of sentences containing metaphorical expressions, as well as translation techniques or methods used to translate from the source language (SL) to the target language (TL). The data collection technique applied was document analysis with field notes in the form of tables which were used as research instruments. Furthermore, the data were analyzed using an interactive analysis techniques, namely data collection is carried out simultaneously with data reduction, data display and drawing conclusions. The results found in this research are as follows. First, There are 54 data of metaphors or metaphorical expressions translated using the transposition technique. The modulation technique was used to translate 70 data, namely 62 data were translated using the free modulation technique and 8 data were translated using the mandatory modulation technique. Second, transposition and modulation translation techniques are obligatory and free or optional. Various kinds of shifts appear using transposition and modulation techniques, including; system shifts, structure shifts, unit shifts, category shifts and point of view changes from active in SL to passive in TL or vice versa

Key words: Metaphors, Transposition, Modulation

Introduction

Translating literary works such as poetry, novels, and plays requires more creativity in the translation process. Landers (2001:5) states that, of all types of translation, only literary translation involves someone in a creative process consistently. Furthermore, Landers (2001:9) also adds that the translation of literary works requires a series of choices. In other words, a translator of a literary work must make a choice, and it is from that series of choices that translation exists.

One of the things that is important in translating literary or other works is the disclosure of the meaning or message intended in the original discourse. The author's message must be maintained and communicated to the readers of the translation. The contents of the target language text (TT) must be commensurate with the source language text (ST), so that the message referred to in SL can be understood by TL readers even though the form may be different. Equivalent in this case does not mean the same, but contains the same message. So, a good translation must always seek to achieve dynamic equivalence, namely the equivalence of TL and SL readers' understanding of the message (meaning) and form (style) conveyed by a text (Nida & Taber, 1974:12).

The problem that often arises in trying to achieve dynamic equivalence is translating information into figurative language, such as expressions that contain metaphors, similes or

personifications. Giving an equivalent that is not appropriate and reasonable will result in a translation that is stiff, unnatural or maybe even the meaning cannot be understood. Thus a translator is required to be able to determine an appropriate and accurate equivalent based on the cultural context of the language involved.

Research on the technique of translating figurative language styles, for example metaphors, is important and urgent to do because it is often a problem that must be faced by translators. This happens because metaphors cannot be translated literally and have a fairly high level of difficulty. Larson (1984: 293) says that if a metaphor is translated literally (word for word) it often creates misunderstandings because in the metaphor there are cultural elements of the people who use the source language which are not necessarily the same as the culture of the people who use the target language.

Many studies have been conducted related to techniques, methods, strategies and procedures for translating figurative language styles, especially metaphors. Sentences that contain metaphorical expressions can be translated using a single technique, but there are also those that require two or three techniques at once. A single translation technique means that it is sufficient to use only one technique to translate metaphorical expressions. The couplet translation technique means that it requires two techniques in translating metaphors in a sentence. While the triplet translation technique requires three types of translation techniques to translate sentences containing metaphorical expressions. The types of translation techniques that can be applied to translate metaphorical expressions are transposition, free modulation, mandatory modulation, reduction, borrowing, literal and others. Researcher will focus more on translating metaphors in a novel entitled *Of Bees and Mist* by Erick Setiawan which is translated using a single translation technique, especially transposition and modulation.

The transposition technique is applied because there are differences in the sentence structure of the source language (English) and the target language (Indonesia) which requires changes or adjustments to the composition or shifts in word categories and lingual units. For example, in the example sentence '*You are my heart, the bloods in my veins...*' it is translated using the transposition technique to become '*Kau adalah jantungku, darah dalam nadiku...*' The application of the transposition technique in translating this metaphor is mandatory due to a shift in the system. Plural nouns in English '*bloods*' and '*veins*' are translated into singular '*darah*' and '*nadi*' in Indonesian.

While the modulation technique is a translation technique which is marked by a change in point of view, focus, cognitive category or other meaningful terms in relation to the source text. Changes in point of view can be lexical or structural. When the sentence '*you are going to have a child*' is translated into '*Anda akan menjadi seorang bapak*,' this is an example of a lexical point of view. An example of a grammatical change in point of view is '*I cut my finger*' which translates to '*Jariku tersayat*' due to a change from an active sentence to a passive one.

The data source for this study was a novel entitled *Of Bees and Mist* by Erick Setiawan which was translated into Indonesian by M. Fransiska under the title '*Of Bees and Mist: Kabut Masa Lalu*' and published by Gagas Media, Jakarta. This novel was first published in the United States and received a positive response from book and literary critics. *Of Bees and Mist* became a finalist for the QPB New Voices Award (2010) and was longlisted for the International IMPAC Dublin Literary Award (2011). The amount of adequate and varied data made researcher interested in using these two data sources as research material and gave the title of this research: "Transposition and Modulation Technique to Translate Metaphors in Erick Setiawan's *Of Bees and Mist* Novel."

The results of research on shifts, both transposition and modulation, are expected to be obtained become input for developing a theory of translation specifically related to transposition and modulation. This hope is based on the few and limited references for translating metaphors in making shifts.

REVIEW OF LITERATURE

According to Keraf (2008: 139) the notion of metaphor is a kind of analogy that compares two things directly without using conjunctions: *like*, *as*, and so on, so that the first point is directly connected to the second point. For example: *bunga bangsa*, *buaya darat*, *buah hati*, *cendera mata*, etc. The actual process of occurrence is the same as a simile, but gradually the information regarding the equation and the first point is omitted, for example: *Pemuda adalah seperti bunga bangsa* (menjadi) *Pemuda adalah bunga bangsa* (menjadi) *Pemuda bunga bangsa* (menjadi) *bunga bangsa*

Meanwhile Wahab (1991:85) defined metaphor as a linguistic expression which meaning cannot be reached directly from the symbol used, because the intended meaning is contained in the prediction of the linguistic expression. In other words, metaphor is the understanding and experience of one thing meant for another.

Definition of Translation

Many definitions are presented by experts related to the term translation. Catford (1965:20) defines translation as "*The replacement of textual material in one language (SL) by equivalent textual material in another language (TL)*" (replacing textual material in the source language with equivalent textual material in the target language). Translation always involves two different languages, namely the source language (SL) and the target language (TL). Each language has different systems and structures that result in differences in the presentation of information. Because of this structural difference between the source language and the target language, it will be difficult for a translator to replace text material in the source language with equivalent text material in the target language.

Nida and Taber (1982:12) also argue that translation "*Consists in reproducing in the receptor language the closest natural equivalent of the source language message, first in terms of meaning and secondly in terms of style*". According to this definition, translating means reproducing the message in the source language into the target language. The results of the reproduction of messages in the target language must have a reasonable equivalent and are closest to the source language. The equivalence is related to meaning and style.

Translation Techniques

Molina and Albir (2002) formulate translation techniques as a procedure for analyzing and classifying equivalence problems in translation. Molina and Albi further explained that transposition and modulation techniques are used when *word for word* translation is not possible to apply. In other words, these two techniques can be called indirect translation.

1. Transposition

Transposition is a shift in form. It is a translation procedure that involves changing grammatical forms from SL to TL. Catford used the term 'translation shifts' for this transposition translation procedure. The word shifts means 'changes'. According to Catford (1965:77-79), there are two kinds of transpositions (translation shifts), namely level shifts and category shifts. Level Shifts, namely changes that occur from grammar to lexicon or vice versa. Meanwhile, Category Shifts can occur when the equivalent of SL to TL has a different category. Changes in this category can still be grouped into four types, namely *unit-shifts*, *structure-shifts*, *class-shifts*, and *intra-shifts*.

Unit shift is a translation unit shift; for example, shift from word to phrase. Then, structure shifts, namely shifts that occur in the construction of sentences, clauses, or phrases. This happens because the structure of SL and TL is different. For example, the system of noun phrases in English is MD (explains – explained) while in Indonesian the

system is DM (explained – explains). A word class shift can be a change from *a verb to a noun* and many others. Furthermore, intra-system shifts are shifts that occur internally, for example in English "*a pair of shorts*" is plural, but in Indonesian it means singular "*sebuah celana dalam*".

1. Modulation

In contrast to the transposition technique which changes the grammatical category, the modulation technique is a translation technique which changes the point of view, focus or cognitive category related to the source text. Hoed (2006:74) says that modulation is the provision of a semantic equivalent by a translator which has a different point of view of its meaning and scope of meaning, but in the context concerned it gives the same message.

This technique changes the point of view of the source text lexically or structurally. It is a way used by translators to see the message of the source language from different angle. This strategy is used when a literal translation produces unnatural translation. If transposition functions to shift the language structure, then modulation functions to shift the language meaning in order to make the message of the source text can be understood well by the target readers. The shift in modulation here means to change the point of view the text has.

METHOD

This is descriptive qualitative research in the field of translation. It is categorized as a qualitative descriptive research because it is carried out with the aim of uncovering various qualitative information by describing things that are examined carefully. Sutopo (2002: 109) states that in qualitative descriptive research the case of studies lead to a detailed and in-depth description of the condition portrait of what actually happened according to what is in the field of study. In this case what will be described is a phenomenon, namely a single translation technique or method used to translate metaphors or metaphorical expressions in the novel *Of Bees and Mist* and its translation *Of Bees and Mist: Kabut Masa Lalu*. The data collected, grouped and analyzed in this study are source language texts (TL) and translated texts (TL) in the form of words, groups of words or phrases and sentences that contain metaphorical expressions and a single translation technique used to translate them.

The data to be studied in this research are metaphorical expressions (metaphors), whether in the form of words, phrases, clauses or sentences, which are in the novel *Of Bees and Mist* and its translation novel in Indonesian. These metaphorical expressions are the main data that will be analyzed by translation techniques or methods.

The main data source in this research is in the form of documents, namely the English novel by Erick Setiawan entitled *Of Bees and Mist* (2009) and published by Simon & Schuster Paperbacks, New York in 2010. Meanwhile, the translated novel was done by Fransiska M. and published by a publisher. GagasMedia, Jakarta in 2011 with the title *Of Bees and Mist: Kabut Masa Lalu*.

To facilitate the data collection process, in this research the researcher used field notes as the instrument. These field notes are made in the form of a table consisting of several columns containing data serial numbers, data codes, types of metaphors, translation techniques or methods, and descriptions. Field notes in the form of tables can be added, reduced or modified as needed during the data collection process.

The data collection technique used by researcher is Document Analysis (Content Analysis). Sutopo (2002: 70) stated that document analysis techniques were carried out to collect data source from written documents and archives. Researcher conducted a study of the novel *Of Bees and Mist* and its translation. Then, record sentences that use metaphorical expressions in SL and TL texts. Furthermore, these sentences are identified, sorted and classified

based on the type of translation technique or method used to translate metaphors or sentences containing metaphorical expressions and assigned serial numbers, data codes and descriptions.

The next step in this reserach is data analysis. Miles and Huberman in Sutopo (2002:91-94) stated that there are three main components in the data analysis process that must be understood by every qualitative researcher, namely: (1) Data reduction (2) Data display and (3) Conclusion drawing and verification.

Data reduction is done simultaneously with the data collection process. Data reduction is a process of selecting, focusing, simplifying, and abstracting data. After the data is reduced, the next step is displaying the data. Data display is the organization of the information found so that research conclusions can be drawn. In this research, the data presented is in the form of sentences containing metaphorical expressions in both the source language text and the target language text. After grouping the types of metaphors, the translation techniques or methods used were analyzed. In the process of analysis, researcher used an interactive analysis model. Data collection was carried out simultaneously with data reduction, data display and drawing conclusions. The three components of the analysis are interrelated and interact with data collection activities.

FINDINGS AND DISCUSSIONS

The focus of this research is to analyze the translation procedures or techniques used by translators to translate metaphors or metaphorical expressions in the novel *Of Bees and Mist* by Erick Setiawan. In the process of collecting and classifying data, transposition and modulation techniques are most often applied by translators. There are 54 data of metaphors or metaphorical expressions translated using the transposition technique. The modulation technique was used to translate 70 data, namely 62 data were translated using the free modulation technique and 8 data were translated using the mandatory modulation technique.

TRANSLATION TECHNUQUES	DATA AMOUNT
Trasnposition	54
Free Modulation	62
Mandatory Modulation	8

2. Transposition Techniques

Examples:

o8/OBM-9/OBM.KML-12/M.Sin.

BSu: Tossing her head, the woman in the sea green hat snorted, then **gave Ravenna a sharp look** before leaving.

BSa: *Sambil menggelengkan kepalanya, wanita dengan topi hijau laut itu mengeram, lalu **memelototi Ravenna** sebelum ia akhirnya pergi.*

69/OBM-80/OBM.KML-107/M.Sin.

BSu: Ravenna leaned in and told him in her **iciest voice**.

BSa: *Ravenna terus mendesak dan berbicara kepadanya dengan **suara yang paling dingin**.*

182/OBM-386/OBM.KML-546/M.Ant.

Bsu: **"Youare my heart, the bloods in my veins, and you will always be the only woman."**

Bsa:

“Kau adalah jantungku, darah dalam nadiku, dan kau akan selalu menjadi satu-satunya wanita.”

3. Modulation Techniques

a. Free Modulation

Examples:

15/OBM-22/OBM.KML-30/M.Ant.

BSu: The nurse had turned **paper white**.

BSa: **Wajah** sang pengasuh berubah **pucatseputih kertas**.

44/OBM-56/OBM.KML-74/M.Ori.

BSu: In the infernal hours, the bed creaked under her delirium, and sleep, if it came, offered no refuge from **the tempest in her blood**.

BSa: *Di jam-jam yang paling parah, ranjangnya akan berderak-derak di bawah iguannya yang dimabuk cinta, dan saat ia akhirnya dapat tertidur, **prahara di aliran darahnya** tetap begelora tanpa ampun.*

143/OBM-282/OBM.KML-397/M.K.Abs.

BSu: A groan exploded from Meridia.

BSa: *Sebuah raungan keras meledak dari mulut Meridia.*

b. Mandatory Modulation

Examples:

34/OBM-46/OBM.KML-60/M.Sin

BSu: ..., instead of drowning out **the song**, only **increased its beauty** and lushness.

BSa: ..., *tetapi **nyanyian itu** bukannya tenggelam, malah semakin **terdengar indah** dan penuh semangat.*

92/OBM-128/OBM.KML-178/M. Sin.

BSu: The look she leveled at Meridia was sharp and loaded with disgust.

BSa: *Ia lalu memberikan pandangan yang tajam dan dipenuhi rasa benci pada Meridia.*

47/OBM-58/OBM.KML-76/M.Ori

BSu: Don't you ever let anyone know **what's brewing in your head?**

BSa: *Apakah kau tak pernah membiarkan siapapun mengetahui **apa yang sedang digodok dalam kepalamu?***

Transposition. Differences in the sentence structure of the source language (English) and the target language (Indonesia) require changes or adjustments to the composition or shifts in word categories and lingual units. This transposition or shift in form can be obligatory or optional. In the phrase *'the man with glasses'* the preposition 'with' must turn into a verb.

Meanwhile, the pronoun 'she' can be translated into the pronoun '*dia*' or the noun phrase '*wanita itu*' especially to avoid ambiguity. To make it clearer let see the following examples:

08/OBM-9/OBM.KML-12/M.Sin.

BSu: Tossing her head, the woman in the sea green hat snorted, then **gave Ravenna a sharp look** before leaving.

BSa: *Sambil menggelengkan kepalanya, wanita dengan topi hijau laut itu mengeram, lalu **memelototi Ravenna** sebelum ia akhirnya pergi.*

The sentence '*the woman gave Ravenna a sharp look*' is a Synaesthetic metaphor. The noun phrase '*a sharp look*' indicates a transfer of responses from the sense of sight (eyes) to the sense of touch (skin). Here the translator applies a transposition technique, namely unit shift, so that the noun phrase '*a sharp look*' which has the structure of Adjective + Noun becomes the verb '*glare*.' This unit shift causes the source language metaphor to change into an ordinary news sentence.

69/OBM-80/OBM.KML-107/M.Sin.

BSu: Ravenna leaned in and told him in her **iciest voice**.

BSa: *Ravenna terus mendesak dan berbicara kepadanya dengan **suara yang paling dingin**.*

The noun phrase '*iciest voice*' with the MD structure or Adjective + Noun is translated using a transposition technique, namely a shift in structure, to become a Noun + Adjective '*suara yang paling dingin*' (DM).

152/OBM-298/OBM.KML-419/M.Sin

BSu: She only looked at him with **tender eyes**.

BSa: *Ia hanya memandang anak itu dengan **mata yang lembut***

The Synaesthetic metaphor of '*tender eyes*' is translated with a transposition technique to become '*mata yang lembut*.' There are two types of shifts applied here, namely system shifts and structural shifts. System shift is used when the plural noun '*eyes*' in the source language is translated into the singular '*mata*' in the target language. A structural shift is applied to translate the noun phrase '*tender eyes*' which has the structure of Adjective + Noun to '*mata yang lembut*' (Noun + Adjective).

182/OBM-386/OBM.KML-546/M.Ant.

Bsu: "**You are my heart, the bloods in my veins**, and you will always be the only woman."

Bsa: "***Kau adalah jantungku, darah dalam nadiku, dan kau akan selalu menjadi satu-satunya wanita.***"

Similar to the previous Anthropomorphic metaphor, the metaphorical expression '*You are my heart, the bloods in my veins...*' is also translated using a transposition technique to become '*Kau adalah jantungku, darah dalam nadiku...*' The application of the transposition technique in translating this metaphor is mandatory due to a shift in the system. Plural nouns in English '*bloods*' and '*veins*' are translated into singular '*darah*' and '*nadi*' in Indonesian.

Free Modulation. Free modulation techniques are applied with the aim of clarifying the implied meaning in the source language, looking for equivalents that feel natural in the target language, and to create similarities in the target language.

15/OBM-22/OBM.KML-30/M.Ant.

- BSu: The nurse had turned **paper white**.
BSa: *Wajah sang pengasuh berubah pucat seputih kertas.*

44/OBM-56/OBM.KML-74/M.Ori.

- BSu: In the infernal hours, the bed creaked under her delirium, and sleep, if it came, offered no refuge from **the tempest in her blood**.
BSa: *Di jam-jam yang paling parah, ranjangnya akan berderak-derak di bawah igauannya yang dimabuk cinta, dan saat ia akhirnya dapat tertidur, **prahara di aliran darahnya** tetap begelora tanpa ampun.*

In the example of the metaphorical sentence above, the free modulation technique is applied to clarify the implied meaning in the source language. Both the noun 'wajah', the adjective 'pucat' and the noun 'aliran' are implied in the source language. By including these words, the translation feels more natural. This symptom is also called explicative, namely clarifying what is implied in the meaning. In the following example (data number 143), the adjective 'keras' and the noun 'mulut' are only implied in the source language and the translator states them explicitly in the target language

143/OBM-282/OBM.KML-397/M.K.Abs.

- BSu: A groan exploded from Meridia.
BSa: *Sebuah raungan **keras** meledak dari **mulut** Meridia.*

161/OBM-326/OBM.KML-459/M.Bin.

- BSu: Ravenna was standing in the middle of the room, shaking and **howling** without meaning.
BSa: *Ravenna sedang berdiri di tengah-tengah kamar sambil terus bergetar dan **melolong** tanpa arti.*

The Animal metaphor (data number 161) above is translated using the free modulation technique. This technique is applied to clarify meaning and create coherence in the target language (TL) by adding the words 'sambil terus' which are implied in the source language (SL). These additions make the translation feel natural and natural.

Mandatory Modulation. Modulation or shifting of meaning is a translation technique marked by a change in point of view, focus, cognitive category or other meaningful terms in relation to the source text. Changes in point of view can be lexical or structural. When the sentence 'you are going to have a child' is translated into 'Anda akan menjadi seorang bapak,' this is an example of a lexical point of view. An example of a grammatical change in point of view is 'I cut my finger' which translates to 'Jariku tersayat' due to the change from active to passive sentences.

34/OBM-46/OBM.KML-60/M.Sin

- BSu: ..., instead of drowning out **the song**, only **increased its beauty** and lushness.
BSa: *..., tetapi **nyanyian itu** bukannya tenggelam, malah semakin **terdengar indah** dan penuh semangat.*

The metaphor in the sentence above is 'the song increased its beauty' which is translated into 'nyanyian itu semakin terdengar indah.' The change in point of view that occurs in the translation of this metaphor is lexical in nature. The lexical meaning of the sentence 'increased its beauty' is actually 'meningkatkan keindahannya.' Because the phrase 'the song' or 'nyanyian' refers to something that can be heard, so the sentence 'increased its beauty' is translated using mandatory modulation techniques to become 'semakin terdengar indah.'

109/OBM-201/OBM.KML-281/M.Orien.

BSu: Meanwhile, **the shop was declining in profit.**

BSa: *Sementara itu, **keuntungan tokosemakin sedikit.***

The lexical meaning of the Orientational metaphor '*the shop was declining in profit*' is '*toko itu sedang mengalami penurunan keuntungan.*' When the translation of this metaphor becomes '*keuntungan toko semakin sedikit,*' it indicates that there has been a change in lexical point of view. The translation technique applied is a mandatory modulation technique.

92/OBM-128/OBM.KML-178/M. Sin.

Bsu: The look she leveled at Meridia was sharp and loaded with disgust.

Bsa: *Ia lalu memberikan pandangan yang tajam dan dipenuhi rasa benci pada Meridia.*

132/OBM-269/OBM.KML-379/M.Ant.

Bsu: The instant **Meridia locked eyes** with her father's mistress, a deep tremor took hold of her bones.

Bsa: *Begitu **mata Meridia terkunci** pada wanita simpanan ayahnya, sebuah getaran hebat menguasai tulang-tulang di seluruh tubuhnya.*

The Synaesthetic metaphor and Anthropomorphic metaphor above are translated using mandatory modulation techniques. The application of this technique is marked by a structural change in point of view, namely a change from active sentences in the source language to passive sentences in the target language or vice versa.

The Synaesthetic metaphor in the source language above has a passive sentence structure, namely '*The look she leveled at Meridia was sharp and loaded with disgust*' which is translated into an active sentence '*Ia lalu memberikan pandangan yang tajam dan dipenuhi rasa benci pada Meridia.*' This structure does not change the meaning. The meaning of the translation of the metaphor remains the same even though there is a change in point of view.

The same change occurs in the metaphor '*The instant Meridia locked eyes with her father's mistress,...*' which is translated into '*Begitu mata Meridia terkunci pada wanita simpanan ayahnya, ...*' Structural changes in point of view are marked by changes in the metaphorical sentence structure of the active source language. be passive in the target language text.

47/OBM-58/OBM.KML-76/M.Ori

BSu: Don't you ever let anyone know **what'sbrewing in your head?**

BSa: *Apa kah kau tak pernah membiarkan siapapun mengetahui **apa yang sedang digodok dalam kepalamu?***

The modulation technique must be applied due to a change in viewpoint that is structural in nature. The active sentence structure in SL becomes a passive sentence in TL. The active sentence "*What's brewing in your head?*" is translated into "*Apa yang sedang digodok dalam kepalamu?*"

CONCLUSIONS

Transposition and modulation techniques are used by translators in translating literary works such as the novel *Of Bees and Mist* intended to obtain equivalence of meaning or message from source language (SL) to target language (TL). Transposition and modulation translation techniques are obligatory and free or optional. Various kinds of shifts appear using transposition and modulation techniques, including; system shifts, structure shifts, unit shifts, category shifts and point of view changes from active in SL to passive in TL or vice versa.

System shifts, for example plural nouns in SL are translated into single nouns in TL. The shift in structure found is a shift in noun phrases in English (SL) adhering to the MD (explains – explained) legal rules, while Indonesian (TL) adheres to the DM (explained – explains) legal rules. The unit shifts found were clauses becoming phrases and vice versa, nouns becoming noun phrases, words becoming groups of words (reduplication), and verbs becoming verb phrases. While the shift in categories found is a shift in word classes from verbs to nouns and vice versa and pronouns to nouns.

The reason for the shift is due to different linguistic factors between SL (English) and TL (Indonesian). In addition, this shift arises because of getting a common and natural equivalence in the target language. By using transposition and modulation translation techniques it is intended that the translation of metaphors or metaphorical expressions in the novel *Of Bees and Mist* becomes accurate, acceptable and has a high level of readability as well as its own aesthetic value. Then, the translator also wants to show the effect of an emphasized or prioritized message. And the last reason is that literal translation does not give a reasonable or flexible effect which will create a "sense" in the target language.

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The Use of Clustering Technique to Improve Students' Achievement in Writing Descriptive Text

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Abstract

This research aimed to know the students' improvement and their responses by applying the clustering technique in writing descriptive text. This Classroom Action Research was conducted in 2 cycles. The research subjects were 20 students of X APHP 2 SMK N Kebonagung Pacitan. The data was obtained from the students' tests, observations, and questionnaire results. The results of the test were analyzed using the quantitative method, while the results of the observation and questionnaire were analyzed using the qualitative method. Individually, the indicator of success was the average score of students had reached the standards of completeness (75). Collectively, the indicator of success was when a minimum 85% of students had reached the standards of completeness. As a result, the students got an average score of 67.00 on the pre-test, 72.10 on the post-test I, and 79.35 on the post-test II. Based on the observations and questionnaire the students gave positive responses.

Keywords: Clustering Technique, Descriptive Text, Writing.

INTRODUCTION

In good writing, the students have to know some of the rules and systematic parts of writing. Writing needs the mastery of several abilities. It includes language use or grammar, punctuation, capitalization, spelling, and the direction of correct vocabulary in composing ideas, Andriyani (2017: 2). In addition to having qualified skills, writing must also notice important parts, including content, organization, vocabulary, grammar, and mechanical skills, Brown (2004). To produce good writing, the writers need several complex steps such as brainstorming, prewriting, drafting, and editing, Markel (1988: 3). So, good writing is able to be communicated to the public and can be understood by recipients of information well. The writers should be guided by the rules of correct writing, which must consist of several things that must be added in a writing, and also follow the complex steps in sequence.

There are different types of texts that we encounter every day, including narrative texts, recount texts, procedural texts, and descriptive texts. In order to determine the aim of writing, teachers can employ clustering approaches or activities. One kind of writing that identifies and describes specific features of an object, location, or person is descriptive text. It serves the purpose of making reading more fascinating for the reader. Students frequently encounter challenges when writing descriptive texts, including organizing their ideas. Additionally, descriptive text is a type of text that is defined as a group of sentences which related in thought and describe what a thing looks like and acts like, what an object looks like, and what a place looks like (Asih, 2013). So, the descriptive text arranged based on details observation about an object and then write the result become a descriptive text. From the explanation in descriptive text, it can make the readers imagine what is described clearly.

Clustering is one of the approaches used in the prewriting phases, according to Fitri (2018). It entails the creation of sentences and words. As a result, it is considered that pupils are more driven to use words during the writing process. Clustering is a technique that can be used during the pre-writing stage. Dr. Gabrielle Rico invented this procedure in 1983, and Hendry

adapted it in 1985 and 1986. This is one of the approaches that writers should take before beginning to write. According to Rico (1983), clustering is a technique for dividing certain related thoughts and writing them down on a blank piece of paper. Sinaga (2017) stated that clustering technique designs an activity and mind participant through the processing of writing which become group together. While Noor (2013) proposed that clustering is a process of reorganizing and rearranging (moving) the most important ideas and information from reading materials or textbooks and converting them into a diagram with own words to help someone understand and remember. There are some steps of the clustering technique that must be followed to get the best result and suitable with the expectation. According to Cooper (2005: 461) clustering works as follows:

- a. Writing ideas in the form of words or phrases in the center of the paper and then circle or mark;
- b. Writing down the main idea of the topic in the form of words or phrases then put a circle or another mark and connect it with the first word in the middle of the paper;
- c. Generating facts, details, examples or ideas related to the main part of this topic in any way. Group these around the main sections and develop them into paragraphs based on each idea that has been written down and linked.

METHOD

In this study, the researcher used classroom action research (CAR). Classroom Action Research (CAR) was used for inquiry into investigative classroom teachers initiated by teachers. It was needed to improve the teacher's understanding of classroom learning and to bring about changes in classroom teaching activities, McTaggart and Kemmis (1988). Moreover, action research is research carried out in the classroom by teachers mainly to solve problems, improve teaching and learning processes, and have a significant impact on achieving learning outcomes.

This classroom action research used the McTaggart and Kemmis (1988) model of classroom action research. Action research activities in the classroom involve several steps for a repetition cycle. Each cycle consists of four steps, namely planning, action, observation, and reflection. The results of one cycle were used to determine the needs of the next cycle until the strategy that will be used to solve the problem. The cycle is described as follows:

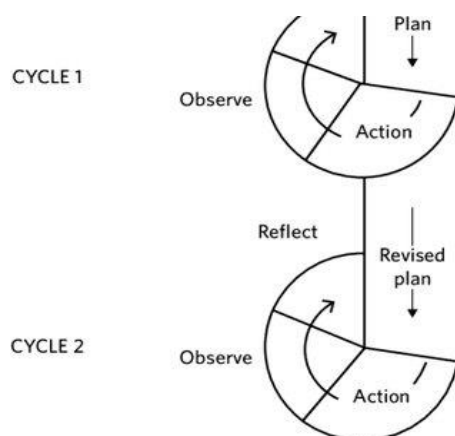


Figure 3. 1 Kemmis and Mc Taggart Model of Classroom Action Research

The researcher conducted this research at the senior high school level. The subjects of this research were the tenth graders in the X APHP 2 class of SMK N Kebonagung Pacitan in the academic year of 2022/2023. This class consisted of 20 students. The school was located at Pacitan-Lorok Street, Ketro Kebonagung, Pacitan Regency, East Java Province.

To collect the qualitative data, the researcher used an observation sheet and questionnaire. While the quantitative data used the students' pre-test and post-test. After the data were collected, then the researcher analyzed the qualitative data using Miles and Huberman's (1984) method through several stages, namely data reduction, data display, and conclusion. And the quantitative data were analyzed using the scoring rubric and formulas. The following table is the analytical scoring rubric used by the researcher to analyze the students' writing in descriptive text.

Table 1 Analytical Scoring Rubric adapted from Weigle

<i>Components of Writing</i>	<i>Scores</i>	<i>Indicators</i>
Content	4	relevant to the topic and easy to understand
	3	rather relevant to the topic and easy to understand
	2	relevant to the topic but is not quite easy to understand
	1	quite relevant to the topic but is not quite easy to understand
Organization	4	most of the sentences are related to the main idea some
	3	some sentences are related to the main idea
	2	few sentences related to the main idea
	1	the sentences are unrelated to each other
Vocabulary & Mechanic	4	a few errors in choice of words, spelling and punctuation some
	3	some errors in choice of words, spelling and punctuation
	2	occasional errors in choice of words, spelling and punctuation
	1	frequent errors in choice of words, spelling and punctuation
Grammar	4	a few grammatical inaccuracies
	3	some grammatical inaccuracies
	2	numerous grammatical inaccuracies frequent
	1	frequent grammatical inaccuracies

The formula for getting the mean by Singh (in Renny, 2018) as follows:

$$M = \frac{\sum x}{N}$$

M = mean/ mean

Σx= total of score

N = total of students

Individually, the students claimed to be successful in this test if they reached the standards of completeness or KKM (75≥). Collectively, if as many as 85% of the students in the class were able to achieve the KKM, then it can be said that there was an improvement. The students' scores were calculated using the formula by Urdan, (2015). To know the class percentage which passed KKM, the researcher used the formula:

$$P = \frac{F}{N} \times 100\%$$

P = The Class Percentage

F = Total Score

N = Number of Student

Next step, the writer identified the improvement score on students' descriptive paragraph from the pre-test up to post-test scores in cycle 1 and cycle 2 the writer used the formula:

$$P = \frac{y - y_1}{y} \times 100\%$$

P : Percentage of Students' Improvement

y : Pre- test Result

y₁ : Post-test 1

$$P = \frac{y_2 - y}{y} \times 100\%$$

P : Percentage of Students' Improvement

y : Pre- test Result

y₂ : Post-test 2

RESULTS AND DISCUSSION

Results

The students' skill in writing the descriptive text was improved by the clustering technique. The results of the students' pre-test and post-test, which were completed for each cycle, also show the students' skill progress. The mean pre-test score was 67,00, the mean post-test score for cycle 1 was 72,10, and the mean post-test score for cycle 2 was 79,35. The findings showed that there was a considerable improvement in writing ability from cycle to cycle.

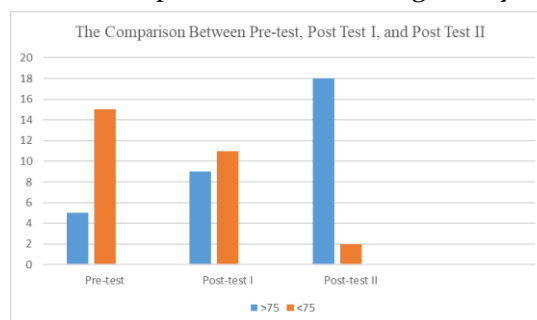


Figure 2 The Comparison Between Pre-test, Post-I, and Post-test II

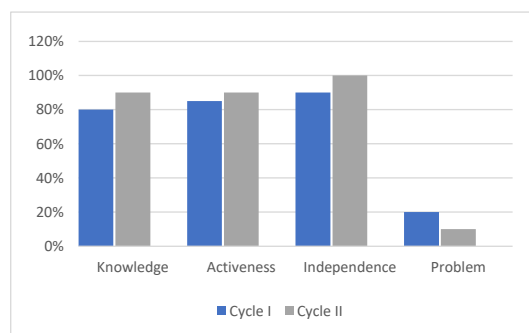


Figure 3 The Comparison Between Students' Responses in Cycle I and Cycle II

The figure showed that almost the students gave a positive response during the teaching-learning process and they had improved after cycle II. The students' knowledge increased by 10%, the students' activeness increased by 5%, the students' independence increased by 20%, and the students' problems decreased by 10%.

Discussion

1. The students' improvement in writing descriptive text by using clustering technique

Based on the data, there were 20 students of class X APHP 2 have taken the pre-test. The results of the pre-test showed a total score was 1,340, with the highest score 80 and the lowest score 55. There were 15 students or 75% who had not reached the standards of completeness and 5 students or 25% had achieved the standards of completeness. The pre-test results showed that students got a mean score of 67.00. This result is still far from the standard of completeness (75). The most basic reason for the low score is due to several things as follows: students still find it difficult to put their ideas into written form; students lack vocabulary mastery; students found the difficulties in writing become coherent sentences and sometimes still mixed up; some students still found the difficulties to develop written content to be interesting and easily understood by readers. Therefore, the researcher used the clustering technique to improve the students' achievement in writing descriptive text.

In cycle I the researcher conducted treatment and post-test I to see students' writing ability. The results of the post-test I showed a total score was 1.442, with the highest score 85 and the lowest score 61. There were 11 students or 55% who had not reached the standards of completeness and 9 students or 45% had achieved the standards of completeness. The post-test I result showed that students got a mean score of 72,10. The mean score of the previous score was 67,00 and the mean score of the students' writing on cycle I was 72,10. That means that there were 5,1 points or 7,61% of mean score improvement.

After finding the facts that students' writing ability was not satisfied, so the cycle should be continued to cycle II. Cycle II was used to repair the weakness in cycle I and make a significant improvement to the students' score. The results of post-test II could be concluded that 18 students (90%) got up to the standards of completeness, and 2 students (10%) scored under the standards of completeness. The total score was 1.587, the highest score was 95 and the lowest score was 70. The mean score of the previous score was 72,10 and the mean score of the students' writing on the cycle II was 79,35. That means that there was 7,25 points or 10,05% of mean score improvement.

It means there was an improvement after cycle II. The indicator of success is that the student's minimum 85% get the standards of completeness (75). The fact showed 90% students got the standards of completeness. It could be concluded that the result of cycle II was satisfying and the clustering technique is a relevant technique to help students improve in writing descriptive text. So, this classroom action research stopped in cycle II.

2. The students' responses

Almost all students gave a positive response during the teaching-learning process. The number of students who can understand the researcher's explanation about the subject improved from 80% to 90%. Most of them have sufficient vocabulary and they can write in

correct spelling. However, there were still some errors in the use of grammar, but fewer errors than in cycle I. In addition, almost students understand how to make coherent paragraphs according to the topic of discussion and in developing the contents of a descriptive text. And their knowledge has increased after cycle II. Then, the students who were active in the classroom improved from 85% to 90%. Several students actively answered the questions given by the researcher, although sometimes they were wrong. Most students also dared to ask questions about material they did not understand. The students can do the test independently according to their ability improved from 90% to 100%. Most students were confident in working on the test. They tried according to their abilities and did not ask other friends. The students who had problems or difficulties in teaching-learning activity decreased from 20% to 10%. The students' problem they have a lack of understanding of the material. They can express their ideas but sometimes they found difficulties in developing good content. But almost all the students had improved after cycle II.

Then, from the questionnaire, 20% of respondents strongly agreed, and 75% agreed, and 5% disagreed that they understand the definition, language features, and structure of descriptive text. Then, 20% of respondents strongly agreed, 75% agreed, and 5% disagreed that they can applied the clustering technique easily. Next, 50% of respondents strongly agreed, 50% agreed that they feel easy to convey ideas in writing descriptive text by applying the clustering technique. Moreover, 50% of respondents strongly agreed and 50% agreed, that they feel happy and interested in learning activities.

CONCLUSION

In this part, the researcher would like to conclude the research based on the data findings and discussions described in the previous chapter.

1. The results of the research can be concluded that the use of clustering technique can improve students' achievement in writing descriptive text to the tenth graders of APHP 2 SMK N Kebonagung Pacitan in the academic year of 2022/2023. It was indicated from the improvement of the student's average score from pre-test to post-test I and post-test II. Individually almost all students reached the standard of completeness (75), and classically the indicator of success is that the student's minimum 85% get the standards of completeness (75). The fact showed 90% students got the standards of completeness in cycle II. This Classroom Action Research (CAR) was successful because the indicator of success has been achieved.
2. The result of the observation showed that the students responded positively during the teaching-learning activity. The number of students who gave positive responses also increased from post-test I to post-test II. Moreover, it is supported by the result of the observation sheet and questionnaire. Most respondents agree that clustering technique improved their knowledge, activeness, independence, and confidence. Almost all students gave positive responses, in general, it could be concluded that clustering technique can improve students' achievement in writing descriptive text.

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Development of SKPI Submission Application for Informatics Education Students of STKIP PGRI Pacitan

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Abstract

In fact, it requires time efficiency and quality administrative services related to SKPI procurement and processing. This benefits both students and institutions and allows for a more efficient and integrated implementation of the academic process in order to achieve goals and make it easier for all parties in the process. The goal of this study, which employs a qualitative methodology, is to identify the best strategy formula for enhancing the accuracy of the data filled into the SKPI. Participant observation, in-depth interviews, and documentation are some of the data collection approaches used in this study. An analysis based on the data acquired is then evolved into a hypothesis in qualitative data analysis, which is an inductive process. The results of the questionnaire that was completed based on the actual reality in the field and what students feel show a percentage of 31.4% for student responses to the use of Google Docs in lecture evaluation activities, 42.9% for moderate responses, and 25.7% for low responses. In terms of the outcomes of the work on the test questions that have been packaged in multiple choice tests on Google Docs, student responses to the use of Google Docs in lecture evaluation activities show that the overall category is high, with the percentage of student scores 70 being 82.22%; 60 is 70%; and 50 is 52.78%.

Keywords: 3-5 words or phrases that are important, specific, and reflect the concept contained in the article, each word or phrase separated by a comma

INTRODUCTION

The development of technology has benefited many facets of existence. Education is one area where technological advancements have improved things. Knowledge can only be attained via education. The degree of schooling a person has will have a significant impact on his job. Having a larger network of friends is one of the key benefits of education. This is crucial for a student to prepare for life after college. One strategy to gain contacts and non-technical abilities (soft skills) is to join student organizations (Fikri et al., 2020).

In the post-college world of today, having both technical and non-technical abilities makes a person a great employee. To assist students in navigating the world after graduating from college, every educational institution gives a Diploma Companion Certificate (SKPI) (Josi, 2017).

Credentials in academics and the workplace on campus Higher education needs an SKPI data collection system that makes it simple for students to immediately access online publications as a direct implementation of enhancing the standard of higher education. There is a need for a system that makes it simpler for undergraduates and postgraduates to apply for SKPI scholarships and to receive Associate Certificates in two directions, with information that is updated online and where information storage is controlled (Muharir et al., 2022).

The SKPI was created by the European Commission, the Council of Europe, and UNESCO with the intention of boosting the transparency of academic and professional degrees gained from universities, according to an announcement made by ENQA in 2003. Since information about academic achievement or qualifications of college graduates is described as a descriptive story that describes the educational level of graduates, SKPI effectively stated that it had

satisfied the requirements for Graduate Competency Standards (SKL) in Article 52 (3) and in Higher Education Law No. 12 of 2012. Article 1 of 2003, Number 20, Paragraph 17 of the Law of the Republic of Indonesia states that "Training in the Legal Territory of the First Level State of the Republic of Indonesia is the Minimum Requirement of This System.

In the 2013 Permendikbud publication No. 73, published in August 2014, information on SKPI provides a venue for proposing current campus skills as learning objectives. Therefore, in order to improve the quality of higher education with a system capable of monitoring and managing quality so that SKPI may be uploaded to institutions, it is required to have direct implementation on campus as an academic and professional title (Putra et al., 2021).

The findings created for all current diplomas were published by BAAK (Bureau of Academic and Student Administration) with the implementation of uploading SKPIs in tertiary institutions (Zulhalim et al., 2020). However, in reality, the manual and traditional SKPI submission technique is still frequently used. Students are required to gather several paper papers and submit an application form to the university administration. The monitoring and evaluation procedure also takes a long time. According to Yanto and Sari (2019), this is only feasible in a setting where students who wish to publish come to the university to complete the data. Another issue is that the SKPI data entry is not accurate, necessitating the phases of filling in the correction by BAAK, followed by confirmation.

This study will concentrate on incorporating scenarios for self-identity filling into predetermined forms that were initially filled out manually by students for Informatics Education students at STKIP PGRI Pacitan. The software will have functions including form filing online. The technical details of application implementation will not be covered in detail in this study; instead, the analysis of interface designs that incorporate form validation situations will be the main focus.

The purpose of this application is to increase the effectiveness and standard of administrative services involved in the acquisition and processing of SKPI. This is advantageous for both students and educational institutions and enables the adoption of a more effective and integrated academic process to accomplish objectives and make the process simpler for all parties.

METHOD

The goal of this study, which employs a qualitative methodology, is to identify the best strategy formula for enhancing the accuracy of the data filled into the SKPI. Participant observation, in-depth interviews, and documentation are some of the data collection approaches used in this study. An analysis based on the data acquired is then evolved into a hypothesis in qualitative data analysis, which is an inductive process. The Miles and Huberman data analysis model was employed in this study, and it contains the following data analysis tasks: data gathering, data reduction, data display, and data conclusion drawing or verification (Sugiyono, 2014: 92).

The SKPI submission application created by BAAK STKIP PGRI Pacitan and developed by researchers is the subject of this study. The researcher's addition of the form validation method to the Google form serves as the research subject.

RESULTS AND DISCUSSION

Results

System analysis is a strategy for solving problems that organizes these elements so that it can be tested to see if they work together to accomplish the intended objectives. To make system development easier, this stage is crucial. This system analysis's objective is to give a general overview of the system's current operation within a firm or agency.

The system that was previously in use can be improved through the system analysis, and flaws in the old system can be found and fixed. The next stage is to identify the system so that it can be compared to the current system, the proposed system, and the pros and shortcomings of the current system.

The start of student evidence collection and form collection activities signals the beginning of SKPI administration. Following the conclusion of the series of thesis examinations for all study programs at STKIP PGRI Pacitan, the campus will utilise the time. This entry is created in tandem with the student's final graduation procedure, allowing the SKPI entry to be opened for the procedure after the full range of academic activity has been finished. Although such a method is quite challenging, it looks convenient to follow since the SKPI program at STKIP PGRI Pacitan was initiated (Yolandita et al., 2023, 38).

Students use the link provided by BAAK based on their study plan to access the Google form. The links that students in the mathematics education study program receive are different from the links that students in the Indonesian language and literature education study program receive, and similarly, students in the history education study program will have different links with students in English education study programs, and so on, to illustrate this process. Students begin the process of completing the SKPI after receiving the access link, beginning with entering their personal information as depicted in Figure 1.

FORM PENGAJUAN SERTIFIKAT UNTUK ISIAN SKPI
TAHUN 2021

Diberitahukan kepada mahasiswa STKIP PGRI Pacitan tingkat akhir yang telah menyelesaikan ujian skripsi untuk segera mengisi biodata dan mengajukan sertifikat untuk isian ijazah dan SKPI
Formulir ini sekaligus dijadikan pendaftaran Yudisium Akhir Studi Mahasiswa Tahun 2021

yusr13@gmail.com [Switch account](#) [Draft saved](#)

The name and photo associated with your Google account will be recorded when you upload files and submit this form. Your email is not part of your response.

* Indicates required question

Nama *

Your answer

ⓘ This is a required question

NIM *

Your answer

ⓘ This is a required question

Prodi

Your answer

Next Clear form

Figure 1. Personal data entry

By entering personal information, the SKPI holder's identification is verified. Based on the form, it was determined that the Name, NIM, and Study Program fields had inaccurate entries as a result of a typing mistake (a typo). Typographical errors alter words and sentences, making them irregular or standard (Rochmawati & Kusumaningrum, 2016, p. 125), making the contents insufficient from the standpoint of verification. Because variations in these fields can be filled in with acronyms, it is most frequently found in Prodi fields. For instance, Indonesian Language and Literature Education can be filled in with the acronym PBSI, the abbreviation Pen. Indonesian Language & Literature, or even Pend. Bhs. & Indonesian Literature.

The validation process for SKPI submissions will be made more difficult by non-standardized entries. BAAK puts greater effort into making sure requirements are met. The

second most common filling errors are entries for student identification numbers, followed by entries for student names, where long names are frequently shortened. By using the dropdown method list for student entry pairs and their NIM, as well as for study program entries, this kind of event can be foreseen. At the very least, non-standard entries can be reduced by using this technique.

The three images above show that the writer implemented a new method, namely the method of grouping choices based on criteria, whereby when students choose one study program, they will automatically be switched to the choice of Student Name and NIM from the study program that they choose. Previously, the name, NIM, and study program were filled in manually.

**FORM PENGAJUAN
SERTIFIKAT UNTUK ISIAN
SKPI TAHUN 2022/2023**

Diberitahukan kepada mahasiswa STKIP PGRI Pacitan tingkat akhir yang telah menyelesaikan ujian skripsi untuk segera mengisi biodata dan mengajukan sertifikat untuk isian ijazah dan SKPI
Formulir ini sekaligus dijadikan pendaftaran Yudisium Akhir Studi Mahasiswa Tahun 2021

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Nama dan foto yang terkait dengan Akun Google Anda akan direkam saat Anda mengupload file dan mengirim formulir ini. Alamat email Anda bukan bagian dari respons Anda.

* Menunjukkan pertanyaan yang wajib diisi

PRODI *

☒ PENDIDIKAN INFORMATIKA
☐ PENDIDIKAN SEJARAH
☐ PENDIDIKAN MATEMATIKA
☐ PENDIDIKAN BAHASA INGGRIS
☐ PENDIDIKAN GURU SEKOLAH DASAR
☐ PENDIDIKAN BAHASA DAN SASTRA INDONESIA
☐ PENDIDIKAN JASMANI KESEHATAN DAN REKREASI

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Figure 2. BAAK previous form

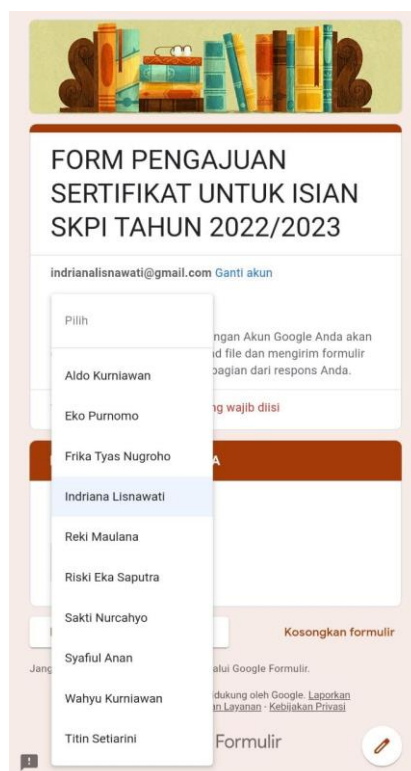


Figure 3. Student Names for Each Study Program

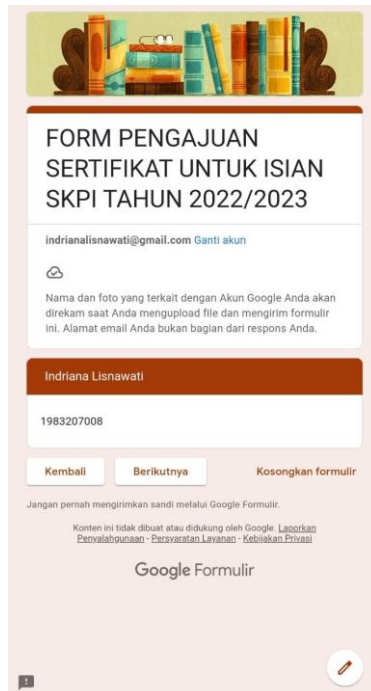


Figure 4. Student Name

The three images above show that the writer implemented a new method, namely the method of grouping choices based on criteria, whereby when students choose one study program, they will automatically be switched to the choice of Student Name and NIM from the study program we choose. Previously, the name, NIM, and study program were filled in manually.

Discussion

By adding parameters to the Google form, scenarios for filling in predetermined fields

instead of student manual entries and grouping based on certain criteria can be changed. Defining a group of students' names in accordance with their individual study programs is the first stage. The layout of the Google form is depicted in Figure 4. It facilitates the provision of study program fields by students (Setiawan et al., 2022, 41).

Figure 4. Study Program Entry Dropdown Settings

The answer facility in the question model serves as the foundation for the go-to section. The drop-down menu lets you manage the flow of students' names into the list of students by grouping them by study program. As a result, student SKPI submissions with regard to identities and study programs can be correctly checked. By altering the scenario to a dropdown option, the manual entry in the electronic form's initial text input form is fixed. For the purpose of printing SKPI documents, the name of the study program can be used as a filter if it has been correctly filled out. When the input is still a brief answer, the entry is still in the form of a short answer, which ultimately necessitates another round of corrections.

Student names are likewise susceptible to variances in non-standard entries. Student names can be verified using short replies by, for instance, shortening names and substituting them with the first letter of long names. A database of student names is kept by the academic and student administration bureau; this information can be utilized to verify student names. The name field in the question model Dropdown section can be quickly evaluated to become a standard field by using the Go to section based on answer scenario option. The Google form's options are implemented as depicted in Figure 5.

Figure 5. Dropdown Settings for Student Name Entries

CONCLUSION

The following can be drawn from the study's findings: (1) The Name, NIM, and Study Program fields all contained typographical flaws that caused various filling-in issues. Typographical errors distort the meaning of words or sentences. Non-standardized entries will make the filling and validation procedure more difficult. To make sure that requirements are met, SKPI and BAAK put in more effort. (2) The authors use a novel method, called the way of grouping options based on criteria, whereby when a student selects a study program, the student is automatically redirected to the student name and NIM page, in order to prevent errors in entering student data.

THANK-YOU NOTE

The authors would like to thank the STKIP PGRI Pacitan for their financial and technical support.

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The Use of Mime Game to Improve Students' Writing Skill in Exposition Text for Eleventh Graders of MIPA 3 SMA Negeri Punung

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Abstract:

This study aims to determine the use of Mime Game can improve students' writing skill in exposition texts for eleventh graders of MIPA 3 SMA Negeri Punung in the academic year of 2022/2023. This research used Classroom Action Research (CAR). The subjects were eleventh graders MIPA 3. Data were obtained by student of pre-test and post-test, and questionnsire. The success indicator is that the average student has reached the completeness standard (75). In the pre-test student average score of 55.19, in post test I the average score of 73.90, in post test II students average score of 80.23, with students who get a score of >75 as many as 18 students and 3 students get a score of <75. The percentage of success in post test II is 85%. Based on the questionnaire it can be seen that 50% of students strongly agree, meaning that many students are active and feel happy when using Mime Game in writing exposition texts. Then 50% of students strongly disagree, which means that many students do not feel bored in learning when using the Mime Game method.

Keywords: Mime Game, Writing, Exposition Text.

INTRODUCTION

Language is a tool to convey ideas, ideas, thoughts, concepts or feelings (Marsudi, 2009). In its rule, language is a differentiator between humans and other creatures. Therefore, humans have the thinking power to develop language imagination. This development brought English to become a foreign language used in all corners of the world.

The important role of English is contained in all aspects, especially in the aspect of education. One of the goals is to improve the quality of human resources in competing in the era of globalization. English has four skills: listening, speaking, reading and writing. (Indonesian National Ministry, 2006).

One aspect of English skills is writing. Writing is a skill of expressing ideas, feelings, and thoughts that organize the structure of words, words, and paragraphs by relying on the eyes, brain, and hands. In writing there are several aspects that must be considered including the use of content, organization, vocabulary, grammar, and spelling. With this aspect of writing, someone has creativity in coming up with writing ideas, so that later it will become a writing that becomes a variety of genres.

Genre as types of text that become references so that a text can be made as effective as possible (Mahsun, 2014). One of them is exposition text which is a type of writing that explains information based on facts to convince the audience. The text of the exposition leads to describe and explain an event that actually happened. The text of the exposition has three intermediate structures, the title, the reaffirmation, and the conclusion in the form of criticism and suggestions.

Based on observations made in the MIPA 3 class of SMA Negeri Punung, it was found that there were many shortcomings of students who did not understand and apply writing skills,

especially in basic things in writing, namely, difficulties in determining content, how students structure writing or organization, the use of grammar, the use of vocabulary, and mechanics. In addition, the lack of methods carried out by teachers also results in students not applying menuis skills well. So that interesting things must be brought in the classroom to improve the writing skills and focus of learning students with different student characters. One of them is to use games.

Games are a method of learning that can help students explore creativity and the fun learning process. To improve comprehension in writing skills, researchers brought the Mime Game to a learning method. According to Roth in his quote (Fadirsair et al, 2021) Mime Game is a game that uses non-verbal techniques that explain character, mood, ideas or narrative through gestures. Mime Game is one of the games that guesses pictures or guesses words or sentences.

Some researchers have applied Mime Game in learning. Previous research by (Eni Purnama, 2017) found that Mime Game can improve students' vocabulary and increase participation, student interest in learning in the learning process. Other research (Maya Puspitasari & Akeu Akhmaliah, 2019) the use of Mime games in teaching present continuous tense for students is more effective, and students' penchant for being present in learning using Mime Game.

Based on the problems in the learning above, the researcher designed the Class Action Research (CAR). Classroom Action Research is used with the intention of improving the learning process and increasing student stability in learning. Researchers used Mime Game as a method to teach expository texts to eleventh graders. Mime Game will increase students' creativity in building and exploring a sentence. It will also make students more creative and innovative. In addition, researcher also argues that the Mime Game is an effective and fun way of teaching expository texts. So, researcher argues that Mime Game will have a positive impact on the teaching of expository texts.

LITERATURE REVIEW

1. Game

Games are an interesting activity and become fun. Where this game is done by interacting with one another. The interesting and challenging games will make students feel happy. It is called a game if it has a purpose, game rules, and elements of fun (Uswatun, 2019). Through games they will also enjoy learning and most likely they will bring home what they will learn (Pratiwi, 2019).

One type of game is Mime Game. Mime game is one of the guessing games in addition to guessing pictures, also guessing sentences (Utami Sinta, 2016). In doing mime games, students feel very excited, imaginative, fun and communicative in performing role-playing tasks. Activities play the role of mime games that describe the words or sentences provided, students feel more enthusiastic and enthusiastic in learning activities. In addition, students also feel communicating directly through body movements by guessing words.

The communication process occurs when students interact with other students. There are two forms of communication, verbal and non-verbal communication. Verbal communication is communication that occurs when students interact by speaking, while non-verbal communication is communication that occurs when they interact with body movements. In mime games students must use non-verbal communication.

There is a twist about the Mime Game. That is, mime games can invite students to be active in the learning process in class. Mime Game can create a fun and effective atmosphere that can reduce boredom and stress of students in the teaching and learning process. Mime

games can also provide motivation to do tasks and make students better at interacting with partners.

2. Writing

Writing is an activity that involves creativity to express ideas, ideas, in the form of writing that has a purpose, for example to inform, convince, and entertain (Dalman, 2015). Writing is a thinking process to find ideas, think about how to express into good writing, and arrange ideas into clear statements and paragraphs for readers (Sarimarsutalinda, Inderawati, and Suganda, 2018).

The purpose of writing is to express ideas and convey messages to readers. According to Cholipah, (2014) writing has the aim of informing, to explain, to understand experience, and to persuade opinions or goals and support with detailed reasons. In writing a text there are elements that must be evaluated including, Content, Organizaton, Grammar, vocabulary and mechanic. Based on Brown 2007 the aspects that must be sisamatai as follows. :

Scoring Rubric From Brown 2007

Aspect	Skore	Performance Description	Weightin g
Content (C)	4	The topic is complete and clear the details are relating to the topic.	3
	3	The topic is complete and clear but the details are almost relating to the topic.	
	2	The topic is complete and clear but the details are not relating the topic.	
	1	The topic is not clear and the details are not relating to the topic.	
Organization (O)	4	Identification is complete and descriptions are arranged with propers connectives.	2
	3	Identification is almost complete and descriptions are arranged with almost propers connectives.	
	2	Identification is not complete and descriptions are arranged with few misuse of connectives.	
	1	Identification is not complete and descriptions are arranged with misuse of connectives.	
Grammar (G)	4	Very few grammatical or agreement inaccuracies.	2
	3	Few grammatical or agreement inaccuracies but not affect on meaning.	
	2	Numerous grammatical or agreement inaccuracies.	
	1	Frequent grammatical or aagreement inaccuracies.	
Vocabulary (V)	4	Effective choice of words and words farms.	1,5
	3	Few misuse of vocabularies, word forms, but not change the meaning.	
	2	Limited range and confusing words and word form.	
	1	Vey poor knowledge of words, word forms, and not understandable.	
Mechanincs (M)	4	It uses correct spelling, punctuation, and capitalization.	1,5

	3	It has occasional errors of spelling, punctuation, and capitalization.	
	2	It has frequent errors of spelling, punctuation, and capitalization.	
	1	It is dominated by errors of spelling, punctuation, and capitalization.	

3. Exposition Text

According to Pardiyo (2007:215) exposition texts are like suggestive argument texts. To respond to life problems, one must make arguments. Through the text of the exposition the speaker tries to persuade to do something. Based on Amalia Pradini (2014), exposition texts are a type of argumentative genre text to persuade readers.

In writing excision text, you must pay attention to 3 general structures. Based on Pradiyono (2007:215) the exposition text has three general structures:

- Thesis, it contains an explanatory statement of the topic and shows the point of view of the author.
- Argument, explaining the argument to support the author's position. Every argument must be accompanied by supporters and clear facts.
- Reiteration/conclusion, stating conclusions that are usually suggestions and criticisms.

The purpose of exposition text is to convey the reader that the topics presented was an important topic to be duscussed or gained attention by way of providing arguments or opinion that support the main idea or topic.

4. Procedure of Using Mime Game

In the teaching and learning process using Mime Game, students are given the motivation to be active, intelligent and creative in making statements through movement guesses expressed in the form of exposition texts. In learning exposition texts, students are expected to be able to string sentences according to the structure of the exposition text. In the use of Mime Game for exposition text learning, teachers and students perform communication activities that interact with each other. The procedure for using Mime Game in the learning of exposition texts is well organized, as below.

Teacher	Student
The teacher explains related to the Mime Game. Understanding Mime Game, usability, and examples. Mime Games are commonly used for guessing games. One performs a pantonym movement and others guess what he means.	Students listen and observe.
The teacher explains how to play the Mime Game. By giving examples of simple practices. The teacher gave a picture to the students.	Students practice the example with a deskmate. One of the students performed a movement based on a picture that had already been seen. Then the other student tried to guess the movement that had been given
After the students are familiar with the use and how to play the Mime Game, the teacher forms students into 5 groups.	Students make a group.
The teacher gives an five titles to be exhibited with Mime Game.	Students pay attention
The teacher practices the movement, and is guessed by each group.	The student pay attention and guess the movement in the group, then ech group makes 3 points and is practiced then answered by

	another group. Then each point is described in the sheet of exposition text
Upon completion, the teacher directs the student to read out the results of his work.	Students read out the results of their work, and collected.

METHOD

This research used the Classroom Action Research (CAR) method. Classroom Action Research (CAR) typically involves the use of qualitative interpretive methods and data collection assisted by academic partners, with the aim that teachers make assessments on how to improve student practice. (Kemmis & MC Taggart in Nixon R, 2014). Classroom Action Research in this study used the design of Kemmis Mc Taggart (1988). He posits that Classroom Action Research usually involves the use of qualitative interpretive methods and data collection assisted by academic partners, with the aim that teachers make assessments on how to improve student practice. Research will involve an iterative cycle, where each cycle consists of four action steps, namely planning, action, observation, and reflection

The subject of this reserach was an eleventh grade student of MIPA 3 SMA Negeri Punung. This class consists of 21 students. The reason the researcher took the class was because based on observation and interview to the english teacher it was known that the students in the class had a willingness to write, but they had some difficulties in writing.

In this research, researchers used a test, observation sheet, interview and questionnaire to measure students performance during the study.

Test is a device used by individuals to obtain responses based on a given numerical score in this research there are two types of test, namely pre-test and post-test. Pre test is a test that performed before the teacher learning and post test is a test that performed after the learning process is completed. Observation is used to determine student performance during the study. In observation, of course, there are indicators, to make it easier for researchers to make observations. There are three indicators used in this research, namely, student discipline, students in learning, and teachers in the teaching and learning process. Interview is a guideline to explore in-depth information on objects related to the problem under study (Sugiarsi, 2020). In conducting interviews there are indicators used, namely students when writing and students when using Mime Game. Questionnaire is one of the instruments used in research. According to Sugiyono (2009), questionnaires are the most important instrument used to explore actual responses to collect data. In this study, questionnaires were distributed to respondents through Google Form. The question given contained fourteen questions.

In this reseacrh, researchers collect data using qualitative methods. Qualitative methods are collected using observations made during the teaching and learning process. Then at the end of the meeting, researchers gave a questionnaire to find students' responses in using Mime Game.

In addition to observation and questionnaires, researchers also analyzed data using pre-test and post-test . By looking at the comparison of the average value of each test with the formula:

$$X = \frac{\sum x}{N}$$

Where :

X = Mean of score

$\sum x$ = Total score of students

N = Total number of students

In this study, individual students were declared successful in the test if they reached the completeness standard or KKM (75). Collectively, if as many as 85% of students in the class are able to achieve KKM, then it can be said that there is an increase.

FINDINGS AND DISCUSSION

FINDINGS

1. Result of Pre Test

Before the exposition text learning using Mime Game, the pre-test will be held on Tuesday, January 31, 2023. All students are present in the eleventh grade of MIPA 3. Students do the pre-test for 30 minutes by making exposition text. With the following results:

No	Nama	Score	Criteria
1.	AZ	42	Incomplete
2.	AA	42	Incomplete
3.	ATR	63	Incomplete
4.	AKAS	50	Incomplete
5.	ARD	63	Incomplete
6.	AN	50	Incomplete
7.	BFMA	50	Incomplete
8.	HLA	43	Incomplete
9.	JWP	63	Incomplete
10.	KAN	65	Incomplete
11.	MS	58	Incomplete
12.	MY	63	Incomplete
13.	NCA	63	Incomplete
14.	NZBP	52	Incomplete
15.	RAP	50	Incomplete
16.	RAR	62	Incomplete
17.	SKA	59	Incomplete
18.	SOA	58	Incomplete
19.	SR	50	Incomplete
20.	SNA	63	Incomplete
21.	RIK	50	Incomplete
Total		1159	
Average		55,19	
High Score		65	
Low Score		42	

From the results of the pre-test, researchers understand the students' strengths in writing, so researchers provide treatment using the Mime Game method in writing exposition texts.

2. Result of Cycle I

a. Planning

Researchers prepare everything that will be used in research. Researchers prepare lesson plans, researchers prepare instruments and researchers prepare materials.

b. Action

In cycle I it is divided into two meetings. The first meeting will take place on January 31, 2023. At the first meeting researchers provided exposition text material without using Mime Game. The material presented is related to the text of the exposition along with examples. In the learning activities, researchers also made observations and interviews with students.

The second meeting will be held on February 7, 2023. Researchers treated the material using Mime Game. With students practicing a title and being guessed by another group then poured in the form of exposition text. Students feel excited about learning. At the end of the meeting, students get an evaluation related to the learning that took place. Then students are given questions to do a post test to make an exhibition text with 30 minutes. With the results below:

No	Nama	Score	Criteria
1.	AZ	70	Incomplete
2.	AA	70	Incomplete
3.	ATR	83	Complete
4.	AKAS	82	Complete

c. Observation

Observation is during learning. In the there are some feel very happy and learning. Especially Mime Game. beginning of the were students who but after being given students were very practicing the Mime

5.	ARD	74	Incomplete
6.	AN	70	Incomplete
7.	BFMA	75	Complete
8.	HLA	73	Incomplete
9.	JWP	67	Incomplete
10.	KAN	70	Incomplete
11.	MS	70	Incomplete
12.	MY	67	Incomplete
13.	NCA	83	Complete
14.	NZBP	62	Incomplete
15.	RAP	83	Complete
16.	RAR	84	Complete
17.	SKA	68	Incomplete
18.	SOA	78	Complete
19.	SR	75	Complete
20.	SNA	78	Complete
21.	RIK	70	Incomplete
	Total	1552	
	Average	73.90	
	High Score	84	
	Low score	62	

carried out observations, students who interested in when using Although at the meeting, there were confused, treatment, enthusiastic in Game.

d. Reflection

The results of cycle I can be seen that from the pre-test and post-test values there is an increase. But there are still shortcomings that occur ci cycle I. So researchers will correct these shortcomings in cycle II.

3. Result of Cycle II

a. Planning

Researchers prepare a lesson plan that will be used in cycle II. Researchers also prepared several instruments used.

b. Action

In cycle II the first meeting will be held on March 14, 2023. With the beginning of the meeting used the Mime Game treatment to write the exposition text. But with a different concept of how to use. Then at the second meeting, researchers gave a post test II to see the ability of students after being given different treatment. The results of the second post test can be seen below:

NO	NAMA	Post Test (II)	Criteria
1.	AZ	80	Completed
2.	AA	78	Completed
3.	ATR	83	Completed
4.	AKAS	85	Completed
5.	ARD	88	Completed
6.	AN	80	Completed
7.	BFMA	75	Completed
8.	HLA	83	Completed
9.	JWP	79	Completed
10.	KAN	71	Incompleted
11.	MS	75	Completed
12.	MY	76	Completed
13.	NCA	90	Completed
14.	NZBP	73	Incompleted
15.	RAP	83	Completed
16.	RAR	84	Completed
17.	SKA	72	Incompleted
18.	SOA	84	Completed
19.	SR	82	Completed
20.	SNA	84	Completed

21.	RIK	80	Completed
	Total	1.685	
	Average	80,23	
	High Score	90	
	Low Score	71	

c. Observation

Observation is carried out during learning. In the observations, all students felt very happy and interested in learning. Especially when using Mime Game. Students seem to be active in learning.

d. Reflection

The results of cycle II can be seen that students have increased in post test scores. There were 18 or 85% of students who scored >75, so the researchers stopped this study in cycle II because 85% of students had reached the standard of completion. After carrying out the test, students were given a questionnaire to find out the students' responses in using Mime Game to write exposition text.

DISCUSSION

Based on the results above, researchers can suggest that mime games can improve students' skills in writing exposition texts. With the opening of the value result. In the pre-test, the average score of 55.19 students met the standard of completeness. In post test I the average score of students was 73.90, with 9 students getting a score of >75 and 12 students getting a score of <75, so that only 42% of students reached the standard of completeness. In post test II students get an average score of 80.23, with students who get a score of >75 as many as 18 students and 3 students get a score of <75. The percentage of success in post test II is 85%. So this research is said to be successful in cycle II.

Based on the questionnaire it can be seen that 50% of students strongly agree, 40% of students agree, 10% of students disagree and 0% of students strongly disagree, meaning that many students are active and feel happy when using Mime Game in writing exposition texts. Then, 0% of students strongly agree, 15% of students agree, 35% of students disagree, and 50% of students strongly disagree, which means that many students do not feel bored in learning when using the Mime Game method.

CONCLUSION

This research is about the use of mime games to improve students' skills in writing exhibition texts. The use of Mime game is effectively used as a learning method because students are very enthusiastic in learning. The atmosphere is not boring and students are enthusiastic in carrying out teaching and learning activities.

The results of this study are shown by calculating the average value of pre-test, post-test I, and post-test II which shows an increase. Based on observations, students are also very enthusiastic about using Mime Game to improve writing skills. Based on the questionnaire, students also said that they felt active and not bored when using Mime Game for writing lessons.

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Ideology Representation of Alexandria Ocasio-Cortez and Candace Owens in Responding Abortion Through Critical Discourse Analysis Framework

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Abstract

Hidden ideology is found in every utterance by Alexandria Ocasio-Cortez and Candace Owens in response to the abortion. The objective of this research was to reveal the ideological representations of the speakers' utterances. This research used a descriptive qualitative method of critical discourse analysis to analyze the phenomenon. Data analysis used Spradley's analysis, including: (a) domain analysis; (b) taxonomy analysis; (c) componential analysis; and (d) analysis of cultural themes. As a result of this research, there were 22 utterances representing the ideology of the speaker's race. The utterance explains that the White race adheres to the ideologies of liberalism (75%), socialism (8%), and feminism (17%). Meanwhile, the Black race adheres to conservatism (64%) and feminism (36%). Based on the results of in-depth component analysis, it was concluded that the dominant White race adheres to the ideology of liberalism because it strongly adheres to fighting for freedom and authority over human bodies. Meanwhile, Black race has a tendency toward conservatism. Where, thoughts and attitudes often refer to historical truth values, believe in strong cultural values, and are more careful about the allure of freedom.

Keywords: Abortion, Critical Discourse Analysis, Ideology

INTRODUCTION

Language, as a fundamental aspect of communication has several definitions. According to Halliday and Matthiessen (2004) in Flowerdew (2012), language is conceived as a source of communication and making meaning rather than as a formal system, as in many other forms of linguistics. Meanwhile, Confucius in (Sun, 2015) stated that language in the social domain function not only as a means of interhuman communication but also as a personal space where an individual develops personally in order to become a true human being. From the definitions above, language is interpreted not only as a communication tool used to create meaning in the social sphere but also to reflect the human personality. In addition, language becomes an intermediary for humans to make themselves into real human beings (Halliday and Matthiessen, in Flowerdew, 2012; and Confucius, in Sun, 2015). Therefore, language and communication are interrelated in human activities.

Communication becomes an important entity that is needed by humans. First, humans are social beings who need each other. Communication becomes an intermediary to make it easier for humans to interact and know the conditions of the surrounding environment. In this case, humans have personal interests and commonly shared social interests (Inah, 2013). Second, humans as intellectual beings, use communication as a tool for sharing knowledge. Third, through communication, humans influence the minds of others through the discourse delivered. Thus, communication is needed because humans as social beings need to establish relationships with others, form quality thinking, and build influence on other people's minds. Henceforth, it can prolong the discourse in society.

Discourse in communication is something that needs a concern. Sipra and Rashid (2013), stated that discourses have a significant role in the generation and reproduction of unequal power relations among various ethnic, gender, age, social class, and professional groups. In addition according to Widodo (2015) in Khalawi & Hadi (2017) discourse is the bias of: (1) subjectivity; (2) culture; (3) identity; (4) interest; (5) politics; (6) ideologies; (7) values; (8) agendas; (9) intertextuality; and (10) power available. Therefore, discourse approach skills are needed so that people can examine the neutrality of communication messages such as words, writing, pictures, and others (Silaswati, 2019). As for examining discourse more deeply, one of the analytical methods used is critical discourse analysis.

Critical discourse analysis becomes the framework used for analyzing discourse in communication. Fairclough (2001) in Amerian and Esmaili (2014) stated critical discourse analysis is an interdisciplinary method that explores politics and social contexts to emancipate ideology, dominance, hegemony, and social power. In addition, according to Shaikh et al., (2015), critical discourse analysis aims to reveal texts shaped ideologically by power relations; it emphasizes the opaque relationship between discourse and the structure of society; and it does so through open interpretation and explanation. Meanwhile Dijk (2008) in Jabar and Yunus (2017) defines critical discourse analysis as a type of discourse analysis research that aims to uncover the relationship between language, power, ideology, society, values, and opinions. Thus, critical discourse analysis attempts to dissect ambiguity through several indicators of dominance, language, ideology, power, inequality, society, hegemony, values, and opinions in the discourse (Fairclough, in Amerian and Esmaili, 2014; Shaikh et al., 2015; and Dijk, in Jabar and Yunus, 2017).

This issue is important to research in order to provide knowledge of the impacts of abortion both on the relationship between humans and themselves, the relationship between humans and other humans, as well as the relationship between humans and God. The researcher and the reader will be unaware of how public figures' speeches contain hidden intentions in responding to issues to gain public trust. In addition, this will have a negative effect if there is no research on the subject.

However, several researchers have conducted previous research using a critical discourse analysis. Priatmoko (2013), conducted research on critical discourse analysis of Susilo Bambang Yudhoyono's speech and shows that critical discourse analysis can explore the relationships among language, power, and ideology. Mohammadi and Javadi (2019) also conducted research on critical discourse analysis by comparing the use of language by Hillary Clinton and Donald Trump in speeches. In addition, Tahir, Shah, and Yasir (2021) carried out research on the critical discourse analysis of a Pakistani Drama specific on discourse and power relations. The last, from Tsani and Ratnadewi (2022), carried out the research about critical discourse analysis in Kamala Harris' speech focused on women and racism issues. The results obtained show that there are five types and uses of racism issues for women of color raised in her speeches; as well as a call to action against the justice of women of color. The researchers concluded that critical discourse analysis can reveal power, language, ideology, and inequality in discourse.

There are differences between this research and previous researches (see Priatmoko, 2013; Mohammadi and Javadi, 2019; Tahir, Shah, and Yasir 2021; Tsani and Ratnadewi, 2022). The main differences from this study are constructed theory and method of analysis as well as the material object of research. The researchers used Dijk's theory and Spradley analysis to analyze existing data. In addition, this research chose the issue of abortion from the views of Alexandria Ocasio-Cortez and Candace Owens, whereas previous studies did not.

Alexandria Ocasio-Cortez and Candace Owens are American public figures. Alexandria Ocasio-Cortez is a politician and activist. As for expressing her opinion on an issue, Alexandria uses her YouTube account, namely Alexandria Ocasio-Cortez. Meanwhile, Candace Owens is known as an activist, political commentator, and talk show host. In addition, the YouTube

account, namely Candace Owens Podcast and Candace Owens is the mass media for expressing Candace's opinion. Moreover, some of the issues that are of common interest to Alexandria Ocasio-Cortez and Candace Owens include the issues of immigration, LGBT, and abortion. However, abortion became the dominant topic on Alexandria Ocasio-Cortez and Candace Owens' YouTube channel. Both have different views in conveying it to the public.

Regarding the different views of Alexandria Ocasio-Cortez and Candace Owens on abortion, this is very interesting to research through critical discourse analysis. This research focuses on ensuring that Alexandria Ocasio-Cortez and Candace Owens have different ideologies. The researchers believe that applying Dijk's critical discourse analysis theory can reveal that Alexandria Ocasio-Cortez adheres to a liberal ideology and Candace Owens adheres to a conservative ideology. Thus, researchers and readers will be more critical in understanding the reality of why and how these opinions are presented, especially on the issue of abortion. Therefore, the researchers are interested in conducting the research entitled "*Ideology Representation of Alexandria Ocasio-Cortez and Candace Owens in Responding Abortion Through Critical Discourse Analysis Framework*".

METHOD

The present research employed the descriptive qualitative method of critical discourse analysis to analyze the phenomena. The researchers focus on research to reveal the ideology adopted by public figures, using a critical approach to gain an in-depth understanding. Video transcript documents sourced from YouTube Alexandria Ocasio-Cortez and Candace Owens utterances about abortion are the primary data sources for analysis. However, the secondary data in this research are books, e-books, e-journals, and thesis. In order to collect the data, the researchers used several research instruments, as follows: (a) the researchers; (b) the videos of Alexandria Ocasio-Cortez and Candace Owens; (c) documentation of video transcripts; and (d) a notebook. Then, the data collection techniques include observation and document analysis. Finally, the researchers used Spradley analysis (1980) including domain analysis, taxonomy analysis, componential analysis, and analysis of cultural themes to analyze the data. However, for the theory of types of ideology, the researchers have used Heywood's theory.

RESULTS AND DISCUSSION

To collect data, the researchers analyzed the transcripts of the videos Alexandria Ocasio-Cortez entitled "*Abortion Rights Fundraiser on Instagram Live | Alexandria Ocasio-Cortez*" and Candace Owens' video entitled "*A Message to Pro-Choicers: Do Your Research on The History of Abortion*". The researchers analyzed video scripts with a critical discourse analysis approach to collect data related to the hidden ideology of the speaker's speech. Based on the results of data collection, there are 12 utterances in Alexandria Ocasio-Cortez's speech and 10 utterances in Candace Owens' speech that contain indications of the speaker's ideology.

Table 1. The Taxonomy Analysis of Alexandria Ocasio-Cortez Video Transcript
"Abortion Rights Fundraiser on Instagram Live | Alexandria Ocasio-Cortez"

No.	Race	Types of Ideologies											Σ
		LI	CI	SI	NI	FAI	EI	FEI	AI	PI	MI	FUI	
1.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
2.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
3.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
4.	White Race	v	-	-	-	-	-	-	-	-	-	-	1

No.	Race	Types of Ideologies											Σ
		LI	CI	SI	NI	FAI	EI	FEI	AI	PI	MI	FUI	
5.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
6.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
7.	White Race	-	-	-	-	-	-	v	-	-	-	-	1
8.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
9.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
10.	White Race	v	-	-	-	-	-	-	-	-	-	-	1
11.	White Race	-	-	-	-	-	-	v	-	-	-	-	1
12.	White Race	-	-	v	-	-	-	-	-	-	-	-	1
Total		9	-	1	-	-	-	2	-	-	-	-	12

Table 2. The Taxonomy Analysis of Candace Owens Video Transcript
“A Message to Pro-Choicers: Do Your Research on the History of Abortion”

No.	Race	Types of Ideologies											Σ
		LI	CI	SI	NI	FAI	EI	FEI	AI	PI	MI	FUI	
1.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
2.	Black race	-	-	-	-	-	-	v	-	-	-	-	1
3.	Black race	-	-	-	-	-	-	v	-	-	-	-	1
4.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
5.	Black race	-	-	-	-	-	-	v	-	-	-	-	1
6.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
7.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
8.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
9.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
10.	Black race	-	v	-	-	-	-	-	-	-	-	-	1
Total		-	7	-	-	-	-	3	-	-	-	-	10

There are codes of ideological types as follows:

LI : Liberalism Ideology SI : Socialism Ideology PI : Populism Ideology
NI : Nationalism Ideology EI : Ecologism Ideology MI : Multiculturalism Ideology
CI : Conservatism Ideology FEI : Feminism Ideology FUI : Fundamentalism Ideology
FAI : Fascism Ideology AI : Anarchism Ideology

1. Componential Analysis

Based on the data findings, the researchers found 22 utterances containing hidden ideology by the two speakers. First, Alexandria Ocasio-Cortez as many as 12 utterances. Meanwhile, Candace Owens has 10 utterances. Each of these data points was obtained in two

videos in the form of sentences, words, or phrases. The classification of componential analysis is explained into two types of speaker races, namely White Race and Black Race.

a. White Race

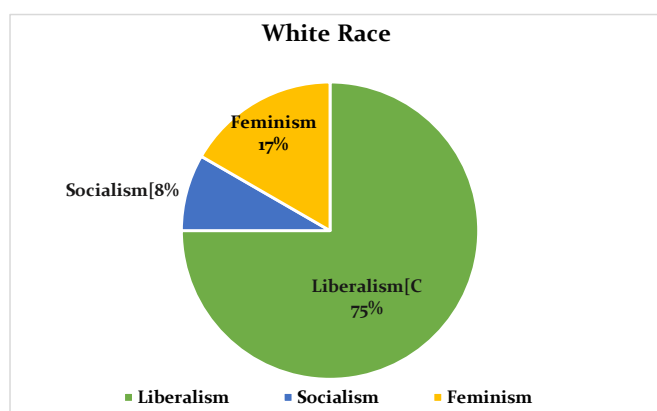


Diagram 1.1 Percentage of ideology of the White race

Based on the results of the diagram above, it shows that the White race has a percentage of three types of ideology. These percentages are sourced from the video of Alexandria Ocasio-Cortez's speeches on YouTube about abortion. Furthermore, the ideology of liberalism, socialism, and feminism is expressed by the speaker of White race.

1) Liberalism Ideology

There are 75% (9 utterances) containing the context of liberalism ideology found in Alexandria Ocasio-Cortez's speech. These findings have a higher presentation compared to other ideologies. This can be seen in several of the speakers' speeches. The example is taken from the third data based on the video, as follows:

"...I took friends and I supported friends through abortions..."

The statement above shows the speaker expressing her support for the practice of abortion. This statement implies that women should have freedom and power over their bodies. This is in line with the ideological principles of liberalism, which embrace core concepts such as freedom, authority, autonomy, and equality (Bell, 2014). Meanwhile, the speaker clearly stated her support for the practice of abortion. This is because the speaker has a background as a public figure, especially an activist and politician, so she has great power to get public support in large quantities, including for legalizing abortion.

2) Socialism Ideology

There are 8% (1 utterance) that contain the context of socialism ideology found in Alexandria Ocasio-Cortez's speech on the issue of abortion. Moreover, the utterance containing the socialism ideology were obtained from a speech. An example is taken from the twelfth data, based on the video from the speaker of the White race. Furthermore, excerpts of speech are as follows:

"...I think everyone deserves health care, I think housing is a right, I don't think that that huge major wall street companies should be able to gobble up homes and then working class..."

The speaker's statement shows that there are social inequalities that are seized upon by superiors in their country. In this statement, the speaker expressed her concern to the audience and tried to get public sympathy for the unrest she was facing. This is because the speech was recorded and disseminated on the YouTube platform, so it can be accessed by anyone. As a result, there is an implied hope to get support in eliminating all forms of oppression experienced by the inferior.

3) Feminism Ideology

Based on the results of the research, there were 17% (2 utterances) containing the ideology of feminism, which was found in Alexandria Ocasio-Cortez's speech on the issue of abortion. An example is taken from the seventh data, from the speaker of the White race, as follows:

“...If you believe in taking women's choice away from them you gotta go...”

This statement implies a form of resistance to the injustices faced by women. In this case, the speaker wants to invite audiences, especially women, to demand equal rights and opportunities, one of which is in public spaces. In addition, this statement assumes that the speaker does not want women to always be in an oppressed position. This is in line with the struggle of feminists to demand equal rights between men and women, especially in political affairs, decision-making, and careers (Kumar Mohajan, 2022).

b. Black Race

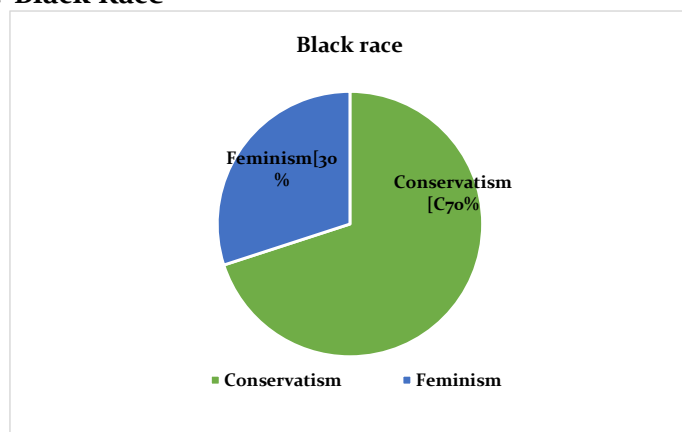


Diagram 1.2 Percentage of ideology of the Black race

The second domain is Black race, where, based on the percentage above, there are 10 utterances that contain ideology. These percentages are sourced from the video of Candace Owens' speeches on YouTube about the abortion problem. The types of hidden ideologies reflected by speakers of the Black race are those of conservatism and feminism.

1) Conservatism Ideology

There are 64% (7 utterances) containing the context of conservatism ideology found in Candace Owens' speech. These findings have a higher presentation compared to other ideologies. This can be seen in several of the speakers' speeches. An example is taken from the sixth data from the speaker of the Black race. Furthermore, excerpts of speech are as follows:

“...The fact that they have tried to bury the history of abortion and have tried to bury the history of planned parenthood makes me sick...”

In the statement above, the speaker expressed her disappointment with the history of abortion and parenthood that interested parties are trying to erase. Here, the speaker expresses her disappointment with the issue being raised publicly and contrary to actual thinking and history. This implies that the speaker is worried if people directly believe in the history of abortion and the history of parenthood fake ones so the abortion rate will continue to rise. Thus, the attitude of the speaker has relevance to the struggle of conservatives to strengthen values, one of which is social values (Eccleshall, et.al., 2003).

2) Feminism Ideology

There are 36% (3 utterances) containing the context of feminism ideology found in Candace Owens' speech. It can be seen, that the percentage of feminism ideology is the least among other ideologies. This can be seen in several of the speakers' speeches. The example is taken from the first data from the speaker of the Black race, as follows:

“...Women are operating under duress it's a game of peer pressure...”

The statement above shows the speaker's partiality towards women's problems. The speaker wanted to show the public that one of the reasons women have abortions is because they are under pressure from those closest to them. This proves that women are in a vulnerable and subordinate position or are at their weakest level, especially in making decisions in their lives. Of course, this will be detrimental to women, because they are clothed in patriarchy and cannot make personal decisions. Feminists want to overthrow patriarchy and end sexist oppression (Heywood, 2021).

2. Analysis of Cultural Theme

In this research, two different types of races were found in public figures, including the White race and the Black race. Meanwhile, each race of these figures has a different ideology when it comes to addressing the issue of abortion.

First, in the context of the abortion issue, the White race represents three types of ideology, namely liberalism (75%), socialism (8%), and feminism (17%). Based on this percentage, the ideology of liberalism dominates other ideologies. This is because the culture of the White race is inseparable from the influence of social context, including habit and history. In several of her speeches, the speaker who raised the issue of abortion always focused on her struggle in society to fight for the right to freedom and authority over human bodies. In addition, the speaker fought for equality for women in the public and political sectors. Thus, the cultural characteristics of the liberals are reflected in the White race way of dealing with problems, both in thought and attitude. Where, the White race strongly adheres to a culture of freedom, both the freedom to choose destiny, the freedom over bodily authority, and the freedom to choose gender.

Furthermore, in contrast to the White race, the Black race, in addressing the abortion issue, represents more of two types of ideology, namely conservatism (64%) and feminism (36%). In terms of percentage, it appears that conservatism is higher than feminism. Of course, this cannot be separated from historical value and social influence. In this case, the Black race has a tendency towards a conservative way of thinking because it is based on componential analysis and is associated with the theory of the characteristics of a conservative. The Black race, in its arguments, often refers to the values of historical truth, believes in strong cultural values, and is more careful to the allure of freedom. The existence of these characteristics then influences the way Black race deal with the problem of abortion. In addition, every utterance of an argument is linked to the basis of historical, cultural, and religious values.

Thus, it can be concluded that the White race and the Black race have different ideological concepts in viewing the issue of abortion. Where, the White race is more dominant in adhering to liberalism while the Black race is more dominant in adhering to conservatism.

CONCLUSION

Based on the description of the data and discussion related to the title *“The Study of Alexandria Ocasio-Cortez and Candace Owens’ Ideology on Women’s Abortion Through Critical Discourse Analysis Framework”*, the speech explains that the White race adheres to the ideologies of liberalism (75%), socialism (8%), and feminism (17%). Meanwhile, the Black race adheres to conservatism (64%) and feminism (36%). In the ideology adopted, the dominant White race adheres to the ideology of liberalism. The White race strongly adheres to freedom. The speaker who raised the issue of abortion always focused on her struggle in society to fight for the right to freedom and authority over human bodies. In addition, the speaker fought for equality for women in the public and political sectors. Meanwhile, Black race has a tendency

towards conservatism. Where, thoughts and attitudes often refer to historical truth values, believe in strong cultural values, and are more careful about the allure of freedom.

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Implementation of Google Docs as Student Collaborative Media in Computational Thinking Activities in Era 4.0

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Abstract

The purpose of this study is to evaluate the usefulness of Google Docs for teaching computational thinking to students at STKIP PGRI Pacitan. This study is qualitative and descriptive in nature. Students from STKIP PGRI Pacitan's levels 2, 3, and 4 of the Informatics Education study program served as the research subjects. Multiple-choice tests and questionnaires were used in this study's data analysis technique. Observation, multiple-choice exams, questionnaires, and documentation were the methods used to collect the data. The data analysis revealed the following conclusions: 1) The usage of Google Docs as a platform for computational thinking activities using exams on Google Docs went well. by having a high acquisition rate in the category, 76.47% on average, with a score between 70 and 90. 2) The results of the questionnaire that was completed based on the actual reality in the field and what students feel show a percentage of 31.4% for student responses to the use of Google Docs in lecture evaluation activities, 42.9% for moderate responses, and 25.7% for low responses. In terms of the outcomes of the work on the test questions that have been packaged in multiple choice tests on Google Docs, student responses to the use of Google Docs in lecture evaluation activities show that the overall category is high, with the percentage of student scores 70 being 82.22%; 60 is 70%; and 50 is 52.78%.

Keywords: Google Docs, group collaboration, computer.

INTRODUCTION

Indonesia is currently transitioning into the Fourth Industrial Revolution. The skills that will be in demand in 2023 as a result of the Industry 4.0 era are closely tied to technical innovation, such as software and application development. Technology-related skills, such programming and systems analysis, as well as human abilities, including emotional intelligence, creativity, and critical thinking, are undoubtedly necessary for jobs in this industry (Santoso et al. 2020).

In many areas of human life, technological advancements bring convenience (Mumtaha & Khoiri, 2019). Cloud computing is one of the many service benefits offered by the Industrial Revolution 4.0, a sort of internet technology development that is becoming more and more accessible and affordable. The utilization of computing resources (hardware and software) as services that can be accessed over an internet network is known as cloud computing. One can produce papers online with this cloud computing service. Users of online documents have unlimited access to manage files, save or add documents, delete, edit, utilize documents online, use them together, and collaborate at any time, regardless of location.

Google Docs is one instance of this cloud computing service. In the world of cloud computing, Google Docs is an internet-based office program that belongs to the SaaS (Software as a Service) category. Users of Google Docs can create documents just like they would with Microsoft Office programs. When multiple students are online at once, Google Docs enables real-time collaboration on texts written by them. You can create documents using Google Docs, including spreadsheets, presentations, and more, just like you would with Microsoft Office

products like Word and Excel. Additionally, Google Docs enables users to share files with one another so that numerous people can utilize the sharing feature to edit them.

Google Docs is a cutting-edge tool that students can use to finish their assignments. Google Docs serves as a platform for carrying out a variety of professor assignments, including creating papers, statistics assignments, brochures, designs, and presentations used as lecture material. Additionally, students can create their documents using a variety of Google Docs tools. Along with managing editing options, permitting concurrent work, connecting with others, storing changes, retrieving previous versions, and offering in-depth online training, Google Docs can also foster collaborative computational thinking between instructors and students.

In the 4.0 industrial era, Google Docs innovation can be used as a collaboration tool between students to enhance computational thinking. The objective is to show that students can effectively collaborate and convey their understanding through writing. Researchers are interested in learning (1) how students' knowledge and experience with Google Docs changed prior to the research, (2) how Google Docs changed the type of communication used in collaborative learning of computational thinking, (3) how Google Docs affected collaborative learning to improve computational thinking, and (4) the possibility of students using Google.

Cooperative learning opportunities for students can encourage computational thinking in relation to informatics technologies. A problem-solving-based learning strategy first developed in the 1950s then repurposed in 1980 and 1996 is known as computational thinking (or computational thinking) (CSTA, 2011). By generating work that is capable of thinking actively, creatively, rationally, systematically, and efficiently, computational thinking (or computational thinking) is utilized to meet the problems of 21st-century learning (Syaiful, 2018). Computational thinking is used in STEAM-based learning, which combines science, technology, engineering, art, and math. As a result, computational thinking is required in STEAM to reduce a complicated problem to a smaller one by defining data based on patterns to compose algorithms as data simulation material. This will enable users to more easily create representations of the complex problem.

Google Docs was previously used in the Informatics Education study program at STKIP PGRI Pacitan during lecture activities. Students, however, have not made Google Docs' capabilities particularly conducive to group learning. They only believe that Google Docs and Microsoft Word are appropriate for using while completing standard lecture assignments. Google Docs can be utilized to help students develop their computational thinking as well as for collaborative learning. Students will be able to collaborate with one another to complete tasks assigned by lecturers by learning the functionalities of Google Docs. Students are expected to learn technology in the modern period as technical advancements get more complex to aid them in their career. By presenting the Google Docs platform as an innovative and collaborative medium to improve computational thinking in students.

In light of the foregoing context, the researcher is curious to learn how Google Docs is being used by students as a collaborative media in computational thinking activities in the Industrial Age 4.0. Students from STKIP PGRI Pacitan's Informatics Education Study Program levels 2, 3, and 4 served as the study's subjects. The Study Program has not made the most of Google Docs as a tool for finishing lecture assignments and encouraging students to use computational thinking.

METHOD

35 students—11 at level 2, 15 at level 3, and 9 from the Informatics Education Study Program—were examined in this type of qualitative study, which looked at how they performed in a computer lab. The goal of this study is to evaluate the benefits of using Google Docs as a collaborative platform for student computational thinking exercises, as well as the effectiveness and student response to it. The survey was carried out as part of STKIP PGRI Pacitan's

Informatics Education study program. Students from the Informatics Education Study Program in the second, third, and fourth grades made up the study's population. There were 35 research participants in all. The tools utilized in this investigation were modified from those in a prior paper by (Kalelioglu et al., 2016). Due to a lack of study time, this is. The results of tests on students utilizing the Google Docs platform as a benchmark for computational thinking, employing indicators of Abstraction, Decomposition, Algorithms, and Pattern Recognition, are the data used.

RESULTS AND DISCUSSION

Results

The Google Docs platform was used by researchers as a benchmark for students in computational thinking in the study Implementation of Google Docs as Student Collaborative Media in Computational Thinking Activities in the Industrial Age 4.0 with Google Docs Material and Aspects of Computational Thinking (Amelia, 2020).

Indicators of students' computational thinking abilities and computational thinking abilities in computer science as measured by test items on Google Docs are shown in the research data. 11 pupils declared that they had the computational thinking competency indicators in place. According to the data, out of the 35 students enrolled in the Informatics Education study program, 31.4% fell into the high category, 42.9% into the medium category, and 25.7% fell into the poor group.

Research findings from the Informatics Education Study Program's semesters 4, 6, and 8 at STKIP PGRI Pacitan were used to gauge student reactions. A question survey using the Google Form platform, which had already been approved by media experts, served as the data collection tool.

Questionnaire Responses from Students

There are 10 statements on the current study questionnaire, with a maximum score of 4 and a minimum score of 1. The maximum total score is 40 (4x10) and the lowest total score is 10 (1x10), according to the information that is currently accessible. The following stages of data analysis were performed: (1) Verify and determine the grade for each response that students selected on the Google form for the questionnaire. It includes the purchase of student test results; (2) Calculate the proportion of student responses once the data has been converted to numbers using the formula below.

$$\text{Persentase Respon} = \frac{\text{Jumlah Skor}}{\text{Jumlah Skor Maksimal}} \times 100$$

Formula (1)

The data is categorized based on the student response categories mentioned earlier in Table 1 after percentages are searched for. The following categories are used to classify student replies in light of the information in the table above: (a) High, if the percentage results from the survey fall between 81.25% and 100%, students are considered to be in the high category. Out of 35 responders in the chart above, 11 students fell into the high group, with a proportion of 31.4%; (b) Currently, if the percentage results from the survey fall between 62.5 and 81.25%, students are considered to be in the middle category. 15 of the 35 responders in the table above, or 42.9% of them, are students who fit into the medium category; and (c) Low, if the percentage results from the survey fall between 43.75% and 62.5%, students are considered to be in the low category. Nine out of the 35 responders in the chart above, or 25.7%, are students who fall into the poor group.

Tabel 1. Results of the Student Response Questionnaire

Kategori	Perolehan	Persentase
Tinggi	11 Mahasiswa	31,4%
Sedang	15 Mahasiswa	42,9%
Rendah	9 Mahasiswa	25,7%
Jumlah	35 Mahasiswa	100%

Overall, the medium category received the greatest student response, with a percentage of 42.9%. Moderate replies suggest that, when examined from the acquisition of the questionnaire, the use of Google Docs in lecture assessment activities as an evaluation medium shows a fairly excellent response when it comes to the achievement of students' aims, interests, and computational thinking.

Data Testing Questions Using Google Docs

Researchers evaluated lectures using Google Docs on June 7, 2023, in the Informatics Education class at 13:52 WIB. Data on the outcomes of their work on questions to see student replies have been collected. In Table 2, data are organized into categories. Student responses fall into the "medium" group when examined from the outcomes of the questions, according to the acquisition of the test scores in the above table.

Tabel 2. Work Results by Question Types from Google Docs Media

Percentage of Acquisition Value			Category
≥70	≥60	≥50	
82.22%	70%	52.78%	Medium

Discussion

According to the data, 82.22% of students received scores of 70 or higher, 70% received scores of 60 or higher, and 52.78% had scores of 50 or higher. When evaluated from the score of the test results during the closing activities as a medium for evaluating lectures, the student's response to working on the questions using Google Docs is included in the moderate response category if the data is included in the category stated in Table 3.

Tabel 3. Results of Students' Computational Thinking.

Student Category	Abstraction	Decomposition	Algorithm	Pattern recognition
High	Students can determine the information needed to solve a problem encountered on the <i>Google Documents test</i> .	Students can decompose problems in the <i>Google Documents feature</i> into a form that is easy to understand	Students can explain correct and appropriate solutions	Students can decide solutions quickly, precisely and accurately for new problems.
Moderate	Students can write down any information in <i>Google documents</i> needed to solve problems, but are weak in speed.	Students can decompose problems in the <i>Google Documents feature</i> into a form that is easy to understand, but is weak in terms of speed of completion of assignment instruments	Students can explain the settlement procedure correctly, but the implementation of the procedure described is weak.	Students can decide fast and accurate solutions to new problems, but are weak in implementing the solutions given by students.
Low	Students cannot determine the information needed to solve a problem	Students cannot decompose the problems in the <i>Google Documents feature</i> into a form	Students cannot explain the solution correctly.	Students cannot determine quick and accurate solutions to new problems

	on google documents.	that is easy to understand.		
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College students with high category are able to acquire abstraction and identify the data required to address a Google Documents test question. Decompose problems in Google Docs into easily understandable parts for decomposition; next, have students explain appropriate and correct solutions using the algorithm indicator; and finally, have students decide on solutions quickly, precisely, and accurately for new problems using pattern recognition.

Students in the moderate category receive different rewards than those who fall under the high category. In the abstraction indicator, students can write down any information in Google documents needed to solve problems, but are weak in speed, and decompose problems in the Google Documents feature into a form that is easy to understand, but is weak in terms of speed of completion of assignment instruments. Students can explain the settlement procedure correctly, but the implementation of the procedure described is weak and can decide fast and accurate solutions to new problems, but are weak in implementing the solutions given by students.

In the low category receive, Students cannot determine the information needed to solve a problem on google documents and cannot decompose the problems in the Google Documents feature into a form that is easy to understand. Students cannot explain the solution correctly and cannot determine quick and accurate solutions to new problems.

CONCLUSION

The use of Google Docs as a student-collaborative platform in the computational thinking activities of STKIP PGRI Pacitan students as a medium for computational thinking evaluation has been implemented. Several inferences can be derived from the data analysis findings and the current debate. The usage of Google Docs as a platform for computational thinking exercises by using exams on Google Docs is working effectively for lecture assessment activities. The indications of computational thinking in the areas of abstraction, decomposition, algorithm, and pattern recognition suggest that the criteria for understanding the problems are fairly strong, as can be observed from the computational test data. Having a high category % and an average acquisition of 76.47% and a score of 70–90.

According to the results of the questionnaires that were filled out based on the actual reality on the ground and what students feel, student responses to the use of Google Docs in lecture evaluation activities fall into three categories: high (31.4%), moderate (42.9%), and low (25.7%). Regarding the outcomes of the work on the test questions that have been packaged in multiple choice tests on Google Docs, student responses to the use of Google Docs in lecture evaluation activities reveal that the overall category is high, with the percentage of students scoring 70 being 82.22%, 60 being 70%, and 50 being 52.78%.

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Prototype of Interactive Learning English Application for Students with Mental Disabilities

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Abstract

This prototype is created to optimize learning English for students with mental disabilities. The product is an interactive application that may be used for learning basic English for grade 1 theme 2 of SLB YKK Pacitan. Before creating this application, the researchers conducted qualitative research on learning English for students with mental disabilities. The researchers need two months to design the product in May and June 2023. The product is advanced on students' needs for an exciting experience. This study uses the APPED R&D model, which still needs to be practically tested by users. The device used to create this prototype is iSpring Solutions.

Keywords: Interactive Application, Elementary School, Mental Disabilities

INTRODUCTION

Inclusive education is where children with special needs can learn with their peers without being separated into classes or special schools. The principle of inclusion is that every individual can receive quality, meaningful and equal education, without discrimination, in ordinary schools. Inclusive education aims to create a friendly and responsive learning environment where all students feel welcome and supported. In this approach, teachers and school staff are expected to provide the necessary support and learning adjustments so that each student can reach their potential.

However, educational disparities still exist in the field. The 2018 National Socioeconomic Survey (SUSENAS) data indicates that, in Indonesia, almost 3 out of 10 children with disabilities have never attended an education. Currently, there are nearly 140,000 children aged 7-18 years with disabilities who are not in school (Badan Pusat Statistik, 2018). Only 56 percent of children with disabilities complete primary school compared to 95 percent of children without disabilities. The gap between children with disabilities and children generally occurs due to several factors. Gaps in the management of inclusive education, teacher status, competency, and assurance of inclusive education services still occur in various regions (Aulia, 2012).

Parents' perceptions also affect the education of children with disabilities. Some parents with children with disabilities prefer sending their children to inclusive and public schools to support the children to be able to socialize with friends. In addition, there are negative perceptions when sending children to special schools. Parents must first know the basic needs of children with disabilities before choosing a school for their child. Neither public nor inclusive schools are designed to be disabled-friendly. The shortage of special teaching facilities and staff adds to education problems for persons with disabilities in public schools. In addition, it is not uncommon for children to get bullied by other students. However, children's mental health is the basis for successful learning. Creating stable routines, fostering hope, reducing stress, encouraging self-expression, and promoting collaborative behavior learning environments can contribute to effective learning and well-being (UNICEF, 2022). special schools serve as

preparatory grounds for successfully transferring children with intellectual disabilities to mainstream schools. (Lilljan et al., 2020).

The education of children with disabilities is very varied and diverse. Children with disabilities cannot be taught in classical or class-based learning. This is because the level of disability of each child is different even though the child is the same age. In addition, the level of material absorption also differs from one child to another. The education of children with disabilities is based on the principles of inclusion and equality, which guarantee the right of every child to receive a meaningful and equal education without discrimination. UNESCO mentions that it is essential that every learner feels valued and respected and enjoys a clear sense of belonging (Anastasiou & Bantekas, 2022). The principle of inclusion underscores the importance of integrating children with disabilities into the same educational environment as children without disabilities. This also ensures they have full access to the curriculum and facilities provided.

The principle of accessibility emphasizes the importance of creating a learning environment accessible to all children, including children with various types of disabilities (UNICEF, 2014). Accessibility can include physical access to school buildings, appropriate technology, and other resources and support. Every child with a disability is a unique individual with different needs and potential. The principle of individualization emphasizes the importance of providing an educational approach tailored to each child's needs and abilities.

Children with disabilities may need additional support to succeed in educational settings (Siahaan, 2022). This principle encourages providing physical, emotional, and academic support to help children overcome challenges and achieve their learning goals. Collaboration between teachers, school staff, parents, and other professionals is critical in providing practical education for children with disabilities (Adams et al., 2016). This principle emphasizes the importance of cooperation and good communication to create a supportive and inclusive educational environment.

Children with disabilities often vary in abilities and needs. This principle emphasizes respect for diversity and creates an environment that respects difference and values the unique contribution of everyone. The education of children with disabilities must be based on human rights (UNICEF, 2012). Every child has the same right to education without discrimination, and this principle emphasizes the importance of respecting and protecting these rights.

Seeing these various characteristics, finding learning tools that are innovative and interesting for children with disabilities is very important (Acharya et al., 2019). Educators should be encouraged and supported to create learning spaces that nurture innovation (Fall, 2022). Attractive learning has a vital role in the education of children with disabilities. Engaging in learning can increase children's motivation and interest in learning. Children with disabilities may face challenges in the learning process. Still, if learning materials are presented interestingly and relevant to their interests, they are more likely to be involved and actively participate in learning.

Attractive learning, such as augmented reality, can increase the level of involvement of children with disabilities in the learning process (Rassy, 2022). When they feel involved and involved with learning material, they will be more eager to participate, think critically, and look for ways to overcome learning challenges. Attractive learning allows for a better adjustment approach for children with disabilities. Teachers can use various learning methods and strategies that suit the needs and abilities of individual children, thereby helping them achieve their learning goals.

Attractive learning can help reduce the stigma against children with disabilities. People with disability have limited access to participation. The most significant barrier for people with disabilities to participate is stigma (Rizky & Hadi, 2021). By providing an inclusive environment and ensuring that children with disabilities are given equal opportunities to learn and develop,

negative stigma and stereotypes can be reduced. Attractive learning also inspires a passion for lifelong learning. Children with disabilities who experience positive and meaningful learning tend to continue looking for opportunities to develop themselves.

In teaching English, several practical strategies and media are needed for children with disabilities. Each type of disability requires different treatment. This is why learning English in special schools is very diverse. Deaf children experience difficulties pronouncing words because they are limited to sound input obtained as a means of pronouncing words. Blind children have difficulty seeing English writing, which is different from Indonesian, but they can pronounce words well. Children with mental retardation have weaknesses in interpreting lessons. Various cases like this encourage the development of effective learning media.

Teaching English to mentally disabled children requires a unique approach because each child has different needs and abilities. Identifying the needs and ability levels of each mentally disabled child is the beginning of learning that the teacher must master. Children with mental retardation also enjoy using pictures and natural objects to help associate English words with things known to children. Visual communication can help improve the understanding and memory of mentally disabled children. In addition, using songs and music in English allows children to enjoy learning the language and increases retention of words and phrases. Children with mental retardation may need repetition to reinforce learning. In addition, teachers need to involve children in game activities related to English. This can help increase motivation and make learning more enjoyable.

The development of this prototype aims to improve students' ability to learn English. This product is specifically for mentally disabled students in grade 1 at the elementary school level. This product corresponds to the theme book 2 class 1, which includes four sub-themes, namely "Family Member," "Family Activities," "My Big Family," and "Family Togetherness." This product emphasizes learning basic English by developing four English skills: listening, speaking, reading, and writing.

Researchers have conducted preliminary research using a qualitative design in developing this product. Data from the initial study involved two teachers with mental retardation at the Pacitan YKK Special School (SLB). Interviews and documentation were carried out for the data collection process. The results of this research are the background for making this prototype product. Products for the mentally impaired are still limited in number. Therefore, this product is hoped to be appropriately developed to help mentally disabled children learn English.

METHOD

This study uses the APPED development model with the following stages:



The initial research found the learning characteristics of mentally disabled children who needed special learning media. The use of interactive media is expected to be able to help children in learning. Therefore, in making this application, researchers emphasize attractive learning media that are easily accessible. In addition, the material is made following the scope of material in the curriculum. The use of videos, images, and interactive text is the key to making this application.

In making this prototype, the research team divided it into three main stages, namely the pre-production stage, the production stage, and the product prototype finalization stage. In

the pre-production stage, the researcher makes learning materials, outlines the layer division, defines menus, and creates an application workflow. At the production stage, the researcher makes an application design that includes the main menu, sub-menus, and application workflow. Researchers use Canva to design and use the iSpring Solutions application to create an application workflow. After the application is finished, the researcher finalizes the product using the APK Building application, so HTML5 is converted into a file with the .apk extension to open it on Android. After the application was finished, the researcher discussed with the teacher to get input for developing this prototype product.

RESULTS AND DISCUSSION

Preliminary Research Results

Before making the product, researchers researched mentally disabled children and teachers at SLB YKK Pacitan. The research results are as follows:

- a. Learning material is derived from the proper stages.
- b. At the beginning of the activity, the teacher must build the mood of the students to be happy.
- c. At the beginning of the activity, the teacher does apperception which involves physical activities such as playing guessing pictures, songs, singing, etc.
- d. The teacher also takes care of the children, so they want to sit and follow the lessons.
- e. The material presented must use concrete objects.
- f. In learning to write, the teacher must provide a picture guide.

Product Development Results

Pre-design stage

At this stage, the researcher compiles materials for the manufacture of learning application prototype products which include:

Develop learning materials.

The material in this media follows the Class 1 Theme Book, theme two, about "My Family." This theme contains four sub-themes, namely "Family Member," "Family Activities," "My Big Family," and "Family Togetherness." The researcher adapted the theme book to be mixed into English material. On the sub-theme "Family Member," the researcher compiled the material in a brief introduction to family members. In this section, students will learn how to mention family members. In the "Family Activities" sub-theme, the researcher compiled material about activities at home. On the sub-theme "My Big Family," the researcher arranges material by explaining their big family and the activities done by them. On the sub-theme "Family Togetherness," the researcher emphasizes the activities with family members. The material is the material in the Theme Book they are studying.

Before making the application, the researcher looked at the needs and ability levels of each mentally disabled child so that the material in this application aligned with what they learned in class. This combination will make it easier for them to learn English because they have already studied the material content in Indonesian in other lessons. One thing is sure that learning for the mentally disabled cannot be class-based. Even in the same class, children's abilities vary, and the learning handling is also different. Mentally disabled children in the primary learning class are not classically but more on individual learning because the skills of these children are very different (Saputra, 2021).

Table 1: Elements of the Application

Theme	Sub Theme	Elements Components
My Family	Family Members	Text, picture, sound, and button
	Family Activities	Text, picture, sound, and button
	My Big Family	Text, picture, sound, and button

	Family Togetherness	Text, picture, sound, and button
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Outline the layer division.

After the complete material is compiled, the researcher arranges the application layer flow from the cover page to the end.

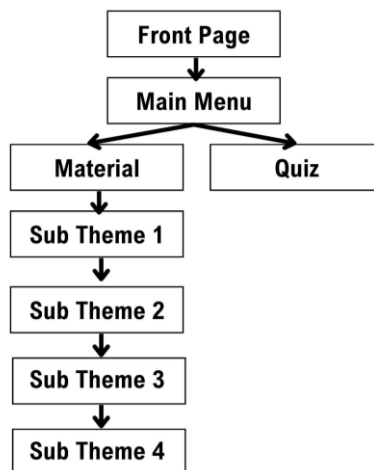


Figure 1: Layer Components

Define menus.

Researchers arrange menus and various buttons that will be used for applications. Each screen in this application has a home and back button to make it easier when children get bored learning to use the application. Children with mental retardation have different abilities from children in general, so they have a lower concentration level and understanding.

Create application workflows.

The researcher compiled an application workflow according to the ability of mentally disabled children to operate it. At this stage, the researcher makes links between buttons to make it easier for mentally disabled children to use this application.

Production stage

At this stage, the researcher makes an application based on the material and conditions determined at the pre-production stage. Researchers use the Canva platform to create designs. This screenshot image is the home page of the application. The application uses bright colors and attractive shapes to motivate students to learn. This main menu has only one “next” button, directing students to the following menu. The main menu does not use identity fields because this still makes it difficult for grade 1 mentally disabled students.



Figure 2: Cover Page



Figure 3: Main Menu



Figure 4: Sub Menu

Figure 2 is a screenshot of the main menu where the researcher makes two main menus: materials and quizzes. Each student can choose the menu to be worked on by clicking one of the buttons. On this screen, animations are used on images of flowers to engage students in learning. The selection of letters uses Cambria because this type of letter is easy to remember. After selecting the learning material menu, they will be directed to choose material sub-themes which include 'Family Member,' 'Family Activities,' 'My Big Family,' and 'Family Togetherness.' They can choose one material from these four sub-themes. By selecting a sub-theme, they will be directed to the material menu of each sub-theme. This application uses exciting videos and pictures, and animations. Researchers use images, animations, and videos to help associate English words with objects familiar to children. Visual communication can help improve the understanding and memory of mentally disabled children. A lecture that integrates pictures or video images can help an individual learn and retain information more effectively (Kumar, 2010).

Sub-theme 1, "Family Members," contains introductions to family members at home. The material starts with Nani's Family. In this part, the students can recognize each family member and mention the name. Figure 5 shows the exercises related to students' family members. In this part, they can fill their name on the link provided. This part emphasizes students' ability to recognize their main family members' names. Researchers combine sound, animation, video, and writing in this sub-menu. Figure 6 highlights the activities of bolding the letter. The students can trace the letter with their fingers, and the application will shape it. The application uses the Multisensory method. Researchers use learning methods that involve various senses, such as hearing, sight, and touch. This combination of techniques can help mentally disabled children associate words with sensory experiences. Children can trace the shapes of letters and numbers by touching the screen. Children can make connections between writing and objects in quizzes. The multisensory method also involves the child's process in (1) repeating the sound that is heard; (2) feeling the shape made by sounds in the mouth; (3) making sounds and listening; and (4) writing letters (Supriatna, 2021).



Figure 5: Sub Menu 1, Family Member

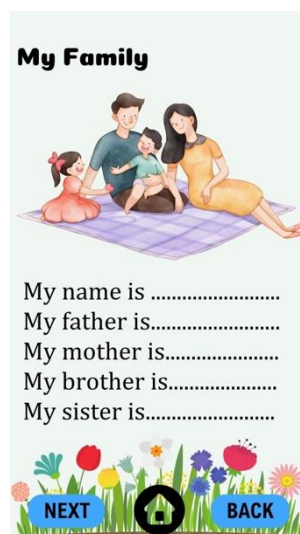


Figure 6: Sub Menu 1, Family Member (2)



Figure 7: Sub Menu 1, Family Member (3)

The second sub-menu explains the activities held together by family members. An example is the activities in the afternoon. The students can read a short paragraph discussing the exercises at home. Then, they can tell their own story. The parents can guide the students in making their stories. The application allows collaboration between children and parents. This application is Android-based so parents can download and install it. That way, children and parents can learn together. Not only helping children learn, but parents also provide strong bonding with children. Parents should be more intensive in assisting, accompanying, and guiding their children, especially children with special needs, to enhance their motivation and academic achievement (Bariroh, 2018). It is also essential to choose the proper communication techniques with the parents of children with disabilities to successfully provide support (UNICEF, 2014b). The researcher recommended that both teachers and parents of the intellectual disabilities students should cooperate to develop the students' adaptive and functional academic skills (Tahan, 2022).

Animations are inserted in this application to improve the student's interest in learning English. The application supports the repetition of material. Children with mental retardation may need repetition to reinforce learning. Applications allow children to learn from small parts of material little by little. Repetition and feedback methods can support slow learners' learning. Slow learners' learning achievement increases and has a high enthusiasm for learning even though it takes a lot of time to repeat the material. Slow learners are disciplined in complying with existing school rules and discipline to keep learning (Indarsari & Utomo, 2022).

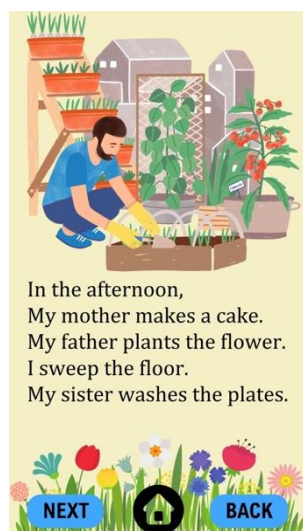


Figure 8: Sub Tema 2, Family Activities



Figure 9: Sub Tema 2, Family Activities (2)



Figure 10: Sub Tema 2, Family Activities (3)

The application uses word visualization. The application helps students learn new vocabulary by visualizing words, the arrangement of letters in words, and letters. This helps them in writing the word. to help mentally disabled children grasp the content expression by visualizing that content (Kılıçaslan et al., 2008). Besides, the application uses contextual material. Researchers make applications with objects and activities close to children, for example, by talking about things around them, activities they are doing, or simple questions about themselves.

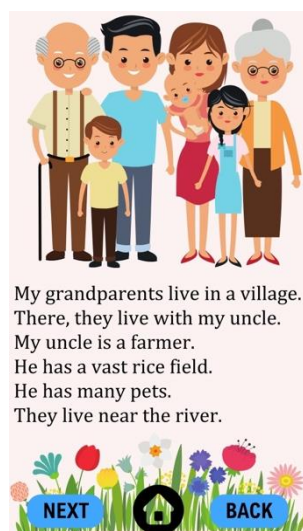


Figure 11: Sub Tema 3, My Big Family

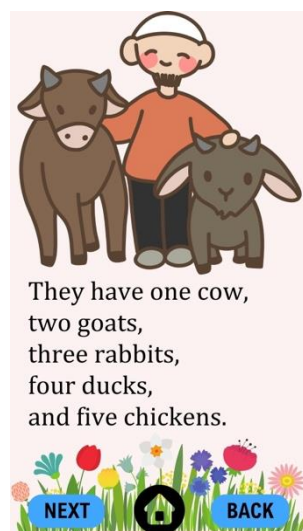


Figure 12: Sub Tema 3, My Big Family (2)

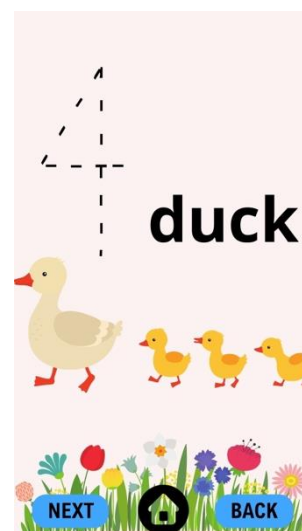


Figure 13: Sub Tema 3, My Big Family (3)

The third sub-menu defines the big family. The students learn about the other family members, including aunt, uncle, and cousin. The menu starts with a short passage about grandparents. In this sub-menu, the students also learn about numbers. The short story tells about their uncle's pets, and the students can learn about the pet's name and number. They were also invited to trace the shape of numbers.



Figure 14: Sub Tema 4, Family Togetherness

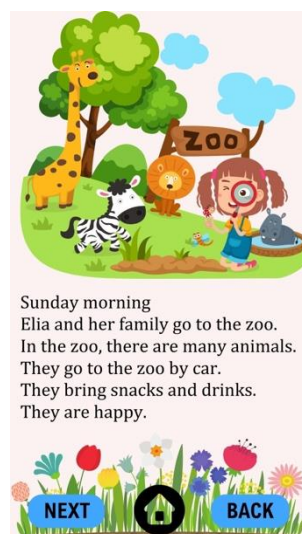


Figure 15: Sub Tema 4, Family Togetherness (2)



Figure 16: Sub Tema 4, Family Togetherness (3)

The fourth sub-theme explains the story of big family togetherness. They go to the zoo together. In this passage, they learn about the name of animals. The reading skills were also treated well in the section.

Product finalization stage

At this stage, the researcher goes through the following steps:

1. The design from Canva is saved with a PowerPoint file.
2. After it opens on the PowerPoint menu, the researcher uploads it using Spring Solutions
3. after the process, the output file is HTML5.
4. After that, the HTML5 file is created by the application using the APK builder.
5. The application is complete and can be installed on Android.

CONCLUSION

This study uses the concept of product development by creating a prototype of an English learning application for mentally disabled children. Products are made in three stages, namely, the pre-production stage, the production stage, and the product finalization stage. In the pre-production stage, the researcher makes learning materials, outlines the layer division, defines menus, and creates an application workflow. At the production stage, the researcher makes an application design that includes the main menu, sub-menus, and application workflow. Researchers use CANVA to design and use the iSpringsolutions application to create an application workflow. After the application is finished, the researcher finalizes the product using the APK Building application, so HTML5 is converted into a file with the .apk extension to open it on Android. After the application was finished, the researcher discussed with the teacher to get input for developing this prototype product.

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An Analysis of Local Wisdom-Based Learning Media Development

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Abstract

This research aims to analyze the results of developing learning media based on local wisdom. The method in this research is literature study research. The results of this research indicate that the development of learning media based on local wisdom is in the form of pop-up book media. The results of the validation of the development of learning media were declared very valid. The use of this learning media is for learning material about the cultural diversity of my people in class IV elementary school, increasing the learning motivation of class IV elementary school students, so that students are interested in learning using media, increasing understanding of concepts in thematic learning, and as a reinforcement of mutual cooperation character education for elementary school students.

Keywords: learning media, local wisdom, pop up books

INTRODUCTION

Learning media (Ulfa and Nasryah, 2020) have an important role in the learning process, with media student motivation can be further increased, apart from that students can also observe directly and information during learning can continue to be repeated according to needs. Media is also useful for teachers in delivering learning material. With the right media the learning process can take place effectively and learning objectives are more easily achieved. Sholeh (2019) explains that media is an important component in the learning process to support learning activities that are designed in accordance with curriculum demands, characteristics of facilities and demands for solving learning problems, and certain media for which formulas have been made. The use of media will help teachers and students in the learning process. By using appropriate media that suits learning needs, learning objectives will be easily achieved.

Media is one of the tools used by teachers in the learning process to convey teaching material to students. We can note the benefits of media in the teaching and learning process as follows: 1) It can help ease learning for students and ease teaching for teachers. 2) can be realized in concrete form. 3) Teaching and learning activities are not boring and not monotonous. 4) All sensory organs can interpret and participate in dialogue so that the weakness of one sense can be balanced by the strength of other senses (Rohani, 2019). Furthermore, Kartini, et al. (2020) stated that teaching media can stimulate children's thoughts, feelings, attention and abilities, so that they can help the teaching and learning process. Learning media is also a means in the learning process to achieve the desired learning outcomes.

Arip and Aswat (2021) explain that the use of media in learning is to convey messages so that it can stimulate students so that the learning process occurs. The use of learning media that is not optimal can influence the implementation of learning. Lesson material delivered using media is more effective than learning without using media. With the learning media available at school, it is hoped that students will be more interested in studying the subject matter presented so that it can increase students' interest in learning and it is hoped that students' learning experience can increase.

Learning media can be developed from the surrounding environment to strengthen retention of student learning experiences. One of them is the development of learning media based on local wisdom. Habba (Sugiarti and Hayati, 2019) defines local wisdom as a variety of cultural riches that grow and develop in a society that are known, trusted and recognized as important elements capable of strengthening social cohesion among community members. Local wisdom that can be used as a learning medium is the story of the origin of the name of an area.

According to Fajarini (Jamil et al., 2021), local wisdom is a view of life and knowledge as well as various life strategies in the form of activities carried out by local communities in responding to various problems in meeting their needs. In foreign languages it is often conceptualized as local policy "local wisdom" or local knowledge "local knowledge" or local intelligence "local genius". Meanwhile, referring to the Big Indonesian Dictionary, wisdom means wisdom, intelligence as something needed in interaction. The word local, which means a place or in a place or in a place that grows, exists, lives something that may be different from other places or is found in a place that has value that may be local or may also be universal. This research aims to analyze the results of developing learning media based on local wisdom.

METHOD

The method used in this research is literature study research. Literature study in this research is a series of activities relating to methods of collecting library data, reading and taking notes, and managing research data objectively, systematically, analytically and critically (Putri et al., 2020). Data collection was taken from 35 (thirty five) articles and then 5 (five) relevant articles were selected from national journals regarding the development of Pop up Book learning media based on local wisdom. Then data analysis is carried out in the form of content analysis, to obtain the necessary information and draw conclusions objectively and systematically.

RESULTS AND DISCUSSION

Results

Research conducted by (Sholeh, 2019), with the title Developing Pop-Up Book Media Based on Local Culture, Cultural Diversity of My Nation, Class IV Elementary School Students. Based on this research, it is known that the validity of the Pop-up Book media includes validation of learning media. The results of the first stage of validation by media experts obtained an average value of 73% and a media revision was carried out, in the second stage of validation an average value of 86% was obtained and the last stage of revision by media experts obtained an average value of 91%, so this product is included in the "very good" category and worth trying.

Next is research (Ulfa & Nasryah, 2020), with the title Developing Pop-up Book Learning Media to Increase Learning Motivation for Fourth Grade Elementary School Students. The results of this research are pop-up book learning media created using PicsArt Photo Studio and Microsoft Word 2010. Based on data analysis, the media expert's assessment was 3.33 in the "valid" category, the material expert's assessment was 3.60 in the "valid" category. the response of the teaching staff was 3.60 with the "valid" category, the student response assessment in trial I was 95.8% in the "very good" category and in the second test it was 98.3% with the criteria "very good". So that the pop-up book on animal and plant diversity meets the criteria for use as learning media.

Research by (Nabila et al., 2021) with the title "Development of Pop up Book Learning Media Based on Local Wisdom in Thematic Learning in Elementary Schools". Based on the validity analysis of pop up book media products based on local wisdom in thematic learning, it can be concluded that the pop up book media developed is in the valid category and is suitable

for testing in class V. Small group trials are carried out on students, giving students response instrument sheets that have been studied. At the small group trial stage the data analysis results obtained were very good with very practical criteria. Meanwhile, the responses of teachers and students in the practicality assessment with the results of the analysis of the data obtained were stated to be practical, also showing that students were interested in learning using media. So it can be concluded that from students' and teachers' responses to pop up book media based on local wisdom it is categorized as very practical. After analyzing the validation and practicality of the pop up book media, it can be concluded that the media developed is valid and practical for use in learning.

Research (Febriani, 2022) with the title "Development of Game-Based Pop up Book Media in Thematic Learning in Elementary Schools". The results of his research concluded that the learning media developed could improve understanding of concepts in thematic learning because game-based pop up books were presented with attractive picture displays that could be played by individuals or groups, so that students were very enthusiastic in learning, especially in thematic learning. Based on the results of the validation test, the media's validity in terms of material obtained a percentage of 88% which was in the "Very Eligible" category. Media validity in terms of media obtained a percentage of 90.83% which was included in the "Very Appropriate" category. And the level of media validity in terms of language obtained a percentage of 87.49% which was included in the "Very Appropriate" category. Student responses to the pop up book media developed at the individual trial stage obtained a percentage of 96.66% which achieved the "Very Good" criteria, limited trials obtained a percentage of 96.66% which achieved the "Very Good" criteria, and wide implementation trials obtained a percentage of 97.20% which reached the "Very Good" criteria. So that game-based pop up books can be used as a learning media solution and are suitable for use in thematic learning.

The fifth research was by (Puspita & Setyaningtyas, 2022) with the title "Development of Pop-up Book Media Based on Local Wisdom as Strengthening Mutual Cooperation Character Education". The results show that based on validation tests by experts, pop up book media based on local wisdom is categorized as very valid and can be implemented in small scale and field tests. Furthermore, the practicality test carried out by practitioners showed that the pop up book media was in the very practical category. Then, based on the effectiveness test, it shows that pop up book media is effective in improving the mutual cooperation character of elementary school students. The results of the hypothesis test show that there are differences in the students' mutual cooperation character before and after using local wisdom-based pop up book media. So it can be concluded that the use of pop up book media based on local wisdom is very valid, very practical and effective as a reinforcement of mutual cooperation character education for elementary school students.

Discussion

Based on research on the development of learning media based on local wisdom, all five studies developed pop-up book media. Research (Sholeh, 2019) uses the ADDIE model, research (Ulfa & Nasryah, 2020) refers to the Borg and Gall model, research (Nabila et al., 2021) uses the ADDIE model, research (Febriani, 2022) refers to the model developed by Borg and Gall, and research (Puspita & Setyaningtyas, 2022) with the ADDIE model.

The results of the validation of the development of learning media for the five studies were also declared very valid. Research (Sholeh, 2019) with validation results by material experts obtained an average score of 97% in the very good category, research (Ulfa & Nasryah, 2020) with trial results obtained an average percentage of 98.3% in the Very good category OK, research (Nabila et al., 2021) with validation results obtained an average of 0.78 which is included in the Aiken'V validity interpretation category, which is quite high or can be said to be valid, research (Febriani, 2022) with feasibility validation test results obtained an average of

88.78% in the very feasible category, and research (Puspita & Setyaningtyas, 2022) expert test results show an average percentage of 88.75% in the Very Valid category.

The use of learning media from the five studies is different, research (Sholeh, 2019) for learning material on the cultural diversity of my people in fourth grade elementary school, research (Ulfa & Nasryah, 2020) to increase learning motivation for fourth grade elementary school students, research (Nabila et al. , 2021) so that students are interested in learning by using media, research (Febriani, 2022) to increase understanding of concepts in thematic learning, and research (Puspita & Setyaningtyas, 2022) as a reinforcement of mutual cooperation character education for elementary school students.

CONCLUSION

The results of research on the development of learning media based on local wisdom from these five studies all developed pop-up book media. The results of the validation of the development of learning media for the five studies were declared very valid. The use of learning media from the five studies, namely; 1) for learning material about the cultural diversity of my people in class IV elementary school, 2) to increase learning motivation for class IV elementary school students, 3) so that students are interested in learning using media, 4) to increase understanding of concepts in thematic learning, and 5) as an educational amplifier the character of mutual cooperation in elementary school students. The results of this research can be followed up by developing learning media based on local wisdom in the form of applications that can be integrated into smartphones.

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Future Trends of Science and Education: The Use of AI in The New World

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ABSTRACT

This paper delves into the emerging trends of Artificial Intelligence (AI) in science and education, focusing on its potential impact on the future of these domains. AI's rapid evolution and remarkable capabilities across various applications herald its integration into science and education, promising to revolutionize research, teaching, and learning processes. By providing an overview of current AI implementations in these fields, examining related works, and exploring the implications, this study navigates the cosmic interplay of AI within science and education. Key challenges like ethical considerations and potential biases call for responsible AI implementation, emphasizing human-AI collaboration. Through collaborative efforts and a human-centric approach, we embark on a cosmic odyssey, charting a course toward a future where AI illuminates the pathways to enlightened progress and transformative growth in science and education.

Keywords: artificial intelligence, science, education, user experience

INTRODUCTION

Artificial Intelligence has garnered significant attention across various industries, including science and education. As AI technologies advance at a breakneck pace, the promise of their integration into these domains lures us into a realm of revolutionary transformation (Chauhan et al., 2022). The rapid evolution of AI has unfurled a cosmic symphony of possibilities, where science, education, and user experience become the stage for profound metamorphoses (Alam, 2021). AI unveils its potential to reshape these fields each year, bestowing transformative advancements and novel solutions that defy expectations. Stepping into the realm of science, AI-powered algorithms wield their magic, unravelling the mysteries hidden within vast datasets and unearthing patterns, correlations, and anomalies that would otherwise remain concealed (Panesar, 2019). The ripple effects of these insights reverberate across scientific disciplines like astronomy, genomics, and climate science, culminating in groundbreaking discoveries. Meanwhile, education becomes a cosmic canvas for AI's transformative strokes, as adaptive learning platforms and personalized content delivery systems cater to individual student's unique learning styles, paces, and preferences. With AI's mastery over administrative tasks, educators are liberated to focus on nurturing the seeds of knowledge and mentorship (Usmani et al., 2023).

This paper will explore the potential future trends of AI in science and education, highlighting the transformative impacts that this technology may bring. Enhanced data analysis, personalized learning experiences, and streamlined research processes emerge as radiant stars in the constellation of advantages. Like stardust, this paper aims to explore the current state of AI's cosmic journey within these domains, tracing its trajectory toward future trends and its hand in shaping the UX landscape. As we embark on this journey, we must navigate the cosmic dance between AI and humanity, holding to the compass of ethics and collaboration. Additionally, it highlights the importance of safely implementing AI, considering ethical considerations, and fostering human-AI collaboration for a sustainable and beneficial future.

RELATED WORK

Numerous studies have investigated the integration of AI in science and education, providing valuable insights into the potential benefits and challenges (Dwivedi et al., 2023; Pursnani et al., 2023). AI applications in science have shown promise in automating data analysis, accelerating drug discovery, and enhancing predictions in various fields. Similarly, AI has been explored in education to personalize learning experiences, automate administrative tasks, and improve the assessment process.

Future Trends: AI in Science and Education

The future of AI in science holds great promise. AI-driven predictive models are poised to revolutionize research by enhancing the accuracy and efficiency of forecasting in various domains (Wang & Yin, 2021). In climate science, AI-powered climate models can help predict weather patterns, extreme events, and potential impacts on ecosystems more precisely (Jain et al., 2023). Similarly, AI-enabled drug discovery platforms can potentially expedite the development of new pharmaceuticals by identifying promising compounds and optimizing drug design (Vatansever et al., 2021).

Moreover, Firouzi et al. (2021) stated that AI's ability to analyze complex data sets rapidly could lead to more efficient research processes, accelerating scientific progress and facilitating interdisciplinary collaboration. From high-energy physics to materials science, AI is expected to be increasingly critical in tackling complex challenges.

In the future, AI is expected to continue transforming the education landscape by offering personalized learning experiences to students. Adaptive learning platforms will dynamically utilize AI algorithms to adjust educational content, responding to individual learners' strengths, weaknesses, and preferences (Jaiswal & Arun, 2021). This personalized approach enhances student engagement, motivation, and academic outcomes, fostering a more effective and enjoyable learning journey.

Furthermore, AI-powered assessment tools will evolve to provide more nuanced and comprehensive evaluations of students' progress, enabling educators to tailor instructional strategies accordingly (Owan et al., 2023). These advancements will likely pave the way for a more inclusive and accessible educational ecosystem where learning is tailored to individual needs and diverse learning styles.

AI in UX Research: Enhancing User Experiences

User Experience (UX) refers to users' overall experience when interacting with a product, system, or service. It encompasses many factors, including ease of use, accessibility, responsiveness, visual appeal, and overall satisfaction. A positive UX is crucial for driving user engagement, loyalty, and the overall success of a product or service (Kim et al., 2013). UX can be categorized into various types, each catering to specific user interactions and contexts. Web UX optimises website user experiences, ensuring seamless navigation and engagement (Xinghai, 2023). Mobile UX aims to enhance user interactions with mobile applications, considering mobile devices' unique constraints and capabilities. Product UX encompasses the design of physical products, emphasizing functionality, aesthetics, and usability (Hu et al., 2022).

The UX design process comprises several iterative stages, beginning with comprehensive research and analysis before initiating the design phase. During the design phase, designers continuously improve the product, employing user feedback and usability testing to refine the user experience. Post-launch, the UX process involves ongoing evaluation and optimization based on user feedback, ensuring the product remains relevant and user-centric. Several core principles guide effective UX design. Simplicity emphasizes the importance of clear and

straightforward interactions, reducing cognitive load for users (Jönsson, 2023). Consistency ensures a uniform experience across different product sections, facilitating user familiarity and reducing confusion (Nadkarni & Gupta, 2007). Accessibility focuses on designing inclusive products usable by individuals with diverse abilities, ensuring a wider audience can benefit from the product's features (Patrick & Hollenbeck, 2021). Ultimately, a user-centric approach places the user's needs and expectations at the center of the design process, leading to a more engaging and satisfying experience (Chang et al., 2019).

According to Ashfaq et al. (2020), AI's integration into UX research has revolutionized how designers understand user preferences, behaviour, and pain points. AI-driven tools can analyze vast amounts of user data, uncovering valuable insights that inform design decisions. AI algorithms can predict user interactions, helping designers anticipate user needs and tailor experiences accordingly. Additionally, AI-powered sentiment analysis allows designers to gauge user satisfaction and identify areas for improvement in real-time, leading to continuous enhancement of the user experience.

Applications of AI

AI's integration with virtual reality (VR) and augmented reality (AR) technologies holds tremendous potential to elevate user experiences in immersive environments. AI algorithms can optimize VR simulations, enhancing realism and interactivity. For AR, AI can personalize the augmented content based on individual preferences, providing more relevant and engaging experiences. AI can create dynamic and challenging scenarios in gaming, adapting to players' skills and behaviours, thereby enriching the gameplay (Dobrovsky et al., 2019).

Several popular AI applications have transformed various industries, significantly impacting user experiences. Powered by AI natural language processing capabilities, Chatbots revolutionized customer service, providing instant responses and personalized assistance (Singh, 2023). Like those used by streaming platforms, recommendation systems utilize AI algorithms to understand user preferences and deliver personalized content suggestions, enhancing user satisfaction and engagement. Language translation applications employ AI-powered neural machine translation to bridge language barriers, fostering global connectivity and cross-cultural communication (Borgonovi et al., 2023). These examples highlight how AI technologies have streamlined processes, enhanced personalization, and enriched user experiences in different domains.

Safely Implementing AI: Best Practices

Safe and responsible AI implementation is essential to ensure AI technologies benefit users and society. Adopting transparency practices enables users to understand how AI algorithms make decisions and promote trust in AI-powered systems. Addressing algorithmic biases is critical to prevent AI technologies from perpetuating discriminatory outcomes. Implementers should prioritize data privacy, ensuring sensitive user information is handled securely and ethically. Additionally, adhering to industry standards and guidelines for AI development can ensure ethical practices and mitigate potential risks.

AI implementation raises important ethical considerations, such as the potential impact on privacy, security, and employment. Balancing the benefits of AI with its societal implications is crucial to prevent unintended negative consequences. Ethical AI design involves incorporating fairness, accountability, and transparency principles to ensure that AI systems are beneficial and inclusive (Umbrello & Van de Poel, 2021).

Promoting human-AI collaboration is key to harnessing AI's potential while respecting human expertise and decision-making. Rather than replacing human roles, AI can complement and augment human capabilities, allowing professionals to focus on more strategic tasks while

AI handles routine or data-intensive operations. Collaboration between AI and humans fosters creativity, innovation, and problem-solving, leading to novel and effective solutions.

DISCUSSION

Integrating AI in science and education has shown significant potential in transforming various aspects of these domains. In science, AI-driven algorithms have improved data analysis by identifying patterns, anomalies, and correlations in vast datasets (Seyhan & Carini, 2019). Furthermore, AI-powered predictive models have shown promise in forecasting outcomes in climate science, genomics, and materials research (Bohr & Memarzadeh, 2020). In education, AI has the potential to personalize learning experiences through adaptive learning platforms, identifying individual learning styles and tailoring content accordingly (Yarandi et al., 2013).

Moreover, AI can assist educators in automating administrative tasks, allowing them to focus more on teaching and student engagement (Chan & Tsi, 2023). However, ethical concerns regarding data privacy and algorithmic biases remain pertinent challenges that must be addressed to ensure responsible AI implementation.

CONCLUSION

The integration of AI in science, education, and user experience has the potential to revolutionize industries and significantly improve human interactions with technology. AI-powered predictive models in science will accelerate research and drive breakthroughs in critical fields. AI's personalization capabilities in education will enhance learning experiences and support educators in their roles. Moreover, AI's impact on user experience will lead to more engaging, personalized, and accessible products and services.

Emphasizing ethical considerations, human-AI collaboration and user-centric design will be essential in harnessing AI's full potential for the betterment of society in the new world. By adopting responsible AI practices and ensuring ongoing evaluation and improvement, we can create a future where AI technologies contribute positively to human progress and well-being.

The dawn of AI in science and education ushers in a new era of boundless promise. As AI technologies paint the horizon with possibilities, our navigation demands a steady hand, considering ethical implications and transcending potential biases. In this cosmic endeavour, collaboration becomes the celestial thread that binds researchers, educators, policymakers, and technologists. Together, we embark on a divine symphony, weaving the harmonies of AI into the very fabric of science and education, forging a future where AI's radiance propels us to the forefront of human progress.

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Simple Web Application Programming Skills Training with the Website www.w3schools.com

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Abstract

Having web application programming skills allows you to develop and expand your knowledge of technology and freedom in creating Technological works. How to Create a web Application is a complex process. However, several techniques can help students learn and code in an efficient and fun way. Learn web application programming and practice through the web platform www.w3schools.com where you can practice coding and practice through the examples available on the website. Content is easy to access, content is updated, and supports new technologies. continuously. The content of Kanduggan is updated in line with changes in programming languages and widespread technology. so you can have the latest information. It is possible to study anytime, anywhere, and by using various devices such as desktops, tablets, or smartphones. There are many online resources available to learn web application programming with responsive and user-friendly designs. Some resources you can take advantage of.

Keywords: web applications, coding, programming

INTRODUCTION

Learning about web application programming is very important in this era of technology and the use of web applications is growing rapidly. This is why it is relevant to the success of businesses and software developers. Therefore, knowledge and skills in creating and developing web applications are very important. The main reason why this field of study is important, (Agustinus Budi Santoso, 2023) studying web application programming will prepare you to work in the information technology industry with the opportunity to work as a web developer web designer project manager web business owner or other related profession helps students understand and apply new technologies. (Kansophon Nattakant, 2022) for use in development. Build the ability to solve problems and be creative. and have the opportunity to work in related careers because this industry is growing rapidly and requires people with the knowledge and skills to develop professional web applications. (Jeraporn Padee, 2022) Studying and updating students' knowledge in creating web application programs will help students adapt and update to technological changes. It also includes a new set of tools and techniques. Repeated study of web application programming will help students learn and adapt to these things over time. Programming or coding skills are in great demand lately. (Muhammad Taufik Dwi Putra, 2022) Whether it's a developer career where coding skills are considered a skill that everyone in this field must have, or the Data line, whether it's Data Analyst, Data Scientist, or Data Engineer if you have programming skills that will be used to retrieve data (Query) and manage basic data before taking this data for further analysis

Learning a programming language related to web applications, such as HTML, CSS, JavaScript, Python, Ruby, PHP, or ASP.NET, will help you understand the structure and what can be done in each language. Many tools and frameworks also help develop web applications such as React, Angular, Vue.js, Django, Flask, and Laravel. Learn and practice to become a person who knows how to use the right programming language. Learning a web application

language is a complex process. (I Gusti Ayu Mirahyanti, 2022) However, several techniques can help students learn and code in an efficient and fun way. I believe that many people will feel worried. or afraid of programming Because it's like a new world with many different languages, it seems similar. But it's not quite the same. by starting to practice programming Everyone can start by reading articles. to open basic knowledge or online learning that will allow you to practice code step by step because developing coding skills must be tried. (Tiara Indah Wicaksana, 2022) This method, in addition to systematic learning, also allows those who do not have the basics to be able to gradually Practice programming to the principles of thinking and programming logic. will have similarities making starting to write one language This will make learning the next language much easier. There are many popular languages to start learning to program. In this article, I will introduce 5 popular basic languages, namely HTML, CSS, JavaScript, PHP, and SQL (Wahyudi, 2022).

This article aims to show the benefits of learning and practicing programming languages through the website www.w3schools.com. is a popular and useful resource for learning and practicing web application programming languages such as HTML, CSS, JavaScript, PHP, and SQL. The site offers interactive tutorials, code examples, and practical exercises to help you understand and master the basic and advanced concepts of these languages. Here are the steps you can follow to learn a web application programming language.

HTML MENU

HTML Introduction: An introductory guide that provides a basic understanding of HTML, the structure of HTML elements, and how to create simple web pages.

HTML Elements: This section explains various HTML elements such as `<p>`, `<a>`, ``, `<table>`, and many more. You can learn how to use these elements to build web pages.

HTML Attributes: Tutorial on HTML attributes that provide additional information or change the behavior of HTML elements, such as the `href` attribute on links and the `src` attribute on images.

HTML Headings: This section explains the heading elements (`<h1>` to `<h6>`) which are used to mark heading levels in HTML documents.

HTML Paragraphs: Tutorial about the `<p>` element which is used to display text in a paragraph on a web page.

HTML Links: A guide to creating links using the `<a>` element, including links to other pages, links to the same section within a page, and external links.

HTML Images: This section explains how to display images using the `` element and how to set attributes such as `src`, `alt`, and `width` to control the image's appearance.

HTML Tables: A guide on creating and setting up tables using the `<table>`, `<tr>`, `<th>`, and `<td>` elements, including setting column widths, merging cells, and adding borders.

HTML Forms: Tutorial on using form elements such as `<form>`, `<input>`, `<select>`, and `<button>` to create interactive forms and collect user input.

HTML Semantics: This section explains HTML elements with semantic meaning such as <header>, <nav>, <main>, <article>, <section>, and others. You can learn how to use these elements to clarify the structure and meaning of content on a web page.

Example of writing HTML code

To practice HTML coding skills, you can see that the website has been divided into 2 parts on the left is the coding page where you can edit the HTML script and see the results. Immediately on the right side, click the Run menu.

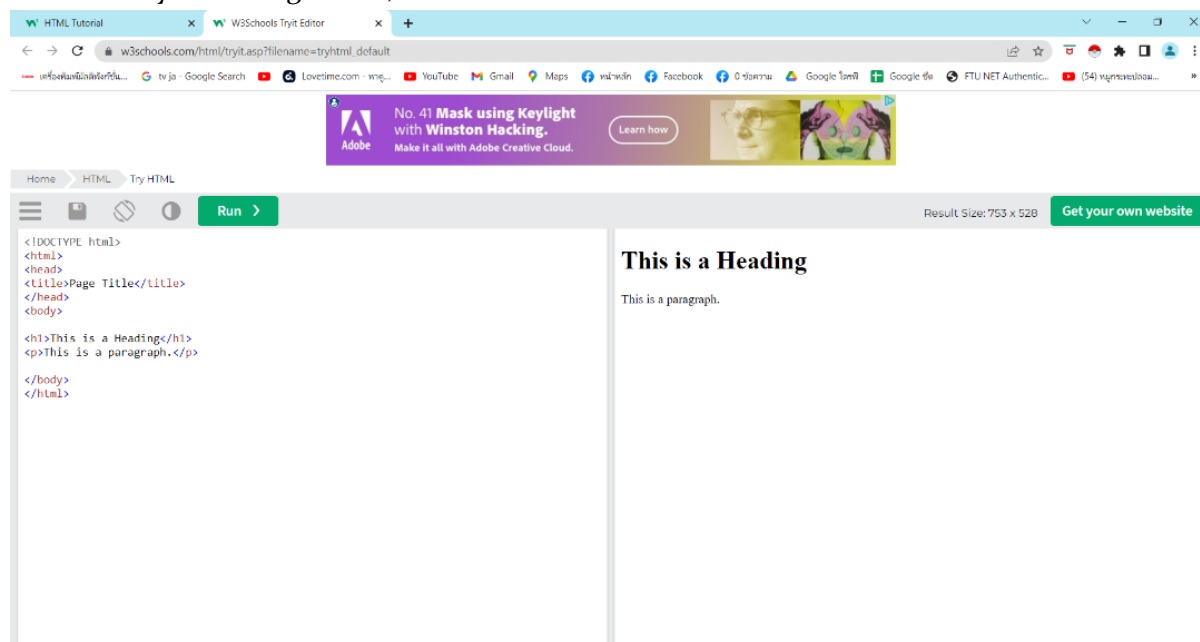


Figure 1. Example of writing HTML code

CSS MENU

There are several topics in the CSS menu that you can learn and explore. Here are some topics that cover various aspects of CSS:

Introduction to CSS: An introduction to CSS and the importance of using CSS to organize the appearance and style of elements on a web page.

CSS Syntax: An explanation of CSS syntax including selectors, properties, and values. You will learn how to use CSS rules to apply styles to HTML elements.

CSS Selectors: A guide on different types of CSS selectors such as element selectors, class selectors, ID selectors, attribute selectors, and other advanced selectors. You can learn how to select and influence specific elements in a web page.

CSS Properties: Tutorial covering various CSS properties, including color properties, font size, margins, padding, layout, background, borders, animations, and more. You can learn how to change the appearance and behavior of elements using the right CSS properties.

CSS Box Model: An explanation of the Box Model concept, which includes elements such as margin, border, padding, and width/height. You will learn how to manage and manipulate the boxes that surround HTML elements.

CSS Position and Layout: This section explains the layout of elements in a web page using position properties such as static, relative, absolute, and fixed. You can learn how to arrange elements with precision and control page layout.

Responsiveness and Media Queries: A guide on how to create responsive designs that can adapt to a variety of screen sizes and devices. You'll learn how to use media queries and other responsive techniques in CSS.

CSS Animation: Tutorial on how to create animated effects using CSS, including transformations, transitions, and key-state animations. You can learn how to give interesting visual effects to web page elements.

CSS Pseudoclasses and Pseudoelements: This section explains the use of pseudoclasses and pseudoelements in CSS, which allow you to apply custom styles to elements based on their state or position.

CSS Grid and Flexbox: Tutorial on using CSS Grid and Flexbox to create responsive and complex layouts. You will learn how to arrange elements in rows and columns using a grid or flexbox system.

Example of Writing CSS code

To practice CSS coding skills, you can see that the website has been divided into 2 parts on the left is the coding page where you can edit the CSS script and see the results. Immediately on the right side, click the Run menu.

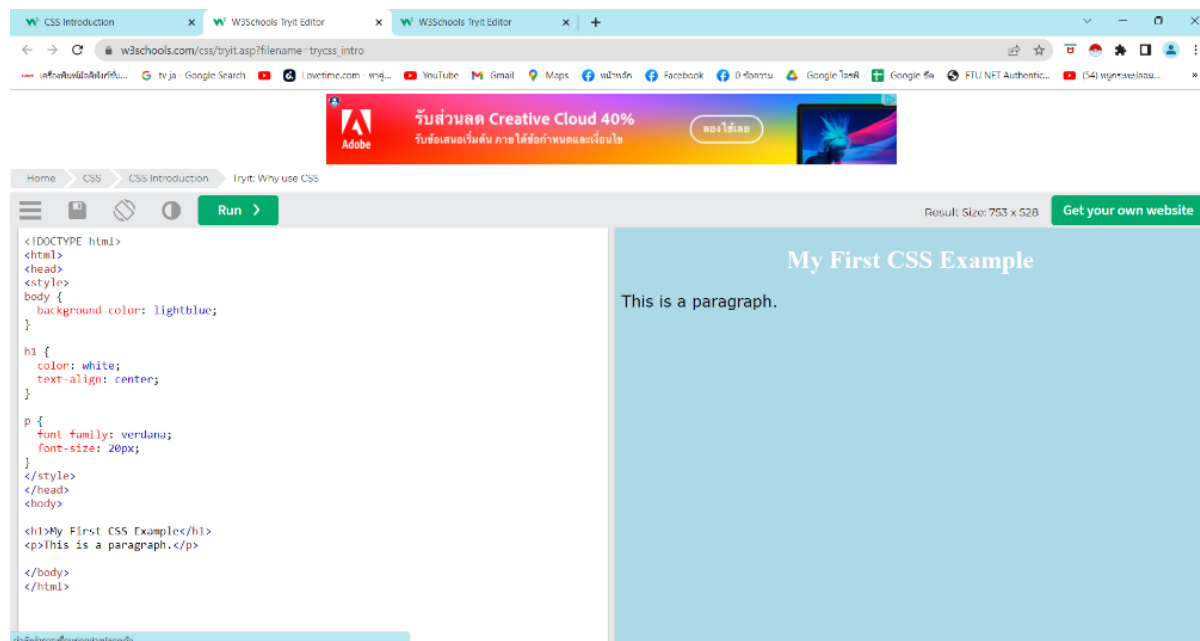


Figure 2. Example of writing CSS code

JAVASCRIPT MENU

There are several topics related to JavaScript that you can learn and explore via the JavaScript menu. Here are some topics that cover various aspects of JavaScript:

Introduction to JavaScript: An introduction to JavaScript as a programming language used to create interactive web pages and control site behavior.

JavaScript Syntax: An explanation of basic JavaScript syntax, including variables, data types, operators, control structures, and functions. You will learn how to write valid and effective JavaScript code.

JavaScript Objects: This section describes objects in JavaScript, including built-in objects such as Math, Date, Array, and String. You will learn how to use and manipulate objects to solve problems in web development.

JavaScript Arrays: A tutorial on arrays in JavaScript, which allows you to store and manage sets of data. You can learn how to create, manipulate, and access elements in an array.

JavaScript Functions: This section explains functions in JavaScript, including how to define functions, sending and receiving parameters, return values, and the use of anonymous functions.

JavaScript Event Handling: Tutorial on how to handle events in JavaScript, such as button clicks, form filling, or page scrolling. You'll learn how to write scripts that respond to user interactions.

JavaScript DOM Manipulation: A guide to how JavaScript can be used to manipulate and change HTML elements and web page structure via the Document Object Model (DOM).

Ajax JavaScript: This section explains the Ajax (Asynchronous JavaScript and XML) technique that allows communication between a web page and the server asynchronously without the need to reload the entire page.

JavaScript Form Validation: A tutorial on form validation using JavaScript, which allows you to check and validate user input before the data is sent to the server.

Responsive Web Programming: A guide on how to use JavaScript to create responsive web designs, such as screen size detection, element manipulation, and ensuring optimal display on various devices.

Example of Writing JAVASCRIPT code

To practice JavaScript coding skills to change attribute values will notice that the website has been divided into two parts on the left is a JavaScript coding page where students can edit JavaScript scripts and see the results. Immediately on the right side, click the Run menu.

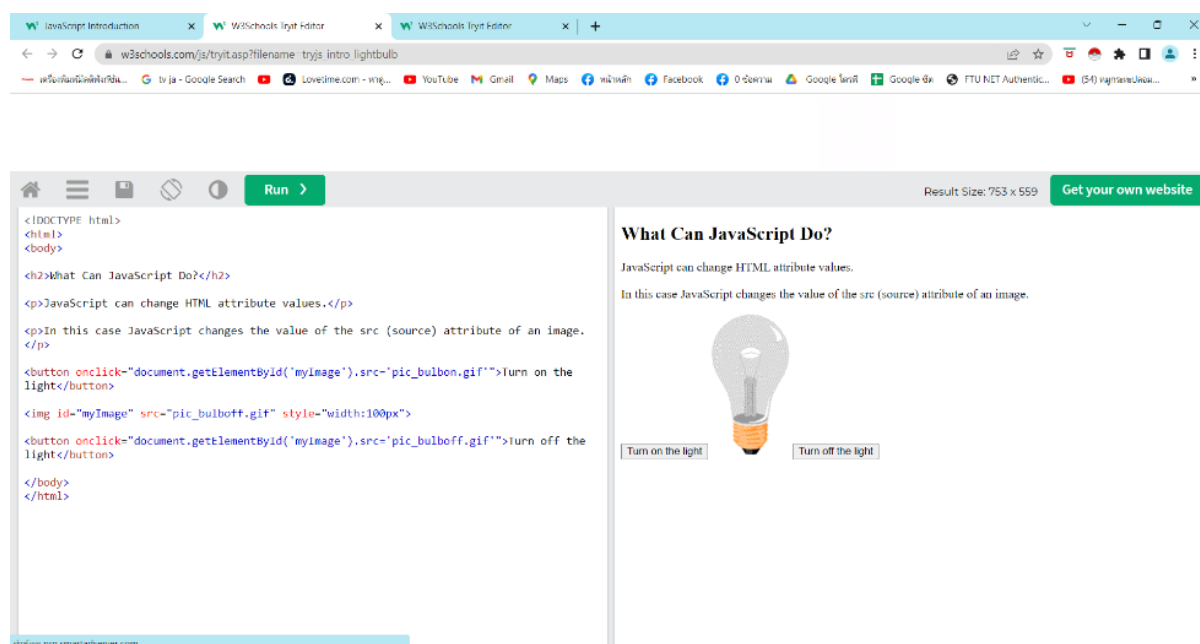


Figure 3. Example of writing JAVASCRIPT code

PHP MENU

There is a "PHP Tutorial" menu that allows you to learn and understand various aspects of the PHP programming language. Here are some topics that you can learn through the "PHP Tutorial" menu:

Introduction to PHP: An introduction to PHP as a popular server-side programming language. You will learn the uses and benefits of using PHP in web development.

PHP Syntax: A tutorial on basic PHP syntax, including variables, data types, operators, branching, and loops. You will learn how to write valid and effective PHP code.

PHP Functions: This section explains functions in PHP, including how to define functions, use parameters, return values, and function calls.

PHP Form Handling: Tutorial on processing form data using PHP. You will learn how to take data submitted by users via HTML forms and process it using PHP.

PHP File Manipulation: A guide to how PHP can be used to read, write, and manipulate files on a server. You will learn how to open files, write data to files, and perform other operations.

PHP String Manipulation: Tutorial on how to process and manipulate strings using the functions and methods provided by PHP. You will learn operations such as string concatenation, truncation, search, and replace.

PHP Database Connection: This section explains how to use PHP to connect to a database and run queries. You will learn connections with MySQL databases and how to retrieve, insert, update, and delete data.

PHP OOP (Object-Oriented Programming): Tutorial on object-oriented programming (OOP) in PHP. You will learn basic OOP concepts such as classes, objects, inheritance, and encapsulation.

PHP Validation and Security: A guide to data validation techniques and security practices in PHP development, such as validating user input, avoiding SQL Injection attacks, and protecting against XSS (Cross-Site Scripting) attacks.

PHP Error Handling: This section explains error handling and troubleshooting in PHP development. You will learn how to resolve and manage errors that may occur in PHP code.

Example of Writing PHP code

To practice PHP coding skills to display using the command `<?php echo "My first PHP script!"; ?>` will see that the website has been divided into two parts on the left is the PHP coding page where you can edit the PHP script and can see the results. Immediately on the right side, click the Run menu.

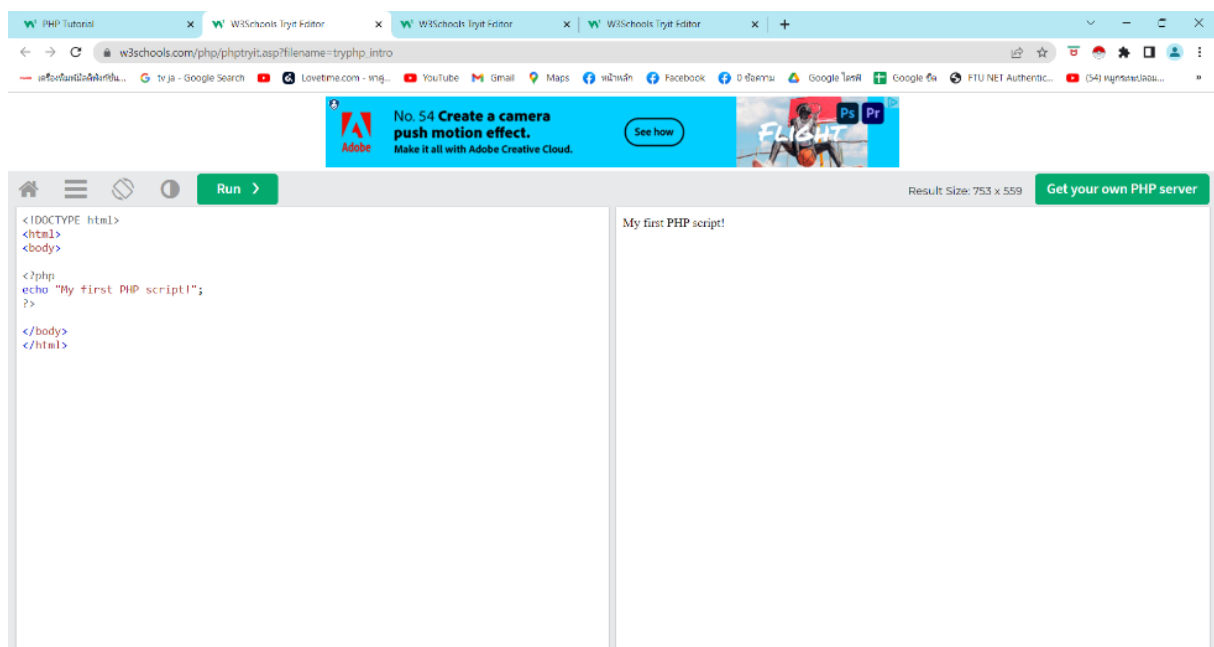


Figure 4. Example of writing PHP code

MENU SQL

Terdapat menu "SQL Tutorial" yang memungkinkan Anda untuk mempelajari dan memahami berbagai aspek bahasa SQL (Structured Query Language). Berikut adalah beberapa topik yang bisa Anda pelajari melalui menu "SQL Tutorial" tersebut:

Pengantar SQL: Pengenalan tentang SQL sebagai bahasa yang digunakan untuk mengelola dan mengoperasikan database. Anda akan mempelajari kegunaan dan manfaat penggunaan SQL dalam pengembangan aplikasi web.

SQL Syntax: Tutorial tentang sintaks dasar SQL, termasuk pernyataan SELECT, INSERT, UPDATE, DELETE, dan lainnya. Anda akan belajar cara menulis pernyataan SQL yang valid dan efektif.

SELECT Statement: Bagian ini menjelaskan tentang pernyataan SELECT dalam SQL, yang digunakan untuk mengambil data dari tabel dalam database. Anda akan mempelajari cara menentukan kolom yang akan diambil, penggunaan klausa WHERE, pengurutan hasil, dan penggunaan fungsi agregat.

Clauses SQL: Panduan tentang klausa-klausa dalam SQL seperti WHERE, ORDER BY, GROUP BY, HAVING, dan JOIN. Anda akan mempelajari cara menggunakan klausa-klausa ini untuk mengatur, memfilter, dan mengelompokkan data dalam query SQL.

Functions SQL: Tutorial tentang fungsi-fungsi dalam SQL, seperti fungsi agregat (SUM, COUNT, AVG), fungsi string (CONCAT, LENGTH, SUBSTRING), fungsi tanggal dan waktu (DATE, TIME, TIMESTAMP), dan banyak lagi. Anda akan mempelajari cara menggunakan fungsi-fungsi ini dalam pernyataan SQL.

Joins SQL: Bagian ini menjelaskan tentang operasi join dalam SQL, termasuk inner join, left join, right join, dan full join. Anda akan mempelajari cara menggabungkan data dari dua atau lebih tabel berdasarkan kriteria tertentu.

SQL Constraints: Tutorial tentang pembatasan (constraints) dalam SQL, seperti PRIMARY KEY, FOREIGN KEY, UNIQUE, NOT NULL, dan lain-lain. Anda akan mempelajari cara menerapkan pembatasan pada kolom-kolom dalam tabel untuk memastikan integritas data.

SQL Transactions: Panduan tentang transaksi dalam SQL, yang memungkinkan Anda melakukan serangkaian operasi database yang saling terkait sebagai satu kesatuan. Anda akan mempelajari cara memulai, menyelesaikan, dan membatalkan transaksi dalam SQL.

SQL Views: Bagian ini menjelaskan tentang tampilan (views) dalam SQL, yang memungkinkan Anda membuat "pandangan" virtual dari data dalam tabel. Anda akan mempelajari cara membuat, mengubah, dan menggunakan tampilan dalam query SQL.

SQL Indexes: Tutorial tentang indeks dalam SQL, yang digunakan untuk meningkatkan kinerja pencarian dan pengurutan data dalam tabel. Anda akan mempelajari cara membuat dan menggunakan indeks dalam database.

Contoh Menulis kode SQL

Untuk melatih keterampilan pengkodean SQL memilih data dari tabel database menggunakan pernyataan `SELECT * FROM Customers;` adalah memilih data dari database bernama Customers, Anda dapat melihat bahwa situs web dibagi menjadi 2 bagian. di sebelah kiri adalah halaman pengkodean SQL anda dapat mengedit skrip SQL dan dapat melihat hasilnya. Segera di sisi kanan, apabila klik menu Run.

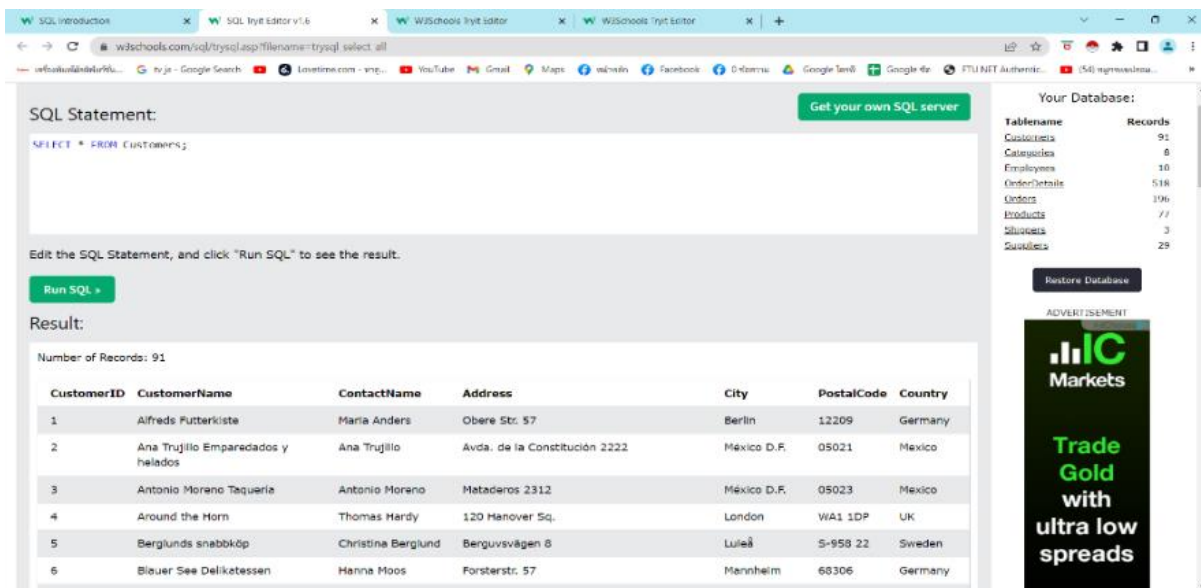


Figure 5. Example of writing SQL code

Problem

When undergoing training to create web applications with the Sublitex 3 program, of course, you will encounter various problems such as the following.

1. The Sublitex 3 program does not have a display page, which makes students want to understand more and are discouraged from continuing to learn.
2. Sublitex has a learning trainer (coach) in the system who can help guide and supervise student learning. The trainer will provide suggestions and correct mistakes. but the content available on the platform Some content may be restricted.
3. Students cannot write their trainers because there are no examples or explanations.

CONCLUSION

Learn via the website <https://www.w3schools.com>. This is very important because It provides various content on the web, HTML, CSS, JavaScript, PHP, SQL. Which helps them access the information they need and learn about the technology. Easy with clear explanations and usage examples. It uses images and coding examples to help learners understand and apply easily. Experiment and practice. There is a section of sample usage scripts that you can try yourself. can modify and add code to learn and test knowledge. always have access to the latest updates on technology and the current status of the website. It has a presentation style that is easy to understand and compatible with general learners. with content that conveys basic and advanced knowledge Learners can learn at their own pace and quickly expand knowledge. convenient online learning is Open for access anytime, anywhere. Be it via desktop, tablet, or smartphone. It provides learners with the resources and information they need to develop their web writing skills. The website also allows students to learn more about topics of interest at their own pace.

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