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DESIGNING EMANCIPATORY LEARNING TO RESPONSE TO THE CHALLENGE OF THE 21ST CENTURY LIFE

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Abstract

Pope Francis in his encyclic of *Laudato Si* warning us about the broken earth. The pope concern about the current condition of mother earth because of human destructive and capitalism activity. In the last chapter of *Laudato Si*, he put a new hope of life by education and spiritual ecology. According to that issue, it is important to design a learning approach that empowering students to design their lesson plan that contain independent learning based on their interest and social background. The research method was action research that applied in the Inovative Learning Natural Science Subject. The lesson approach is called emancipatory education that means an approach that humanizing, involving critical awareness, and questioning the system. In this courses, the students was facilitated to develop their efforts in making use of the natural sciences concepts and laws in daily life. The learning process was designed based on emancipatory approach. Students were studied about *Laudato Si*, document about environmental crisis, movies, and also journal and resume it into an article independently. Then, they designed an instrument to interview the activist of environmental conservation. The instrument was made based on 6 point in the *Laudato Si*. The humanizing showed in their way to chose subject of interview, how they delivered the question, how they worked in peer group, and also how they design the lesson plan that based on students background and context. In that interview, the students showed their critical awareness that implicit in their question. After they resumed the result of interview, they applied it into their lesson plan to teach natural science in elementary school.

Keywords: emancipatory, natural science, *Laudato Si*

1. Introduction

Laudato Si is divided into six chapter consisting (1) the thought about the condition of the current mother earth; (2) the Bible related with God's creation; (3) the human root of the ecological crisis; (4) an integral ecology; (5) the rules of policy, approach and real action; and (6) education and spiritual ecology.

In the thought about the current condition of the mother earth, it is described that our mother earth is apparently broken because of the climate change, water problem, the decrease of the biodiversity, the decrease of the quality life and social deteriorated, and global imbalances. This discussion is closed with the fact that we have given weak response towards these social problems. The either the national or the international politics move towards the global technology and finance. In this situation, a critical response is highly needed.

Based on PGSD curriculum, the teaching of Learning Natural Sciences is that by the end of the course, the students are able to (1) observe the natural phenomena, either directly or indirectly; (2) make use of the natural sciences concepts and laws in daily life; (3) understand the structure of natural sciences, including functional

relationship among concepts related with natural sciences. In addition to involving the conceptual understanding, this course also includes laboratories practice. This activity is meant to support and develop the students' ability to observe.

For the students who are interested in developing innovative learning natural sciences, PGSD offers two other courses, namely Innovative Learning Natural Sciences 1 and Innovative Learning Natural Sciences 2. In these courses, the students are facilitated to develop their efforts in making use of the natural sciences concepts and laws in daily life. Students as the will-be elementary school teachers are encouraged to develop their own experiments and modifying a simple laboratories equipment, and to develop their learning activities based on a particular theme.

It is important to note that most of the students in PGSD do not have sufficient background in natural sciences. Most of them have social sciences as their background knowledge. Some of them even attended vocational school when they were in their high school. Most of them have the difficulties to understand the natural sciences concepts and laws. There was a time that the students obtained

45.55 of 100 when they did the test containing the basic biology for elementary students.

2. Method

This action research begun with designed the Inovative Learning Natural Science Subject's lesson plan and rundown. The researcher chose project based learning as the method and mix it with emancipatory approach.

There were 35 students that took this subject. They were divided into 5 groups to did the project. The theme of the project was Laudato Si. the rundown of the subject were divided into 8 steps:

- a. Literacy studies
- b. Observation to environmental studies center
- c. Design interview instrument based on 6 point of Laudato Si.
- d. Interview the activist of environmental conservation
- e. Analysis the data by coding and wrote description
- f. Design elementary natural science lesson plan with environmental topic
- g. Implemented the lesson plan in elementary school
- h. Evaluated and reflected all the process

Researcher collect all the students' portofolio, studied it, observed them in every step, and built a conclusion.

The point that had been observed in the students' process based on 3 core of emansipatory approach: humanizing, involving critical awareness, and questioning the system.

3. Results and Discussion

In the first meeting of Innovative Natural Science Subject, 35 students was asked to observed a short movie that showed them the condition of 70 years later, when all the trees gone and the water is created synthetically in factory. After that, the students discuss about broken environmental based on their real experience. The critical awarness showed in some students question in the discussion. "*What will happened if all the water is taken by corporation?*" (P-Q1). They also questioning the system "*in my experience, in my home town, the government agree to let hundreds of developer to build hotels in the same city, how can it be?*" (A-Q2).

Students collected literacy to help them understand the context of broken earth. The first book that highly recommended to read was the encyclic Laudato Si by Pope Francis. Some of

them read novels, articles from newspaper and short movie from Youtube. That was struggling to them to resume all literacy that they had been collected. They did not understand the difference between resume some articles and made synopsis. They needed a week more to reviewed and revised their resume.

Identifying that the students were not well trained in handling an interview, the researcher encouraged the students to propose what to do to gather these information. Two aspects were involved in assessing this ability. One was the ability to gather the information, including the ability to develop the interview and two was the richness of the data they gained. The assumption of the richness of the data was based on the idea of qualitative data that the richness of the data is based on the ability to develop the question for interview (Kvale & Brinkmann, 2009).

The instrument for interview had been done in the fourth week. They developed the question based on 6 point of Laudato Si.

The students came to Environmental Studies Center of Sanata Dharma Univeristy to interviewed some conservation activists there. The result of 5 subject of interview, they had the similar point of view about human as the center of environmental crisis. But, they divided into 2 point of view about ecological crisis. One group believed that the environmental crisis was because human exploitation and activity. The other group believed that nature had ability to adapted with what had been done in the surface.

By that information, students did reflection and evaluation. The result of that activity was used as the core of natural science lesson plan that they arranged. The lesson plan was developed by Tomlinson model and emancipatory approach. The model had 16 criteria that showed in the implementation. Beside that, the emancipatory approach had 3 criteria. Meanwhile, the principles of learning materials development in language teaching from Tomlinson (1998) that can be adopted into this study is that materials should achieve impact, help the learners to feel at ease, help the learners to develop confidence, be relevant and useful, require and facilitate the learners' self-investment, not rely too much on controlled practices, and provide opportunities for outcome feedback. The materials that had been developed then was implemented in the classroom setting. The process and the results of the implementation of the materials were studied using qualitative phenomenological approach.

4. Conclusion

The emancipatory approach encourage students to be more independent to dig information from the expert and phenomenon source. That because the emancipatory approach let them learn by their own experience and background (humanis), express their opinions and feelings (critical), and aware to the system of social life (questioning the system).

Their product (lesson plan of natural science for elementary school) was implemented as an answer of the lack of conservation education for young learners.

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