Differentiated Instruction, Equity, and Inclusion in Language Education

Thao Quoc Tran
HUTECH University, Vietnam

Tham My Duong
Ho Chi Minh City University of Economics and Finance, Vietnam

IGI Global
Scientific Publishing
Publishing Tomorrow's Research Today

Table of Contents

Detailed Table of Contents

Ha T. V. Nguyen, Ton Duc Thang University, Vietnam
Kristin Javorsky, Mississippi State University, USA

This chapter examines the limitations of Vietnam's National Foreign Language
Project 2020, particularly the ongoing struggle of many students to communicate
effectively in English despite years of instruction. The chapter argues that the heavy
reliance on rote memorization of vocabulary, a widespread practice in Vietnamese
EFL education, leads to superficial learning and favors certain students over others. It
explores key challenges in Vietnam's EFL landscape, such as teachers' pedagogical
content knowledge, the quality of instructional materials, and the lack of effective
student learning strategies. The chapter advocates replacing rote memorization
with more equitable and effective approaches along with embedding the four-part
processing model for word recognition and the four strands principle. It concludes
with practical pedagogical strategies to illustrate how these methods can be applied
in the Vietnamese context.

Brian Hibbs, Dalton State College, USA

This chapter overviews the impact of a course unit on translanguaging within an
ESOL teaching methodology course which was designed to advance pre-service
elementary education teachers' awareness of the translanguaging approach in an effort
to support their understanding and appreciation of the importance of acknowledging
multilingual learners' linguistic funds of knowledge. The chapter begins with a
review of the concepts of identity and power and the role translanguaging plays with
respect to these phenomena. The chapter provides a summary of relevant literature
concerning the integration of translanguaging into teacher education and then
moves into a description of the components of the course unit on translanguaging,
the research context for the study, and preliminary findings. Finally, the chapter
ends with a description of the relevancy of the investigations' findings for both
researchers and teacher educators.

Collaborative learning performs an essential role in English language education as it encourages student involvement in group discussions. Translanguaging is seen as a tool to foster active collaboration among learners. Additionally, translanguaging demonstrates great potential to stimulate inclusive language education which values students' linguistic diversity in English classrooms. This chapter examines Vietnamese tertiary teachers' perception of deploying translanguaging to enhance students' collaborative learning. This qualitative study involved three teachers in partaking in semi-structured interviews. The thematic analysis approach was employed to analyze data. The findings disclosed that teachers believed that adopting translanguaging pedagogy could develop learners' collaborative learning, leading to ideas generation, a pleasant learning environment, and inclusiveness. Teachers' difficulties in implementing translanguaging were also uncovered. Pedagogical implications are suggested for policymakers, teachers, and students to promote translanguaging as inclusive education.

Oneness ideologies in teaching have lead to parochial pedagogy and methodology in learning institutions worldwide. In spite of the current transitions from physical contact between supervisors and students in many African universities, little is known about the effectiveness of using Zoom as a digital platform for supervision retreats. This chapter documents 10 students' multiple voices on their digital experiences in their Ph.D. research literacy programme organized by a south African university on Multilingual Education and Literacies over a three-month period. Students' oral narratives through interviews and their metacognitive reflections reveal that group supervision was effective . Digital platforms have enabled supervision to unveil best methodological practices in post-colonial contexts. While detailing the pillars of ubuntu research methodology, the chapter also disrupts the orthodox and colonizing research discourses based on one-oneness ideology. In the end, we make recommendations for practice and further research are highlighted.

>   *Thao Quoc Tran, Ho Chi Minh City Open University, Vietnam*
>   *Tuyen Kim T. Nguyen, University of Foreign Languages and Information*
>   *Technology (HUFLIT University), Vietnam*

The chapter presents a study exploring Vietnamese L2 students' perceptions of translanguaging in Business English courses in which the equitable and inclusive learning environment is fosted. The mixed methods study was conducted at a higher education institution in Vietnam. semi-structured interview for data collection. A group of 108 Vietnamese L2 learners were involved in answering a closed-ended questionnaire, and nine of them were intentionally invited for semi-structured interviews. The collected data were quantitatively processed by SPSS software in terms of descriptive statistics and qualitatively analysed in terms of the content analysis approach. The findings showed that Vietnamese L2 learners showed positive perceptions of translanguaging in Business English courses. Their cognitive dimension in perception of translanguaging was higher than their emotional and behavioral dimensions. This chapter highlights translanguaging as one of the teaching approaches to instill equity and inclusion in Business English courses.

>   *Duyen Nguyen Thien Ngo, Ho Chi Minh City University of Economics*
>   *and Finance, Vietnam*
>   *Mi Ha Thao Nguyen, University of Finance - Marketing, Vietnam*
>   *Tham My Duong, Ho Chi Minh City University of Economics and*
>   *Finance, Vietnam*

The present study explores the potentially beneficial washback effects of e-portfolio intervention for speaking assessment in an EFL class with a focus on inclusivity. Such data were obtained from the narrative form and semi-structured interviews with ten teachers and four administrators. The study's findings revealed positive washback effects. The teachers claimed a change of perceptions regarding the utilization of the e-portfolio assessments for students and the welcoming university climate that embraces all students' input while the administrators agreed on the possible advantages. This study pulls together stakeholder considerations showing that mutual influence, constant iteration and a high level of administrative support are required to maximize learning outcomes and maintain the deployment of e-portfolios as an assessment method for assessing students' English-speaking competence inclusively.

Chapter 7

    Luki Emiliya Hidayat, Sekolah Menengah Kejuruan Negeri 10 Malang,
        Indonesia
    Suci Nugrah Amalia, Universitas Negeri Malang, Indonesia
    Wahyu Indah Mala Rohmana, Universitas Islam Negeri Maulana Malik
        Ibrahim Malang, Indonesia
    Nina Khayatul Virdyna, Institut Agama Islam Negeri Madura, Indonesia
    Priyatno Ardi, Universitas Sanata Dharma, Indonesia
    Nunung Suryati, Universitas Negeri Malang, Indonesia

In today's diverse world, differentiated instruction holds the potential to accommodate learners' diversities in EFL classrooms. Prior to differentiating the instruction, conducting diagnostic assessment is crucial to portray learners' characteristics and needs. Hence, this chapter explicates EFL teachers' understanding and practices of diagnostic assessment within the context of EFL differentiated instruction. A survey, involving 155 EFL teachers from Indonesian secondary schools, was employed. The quantitative data were then supported by the data from semi-structured interviews. The findings revealed most teachers had a good understanding of diagnostic assessment, though a significant proportion of them did not frequently make use of the diagnostic assessment results to differentiate instructions, and half of them successfully practiced it. This chapter also figured out EFL teachers' techniques and strategies to differentiate content, process, and product evaluation, with different levels of complexity based on students' readiness, interest, and learning profiles.

Chapter 8

    Ariyanti Ariyanti, Universitas Widya Gama Mahakam Samarinda,
       Indonesia
    Slamet Setiawan, Universitas Widya Gama Mahakam Samarinda,
       Indonesia
    Ahmad Munir, Universitas Negeri Surabaya, Indonesia
    Suhartono Suhartono, Universitas Negeri Surabaya, Indonesia
    Syafi'ul Anam, Universitas Negeri Surabaya, Indonesia

The emergence of positive psychology interventions in foreign language classrooms
has shown improvements in learner outcomes. However, more research is needed on
how positive psychology can optimize second language acquisition experiences and
writing performance. This mixed-methods study investigated the efficacy of positive
psychology techniques in improving Indonesian university students' English writing
skills across multiple areas. 60 students were randomly assigned to experimental
and control groups. Assessments captured quantitative and qualitative performance
differences before and after the intervention. Large effect size gains occurred for
the treatment group. Students favored hope-based activities like feedback and
consultations. Findings imply more positive versus negative feedback enhances
writing motivation and outcomes. Further research is warranted on how positive
psychology manifests in learners' complex experiences during foreign language
acquisition and influences multifaceted writing performance.

Chapter 9

    Phuong Hoa Mai Nguyen, Van Lang Univerisity, Vietnam
    Tuan Hoang Nguyen, Ho Chi Minh City University of Economics and
       Finance, Vietnam

Understanding student engagement with feedback plays a significant role in
differentiated instruction in language teaching and learning. This qualitative multiple
case study explored the particular cases of student engagement in the specific contexts
of two high schools in Binh Duong province in Vietnam. Findings from teacher
and student interviews, follow-up questions, students' reflections on feedback from
teachers and from Artificial Intelligence (AI) softwares, and analysis of original and
revised essays indicate students' mixed responses to AI feedback compared to their
active participation in classroom feedback practices through reciprocal dialogues
between teacher and students. The findings suggest an in-depth investigation into
effective strategies employed by teachers and students in utilizing AI feedback for
individualized learning.

Chapter 10

    Tien Xuan Ho, Bao Loc High School for the Gifted, Vietnam
    Tham My Duong, Ho Chi Minh City University of Economics and
        Finance, Vietnam

The inclusion in English language education was evaluated by examining the relationship between academic achievement and high school students' engagement in EFL classrooms in this study. The grade point average (GPA) of students and the four components of their involvement—the cognitive, behavioral, affective, and agentic—were explored by the mixed-methods approach. The GPAs of 188 eleventh graders and levels of engagement in the EFL classrooms, were gathered through a closed-ended questionnaire. In-depth information was also obtained through a semi-structured interview. The results revealed that students frequently engaged in all four aspects of learning in EFL classes; however, the agentic component had the least impact on students' engagement. There was a noticeable correlation between the students' academic achievement and their learning engagement. The agentic dimension was closely linked to the affective aspect, which experienced the greatest influence. The study also offers some recommendations for teachers and learners to improve the quality in teaching and learning English.

Chapter 11

    Thao Quoc Tran, Ho Chi Minh City Open University, Vietnam
    Thien Hong Nguyen, Chau Phu High School, Vietnam

This chapter presents a mixed-methods study exploring L2 students' identity development through project-based language learning (PBLL) using the inclusive perspective. The study recruited a cohort of 91 students from a high school in Vietnam. Two research instruments (questionnaire and interview) were employed for data collection. The findings revealed L2 students' identities were reflected via their language proficiency, learner autonomy and language practice. Specifically, PBLL could enhance L2 students' speaking abilities, self-regulation, time management, decision-making, collaboration, presentation confidence, and overall communicative skills. This chapter highlights PBLL's pivotal role in shaping students' identities within the inclusive language education.

Le Thi Hong Vo, University of Economics Ho Chi Minh City, Vietnam
Hoa Thi Nguyen, ETC English Language Centre, Vietnam

The trend of teaching English to young learners reflects the need to prepare children with English requirements for participation in global contexts. However, the inclusion of young English learners requires an appropriate methodology. Total Physical Response (TPR) is considered to involve students actively through physical actions, which can be more engaging than traditional approaches, particularly beneficial to beginners. Adopted a qualitative approach with questionnaires, interviews, and classroom observation, the study aims to explore how TPR methods can improve the effectiveness of teaching vocabulary and comprehension to young learners aged 5-9 at an English language center in Vietnam. The results showed improvements in both vocabulary and comprehension among learners, indicating that TPR made learning English enjoyable for children and actively engaged them in the process. Recommendations for TPR's contribution to English teaching and learning to enhance learners' language skills, particularly in early childhood education, have been given at the end of the study.

Dung Nguyen, Ho Chi Minh City Open University, Vietnam

This research was conducted to examine authentic materials (AMs) and differentiated instruction (DI) in matching Vietnamese EFL learners' motivation. Thus, 48 students majoring in Accounting learning General English at a university in Vietnam were recruited. A questionnaire survey and interviews were carried out. The figures collected with the questionnaire on learners' motivation showed the differences in motivation among EFL learners, and the data gathered from interviews indicated learners' attitude towards AMs and DI. The findings revealed that there were dissimilarities in EFL learners in terms of motivation, and AMs as well DI played as powerful tools in satisfying learners' motivation. This study also suggested some implications on AMs and DI for EFL teachers.

Tuyen Van Le, HUTECH University, Vietnam
Hieu Tran Minh Vo, HUTECH University, Vietnam
Hong Kim Tran, HUTECH University, Vietnam

This chapter demonstrates teachers' practices and beliefs about the implementation of OBE in English as a foreign language (EFL) courses in Vietnamese Higher Education; particularly, they are the EFL courses for non-English majored students at a private university in Vietnam. The chapter begins with the introduction mentioning the objectives of the study. Second, a review of literature is provided with a theoretical background for the research problem under investigation. It consists of 1) a discussion of the concepts of outcome-based education and learning outcomes, 2) a discussion of constructive alignment of teaching, learning and assessment as a principle of OBE, and 3) beliefs about OBE. The chapter next turns to the research study that examines EFL teachers' practices and beliefs about the implementation of OBE in EFL courses, including a summary of the results, and recommendations for further research.

Preface

In the dynamic field of English language education, the imperative for research-driven practices has never been more vital. This book, *Differentiated Instruction, Equity, and Inclusion in English Language Education*, stands as a beacon for educators, researchers, and administrators striving to tackle the pressing issues of differentiated instruction, equity, and inclusion.

Research is at the heart of meaningful change. It provides the evidence-based insights necessary to understand the complexities of our learners' needs and the diverse contexts in which they learn. Each chapter in this collection offers a rigorous exploration of innovative methodologies, theoretical frameworks, and empirical findings that directly address the challenges faced in today's classrooms. By grounding our approaches in research, we not only validate our practices but also enhance their effectiveness.

The contributions within this volume delve into critical areas such as learner identity, motivation, and the integration of technology, offering actionable solutions to pressing problems. For instance, insights into differentiated instruction empower educators to tailor their methods to the varied abilities and backgrounds of their students, ensuring that every learner can engage meaningfully with the content. Additionally, discussions on equity and inclusion spotlight the importance of recognizing and addressing systemic barriers and guiding educators in creating environments where all students feel valued and supported.

Moreover, this book serves as a platform for sharing context-specific strategies and experiences from contributors across diverse ESL/EFL settings. By highlighting localized research and its applications, we equip educators with the tools to adapt and implement solutions that resonate within their own classrooms. This collaborative approach fosters a sense of community among practitioners and reinforces the notion that research is not an isolated endeavor but a shared journey toward excellence in education.

As we navigate the complexities of language education, let us embrace the power of research as a catalyst for change. We hope this collection inspires you to engage deeply with the findings and apply them to your practice, fostering an educational environment where differentiated instruction, equity, and inclusion thrive. Together, we can address the challenges outlined in this volume and unlock the full potential of every learner.

As editors of *Differentiated Instruction, Equity, and Inclusion in Language Education*, we are pleased to present a diverse range of chapters that collectively address the pressing issues of equity and inclusion within English language education. Each contribution sheds light on innovative practices and research findings that aim to enhance the learning experiences of all students. Below, we provide an overview of each chapter, highlighting the key themes and insights.

Chapter 1: Beyond Memorization: Transforming Vocabulary Teaching and Learning for Equity in Vietnamese EFL Classrooms

This chapter critically examines the limitations of Vietnam's National Foreign Language Project 2020, particularly the reliance on rote memorization in vocabulary instruction. By advocating for more equitable approaches, such as the four-part processing model for word recognition, the authors highlight how these methods can foster deeper understanding and communication skills. Practical strategies are provided to help educators transition from superficial learning to a more meaningful engagement with vocabulary.

Chapter 2: Fostering Pre-Service Teachers' Appreciation of Students' Linguistic Strengths via Translanguaging: Empowering English Learners

In this chapter, the author explores the impact of a course unit focused on translanguaging within an ESOL methodology course for pre-service teachers. By fostering an appreciation for the linguistic strengths of multilingual learners, the study underscores the importance of identity and power in language education. The findings suggest that incorporating translanguaging into teacher education can significantly enhance future educators' understanding and support of diverse linguistic backgrounds.

Chapter 3: EFL Teachers' Perspectives on Leveraging Tertiary Learners' Collaborative Learning via Translanguaging: Toward Inclusive Language Education

This qualitative study investigates Vietnamese EFL teachers' perceptions of using translanguaging to enhance collaborative learning. Through interviews, the author reveals that teachers view translanguaging as a tool for inclusivity and idea generation, contributing to a supportive learning environment. However, the chapter also addresses the challenges teachers face in implementing this approach, offering insights for policymakers and educators to promote a more inclusive educational framework.

Chapter 4: Digital Literacies and Ubuntu Research Methodology in the COVID-19 Context: A Translanguaging Approach in E-Supervision Sessions with Ph.D. Students

The author documents the experiences of Ph.D. students navigating digital supervision during the pandemic, emphasizing the role of Ubuntu research methodology in fostering community and collaboration. Through student narratives, the chapter illustrates how digital platforms can effectively facilitate academic support, while also critiquing traditional methodologies that may overlook diverse voices. Recommendations for future research and practice are presented, underscoring the need for inclusive approaches in digital learning environments.

Chapter 5: Equity and Inclusion in Business English Courses: L2 Students' Translanguaging

Focusing on Vietnamese L2 students' perceptions of translanguaging in Business English courses, this mixed-methods study highlights the positive impacts of an equitable and inclusive learning environment. The authors analyze data from questionnaires and interviews, revealing that students view translanguaging as a beneficial practice that enhances their learning experience. The findings underscore the potential of translanguaging to foster inclusivity in specialized language courses.

Chapter 6: Fostering Inclusivity in English Speaking Assessment: Insights into the Washback Effects of E-Portfolios

This chapter explores the washback effects of e-portfolios in speaking assessments, demonstrating their potential to create a more inclusive environment. Through narratives and interviews with teachers and administrators, the authors reveal positive shifts in perceptions regarding e-portfolio use. The chapter emphasizes the importance of administrative support and collaboration among stakeholders to maximize the effectiveness of this assessment method.

Chapter 7: EFL Teachers' Understanding and Practices of Classroom-Based Diagnostic Assessment in Differentiated Instruction

Investigating EFL teachers' comprehension and implementation of diagnostic assessment, this chapter highlights its significance in differentiated instruction. A survey of Indonesian teachers reveals a general understanding of diagnostic practices, though many do not regularly apply the insights gained. The chapter offers strategies for enhancing the use of diagnostic assessments to better cater to the diverse needs of learners.

Chapter 8: Enhancing EFL Writing Performance through Differentiated Positive Psychology Interventions

This mixed-methods study examines the application of positive psychology interventions in improving writing performance among Indonesian university students. The findings indicate substantial gains in writing skills, particularly when using hope-based activities that encourage student engagement. The chapter advocates for further exploration of positive psychology's role in enhancing language acquisition and learner motivation.

Chapter 9: Learner Engagement with Feedback in Essay Writing: A Multiple Case Study

Focusing on student engagement with feedback in essay writing, this qualitative study presents insights from two Vietnamese high schools. Through various data sources, the authors explore how students respond to feedback from both teachers and AI tools. The findings highlight the importance of reciprocal dialogue in feed-

back processes and suggest strategies for effectively integrating AI into personalized learning experiences.

Chapter 10: The Correlation between Students' Learning Engagement and their Academic Achievement: Elevating Inclusion in English Language Education

This chapter investigates the relationship between engagement and academic achievement among high school students in EFL classrooms. By employing a mixed-methods approach, the authors reveal a significant correlation between students' involvement in learning activities and their GPAs, which leverages inclusion in English language teaching and learning. The findings emphasize the need for educators to foster all aspects of student engagement to enhance learning outcomes.

Chapter 11: L2 Students' Identity through Project-Based Language Learning: An Inclusive Perspective

Exploring the development of L2 students' identities through project-based language learning (PBLL), this mixed-methods study highlights the positive effects of PBLL on language proficiency and self-regulation. The chapter showcases how inclusive pedagogies can empower students, fostering their collaboration and communication skills while enhancing their overall learning experience.

Chapter 12: Inclusion of Young English Learners: Adopting the Total Physical Response Method

This qualitative study evaluates the effectiveness of the Total Physical Response (TPR) method in teaching young English learners. Through classroom observations and interviews, the authors demonstrate improvements in vocabulary and comprehension among students aged 5-9. The findings advocate for TPR as a dynamic and engaging approach to language instruction that can significantly benefit early childhood education.

Chapter 13: Using Authentic Materials and Differentiated Instruction to Match EFL Learners' Motivation

Investigating the intersection of authentic materials and differentiated instruction, this chapter reveals how these strategies can cater to the motivational needs of Vietnamese EFL learners. By collecting and analyzing data from students, the author illustrates the varying levels of motivation and the effectiveness of authen-

tic materials and differentiated instruction in enhancing student engagement and learning outcomes.

Chapter 14: The Implementation of Outcome-Based Education in EFL Courses in Vietnamese Higher Education: Teachers' Practices and Beliefs

This chapter examines EFL teachers' practices and beliefs regarding the implementation of outcome-based education (OBE) in Vietnamese higher education. Through a thorough literature review and empirical study, the authors discuss the principles of OBE and provide recommendations based on teachers' insights. The chapter contributes valuable perspectives on aligning teaching practices with desired learning outcomes to promote effective language education.

Together, these chapters offer a comprehensive exploration of differentiated instruction, equity, and inclusion, equipping educators and researchers with the knowledge and tools needed to navigate the complexities of language education in diverse contexts. We invite you to engage with these insights as we collectively strive for a more equitable and inclusive educational landscape.

Chapter 7
EFL Teachers' Understanding and Practices of Classroom–Based Diagnostic Assessment in Differentiated Instruction

Luki Emiliya Hidayat

Sekolah Menengah Kejuruan Negeri 10 Malang, Indonesia

Nina Khayatul Virdyna

Institut Agama Islam Negeri Madura, Indonesia

Suci Nugrah Amalia

https://orcid.org/0000-0002-5189 -8813

Universitas Negeri Malang, Indonesia

Priyatno Ardi

https://orcid.org/0000-0002-9523 -2060

Universitas Sanata Dharma, Indonesia

Wahyu Indah Mala Rohmana

Universitas Islam Negeri Maulana Malik Ibrahim Malang, Indonesia

Nunung Suryati

Universitas Negeri Malang, Indonesia

ABSTRACT

In today's diverse world, differentiated instruction holds the potential to accommodate learners' diversities in EFL classrooms. Prior to differentiating the instruction, conducting diagnostic assessment is crucial to portray learners' characteristics and needs. Hence, this chapter explicates EFL teachers' understanding and practices of diagnostic assessment within the context of EFL differentiated instruction. A survey,

involving 155 EFL teachers from Indonesian secondary schools, was employed. The quantitative data were then supported by the data from semi-structured interviews. The findings revealed most teachers had a good understanding of diagnostic assessment, though a significant proportion of them did not frequently make use of the diagnostic assessment results to differentiate instructions, and half of them successfully practiced it. This chapter also figured out EFL teachers' techniques and strategies to differentiate content, process, and product evaluation, with different levels of complexity based on students' readiness, interest, and learning profiles.

INTRODUCTION

EFL classrooms in the twenty-first century have been doomed as the learning environment of super-diversity (Gheyssens et al., 2022). The classrooms have even grown more diverse than ever before with students coming from diverse social, economic, cultural, and geographical backgrounds, and bringing in their own individual uniqueness and qualities, such as interests, talents, profiles, and competencies. This heterogeneity requires EFL teachers to modify their teaching activities to provide students with instructions that meet their needs and heterogenous aspects (George, 2005; Bender, 2012), including their diverse preferences, ability levels, background of knowledge, and learning profiles (Tomlinson et al., 2008). In this regard, differentiated instruction (DI) is introduced and implemented to encourage teachers to adapt and adjust their teaching to meet students' heterogeneity (Cahyono et al., 2023; Tomlinson, 2017; Tomlinson & Moon, 2013). Studies have reported that DI positively fosters student advancement and academic achievement (Bi et al., 2021; Sapan & Mede, 2022), as well as non-academic achievements, such as motivation, autonomy, participation, and engagement (Güvenç, 2021; Yavuz, 2020). However, previous studies have also articulated that the complexities of DI pose challenges in the implementation of its components, one of which is identifying the diversity of the students (Gaitas & Alves, 2017; Pozas et al., 2020; Smale-Jacobse et al., 2019; Suwastini et al., 2021).

It is undeniable that in implementing DI that meets students' learning needs, teachers need to begin with diagnostic assessment (DA). This assessment helps to figure out students' strengths, weaknesses, and interests, offering a starting point for positive learning changes and modifications (Jang & Sinclair, 2021; Nichols et al., 2009; Tomlinson, 2014). Gaitas and Alves (2017) underscore the enactment of DA as a significant part of the DI processes, functioning as a pre-assessment of preparedness to modify lessons and a provision of formative and summative assessment. It helps teachers to figure out what each student in their class is good at and what they need to work on. The gained information is then used to make

individualized learning plans for each student that meet his or her own unique needs (Jang & Sinclair, 2021). In doing DA, teachers identify their students' readiness level, interests, and profiles. The understanding and appropriate practices of these elements are essential for success in achieving the goal of DI (Tomlinson, 2014).

A plethora of studies has investigated the practices of DA (Csapó & Molnár, 2019; Mayes et al., 2008; Rafi & Pourdana, 2023; Scaife & Wellington, 2010), teachers' assessment literacy and its implications for DA (Clark et al., 2022), and the use of computer-based DA (Clark & Endres, 2021). However, to the best of our knowledge, there is no study focusing on exploring teachers' understanding and practices of DA within the framework of the implementation of DI in the EFL classroom. Scrutinizing what teachers comprehend, think, and believe about DA within the context of DI is crucial as it directly influences their teaching practices (Borg, 2015). Such a study is urgently needed in the Indonesian EFL context, where DI is a key component of the current curriculum, known as *Kurikulum Merdeka* (Kepmendikbud, 2020; Permendikbudristek, 2022). For this reason, examining Indonesian EFL teachers' practices for integrating the components of DA into DI should follow the exploration of their understanding of DA within the context of DI. It is essential to determine whether their comprehension aligns with their actual practices, emphasizing the urgency of ensuring consistency between their understanding and its implementation.

This study contributes significantly to the field of EFL teaching and learning by enriching the academic discourse on DA and DI and offering empirical evidence on how these concepts are understood and applied by Indonesian EFL teachers. The results could potentially influence future curriculum development and educational policies in Indonesia, serving as a guide for EFL teacher trainings in the gamut of DA and DI to successfully implement the current curriculum. By understanding the gaps between teachers' comprehension and their actual practices, educational stakeholders can design interventions to enhance teaching effectiveness and student outcomes in diverse EFL classrooms. To guide the inquiry of this study, two research questions are formulated as follows:

1. How proficient are EFL teachers in understanding diagnostic assessment within the framework of differentiated instruction?
2. How do EFL teachers put differentiated instruction into practice based on the results of diagnostic assessment?

BACKGROUND

Diagnostic assessment in the context of DI

Tomlinson (2014) has categorized DI into three components, namely content, process, and product. The first component, *content*, refers to the topic of learning, knowledge, and abilities that the teachers want students to acquire. The second component, *process*, has to do with the methods and strategies of instruction. The last component, *product*, deals with the evaluation of learning based on students' demonstration of their acquired knowledge. Gaitas and Alves (2017) underscored that assessment serves a crucial part in the implementation of the DI components, encompassing diagnostic assessment (DA) before instructions, pre-assessment to gauge the readiness for lesson modification, provision of formative and summative assessment, and identification of students' learning styles. In this regard, DA helps teachers to figure out what each student in their class is good at and what they need to work on. This information is then used to make individualized learning plans for each student that meet his or her own unique needs (Jang & Sinclair, 2021). Unlike formative assessment, which refers to a continuous evaluation of students' learning progress, DA primarily focuses on students' knowledge prior to instruction, aiming to draw conclusions about learners' strengths and weaknesses in specific skill areas and using them to make positive changes in learning (Jang & Sinclair, 2021).

It is worth noting, however, that in conducting DA, teachers are required to understand their students across three indicators. The first indicator is students' readiness level, which refers to how much students understand about a concept or topic. To identify the levels of their readiness, teachers are required to assess students' prior knowledge and determine their current level of mastery (Arden et al., 2017). By doing so, teachers can differentiate students' learning based on content, process, and product. Teachers can adjust students' readiness by giving tiered activities that allow them to achieve the same objectives, but at different levels of difficulty (Hall, 2009). Then, they can offer students learning contracts, which entail agreements between teachers and students concerning the concepts and skills that need to be learned. Furthermore, flexible grouping can be administered for students' placement. This type of grouping, which is not stagnant and continuously changed according to the topic and activities, enables students to work with peers with similar or varying interests and readiness levels (Lewis & Batts, 2005).

The second indicator is students' interests. To discover students' interests, teachers can structure the learning and connect the content of a unit to topics or processes that motivate students to engage in learning activities (Santangelo & Tomlinson, 2012). Assessing students' interest involves assisting them in linking their interests to a meaningful learning goal (Bahador & Mofrad, 2020). It involves identifying

specific topics, ideas, or skills that inspire students' enthusiasm and align with their passions. The last indicator is learning profiles, referring to ways in which students learn best. To gauge students' learning profiles, teachers can conduct interviews with students to gain a deeper understanding of their learning needs and preferences. During these interviews, teachers can ask open-ended questions about students' learning goals, challenges, and interests, and use this information to adapt instructions to their needs. Hence, the elements of DA contribute to the success of achieving the goals of DI (Tomlinson, 2014).

Differentiated instruction in the Indonesian curriculum

In the Indonesian context, the implementation of DI to meet students' diverse needs and promote freedom of thinking are mandated in the latest curriculum, called *Kurikulum Merdeka* (Kepmendikbud, 2020; Permendikbudristek, 2022). Instilling the values proposed by the Indonesian father of education, Ki Hajar Dewantara, the curriculum aims to nurture students to be critical, creative, collaborative, innovative and participative persons (Gravett et al., 2024; Jufriadi et al., 2022; Prasetyo et al., 2023). As a results, students, as future generations, will be more successful in leading themselves and their society in responding to the Fourth Industrial Revolution challenges (Oke & Fernandes, 2020; Hasanah et al., 2022).

In its practice, the current curriculum drives students, teachers, parents, and other relevant stakeholders to collaboratively provide positive and supportive learning experiences, which align with the constructivist paradigm. The constructive learning concept in the curriculum allows students to actively construct their own knowledge and competencies through various life-related activities designed by teachers and supported by parents as well as other relevant stakeholders (Asrial et al., 2022; Sihombing et al., 2021; Triyatno & Fauiziati, 2022). Accordingly, teachers are expected to convey learning in a natural, agentic, and enjoyable way, aligned with students' needs and real-life settings. This approach allows students to experience the joy of the learning process while developing their life skills in the classroom.

METHOD

Design

This study employed a survey research design by using questionnaires to gather data. According to Creswell and Guetterman (2019), the questionnaire gave us the opportunity to gather factual data, such as background knowledge and respondents' perceptions. Hence, the questionnaires were used to gauge the EFL teachers' un-

derstanding of the DA elements, represented by several statements related to DA, and to assess the extent to which they had integrated DA into DI during their EFL teaching. In addition, semi-structured interviews were conducted to explore EFL teachers' practices of DI implementation based on the results of DA.

Instruments

The primary instrument used to assess teachers' comprehension of DA within DI was a questionnaire adapted from Jimola and Ofodu (2019), and Lee (2015), while to evaluate teachers' implementation of differentiated instruction informed by diagnostic assessment, the other questionnaire was adapted from Tomlinson (2001, 2003, 2009). The questionnaires were modified to fit the contexts of Indonesian EFL teachers (see Appendix 1 and 2). A 5-point Likert scale was used in the instruments. Prior to its distribution, the items of the questionnaires were validated by a professor in teacher professional development and a senior lecturer whose expertise was in the field of assessment. The questionnaires consist of three sections, namely background information, EFL teachers' understandings of DA elements for DI, and EFL teachers' practices of DI in accordance with the DA results.

Participants

This study included 155 secondary school EFL teachers from various cities and regions throughout Indonesia. To invite EFL teachers to participate in the study, the researchers shared the Google Form link of the questionnaire. The online questionnaire includes an informed consent form with information regarding the nature of the study, its objective, the data collection method, the rights of participants, and the anonymity and confidentiality of the responses. Only after submitting their digital consent and progressing to the next stage of the forms could the participants access the questionnaires. The participants with the mean scores categorized as extremely high or extremely low were later contacted to participate in semi-structured interviews. Table 1 displays the demographic information of the participants.

Table 1. Demographic data of research participants

Variable	Category	(F)	Total	(%)	Total
Gender	a. Female	111	155	71.6	100
	b. Male	44		28.4	
Years of Teaching	a. <5 years	8	155	5.2	100
	b. 6 – 10 years	30		19.4	
	c. 11 – 15 years	36		23.2	
	d. >15 years	81		52.3	
Education	a. Bachelor's degree	127	155	81.9	100
	b. Master's degree	28		18.1	
Educator Certified	a. Yes	125	155	80	100
	b. No	30		20	
The implementation of Kurikulum Merdeka	a. Have not implemented	20	155	12.9	100
	b. Since 2020	11		7.1	
	c. Since 2021	24		15.5	
	d. Since 2022	100		64.5	

Data collection

To collect the data, the questionnaires were made available online in Google Form format. The link of the online questionnaires was distributed to EFL teachers from secondary schools in Indonesia through WhatsApp personal and group messages. The questionnaire items were administered in Bahasa Indonesia to encourage participants to provide more open and expressive answers. The questionnaire link remained available for two weeks, and it typically took 10-15 minutes for participants to complete the questionnaires. Furthermore, semi structured interviews were conducted to the selected participants. Ten out of 155 participants were chosen for the interviews, consisting of five English teachers with high scores and five English teachers with low scores in the questionnaire results.

Data analysis

After the data collection, descriptive analysis was conducted. Individual scores for EFL teachers 'understanding of the DA elements were obtained by calculating and averaging the item scores to determine the mean percentages from all participants. The average score indicated the level of understanding of the DA elements for DI. These scores were then classified into three levels of quality, namely 0 to 1

representing poor knowledge, 2 to 3 representing moderate understanding, and 4 to 5 representing excellent understanding.

Since the interviews were held in both English and Bahasa Indonesia, the participants provided responses in both languages. The responses, initially recorded in Bahasa Indonesia, were translated into their English equivalents for presenting the research findings. The analysis, conducted using content analysis, focused on language features as communication while also paying attention to the content or contextual meaning of the interview data (Hsieh, 2005). It aimed to compile and derive meaning from the gathered data, highlight essential ideas or concepts, and make reasonable inferences.

FINDINGS AND DISCUSSIONS

Teachers' Understanding of DA within the Framework of DI

The survey findings indicated that most teachers had a good understanding. The understanding of DA in DI among Indonesian EFL teachers is reflected in Table 2, which presents frequencies and percentages derived from questionnaire responses.

Table 2. Teachers' understanding of DA in DI

Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
1	4(2.6%)	8(5.2%)	37(23.9%)	73(47.1%)	33(21.3%)
2	0(0%)	3(1.9%)	24(15.5%)	74(47.7%)	54(34.8%)
3	0(0%)	3(1.9%)	16(10.3%)	65(41.9%)	71(45.8%)
4	0(0%)	3(1.9%)	13(8.4%)	74(47.7%)	65(41.9%)
5	4(2.6%)	8(5.2%)	46(29.7%)	76(49.0%)	21(13.5%)
6	4(2.6%)	9(5.8%)	53(34.2%)	72(46.5%)	17(11.0%)
7	4(2.6%)	17(11.0%)	62(40%)	61(39.4%)	11(7.1%)
8	5(3.2%)	13(8.4%)	55(35.5%)	69(44.5%)	13(8.4%)
9	3(1.9%)	5(3.2%)	36(23.2%)	87(56.1%)	24(15.5%)
10	1(0.6%)	4(2.6%)	36(23.2%)	94(60.6%)	20(12.9%)
11	1(0.6%)	1(0.6%)	39(25.2%)	86(55.5%)	28(18.1%)
12	4(2.6%)	11(7.1%)	62(40%)	64(41.3%)	14(9.0%)
13	2(1.3%)	5(3.2%)	23(14.8%)	95(61.3%)	30(19.4%)
14	1(0.6%)	7(4.5%)	31(20.0%)	94(60.6%)	22(14.2%)
15	3(1.9%)	3(1.9%)	42(27.1%)	86(55.5%)	21(13.5%)

Table 2. Continued

Item	1 (SD)	2 (D)	3 (N)	4 (A)	5 (SA)
16	2(1.3%)	4(2.6%)	50(32.3%)	79(51.0%)	20(12.9%)
17	2(1.3%)	5(3.2%)	53(34.2%)	74(47.7%)	21(13.5%)
18	1(0.6%)	4(2.6%)	36(23.2%)	96(61.9%)	18(11.6%)
19	1(0.6%)	4(2.6%)	23(14.8%)	82(52.9%)	45(29.0%)
Σ (%)	1.41	6.28	25.02	50.95	18.6

Table 2 shows that most Indonesian English teachers had a good understanding of DA in the context of DI. Specifically, 1.41% of the English teachers exhibited poor understanding, 31.3% exhibited moderate understanding, and 69.5% exhibited an excellent understanding of the DA in DI. The findings suggest that a good understanding of DA in DI enables EFL teachers to effectively differentiate their instructions. This point has also been emphasized by Clark et al. (2022), focusing on teachers' assessment literacy in the implications of DA. Their study reveals how the outcomes of DA affect teachers' instructional decision-making. The consistent findings underscore that teachers' good understanding of DA serves as a significant departure prior to differentiating their instructions in the EFL classrooms.

With a good grasp of DA, Indonesian EFL teachers can use the assessment results to group students based on skill levels, learning styles, or interests, and provide instructions that meet the needs of each group. Furthermore, they can utilize assessment data to craft individualized learning plans for students requiring additional supports or challenges (Jang & Sinclair, 2021). The findings also suggest that EFL teachers can use the assessment data to determine whether their students are making progress towards their learning goals and adjust their instructions to address any areas of concern (Nichols et al., 2012). The assessment data can also be shared to parents and other education professionals. By sharing the data, the teachers can contribute to a more comprehensive understanding of their students' learning needs, fostering collaboration among all stakeholders to support student success.

Despite Indonesian EFL teachers' good understanding of the DA within the DI framework, the findings indicate that 1.41% of the teachers exhibited a poor understanding of DA. Even, twenty respondents admitted that their schools had not implemented *Kurikulum Merdeka*, suggesting that DA might not be integrated into the teaching-learning processes in these institutions. With this caveat in mind, these teachers may lack a solid understanding of DA within the framework of DI. This finding provides valuable insights for educational stakeholders regarding the implementation of the current curriculum in Indonesia, highlighting the importance of ensuring consistency in the curriculum implementation across all Indonesian schools. It is crucial because when teachers lack a good understanding of how to

effectively use DA, they may overlook the vital information about their students' learning needs, potentially hindering their academic progress (Gaitas & Alves, 2017).

Teachers' Practices of DI Based on the DA Results

The second questionnaire comprised 11 items eliciting information about the Indonesian EFL teachers' practices of DI based on the DA results. The items of the questionnaire were intended to find out the frequency of differentiating the instructions in EFL teaching in three main components of DI, namely content, process, and product. The data is presented in Table 3.

Table 3. Teachers' practice of DI based on the DA results

		Not frequently		Frequently	
Content	1	12(7.7%)	53(34.2%)	69(44.5%)	21(13.5%)
	2	9(5.8%)	57(36.8%)	74(47.7%)	15(9.7%)
	3	12(7.7%)	48(31.0%)	73(47.1%)	22(14.2%)
	4	11(7.1%)	66(42.6%)	61(39.4%)	17(11.0%)
	5	11(7.1%)	59(38.1%)	65(41.9%)	20(12.9%)
	Σ (%)	7.08%	36.54%	44.12%	12.26
Process	6	12(7.7%)	52(33.5%)	75(48.4%)	16(10.3%)
	7	12(7.7%)	55(35.5%)	69(44.5%)	19(12.3%)
	8	14(9.0%)	54(34.8%)	65(41.9%)	22(14.2%)
	Σ (%)	8.13%	34.6%	44.93%	12.2%
Product	9	11(7.1%)	54(34.8%)	73(47.1%)	17(11.0%)
	10	13(8.4%)	55(35.5%)	65(41.9%)	22(14.2%)
	11	10(6.5%)	54(34.8%)	70(45.2%)	21(13.5%)
	Σ (%)	7.33%	35.03%	44.73%	12.9%
Σ (%)		7.51	35.39	44.59	12.45
		42.9		57.04	

Table 3 demonstrates that 35.39% of the Indonesian EFL teachers differentiated their lessons only sometimes, whereas 7.51% of the EFL teachers reported never doing so. This suggests that 42.9% of the EFL teachers in our study did not frequently implement all components of DI in their EFL instruction using the DA results. The remaining teachers reflected that 44.59% often and 57.04% always implemented the components of DI in their teaching practices. The findings suggest that the number of teachers who infrequently and frequently implemented the three components of DI does not significantly differ. It might be due to the implementation of the new

curriculum, *Kurikulum Merdeka*, which is still new in Indonesia, so that many EFL teachers are not yet prepared to implement DI to address students' diversity. The findings align with those of Suprayogi and Valcke (2016), which show that the current rate of DI implementation is much lower than the threshold for mastery learning. However, despite this lower rate, the teachers believe they can manage students' differences and possess some fundamental DI implementation ideas. Other studies have also identified the challenges faced by teachers in implementing DI, including knowledge of DI, teaching methods, personal characteristics, preparation time, class size, and lack of resources (Lavania & Nor, 2020; Melesse, 2015). Therefore, the findings of this study underscore the importance of educational policymakers prioritizing investment in EFL professional development and teachers' training related to the implementation of DI components in EFL teaching.

In addition to the questionnaire data, the findings regarding teachers' DI practices based on the DA results were obtained from semi-structured interviews. The summary of the findings is presented in Table 4.

Table 4. EFL teachers' practices of DI based on the result of DA

Codes	Themes	Problems/ Situations	Strategic Practices
Students' readiness	Differentiating the content	Low Readiness	Providing simple materials with basic vocabulary and simple task complexity Using many pictures
		Medium Readiness	Introducing complexities within the materials, longer texts, or short stories Using moderate vocabulary, everyday grammar rules, and idiomatic expressions
		High Readiness	Adding more external links and videos to learning resources Providing longer text with complexities Adding advanced grammar rules, vocabulary, and new idiomatic expressions

Table 4. Continued

Codes	Themes	Problems/ Situations	Strategic Practices
	Differentiating the process	Low Readiness	Implementing more scaffolding technique, grouping students with medium to high mastery students and applying peer teaching/ tutoring Giving more intensive guidance Providing a lot of drilling and modelling
		Medium Readiness	Combining independent activities and peer works with a timeframe determined by the teacher
		High Readiness	Giving more independent learning opportunities, discussion, presentation Giving more challenging and complex activities, more skills coverage, peer teaching
	Differentiating the product (evaluation procedure)	Low Readiness	Giving simpler, easier questions or multiple-choice questions, simple products such as posters and concept maps and simple assignments in forms of pictures or simple writing works, Giving remedials by re-explaining the material or evaluation questions, using simple rubrics or checklists
		Medium Readiness	Giving moderate-difficult multiple-choice questions, matchmaking, or T/F questions Involving HOTS tasks such as analyzing and drawing conclusions Giving more spaces to explore students' creativity in creating the products (videos, storyboards, power points, voice recordings) Using more detailed rubrics, checklists, and complex criteria to assess student's works
		High Readiness	Giving higher level of questions and more complex products e.g. podcasts, brochures, videos; Giving HOTS/ critical thinking/ reflective questions and types of multiple-choice questions, T/F, essay, matchmaking questions Using more open-ended evaluation procedures, e.g. portfolio, authentic writing that allows students to showcase their creativity and skills

Table 4. Continued

Codes	Themes	Problems/ Situations	Strategic Practices
Students' learning profiles/ preferences	Differentiating the content	Visual	Using visual aids such as diagrams, charts, maps, and pictures to help students understand the content. Using graphic organizers to help students organize information and see the relationships between different concepts. Using educational videos as an effective way to present information to visual learners.
		Audio	Using audio recordings or podcasts to illustrate the use of details in descriptive texts. Providing audio materials such as recorded lectures, and audiobooks. Using songs, chants, and rhymes to help students remember key information and concepts.
		Kinesthetic	Providing opportunities for students to move while writing descriptive texts, such as writing while walking or standing. Allowing students to use hands-on activities that allow them to move and manipulate objects. Providing activities such as experiments, model building, or using manipulative moves to help students understand and apply the content. Using movement-based activities such as role-playing or simulations.

Table 4. Continued

Codes	Themes	Problems/ Situations	Strategic Practices
	Differentiating the process	Visual	Using graphic organizers to help students visualize the steps involved in the process.
			Providing visual feedback such as charts, graphs, or rubrics to help students see their progress and identify areas for improvement.
			Offering options such as creating visual diagrams or models, or using interactive technology to help students show what they know about the process in a way that works best for them.
		Audio	Providing oral discussions and debates to help students engage with the process.
			Providing opportunities for students to explain the process to their classmates or to create podcasts or audio presentations to help them better understand and process the content.
			Using read-aloud or recorded descriptive text to model effective writing.
		Kinesthetic	Providing activities such as experiments, model building, or manipulatives move to help students understand and apply the process.
			Using movement-based activities such as role-playing or simulations to help students engage with the process.
			Offering options such as creating models or demonstrations, or using interactive technology to help students show what they know about the process in a way that works best for them.

Table 4. Continued

Codes	Themes	Problems/ Situations	Strategic Practices
	Differentiating the product (evaluation procedure)	Visual	Using different colors to highlight important information and to help students better understand the relationships between different concepts. Providing written descriptions that help students understand the evaluation procedures and how to complete them. Using visual assessments, such as identifying and analyzing images, to evaluate students' understanding of the evaluation procedures.
		Audio	Facilitating class discussions to evaluate students' understanding of the evaluation procedures and to encourage students to ask questions and provide feedback. Asking students to present their understanding of the procedures verbally, either individually or in groups. Asking students to listen and respond to audio recordings, to evaluate students' understanding of the evaluation procedures.
		Kinesthetic	Using performance-based assessments that require students to demonstrate their understanding of the content through a physical task or activity. Using rubrics that emphasize the physical skills and abilities. Allowing for movement during assessments by providing options for students to stand, move around, or use fidget toys while completing the assessment.

Table 4. Continued

Codes	Themes	Problems/ Situations	Strategic Practices
Students' interests	Differentiating the content	Sports	Providing sport-related material, such as reading passages, vocabulary lists, or grammar exercises, that are related to sports
		Arts	Providing art-related resources, such as art-related books, websites, and videos.
		Technology	Providing tech-related material in the form of text, video, or website, such as material about how to make a video or a simple program.
		Nature	Providing nature-related text, video, or website, such as a descriptive text that focuses on nature view, beaches or mountains or providing vocabulary related to nature, such as plants, animals, and weather
		Food	Providing food-related text, video, or website, such as reading passages about food culture or history, vocabulary lists related to cooking or eating out at restaurants, or grammar exercises focusing on food-related idioms and expressions.
		Etc.	Providing materials with various themes based on students' interest.
	Differentiating the process	Sports	Providing opportunities for discussion and debate about sports-related topics in English. For example: having a debate of the benefits and drawbacks of a particular sport or ask students to discuss their favorite athletes and why they admire them.
		Arts	Incorporating art-topics using cooperative learning strategies an, such as having group art discussion or art critique sessions Engaging students in art-based activities, such as drawing, painting, or sculpture
		Technology	Incorporating technology in English Language teaching by using interactive whiteboards, online games, podcasts. Organizing discussion among students around technology-related topics or videos technology.
		Nature	Asking students to go out of the class to observe and collect sensory details about nature and explain videos or pictures of natural environments.
		Food	Providing opportunities for students to engage in food-related activities (eating, baking or cooking) while practicing their English. For example, discussing their favorite foods and why they enjoy them.

Table 4. Continued

Codes	Themes	Problems/ Situations	Strategic Practices
	Differentiating the product (evaluation procedure)	Sports	Giving assignments of writing a sports-related essay, or presenting a speech on a sports-related topic.
		Arts	Giving assignments that allow students to explore their interests in arts for example ask students to write poetry or short stories inspired by a specific artwork or artist while using English vocabulary and expressions.
		Technology	Giving personalized assignments that allow students to explore their interests in technology. For example: asking students to create a presentation on a new technology product or write an essay about the impact of technology on society.
		Nature	Using nature as a theme for exercises or assignments. For example: asking students to write a descriptive essay about their favorite natural setting or to give a presentation about a specific plant or animal species.
		Food	Giving assignments by asking students to create their own food-related content in English. For example: writing project of food reviews, create their own recipe videos, or start a food blog in English, using food-related vocabulary and expressions.
		Etc.	Giving assignment, exercise, task, or project personalized to the category of student interests

Differentiating the Content of Teaching Based on Students' Readiness

In Table 3, the findings suggest that following DA on students' readiness, the EFL teachers differentiated the content of teaching for students with low readiness by providing simple materials with basic vocabulary and tasks of simple complexity. They used pictures to foster students' understanding. For students with medium readiness, teachers introduced complexities within the materials by providing longer texts or short stories with a moderate difficulty level of vocabulary, everyday grammar rules, and idiomatic expressions. Meanwhile, for students with high readiness, the teachers differentiated the content of teaching by adding more external links and videos to learning resources. They also challenged these students with more opportunities to explore additional learning resources and engage with actual and current issues. Additionally, the teachers provided longer texts with increased complexity, incorporating advanced grammar rules, vocabulary, and new idiomatic expressions.

To enhance the content of teaching for students with low and medium readiness, the teachers can also use technological tools. Digital video games, for example, can promote conceptual understanding and facilitate different assessment forms within the context of DI (Estaiteyeh & DeCoito, 2023). The practices to differentiate the content of teaching based on students' readiness align well with Vygotsky's (1978) concept of the zone of proximal development, wherein a student can successfully master the acquired level with scaffolding or support from a peer or teacher. Tomlinson et al. (2003) further confirmed that DI should push every student into their zone of proximal development.

Differentiating the Process of Teaching Based on Students' Readiness

Regarding the differentiation of the teaching process for students with low readiness, the findings revealed that the Indonesian EFL teachers commonly implemented various scaffolding techniques. They grouped low-mastery level students with those at medium- to high-mastery levels and utilized peer teaching or tutoring. Some teachers offered more intensive guidance by conducting drills and modeling, delivering lectures, and using charts or organizers to assist students in organizing and developing their ideas. For students with a medium level of readiness, most teachers combined independent activities with peer work within a timeframe determined by the teachers. Additionally, the teachers provided more independent learning opportunities through discussions and presentations. They also offered more challenging and complex activities covering a broader range of skills through the use of current technological tools. Game applications, such as Quizlet, Educandy and Classcraft in the form of online quests, can be used to improve EFL students' mastery in vocabulary and grammar. The applications pose varying levels of challenge, difficulty and complexity that align with students' different readiness levels (Zeng, 2020) and allow the teachers to deliver different kinds of instructions, tangible examples, worksheet exercises, and more complex activities, which assist students in making sense of the knowledge they learn (Blaz, 2016; Kótay-Nagy, 2022).

Differentiating the process, according to Tomlinson's (2003, 2014) DI model, involves tailoring the learning path for students, associated with the learning activities they engage in to achieve the learning goals. The main objective is to design a variety of teaching methods tailored to students' learning needs. In a similar vein, Hall's (2002) DI model focuses on the role of assessment in meeting students' needs, determining where they stand in their learning process, and providing assistance accordingly. The combination of both DI models will work best for students, as they will not only be provided with different learning options but also be informed and aware of their knowledge, skills, strengths, and weaknesses through feedback

and assessment. When applied effectively, these approaches can positively impact students' learning outcomes (Coubergs et al., 2017). However, the findings of this study revealed that the teachers did not frequently apply the process differentiation such as tiered assignments because it required a significant workload and consumed much time to generate and track students' progress (cf. Lahrichi, 2019; McNamara, 1997). Moreover, the teachers did not pay too much attention to the number of groupings, mainly due to the large class sizes they had to manage (cf. Blatchford & Russell, 2019).).

Differentiating the Product or Evaluation Procedures of Teaching Based on Students' Readiness

The findings show that in differentiating the products or evaluation procedures of teaching based on the DA results for students with a low level of readiness, the teachers generally provided simpler, easier questions or multiple-choice questions. They assigned simple products, such as posters and concept maps. Some teachers opted for assignments in the form of pictures or simple writing tasks and conducted remedials by re-explaining the material or evaluation questions. They employed simple rubrics or checklists for assessment. For students with a medium level of readiness, most teachers presented multiple-choice questions, and matching or true/false questions with moderate difficulty, and integrated HOTS tasks, such as analyzing and drawing conclusions. Some teachers also spent times exploring and using technological products, such as videos, storyboards, PowerPoint presentations, and voice recordings. Differentiating the products can also be achieved through assigning students with digital video games (DVGs), which integrate DI with technology-enriched resources (Estatieyeh & Decoito, 2023). The DVGs provide DA before the game begins through guided questions and feedback throughout the levels.

Furthermore, the teachers used more detailed rubrics, checklists, and complex criteria to assess students' works. For students with a high level of readiness, the teachers tended to provide more difficult questions and more complex products, such as podcasts, brochures, and videos. They integrated critical thinking and reflective questions into various types of assessment, including multiple-choice, true/false, essay, and matching questions. They also utilized more open-ended evaluation procedures, such as portfolios and authentic writing, allowing students to demonstrate their creativity and skills. The findings indicate that the teachers held the belief that HOTS could only be taught to students with medium and high readiness, although it can be taught to students at any level of readiness. This condition is considered reasonable as many teachers still had limited knowledge of HOTS, even though some understood its importance and could teach it using various innovative learning models (Retnawati et al., 2018).

Differentiating the Content of Teaching Based on Students' Interests

The findings reveal that following the analysis of DA results, the teachers adjusted their instructions by tailoring lesson contents to better resonate with their students' interests. It is apparent that students possessed varied interests, including nature, food, technology, arts, and sports. This diversity encouraged teachers to diversify their teaching materials accordingly. For instance, for students passionate about sports, the teachers provided relevant materials like reading passages, vocabulary lists, or grammar exercises centered around sports. Likewise, for those inclined towards art, the teachers incorporated art-related resources, such as books, websites, and videos, including procedural texts on painting, sculpting, and other artistic topics. Similarly, students keen on technology were offered technology-oriented materials in various formats, such as written texts, videos, and online resources. These resources might include guides on creating videos or simple programming tutorials. Meanwhile, for students drawn to nature, the teachers utilized nature-themed texts, videos, and websites, offering descriptive content focused on natural landscapes like beaches and mountains, alongside vocabulary pertaining to plants, animals, and weather. Moreover, students with a penchant for food were provided with materials like reading passages exploring food culture or history, vocabulary lists related to cooking or dining out, and grammar exercises highlighting food-related idioms and expressions. Through these tailored approaches, the teachers effectively differentiated their instruction to engage students based on their individual interests and learning preferences.

These findings suggest that the teachers implemented DI by offering materials with diverse themes tailored to students' interests. These practices align with Maker and Schiever's (2005) assertion that the content differentiation involves accommodating students' preferences, often through methods such as tiered texts or customized learning resources. Despite the benefits, the teachers acknowledged the challenges of preparing varied materials to match individual student interests. However, the effort paid off as students demonstrated increased engagement in class when provided with materials aligned with their interests. To overcome such challenges, the teacher can use digital tools in designing the content for teaching that fit to students' interests. For those passionate about food, for example, cooking simulation apps such as Cooking Mama can be helpful. Students can participate in virtual cooking classes using simulation apps or by following online recipes. They can document their cooking process through videos or digital journals. This activity combines culinary interests with practical technology use, promoting both creativity and digital storytelling. Such a user-centered design approach can promote DI in action (Cha & Ahn, 2020). Indeed, as Tomlinson (2014) underscores, DI leads to

improved understanding and retention of materials. The adaptation of contents and processes to match students' interests can serve as a powerful motivator, contrasting with the limitations of a one-size-fits-all teaching approach (Roberts & Inman, 2023).

Differentiating the Process of Teaching Based on Students' Interest

The findings reveal that in addition to tailoring the content of instruction, the teachers also adapted the teaching process to accommodate students with varying interests. They continuously adjusted their teaching strategies based on these interests, fostering dynamic learning environments. For instance, the teachers encouraged discussions on topics aligned with students' interests. For those passionate about sports, the teachers facilitated debates on sports-related subjects in English. This might involve deliberating the merits and drawbacks of specific sports or discussing favorite athletes and the reasons for their admiration. Similarly, for students with a penchant for art, the teachers employed cooperative learning strategies, such as group art discussions and art critique sessions. These activities were supplemented with hands-on art-based tasks like drawing and painting, allowing students to engage deeply with their artistic interests. Furthermore, the teachers differentiated the teaching process for students interested in technology by integrating technological platforms into English language instruction. This could involve utilizing online videos, social media platforms, or podcasts to enhance learning experiences and cater to the technological interests of these students. By adapting the teaching process to align with students' diverse interests, the teachers fostered engagement and enriched the learning outcomes.

The teachers further facilitated discussions among students, centered on technology-related topics or advancements in video technology. For students with a keen interest in nature, the teachers encouraged outdoor observations of natural surroundings or facilitated discussions based on videos or images depicting various natural environments. Meanwhile, for students passionate about food, the teachers integrated food-related activities, such as eating, baking, and cooking into English language practice sessions. This might involve discussions on favorite foods and the reasons for their appeal. In practice, the teachers utilized online learning management platforms such as Google Classroom, and interactive content creation tools like Genially. These online resources allow the teachers to differentiate the teaching process by sequencing activities in an order of gradual difficulty where students proceed with the activities in a linear way, or giving authority for students to complete the tasks using their own choice and preferences (Kótay-Nagy, 2022; Meşe & Mede, 2023). In this regard, differentiating the teaching process involves delivering the same concept and skill to every student while customizing the method

of delivery to accommodate individual learning styles and unique needs. This means that although the topic being taught is the same for every student, the way in which each student comprehends and processes the information may differ (Brigandi et al., 2019). Tomlinson (2014) asserts that every student is unique, possessing different interests and learning preferences. Therefore, differentiating the teaching process is essential to address the diverse needs of students effectively.

Differentiating the Product of Teaching Based on Students' Interest

The findings indicate that teachers personalized the outcomes of teaching to align with students' interests, providing customized assignments, exercises, tasks, and projects tailored to different areas of interest such as art, food, nature, technology, and sports. For instance, students were tasked with writing sports-related essays or delivering speeches on sports-related topics. Additionally, they were prompted to create poetry or short stories inspired by specific artworkers or artists, incorporating English vocabulary and expressions. Moreover, personalized assignments allowed students to explore their technological interests, such as creating presentations on new technology products or writing essays about the societal impact of technology. Nature-themed projects were also integrated, with students writing descriptive essays about their favorite natural settings or giving presentations on specific plants or animal species.

Students were also encouraged to generate food-related contents in English, such as writing food reviews for restaurants, creating recipe videos, or starting food blogs, by utilizing food-related vocabulary and expressions. Through these differentiated products, the teachers evaluated the same concepts or skills for each student at the conclusion of a unit of study. However, they provided diverse options for students to demonstrate their understanding, such as creating videos, writing reports, or presenting projects. This approach enabled students to showcase their knowledge in ways that suited their strengths and interests, rendering the evaluation process more engaging and meaningful. This idea is echoed by Smale-Jacobse et al. (2019), who emphasized the importance of providing various options for showcasing learning through personalized projects, leading to heightened student engagement and deeper understanding compared to the traditional forms of assessment (Bondie et al., 2019). Since the students have different interest, the teachers can also ask the students to choose the product themselves. For example, the use of BookCreator, a digital tool supporting multimodality, provides students with a wide range of creative opportunities in creating products (Johler & Krumsvik, 2022). Choosing a product type themselves leads students to increase their motivation and exercise one's strengths and personal interests to demonstrate learning (Hur & Oh 2012; Tomlinson 2001).

Differentiating the Content of Teaching
Based on Students' Learning Profiles

Differentiating the content of teaching based on students' learning profiles is an effective way to provide an inclusive learning environment for all students since the students may have different profiles in a class. Teaching the students in different ways in content may be very challenging. For visual learners, the teachers used visual aids, such as diagrams, charts, and images to present information, and provide written instructions or summaries to accompany them. Videos or animations were also used to illustrate concepts of content (Ortega et al., 2018). Videos or animations are effective in illustrating concepts, as the students can bring the information to real life and help them see how it applies in real-world situations. By these strategies, the teachers helped visual learners to better engage with and understand the contents.

For auditory learners, the teachers gave verbal instructions or explanations of concepts, used class discussions or group work to encourage verbal communication, and used audio recordings or podcasts to present information (İlçin et al., 2018). As auditory learners tend to learn best through hearing and listening, it is important for teachers to incorporate strategies that focus on sound and verbal communication. Providing verbal instructions or explanations of concepts helped auditory learners to understand the material. Encouraging class discussions or group work also allowed students to engage in verbal communication, which can help them to process and retain the information better. The teachers used audio recordings or podcasts to present information, which can be replayed as needed, allowing auditory learners to revisit the material and reinforce their understanding (Scott & Edwards, 2019).

For kinesthetic learners, hands-on activities or experiments were used to demonstrate concepts, and opportunities for movement provided through group projects or role-playing activities. Group projects or role-playing activities gave opportunities for movement, as well as interaction with other students, which can help them to process the information more effectively. By using these strategies, the teachers ensured that all students, regardless of their learning profiles, learned and engaged with the content effectively (Al-Seghayer, 2021). Furthermore, the incorporation of current technological tools or digital platforms can significantly augment DI and provide dynamic learning experiences meeting diverse student needs. For instance, the teachers employed educational software and apps like Kahoot! and Quizizz. Real-time tests provided by the platforms can evaluate students' comprehension and provide them with the answers right away. This is very helpful for auditory learners who expect immediate verbal feedback (Seah, 2020).

Differentiating the Process of Teaching Based on Students' Learning Profiles

Differentiating the process of teaching based on students' learning profiles helped the teachers meet the diverse needs of their students. For visual learners, the teachers used visual aids, multimedia tools, color-coding, and encouraged note-taking and diagram-drawing to help them better understand the information being presented. Using visual aids and multimedia tools help visual learners process information more easily, while color-coding and note-taking helped students organize and remember important information (Adnan & Marlina, 2017). Encouraging visual learners to draw diagrams help them create mental images of the material, which aid in retention and understanding.

For auditory learners, the teachers used verbal instructions, class discussions, podcasts, and encouraging summarizing and reading out loud that help them actively engage in the learning process. The verbal instructions and explanations helped auditory learners process information more easily, while class discussions and reading out loud helped students actively engage with the material (İlçin et al., 2018). Encouraging students to summarize important information in their own words also helped them internalize and retain information. The use of podcasts or audio recordings also gave additional opportunities for auditory learners to review and understand the materials.

For kinesthetic learners, incorporating hands-on activities, movement, manipulatives, and note-taking and diagram-drawing made students visualize and understand abstract concepts (Santikarn & Wichadee, 2018). Encouraging movement and physical activity during lessons help students focus and alert. Using manipulatives and physical objects made kinesthetic learners visualize and understand abstract concepts, while note-taking and drawing diagrams made students remember important information (Al-Seghayer, 2021). In a reading class, for example, the teachers can also differentiate learning strategies using various kinds of reading tools, including kindle, iPad, and WeChat Apps. The tools provide multi-modal texts and electronic readers that facilitate students' diverse learning profiles, making reading accessible and appealing to students with different reading preferences (Sun, 2023). By these strategies, the teachers help all students engaged with the material and better understand the process.

Differentiating the Product of Teaching Based on Students' Learning Profiles

Differentiating the assessment product of teaching based on students' learning profiles involved a variety of strategies that allowed students to demonstrate their understanding in ways that best suit their learning style (Rosita & Femilia, 2022). For visual learners, the teachers included the use of diagrams, graphic organizers, and visual representations of information. By using these types of assessment tools, the visual learners showcase their strengths and effectively demonstrate their understanding of the materials.

For auditory learners, the teachers used oral presentations, class discussions, podcasts, audio recordings. The auditory learners process and retain information best when it is presented in an auditory format. Therefore, assessments appropriate to the auditory learners include oral presentations, class discussions, and debates, which allow them to actively participate and engage in the learning process. These types of assessments enabled the auditory learners to demonstrate their ability to express themselves verbally, listen attentively to others, and think critically about the material being discussed.

For kinesthetic learners, the assessments involved hands-on projects, experiments, and physical demonstrations of understanding. The assessments were designed to allow flexibility in how students demonstrated their understanding (Boelens et al., 2018). A project-based assessment allows students to choose the format of their final product, such as a written report, a video presentation, or a physical model. This provides opportunities for students to showcase their strengths and creativity, while also allowing for differentiation based on the learning styles. Ultimately, differentiating the assessment products requires a deep understanding of each student's learning profile and individual needs, which in turn could foster students' confidence, motivation, and enthusiasm (Seah, 2020). In doing so, the teachers used gamification that met students' profiles and provided varied assessment in each level. By providing multiple options for assessment and allowing for flexibility in how students demonstrate their understanding, the teachers create more inclusive and effective learning environment that supports the diverse needs of all learners (Lee, 2015).

CONCLUSION

This study was carried out to seek information on how well Indonesian EFL teachers perceived understandings of DA within the framework of DI and to what extent they practiced implementing DI components in EFL teaching based on the DA

results. It was revealed that the majority of EFL teachers had a good understanding of DA in DI. This understanding is crucial for the teachers to effectively differentiate their instructions in the EFL classroom. Although the EFL teachers perceived a good understanding of DA in DI, when bringing them into DI practices, it was found that a significant proportion of EFL teachers in Indonesia did not frequently implement all components of DI in their teaching practices based on the DA results. However, almost half of the teachers in the study were found to be frequently implementing DI components, suggesting that some teachers had successfully integrated DI into their teaching practices. The challenges faced by the teachers in implementing DI underscore the importance of investing in their professional development and training. This study highlights the need for educational policymakers to provide professional development opportunities and support for teachers to effectively implement the DI components in their EFL teaching.

This study has also revealed the practices of DI where EFL teachers use various strategies to differentiate instruction based on students' readiness, learning profiles, preferences, and interests. They employed a range of techniques to differentiate contents, processed, and product evaluations, with different levels of complexity based on students' readiness. Moreover, the teachers catered to students' learning profiles and preferences by offering varied forms of content, activities, and assessments aligned with students' visual, auditory, and kinesthetic learning styles. Additionally, the teachers considered students' interests in designing and implementing learning activities and assessments. By personalizing instruction, the teachers can enhance students' engagement, motivation, and academic achievement. Therefore, it is essential for the teachers to continue to adapt and refine their DI practices to meet the diverse needs of their students.

Directions for Future Research

There are several areas for further research that could provide valuable insights. One possible direction for future research is to investigate the specific challenges faced by EFL teachers in Indonesia in implementing the DI components based on the DA results. Understanding these challenges can help inform the development of more targeted professional development programs and supports for EFL teachers. Another potential area of research is to examine the impact of DI practices on EFL students' academic achievement and engagement. This could involve exploring the extent to which students' readiness, learning profiles, preferences, and interests influence their learning outcomes. Additionally, further research could examine the effectiveness of different DI strategies in promoting student engagement and academic achievement in EFL classrooms. This could involve investigating the use of various instructional materials, scaffolding techniques, and peer teaching/

tutoring in promoting student learning in a differentiated classroom. Finally, future research could examine the role of technology in facilitating the implementation of DI in EFL classrooms. This could involve exploring the effectiveness of various digital tools and platforms in supporting EFL teachers' DI practices and enhancing student learning outcomes.

REFERENCES

Adnan, A., & Marlina, L. (2017). EFL students' learning style in English as general course at Universitas Negeri Padang. [ASSEHR]. *Advances in Social Science, Education and Humanities Research*, 110, 235–240. DOI: 10.2991/iselt-17.2017.41

Al-Seghayer, K. (2021). Characteristics of Saudi EFL learners' learning styles. *English Language Teaching*, 14(7), 82–94. DOI: 10.5539/elt.v14n7p82

Arden, S. V., Gandhi, A. G., Zumeta Edmonds, R., & Danielson, L. (2017). toward more effective tiered systems: Lessons from national implementation efforts. *Exceptional Children*, 83(3), 269–280. DOI: 10.1177/0014402917693565

Asrial, S., Syahrial, , Husni Sabil, , Rahmat Perdana, , & Iqbal, M. (2022). Digital E-assessment technology in assessing students' tolerance character. *Jurnal Ilmiah Sekolah Dasar*, 6(4), 558–567. DOI: 10.23887/jisd.v6i4.47302

Bahador, H., & Mofrad, M. H. (2020). Classroom dynamic assessment of EFL learners' oral production: A case of female intermediate learners. *Language Teaching Research Quarterly*, 18, 83–97. DOI: 10.32038/ltrq.2020.18.06

Bender, W. N. (2012). *Project-based learning: Differentiating instruction for the 21st century*. Corwin Press.

Bi, M., Struyven, K., & Zhu, C. (2021). Differentiated instruction in Chinese primary and secondary schools: A systematic literature review. *Research Square*, 1-19. https://doi.org/DOI: 10.21203/rs.3.rs-207311/v1

Blatchford, P., & Russell, A. (2019). Class size, grouping practices and classroom management. *International Journal of Educational Research*, 96, 154–163. DOI: 10.1016/j.ijer.2018.09.004

Blaz, D. (2016). *Differentiated instruction: A guide for world language teachers* (2nd ed.). Routledge. DOI: 10.4324/9781315695648

Boelens, R., Voet, M., & De Wever, B. (2018). The design of blended learning in response to student diversity in higher education: Instructors' views and use of differentiated instruction in blended learning. *Computers & Education*, 120, 197–212. DOI: 10.1016/j.compedu.2018.02.009

Borg, S. (2015). *Teacher cognition and language education: Research and practice*. Bloomsbury Publishing.

Brigandi, C. B., Gilson, C. M., & Miller, M. (2019). Professional development and differentiated instruction in an elementary school pullout program: A gifted education case study. *Journal for the Education of the Gifted*, 42(4), 362–395. DOI: 10.1177/0162353219874418

Cahyono, B., Ardi, P., Siwa, Y., Sari, R., & Gestanti, R. (2023). EFL teachers' technological pedagogical knowledge (TPK) and ecological agency in responding to the differentiated learning policy in Indonesia. *Journal of Research in Applied Linguistics*, 14(2), 84–100. DOI: 10.22055/rals.2023.44055.3081

Cha, H.-J., & Ahn, M.-L. (2020). Design and development of a smart-tool prototype to promote differentiated instruction: A user-centered design approach. *Interactive Learning Environments*, 28(6), 762–778. DOI: 10.1080/10494820.2018.1552871

Clark, A. K., Nash, B., & Karvonen, M. (2022). Teacher assessment literacy: Implications for diagnostic assessment systems. *Applied Measurement in Education*, 35(1), 17–32. DOI: 10.1080/08957347.2022.2034823

Clark, T., & Endres, H. (2021). Computer-based diagnostic assessment of high school students' grammar skills with automated feedback–An international trial. *Assessment in Education: Principles, Policy & Practice*, 28(5–6), 602–632. DOI: 10.1080/0969594X.2021.1970513

Coubergs, C., Struyven, K., Vanthournout, G., & Engels, N. (2017). Measuring teachers' perceptions about differentiated instruction: The DI-quest instrument and model. *Studies in Educational Evaluation*, 53, 41–54. DOI: 10.1016/j.stueduc.2017.02.004

Creswell, J. W., & Guetterman, T. C. (2019). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (6th ed.). Pearson Education.

Csapó, B., & Molnár, G. (2019). Online diagnostic assessment in support of personalized teaching and learning: The eDia system. *Frontiers in Psychology*, 10, 1522. DOI: 10.3389/fpsyg.2019.01522 PMID: 31333546

Estaiteyeh, M., & DeCoito, I. (2023). Differentiated instruction in digital video games: STEM teacher candidates using technology to meet learners' needs. *Interactive Learning Environments*, ●●●, 1–15. DOI: 10.1080/10494820.2023.2190360

Gaitas, S., & Alves Martins, M. (2017). Teacher perceived difficulty in implementing differentiated instructional strategies in primary school. *International Journal of Inclusive Education*, 21(5), 544–556. DOI: 10.1080/13603116.2016.1223180

George, P. S. (2005). A rationale for differentiating instruction in the regular classroom. *Theory into Practice*, 44(3), 185–193. DOI: 10.1207/s15430421tip4403_2

Gheyssens, E., Coubergs, C., Griful-Freixenet, J., Engels, N., & Struyven, K. (2022). Differentiated instruction: The diversity of teachers' philosophy and praxis to adapt teaching to students' interests, readiness and learning profiles. *International Journal of Inclusive Education*, 26(14), 1383–1400. DOI: 10.1080/13603116.2020.1812739

Gravett, K., Taylor, C. A., & Fairchild, N. (2024). Pedagogies of mattering: Reconceptualising relational pedagogies in higher education. *Teaching in Higher Education*, 29(2), 388–403. DOI: 10.1080/13562517.2021.1989580

Güvenç, G. (2021). The impact of virtual differentiated instruction practices on student and teacher perceptions in English language teaching. *International Journal of Curriculum and Instruction*, 13(3), 3146–3164.

Hall, B. (2009). *Differentiated Instruction: Reaching all Students*. Pearson.

Hall, T. (2002). *Differentiated instruction. Effective classroom practices report*. National Center on Accessing the General Curriculum, CAST, U.S. Office of Special Education Programs.

Hasanah, N., Sembiring, M., Afni, K., & Risma, D. (2022). Sosialisasi Kurikulum Merdeka Merdeka Belajar untuk meningkatkan pengetahuan para guru di SD Swasta Muhamaddiyah 04 Binjai [Socialization of the Kurikulum Merdeka Merdeka Belajar curriculum to enhance the knowledge of teachers at Muhamaddiyah 04 Binjai Elementary School]. *Ruang Cendikia: Jurnal Pengabdian Kepada Masyarakat*, 1(3), 235–238.

Hsieh, H. F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, 15(9), 1277–1288. DOI: 10.1177/1049732305276687 PMID: 16204405

Hur, J. W., & Oh, J. (2012). Learning, engagement, and technology: Middle school students' three-year experience in pervasive technology environments in South Korea. *Journal of Educational Computing Research*, 46(3), 295–312. DOI: 10.2190/EC.46.3.e

İlçin, N., Tomruk, M., Yeşilyaprak, S. S., Karadibak, D., & Savcı, S. (2018). The relationship between learning styles and academic performance in Turkish physiotherapy students. *BMC Medical Education*, 18(1), 1–8. DOI: 10.1186/s12909-018-1400-2 PMID: 30514280

Jang, E. E., & Sinclair, J. (2021). Diagnostic assessment in language classrooms. In Fulcher, G., & Harding, L. (Eds.), *The Routledge handbook of language testing* (pp. 187–205). Routledge. DOI: 10.4324/9781003220756-15

Jimola, F. E., & Ofodu, G. O. (2019). ESL teachers and diagnostic assessment: Perceptions and practices. *ELOPE: English Language Overseas Perspectives and Enquiries*, 16(2), 33–48. DOI: 10.4312/elope.16.2.33-48

Johler, M., & Krumsvik, R. J. (2022). Increasing inclusion through differentiated instruction in a technology-rich primary school classroom in Norway. *Education, 3-13*, 1–15. DOI: 10.1080/03004279.2022.2143721

Jufriadi, A., Huda, C., Aji, S. D., Pratiwi, H. Y., & Ayu, H. D. (2022). Analisis keterampilan abad 21 melalui implementasi Kurikulum Merdeka Belajar Kampus Merdeka [Analysis of 21st century skills through the implementation of the Merdeka Belajar Kampus Merdeka curriculum]. *Jurnal Pendidikan Dan Kebudayaan*, 7(1), 39–53. DOI: 10.24832/jpnk.v7i1.2482

Kepmendikbud. (2020). No. 719/P/2020, *Guidelines for implementing curriculum in education units in special conditions*.

Kótay-Nagy, A. (2022). Primary school EFL teachers' practices and views of technology-enhanced differentiated instruction: A pilot interview study. *Working Papers in Language Pedagogy, 17*, 45–65. https://doi.org/DOI: 10.61425/wplp.2022.17.45.65

Lahrichi, M. A. (2019). *Negotiated Individual Study in Education: Tiered assignments as a differentiation technique*. https://www.researchgate.net/publication/333809377_Action_Study_in_Education_Tiered_Assignments_as_a_Differentiation_Technique#fullTextFileContent

Lavania, M., & Nor, F. B. M. (2020). Barriers in differentiated instruction: A systematic review of the literature. *Journal of Critical Reviews*, 7(6), 293–297. DOI: 10.31838/jcr.07.06.51

Lee, Y.-W. (2015). Diagnosing diagnostic language assessment. *Language Testing*, 32(3), 299–316. DOI: 10.1177/0265532214565387

Lewis, S. G., & Batts, K. (2005). How to implement differentiated instruction? Adjust, adjust, adjust. *Journal of Staff Development*, 26(4), 26–31.

Maker, C. J., & Shiever, S. W. (2005). *Teaching models in education of the gifted* (3rd ed.). Pro-Ed.

Mayes, R., Chase, P. N., & Walker, V. L. (2008). Supplemental practice and diagnostic assessment in an applied college algebra course. *Journal of College Reading and Learning*, 38(2), 7–30. DOI: 10.1080/10790195.2008.10850306

Melesse, T. (2015). Differentiated instruction: Perceptions, practices and challenges of primary school teachers. *Science, Technology and Arts Research Journal*, 4(3), 253–264. DOI: 10.4314/star.v4i3.37

Meşe, E., & Mede, E. (2022). Using digital differentiation to improve EFL achievement and self-regulation of tertiary learners: The Turkish context. *Innovation in Language Learning and Teaching*, 17(2), 340–353. DOI: 10.1080/17501229.2022.2043872

Nichols, P. D., Chipman, S. F., & Brennan, R. L. (2012). *Cognitively diagnostic assessment*. Routledge. DOI: 10.4324/9780203052969

Oke, A., & Fernandes, F. A. P. (2020). Innovations in teaching and learning: Exploring the perceptions of the education sector on the 4th Industrial Revolution (4IR). *Journal of Open Innovation*, 6(2), 1–22. DOI: 10.3390/joitmc6020031

Ortega, D. P., Cabrera, J. M., & Benalcázar, J. V. (2018). Differentiating instruction in the language learning classroom: Theoretical considerations and practical applications. *Journal of Language Teaching and Research*, 9(6), 1220–1228. DOI: 10.17507/jltr.0906.11

Permendikbudristek. (2022). No. 56 Year 2022, *Curriculum Implementation Guidelines for Learning Recovery*.

Pozas, M., Letzel, V., & Schneider, C. (2020). Teachers and differentiated instruction: Exploring differentiation practices to address student diversity. *Journal of Research in Special Educational Needs*, 20(3), 217–230. DOI: 10.1111/1471-3802.12481

Prasetyo, H., Roemintoyo, , & Sukarno, . (2023). Student-centered learning based on the principles of Ki Hajar Dewantara in the implementation of the Merdeka curriculum: A case study of elementary schools in Indonesia. *Journal of World Englishes and Educational Practices*, 5(3), 111–117. DOI: 10.32996/jweep.2023.5.3.10

Rafi, F., & Pourdana, N. (2023). E-diagnostic assessment of collaborative and individual oral tiered task performance in differentiated second language instruction framework. *Language Testing in Asia*, 13(1), 1–18. DOI: 10.1186/s40468-023-00223-7

Retnawati, H., Djidu, H., Kartianom, A., & Anazifa, R. D. (2018). Teachers' knowledge about higher-order thinking skills and its learning strategy. *Problems of Education in the 21st Century, 76*(2), 215-230.

Roberts, J. L., & Inman, T. F. (2023). *Strategies for differentiating instruction: Best practices for the classroom*. Taylor & Francis.

Rosita, I., & Femilia, P. S. (2022). Students' preference of English learning style for foreign language learners. *Bogor English Student and Teacher (BEST). Conference*, 3, 164–171.

Santangelo, T., & Tomlinson, C. A. (2012). teacher educators' perceptions and use of differentiated instruction practices: An exploratory investigation. *Action in Teacher Education*, 34(4), 309–327. DOI: 10.1080/01626620.2012.717032

Santikarn, B., & Wichadee, S. (2018). Flipping the classroom for English language learners: A study of learning performance and perceptions. [IJET]. *International Journal of Emerging Technologies in Learning*, 13(09), 123–135. DOI: 10.3991/ijet.v13i09.7792

Sapan, M., & Mede, E. (2022). The effects of differentiated instruction (DI) on achievement, motivation, and autonomy among English learners. *Iranian Journal of Language Teaching Research*, 10(1), 127–144. DOI: 10.30466/ijltr.2022.121125

Scaife, J., & Wellington, J. (2010). Varying perspectives and practices in formative and diagnostic assessment: A case study. *Journal of Education for Teaching*, 36(2), 137–151. DOI: 10.1080/02607471003651656

Scott, S. S., & Edwards, W. A. (2019). *Disability and world language learning: Inclusive teaching for diverse learners*. Rowman & Littlefield.

Seah, D. (2020). Using Kahoot in law school: Differentiated instruction for working adults with diverse learning abilities. *International Journal of Mobile Learning and Organisation*, 14(1), 36–48. DOI: 10.1504/IJMLO.2020.103937

Sihombing, A. A., Anugrahsari, S., Parlina, N., & Kusumastuti, Y. S. (2021). Merdeka Belajar in an online learning during the Covid-19 outbreak: Concept and implementation. *Asian Journal of University Education*, 17(4), 35–48. DOI: 10.24191/ajue.v17i4.16207

Smale-Jacobse, A. E., Meijer, A., Helms-Lorenz, M., & Maulana, R. (2019). Differentiated instruction in secondary education: A systematic review of research evidence. *Frontiers in Psychology*, 10, 1–23. DOI: 10.3389/fpsyg.2019.02366 PMID: 31824362

Sun, X. (2021). Differentiated instruction in L2 teaching: Two extensive reading programmes conducted during COVID-19 pandemic. *Innovation in Language Learning and Teaching*, 17(2), 177–190. DOI: 10.1080/17501229.2021.1979985

Suprayogi, M. N., & Valcke, M. (2016). Differentiated instruction in primary schools: Implementation and challenges in Indonesia. *Ponte Journal*, 72(6), 2–18. DOI: 10.21506/j.ponte.2016.6.1

Tomlinson, C. A. (2001). *How to differentiate instruction in mixed-ability classrooms* (2nd ed.). Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2014). *The differentiated classroom: Responding to the needs of all learners*. Association for Supervision and Curriculum Development.

Tomlinson, C. A. (2017). *How to differentiate instruction in academically diverse classrooms*. Association for Supervision and Curriculum Development.

Tomlinson, C. A., Brighton, C., Hertberg, H., Callahan, C. M., Moon, T. R., Brimijoin, K., Conover, L. A., & Reynolds, T. (2003). Differentiating instruction in response to student readiness, interest, and learning profile in academically diverse classrooms: A review of literature. *Journal for the Education of the Gifted*, 27(2–3), 119–145. DOI: 10.1177/016235320302700203

Tomlinson, C. A., Brimijoin, K., & Narvaez, L. (2008). *The differentiated school: Making revolutionary changes in teaching and learning*. Association for Supervision and Curriculum Development.

Tomlinson, C. A., & Moon, T. R. (2013). *Assessment and student success in a differentiated classroom*. Association for Supervision and Curriculum Development.

Triyatno, T., Fauiziati, E., & Maryadi, M. (2022). Implementasi Kurikulum Merdeka Belajar dalam perspektif filsafat progresivisme John Dewey [The implementation of the Merdeka Belajar curriculum from the perspective of John Dewey's progressivism Philosophy]. *Lentera: Jurnal Ilmiah Kependidikan*, 17(2), 17–23.

Vygotsky, L. S., & Cole, M. (1978). *Mind in society: Development of higher psychological processes*. Harvard university press.

Yavuz, A. C. (2020). The effects of DI on Turkish students' L2 achievement, and student and teacher perceptions. *Eurasian Journal of Applied Linguistics*, 6(2), 313–335. DOI: 10.32601/ejal.776002

Zeng, S. (2020). The potential of online technology for language learning. *English Language Teaching*, 13(10), 23–37. DOI: 10.5539/elt.v13n10p23

ADDITIONAL READING

Bondie, R. S., Dahnke, C., & Zusho, A. (2019). How does changing "one-size-fits-all" to differentiated instruction affect teaching? *Review of Research in Education*, 43(1), 336–362. DOI: 10.3102/0091732X18821130

Bosma, T., & Resing, W. C. (2008). Bridging the gap between diagnostic assessment and classroom practice. *Journal of Cognitive Education and Psychology*, 7(2), 174–198. DOI: 10.1891/194589508787381854

Dixon, F. A., Yssel, N., McConnell, J. M., & Hardin, T. (2014). Differentiated instruction, professional development, and teacher efficacy. *Journal for the Education of the Gifted*, 37(2), 111–127. DOI: 10.1177/0162353214529042

Fan, T., Song, J., & Guan, Z. (2021). Integrating diagnostic assessment into curriculum: A theoretical framework and teaching practices. *Language Testing in Asia*, 11(2), 1–23. DOI: 10.1186/s40468-020-00117-y

Ruys, I., Defruyt, S., Rots, I., & Aelterman, A. (2013). Differentiated instruction in teacher education: A case study of congruent teaching. *Teachers and Teaching*, 19(1), 93–107. DOI: 10.1080/13540602.2013.744201

Van Geel, M., Keuning, T., Frèrejean, J., Dolmans, D., van Merriënboer, J., & Visscher, A. J. (2019). Capturing the complexity of differentiated instruction. *School Effectiveness and School Improvement*, 30(1), 51–67. DOI: 10.1080/09243453.2018.1539013

KEY TERMS AND DEFINITIONS

Diagnostic assessment: A form of pre-assessment to identify students' strengths and weaknesses in specific skill areas, allowing for targeted improvements in the learning process.

Differentiated instruction: An instructional approach in which teachers adapt their teaching methods to accommodate diverse needs, abilities, and interests of individual student or groups of students.

Teachers' practices: The actions that teachers employ in their instructional interactions with their students.

Teachers' understanding: The depth and clarity that teachers have regarding teaching and learning.

APPENDIX 1

Teachers' understanding of diagnostic assessment in differentiated instruction

Adapted from Jimola and Ofodu (2019) and Lee (2015)
The questionaire uses 5-point Likert Scale
(1= Very low, 2=Low, 3=Average, 4=High, 5= Very high)

1. I am familiar with the diagnostic assessment in differentiated instruction
2. Diagnostic assessment contributes immensely to the improvement of the learning and teaching practices in differentiated instruction
3. Diagnostic assessment is used to spot students' strengths and weaknesses
4. A diagnostic assessment aims to pinpoint the root causes of students' weaknesses
5. I can design diagnostic instruments, tests and procedures
6. I can develop diagnostic instruments, tests and procedures
7. I can validate diagnostic instruments, tests and procedures
8. I can identify and define attributes/subskills and traits/dimensions.
9. I can administer diagnostic assessment and collect examinee performance data
10. I can estimate the learner's knowledge or proficiency states for attributes, sub-skills, traits, or rating dimensions.
11. I can classify learners in terms of weaknesses strength patterns.
12. I can conduct multiple, additional rounds (or cycles) of testing, if necessary.
13. I can detect students' comprehension of the lesson at the end of the task.
14. I can establish the exact nature of the specific learning difficulties at the end of the task.
15. I can rank students at the end of each diagnostic assessment based on low, medium and high readiness
16. I can rank students at the end of each diagnostic assessment based on their interests.
17. I can rank students at the end of each diagnostic assessment based on their learning profiles/learning styles.
18. I am able to give further instructions for remediation.
19. Diagnostic assessment can foster students' engagement in learning

APPENDIX 2

Teacher's practices of differentiated instruction based on the diagnostic assessment

Adapted from Tomlinson (2001, 2003, 2009)
The questionnaire uses 4-point likert scale
(1= Never, 2=Sometimes, 3=Frequently, 4=Always)

1. I differentiate the content of my teaching for students who have low readiness/ mastery level.
2. I differentiate the content of my teaching for students who have medium readiness/ mastery level.
3. I differentiate the content of my teaching for students who have high readiness/ mastery level.
4. I differentiate the content of my teaching for students who have different interests.
5. I differentiate the content of my teaching for students who have different learning profiles/ learning styles.
6. I differentiate the process of my teaching for students who have low readiness/ mastery level.
7. I differentiate the process of my teaching for students who have medium readiness/ mastery level.
8. I differentiate the process of my teaching for students who have high readiness/ mastery level.
9. I differentiate the process of my teaching for students who have different interests.
10. I differentiate the process of my teaching for students who have different learning profiles/ learning styles.
11. I differentiate the product (evaluation procedure) of my teaching for students who have low readiness/ mastery level.
12. I differentiate the product (evaluation procedure) of my teaching for students who have medium readiness/ mastery level.
13. I differentiate the product (evaluation procedure) of my teaching for students who have high readiness/ mastery level.
14. I differentiate the product (evaluation procedure) of my teaching for students who have different interests.
15. I differentiate the product (evaluation procedure) of my teaching for students who have different learning profiles/ learning styles.