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# IMPLEMENTATION OF AUGMENTED REALITY TECHNOLOGY IN NATURAL SCIENCES LEARNING OF ELEMENTARY SCHOOL TO OPTIMIZE THE STUDENTS' LEARNING RESULT

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# Abstract

In this research, the researcher developed new innovation in natural sciences learning of elementary school by implementing augmented reality technology. The method that used in this research was research and development method based on Borg and Gall theory which consists of ten stages: 1) research and information collecting, 2) planning, 3) develop preliminary form of product, 4) preliminary field testing, 5) main product revision, 6) main field testing, 7) operational product revision, 8) operational field testing, 9) final product revision, 10) dissemination and implementation. The result of this research is learning media of natural sciences learning in elementary school by utilizing augmented reality technology. Based on the implementation of experiment, it is obtained the data that learning process using augmented reality which is developed can optimize the students' learning result.

Keywords: Augmented Reality, Learning Result, Research and Development, Natural Sciences of Elementary School, Learning Media

# Introduction

Based on the result of PISA (2009), Indonesia is on the second lowest rank from the 65 countries. There are three aspects that were researched by PISA, they are: the ability of reading, mathematics, and science. The result showed that science is on the lowest rank. This is apprehensive that aspect which is measured by PISA is including the special skill in science field that is very needed in facing the global era challenge. In this case, science learning should be revised to be better. From those reasons, it becomes challenge for sciences teachers to teach science maximally to the students. One of the efforts is revising the learning system. In education field, science learning is called as natural sciences learning. Natural science (IPA) is collection of knowledge that is arranged systematically about natural indication. Natural science development is not only about fact, but also scientific method and scientific attitude. It is hoped that natural science education can be tool for students to learn surrounding nature. Also, the

continually prospect development can be implemented in daily life. (Depdiknas, 2008).

Based on the result of survey in Surakarta, it is showed that the score of natural science is lower than the others subjects. In conducting examination, the score of natural science is in the lowest rank compared with other subjects. On the national examination in academic year of 2013/104, the average of Indonesian Language is 8.26, mathematics 7.38, while natural science is 7.29. Then, on the national examination in academic year of 2014/2015, the score of natural science has significant decreased with average 62.43. Starting from that, it is a challenge for teachers to be able to convey the science lessons as much as possible to the students. One effort that can be done to maximize learning outcomes is by improvements in the learning system.

Learning outcomes of students are influenced by internal factors and external factors. Internal factors including the students' interest and willingness in managing the material received. External factors include the availability of media and the presence of a teacher in the learning process. Learning is a process of interaction between students and teachers, both in the classroom and outside of classroom by using learning source and learning media.

Learning resources can be obtained from teachers, books, or printed media and other audio media that are expected to gain a wider knowledge. Progress in education will not happen without improving the learning process used. In other words, the quality of education is strongly influenced by the quality of learning. Therefore, the lessons to be implemented should be adjusted to the mandate of Government Regulation No. 19 of 2005 on National Education Standards, one of the standards to be developed is the process standard.

Then, to obtain good results in the learning process, it should be supported by the appropriate media that, because the learning media is an intermediary or the introduction of good communication and fun between teachers with students. The students' spirit will arise when the atmosphere is so fun and learning will be effective when they are happy in learning. Teachers' ability in designing and implementing learning media is the key to the success of fun learning process.

Grouping Learning media are very diverse, Seel and Glasgow (1990: 181-183) classify the media into two broad categories: traditional media and latest technology media. Learning media with modern technology usually involves emerging technologies such as cassette playback, video, recordings. While traditional media can be created manually by the teacher or containing classic elements by using materials and tools that are easily found in the environment. Teachers must be creative to create learning media in order to make learning condition which is educative, effective, and optimally efficient.

In this global era, the main multimedia is in form of ICT (Information Technology and communication) becomes a fundamental requirement in determining the quality and effectiveness of the learning process. According to Alhamuddin (2010) the process of learning using multimedia makes the learning is more deeply and fun, while for teachers the utilization of media is easier and very helpful in the process of effective learning. From Dryden and Vios (2003) study, it can be concluded from the results of their research that in successful

education, self-image was more important than the learning materials. Thus, the concept of future education is directed to how to excite learners to learn in a fun way.

Nowadays, one of the trending technologies is Augmented Reality. Suryawinata (2010) stated that Augmented Reality is combination between virtual and reality world made by computer. The virtual object can be text, animation, 3D model or video that gathered with the real environment, so that the users can feel the virtual object is in their environment. Augmented Reality belongs to new technology branch. However, the development is fast. So far, this technology is used in various fields, especially in military and advertisement. And now, it started applying in education field. Elango (2015) in his research showed positive result in implementing Augmented Reality on mathematics learning. Then, Chiang, Yang & Hwang (2015) stated that there is increasing of students' understanding in learning science through media based Augmented Reality. Also, research by Kucuk, Zilmas, and Goltas (2015) showed positive result in utilization of Augmented Reality in learning language.

In short, object can be seen more real through Augmented Reality. Therefore, it is very interesting if it is applied in learning process, especially in natural science, for it has many topics that can be learned through picture or visual. Besides, Augmented Reality can be accessed via OS Android in phone facility.

Therefore, in this research, the researcher developed new innovation in natural science learning in elementary school. It is hoped that the problems above can be solved. The researcher developed assignment worksheet that utilize technology by using Augmented Reality system and can be accessed via android.

# Method

Research design that was conducted is Research and Development (RD) that developing assignment worksheet of Natural science in elementary school based multimedia android using Augmented Reality. The development that conducted is using procedural model that adapting Borg and Gall model development.

The development according to Borg and Gall (1983) consists of ten steps: (1) research and information collecting (2) Planning (3) Develop preliminary form of product (4) Preliminary field testing (5) main product revision (6) main field testing to validate development product in large scale and compared with control product (7) operational product revision (8) operational field testing. It is validation test towards operational product that produced (9) Final product revision (10) dissemination and implementation product.

Respondent in this research is class 5 elementary school students in Surakarta. In the trial of small scale, the product is tested to 10 students and 1 teacher. In the trial of middle scale, the product is tested to 25 students and 2 teachers. Then, in the trial of large scale, it is tested to six classes (control class and experiment class). Instruments that used in this development research are questionnaire, questions, validation sheet, assessment sheet between students and observation sheet. Data processing in this research is conducted using descriptive analysis, including: expediency analysis and analysis of learning test result data. The method of collecting data in this research is questionnaire technique to know

the expediency product (assignment worksheet based android multimedia) from topic experts, language experts, learning experts, media experts, and also the teacher and students' respond, learning result assessment, psychomotor, and behavior. Test technique to assess cognitive learning result, and assessment technique inter students to psychomotor and behavior. Before tested, product is validated by 9 experts using Aiken formula.

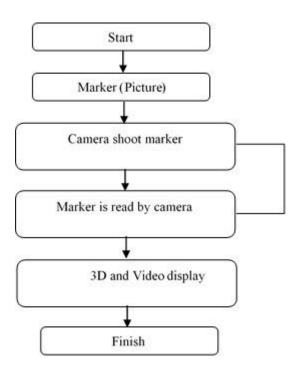
# **Findings and Discussion**

Activities conducted on the needs analysis in the form of field studies by giving questionnaires to students and teachers to the needs of learning media, learning condition in the classroom, the availability of learning materials, interviews with students and teachers, and analysis of national examination results in the last three years and daily test results.

In this preliminary research, it is found that the learning result of natural science is not yet optimal, there are some topics that are difficult to be understood by the students, especially the topic that need analysis process to an image and cycle. Thus, teachers need natural science learning media that appeals to learners and facilitates the students' understanding in learning natural science.

# **Planning**

In this stage, the researcher design learning media based android multimedia by utilizing augmented reality based on KTSP curriculum.



Picture 1. Augmented Reality Mechanism

# Develop Preliminary form of Product

Researchers make learning media based on augmented reality technology based on the 5th grade of elementary school. The resulting product has been validated by 9 experts covering material experts, media experts, learning experts, linguists, and education practitioners. The results obtained that the media developed is valid with the acquisition of validation value Aiken 0.9528.



Picture 2. Display of Augmented Reality



Gambar 2. Display of Application in android

# Preliminary Field Testing

In preliminary field testing stage, product was tested to 10 students and 2 teachers. The aim of preliminary field-testing was to measure readability of product that was media. Furthermore, this test was conducted by distributing questioner to the students and teachers after they used the product. The result shows that the quality of developed media was average. The data analysis shows that students mean score in evaluating product is 83.96, and evaluation product from teacher is 81.25.

No **Evaluation Students** Teacher Aspect of Percentagee Percentagee Category Category **Ouality** (%) (%) 1. Content 86.67 Good 83.33 Average 2. Language 81.67 Average 83.33 Average

Average

Average

Average

79.16

79.16

81.25

Average

Average

Average

Table 1. The Result of Preliminary Field Testing

# Main Product Revision

Display

Mean

Abandonment

3.

4.

Main product revision was done to revise the product by considering on the result of preliminary field-testing. Revision was conducted from students' evaluation and teachers' evaluation toward the product. The revision includes improving the quality of sensitivity marker in augmented reality and others inappropriate terms.

84.17

83.33

83.96

# Main Field Testing

In this stage, product was tested into larger scale. Developed media was tested into one class with the total number of students was 25 students and 2 teachers. The result shows that the quality of media is good. Students' evaluation score was 85.8 and teachers' evaluation score was 89.6.

Table 2. The Result of Main Field Testing

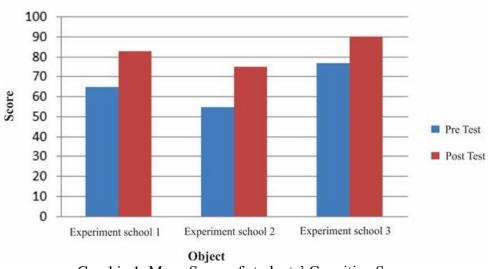
No	Evaluation Aspect of Quality	Students		Teacher	
		Percentagee (%)	Category		Percentagee (%)
1.	Content	86.74	Good	91.67	Good
2.	Language	89.77	Good	91.67	Good
3.	Display	88.26	Good	91.67	Good
4.	Abandonment	87.5	Good	95.83	Good
	Mean	88.07	Good	92.71	Good

# Operational Product Revision

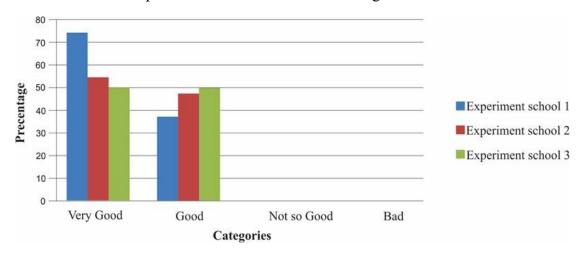
The quality revision and improvement of the product was done based on the result of main field-testing. In this stage, the quality revision and improvement was conducted by adding the explanation voice on augmented reality display.

# **Operational Field Testing**

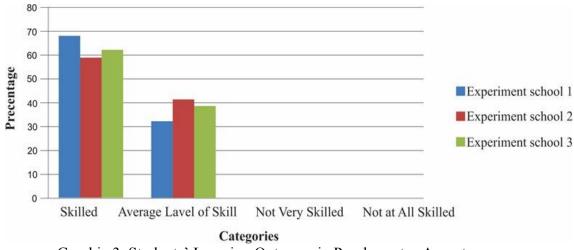
Operational field testing of developed media was conducted in 3 sample schools. The result of implementing the developed media in learning process shows the optimal result. It can be showed from the improvement of students learning outcome in some aspects such as cognitive, affective, and psychomotor. The following tables show the improvement score of students' learning outcome on.



Graphic 1. Mean Score of students' Cognitive Score



Graphic 2. Students' Learning outcome in Affective Aspect



Graphic 3. Students' Learning Outcome in Psychomotor Aspect

# Final Product Revision

Final product revision was conducted based on the result of operational field testing that shows that the quality of product is appropriate and relevant to be implemented and disseminated.

# Dissemination and Implementation

After validation, testing and revision leaning media of science using augmented reality is appropriate and relevant to be implemented in learning process. The next stage is disseminating and implementing product. Furthermore, the developed product is presented in learning innovation forum and distributed to schools in Surakarta. Later on, play store is used to enlarge the distribution of produce and easy teachers and students to access and download the product.

## Conclusion

In this research, researcher developed learning science media by using augmented reality technology. The product was validated by 9 experts including media expert, learning expert, language expert and education practitioners. The result of validation shows that the developed media score was 0.9528. The result of students' evaluation and teachers' evaluation toward the product was 88.07 % and 92.71%. It means that the developed product is good and relevant to be implemented in learning process. Moreover, the result of field testing also shows significant result. The result of field-testing shows that the developed media can improve students learning outcome on science viewed from cognitive aspect, affective aspect and psychomotor aspect. In the last stage of this development research, researcher disseminates the product to the elementary school teachers in Surakarta, distributes and provides download facility of product in play store.

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# ENGLISH PRE-SERVICE TEACHERS' IDENTITY DURING TEACHING PRACTICE: NARRATIVE RESEARCH

# Brigitta Shinta Hapsari and Ouda Teda Ena

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### Abstract

This research attempts to discover the identities of pre-service teachers in a private university in Yogyakarta, in relation to their positioning of their students. In addition, this research also aims to study to what extent positioning can construct identities of the pre-service teachers. The participants of this research were two pre-service teachers of a private university in Yogyakarta. The data were obtained through interview. The findings of this research first showed that the pre-service teachers perceived various identities in relation to positioning of their students. However, it was found that there were different identities between the two participants even though they faced similar problems. Last, positioning might have a force for the pre-service teachers in constructing their identities.

Keywords: pre-service teachers, identities, positioning theory, teaching practice

### Introduction

As teacher candidates, pre-service teachers are required to shape their professional identities as pre-service teachers. These identities are shaped during their studying period, especially through courses related to teaching and pedagogy (Ivanova & Skara-Mincāne, 2016). Along with their studying period in university, teaching practice is also significant in developing pre-service teachers' professional identity.

As teaching practice gives the pre-service teachers real experiences of working in real schools, the pre-service teachers get some benefits for their professional development, Chan (2013) states that "through such practice student teachers are exposed to valuable opportunities to acquire professional knowledge, improve their teaching skills, and gain teaching competence" (p. 1). It shows that by doing teaching practice, the pre-service teachers are given opportunities to get professional knowledge, teaching skills, and teaching competence.

Other than the benefits that the pre-service teachers get from teaching practice, the pre-service teachers also perceive their teachers' identity through the interactions they do in schools toward their students and also their mentors. This is in line with Beauchamp and Thomas (2009) who state that "a teacher's identity is shaped and reshaped in interaction with others in a professional context" (p.

178). Then, Olsen (2008) adds that identity can be seen as a result of interactions in teachers' development. Thus, it means that teaching practice provides a chance for the pre-service teachers to (re)negotiate their teacher's identity.

Since teaching practice enables pre-service teachers to develop their teacher identity through the interactions that they made in school, positioning as a result of those interactions should be a part of attention for the lecturers and the preservice teachers themselves (van Langenhove & Harré, 1999). Davies and Harré (1999) claim that "positioning ... is a discursive process whereby people are located in conversations as observably and subjectively coherent participants in jointly produced storylines" (p. 37). Kayi-Aydar (2015) highlights the importance of positioning in teacher identity construction. Reeves (2009) also points out that people can assign or reject the identities that are labelled to them by using positioning. This shows that there is an urgency to seek pre-service teachers' identities through positioning because positioning can reveal their identities. Moreover, their identities can determine what kind of interactions that the preservice teachers have during their teaching practice.

Considering the significance of teaching practice course in building preservice teachers' identity, this study attempts to analyze pre-service teachers' positioning and identities. Utilizing positioning theory to identify pre-service teachers' identity is considered as a new development in researching professional identity. It is because some research related to pre-service teachers and their identity has been conducted (e.g. Charles, 2017; Hong, 2010; Ruohotie-Lyhty & Moate, 2016; Walshaw, 2009), but none of them use positioning theory yet to analyze the identity of the pre-service teachers. Meanwhile, positioning theory has been said to be a useful way to see how people position themselves and others. Apparently, positioning theory is also widely utilized to reveal one's identity (Carbaugh, 1999; Berman, 1999; Sabat & Harré, 1999). Therefore, this research is going to shed a light in the use of positioning to discover English pre-service teachers identity.

Based on the research background stated above, the researchers formulate two research questions to guide this research: (1) what are the English pre-service teachers' identities during their teaching practice according to how they position themselves in relation to their students? (2) To what extent do the positioning shape the pre-service teachers' identities?

# Method

As mentioned in the introduction, this research focused on identifying English pre-service teachers' identity during their teaching practice through positioning theory. In order to achieve this aim, the researchers needed to gather in-depth data of the English pre-service teachers' experiences during their teaching practice. Thus, this research is a qualitative research. As stated by Ary, Jacobs, and Razavieh (2010), "qualitative inquiry seeks to understand and interpret human and social behavior as it is lived by participants in a particular social setting" (p. 420).

This research was a narrative research in which the focus was the story told by the participants. According to Ary et al. (2010), narrative research "has its roots in different humanities disciplines and focuses on stories (spoken or written)

told by individuals about their lives" (p. 468). This research will explore the experiences gained by English pre-service teachers during their teaching practice in order to find out their identity and positioning. The stories were gained through their written reports and interviews, as Ary et al. (2010) state that "a narrative can be any text or discourse" (p. 468).

# Participants and Data Gathering Technique

The participants of this research were two English pre-service teachers from English Language Education Study Program (ELESP) of a private university in Yogyakarta, named Ammy and Elia (all names are pseudonyms). The participants were the eighth semester students who had done their teaching practice and had finished their reports. The participants were all females. The participants did their teaching practice in two different school. Ammy taught in a private single-sex school. Elia taught in a public vocational school. Both of them were located in Yogyakarta. The participants were purposively selected so that the data met the objectives of this research.

In order to gather the data, the researchers used the participants' reports of teaching practice to obtain general data of the participants regarding their teaching practice experiences and how they positioned themselves. However, the data that were found in the reports were not rich. The reports were also consciously written by the participants as a requirement of their evaluation. Thus, the researchers conducted interviews with the participants regarding their experiences during their teaching practice. The interview was to gain deeper understanding of their experiences during their teaching practice, their positioning, and identities. The interview was audio recorded as well. The data obtained from the interviews were the primary data of this research.

# Data Analysis Technique

After the data are gathered, the data were analyzed. The data from the participants' teaching practice reports were reviewed. While reading the reports, the researchers highlighted some interesting experience regarding to teachers' identity and positioning. However, the researchers did not find rich data about in their teaching practice reports. Thus, the researchers used the data from the teaching practice reports as the guidelines for the interviews.

After conducting the interviews, the interview data were transcribed verbatim. The participants' interviews transcripts were coded. According to Ary et al. (2010), coding refers to "read and reread all the data and sort them by looking for units of meaning—words, phrases, sentences, subjects' ways of thinking, behavior patterns, and events that seem to appear regularly and that seem important" (p. 483). By coding the transcripts, the researchers were able to find the pre-service teachers' identities.

# **Findings and Discussion**

From the data analysis, it was found that the two participants faced an extreme situation during their teaching practice regarding classroom management especially handling students' attitude. Through their stories of facing a challenge of their students' attitude, it can be seen how they positioned their students. Moreover, it reflected their identities in relation to their students. Therefore, there

are two parts in this section, the first part reveals the pre-service teachers' identities in relation to their positioning of the students. The second one describes the influence of positioning to their identities.

# Identities Perceived through Positioning to the Students

From the stories that the two participants told, the researchers found that actually Ammy and Elia faced similar problem, in which they found difficulties in handling students' behavior. However, they showed two different identities while facing the situation. Ammy shaped herself as a firm teacher to face students' bad behavior. This situation also shaped Ammy to be a creative teacher by preparing a bunch of activities to minimize students' noise. Meanwhile, Elia showed a 180° different identity in facing the situation, which is a powerless teacher. She positioned her students to be more powerful than her that she could not handle the students anymore. She also felt frustrated in teaching her students so she decided to give up teaching that class.

Ammy, who did her teaching practice in a single-sex private school in Yogyakarta which is popular to have brilliant students, had some difficulties in facing students' attitudes which were really annoying for her. Indeed, her students were excellent already in English because most of them have prior experiences of using English in their daily life. Even some of them spent their lifetime abroad, such as in Dubai or Africa, so they do not have any difficulties with English. However, their excellence made them seem like they did not need teachers, and it influenced their attitudes in class. Ammy's students were really noisy, and liked to make a chaos in the class. It made her feel like she was not respected in the class. Moreover, there were some students who slept in the class, and the other played mobile games.

Looking upon the students' attitudes, Ammy made some solutions to handle students' behavior. There were some ways that she did in class. First, she made a set of activities that allowed students to do nothing in class. She always prepared a lesson plan before teaching, which guided her in teaching. Furthermore, she always had a backup plan to be done just in case her lesson plan was not successful. She gave her students activities over activities to minimize students' bad behavior. For example is what she stated in the interview,

"I designed my lesson plan to have student-centered activities. I did that so they had activities to do, and so they don't fall asleep. If I taught them, they would not listen to me. I always taught for only 10-15 minutes. After that, I gave them some activities, (like) group works, (then) I go around them."

She also paid so much attention on the time allocation for each activity. She tried her best to implement each activity right on time so all of her prepared activities could be successfully done and there was no time for the students to do nothing. All of these activities, made her a well-prepared teacher and a creative teachers because she always prepared a bunch of materials and activities to be given to the students.

Aside from preparing a bunch of activities for the students, Ammy also set herself to be a firm teacher. She put a line between herself and her students, so the students still respected her as a teacher. Moreover, her body was smaller than the students. Thus, if she became very friendly with her students, she was afraid that her students would bully her and not respect her. She was also afraid that her students would not pay attention to the materials that she had prepared. Even though she put herself as a firm teacher, when there was a student who slept, or were busy by themselves, she came closer to the student and asked them to pay attention. When the student fell asleep, she also came to the student's seat and asked them to wash their face. So, Ammy set herself to be a firm teacher, and in the same time, an attentive teacher.

Facing similar, or even more extreme, situation in the class, Elia, who did her teaching practicum in a public vocational school in Yogyakarta, showed different identities in facing her challenge. When Ammy's school was well-known to have brilliant students in her school, Elia's school was well-known of having students who were really naughty. She already heard that rumor even before she began her teaching practicum. The situation was actually worse when she began her practicum.

Elia faced an extreme situation which made her lost her agency in teaching. She taught a tenth grade class, which consisted of the naughtiest students in the school. While she was doing her observation, she saw that the real teacher asked the students to be quiet. The teacher came to the back rows of the class. As soon as the teacher went back to the front, Elia heard some swearing words came from the students' mouth. After experiencing that, she was afraid, and started to feel worried of how she would teach in that class.

When she taught in that class, she found a lot of difficulties in handling students' behavior. According to her, the students' behavior was extremely bad, which made her give up on teaching her students. The students were really noisy, and they showed no respect to her at all. On one side of the class, the students were lying on the floor, taking off their clothes. One another side of the class, some of them were sleeping, or playing mobile games. Only few of them listened to her. Facing that situation, she could not do anything. What was more important for her was there were still some students who were willing to do the assignments.

Other than that, she also got some disrespectful behavior from the students. Once, she gave a remedial exam for the students. When she came to the class, she heard that one of the naughtiest students complained why she had to come to the class. Then, the exam began. After finishing the exam, the naughtiest student started to lie on the floor, playing his mobile phone. Some time passed, he asked whether Elia had left the class. Finding that Elia had not left the class yet, a swearing word came out of his mouth. Elia was shocked and down hearing that word. Then, another student tried to kick her. Fortunately, the kick did not hit her face, but the kick was extremely close to her face.

While telling this story, the words "I cannot do anything", or "I tried to be patient" were frequently said. Moreover, she also often said that "the most important thing was there were students who listened to me. That much was enough." Below is the example of what she said in the interview,

"Teaching that class is extremely hard. While teaching them, I cannot do anything. What is more important is they do the assignments. I don't care they want to play games, or whatever. What's more important is there are still some of them who want to do the assignment"

It showed that she felt powerless in front of her students. She positioned her students as more powerful than her that she could not handle her. She perceived her identity as a powerless teacher in that class.

This identity brought some impacts for her. The impacts ranged from changing her mind-set, up to giving up teaching in that class. At first, realizing that she had no power to handle her students, she changed her mind-set from giving activities which stimulated students to be active, to the mind-set that she only needed to teach the students who wanted to listen to her. However, the situation did not bring any better improvement for her, which resulted in her giving up teaching the class. She also felt extremely tired after teaching the students. Eventually, she told her mentor teacher to change her class, and she finally taught another class.

However, Elia showed a different identity when taught different classes. When she did her teaching practice, she taught two classes. In the other classes, she was friendly to the students. She often came closer to the students who did not do their assignments, and helping them how to finish the assignment. The same identity was found when she taught the students of the class that was a replacement of the class that she gave up on. In teaching that class, she could approach her students, helping them in understanding the materials that the students had not understood.

From the analysis, the researchers also found a factor that made the two participants showed a polarized identity even though they face similar situation was the school culture. In Ammy's case, even though the students' behavior was annoying, the students were already excellent in English. Moreover, the school was known of having brilliant students. Meanwhile, in Elia's case, the students indeed seem like they did not have any motivation to go to school. In addition, the students also knew that their school was not a good school, so they underestimated the importance of school. This is what made Ammy and Elia perceived different identities.

# The Influence of Positioning in Shaping Identities

From what the researchers found, both Ammy and Elia actually want to be a friendly teacher, but they could not shape that identity during their teaching practice. It means that positioning can force the participants to shape new identities that are different with the identities they initially want to have.

In Ammy's case, she perceived her identity as a firm teacher in the class, due to her positioning of her students as noisy students. To handle that situation, she needed to build her identity as a firm teacher when she actually wanted to be a friendly teacher. She stated in the interview that,

"I intentionally make myself as a teacher, not their friend. Why? Because I see my friend who is friendly to the students, and the students do not respect

her at all because we are all women. And I don't want that to happen. I don't want them to underrate the lesson, or anything else. So, I become quite mean to them."

Similarly, in Elia's case, she also wanted to be a friendly teacher for her students. In addition to that, she also wanted to have more power than her students, because overall she is the teacher. Thus, she needed to be more powerful than her students, but in the same time being a friendly teacher for her students. As what she said,

"If I become a teacher, I want to be their friend. If we are close, I can give my knowledge to them easily, in a way that friends do, not too formal. It will be good between us. Yet, I want to be a level upper than them, so they will be respectful to me."

However, seeing her experiences during her teaching practice, it is unfortunate that she could not shape the identity that she wanted to have. On the other hand, she perceived a powerless teacher identity because of the condition that forced her to position her students as more powerful than her.

From Ammy and Elia's case, the researchers found that there was a force within them that shaped their identity based on their positioning of their students. It means that actually there were some identities that they did not want to perceive, but because of the situation, they had to build certain identities.

The aim of this research is to find out pre-service teachers' identities in relation to the positioning of their student. In addition, this research also seeks to what extent positional identities force the pre-service teachers to build new identities. To answer the research questions, a data analysis has been conducted and the researchers found two main findings of the analysis. First, the two participants showed polarized identities, even though they positioned their students similarly. Second, there was a force within positioning that made the participants construct new identities during their teaching practice. All of the findings of this research were the result of the interviews with the participants. It was the limitation of this research that there was only a small amount of information that the researchers could obtain from the participants' reflections in teaching practice reports.

In this research, the two pre-service teachers showed various identities based on their positioning of their students, ranged from positive identities such as a creative teacher, an attentive teacher, a well-prepared teacher, up to quite negative identities, such as a firm teacher and a powerless teacher. What is interesting in the findings is the two participants showed polarized identities, even though they faced similar situation, which was facing difficulties in handling students' bad behavior. This may be influenced by how they position their students. Ammy positioned her students as noisy students, yet excellent in English. Meanwhile, Elia positioned her students as more powerful than her.

Looking upon a theory, Kayi-Aydar (2015) argues that teachers put positions their students will affect their self-positioning, which will also have results in their

teaching activity. In the participants' case, Ammy and Elia indeed face similar situation. However, they positioned their students differently. Elia directly positioned her students as more powerful than her, so she positioned herself as a powerless teacher. This brought her to frustration and finally giving up on the class. Yoon (2008) also explains that "whatever the positions teachers take, that positioning guides them in their interactive approaches with students in classroom settings" (p. 499). Here, it is understandable why Elia gave up on her class. However, Elia showed a friendly teacher identity in another class that she taught. It is caused by different positioning that she put upon her students, which is "sembodo" or naughty but clever. It is very normal to happen because positioning is flexible and contextual, rather than fixed (Bucholtz & Hall, 2005).

Positioning also might have a force to the pre-service teachers to construct new identities other than the identities that they wanted to perceive. In this research, both Ammy and Elia initially wanted to be a friendly teacher. However, the situation that they faced in school, did not allow them to put positions that enabled them to have a friendly teacher identity. In contrast, Ammy constructed an identity to herself as a firm teacher. Similarly, Elia perceived a powerless teacher as her identity. This finding is similar with Reeves (2009) states, "as people negotiate identities, they take up, assert, and resist identity positions that define them" (p. 35). Moreover, Kayi-Aydar (2014) also explains that "The same individual can manifest any of his or her identities or be assigned new identities in the form of positions in different contexts" (p. 3). It means that a person can have a new identity depending on the positions he takes.

The results of this research may be guidance for the organizers of teaching practice to conduct a follow up on the results of teaching practice for the preservice teachers. Pre-service teachers' identities are essential for their professional development. The identity that the pre-service teachers perceived also has influences on the agency that the pre-service teachers have later when they come to the professional world. It is in line with Ruohotie-Lyhty and Moate (2016) who state that "the relationship between agency and professional identity suggests that within the teacher education context, preservice teachers' professional identity cannot be developed without the possibility for agentic action" (p. 319). Teaching practice should be a chance for the pre-service teachers to develop their identities. Thus, the lecturers should keep an eye of them so the interactions between the preservice teachers and all elements in schools can happen, as identity also emerged as a result of interactions.

One of the findings of this research also indicates that there may be some influences from the school culture to the positioning and identities of the preservice teachers. Therefore, this research may be replicable to be conducted in other regions, or even other countries. Moreover, this study may lead to other research which focuses on the relation between positioning, culture, and identity. This topic is not limited only to pre-service teachers, but any other elements in educations, for instance is in-service teachers.

# Conclusion

This qualitative research aimed to identify the identity of pre-service teachers of a private university in Yogyakarta viewed through positioning theory. Another aim of this research is to see the effect of positioning in constructing identities for the pre-service teachers. The results of this research showed that the participants of this research showed various identities in relation to their positioning of their students. However, even though the participants faced similar situation in handling students' bad behavior, the two participants perceived two polarized identities. Last, positioning theory takes a big role in constructing identities for the pre-service teachers.

This limitation of this research, which was the data of this research were mainly obtained through interview, can be utilized as the improvement for further research. Further studies are needed to support the finding that positioning has effects on pre-service teachers' identity construction. Future researchers who are interested in similar topic may conduct similar research on other teacher education program in other regions or countries. Further research may also employ more participants and more aspects, such as school culture, as the point of analysis.

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# A STUDY OF INTRODUCTION TO COLLEGE ENGLISH TEACHERS' BELIEFS IN THEIR TEACHING ROLES

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### Abstract

The study investigated Introduction to College English's teachers' beliefs about their roles as teachers. The participants of the study were thirteen teachers. It used their reflection papers as the source of data and secondary data, as the reflections were not originally written for the purpose of this study. The study used thematic analysis of the secondary data and it produced four themes or categories regarding the teacher participants' beliefs about their roles. First, they believed they should design various activities that promoted learning. Secondly, they needed to monitor their students' progress and conduct appropriate assessments. They also believed that they should always have alternative plans whenever their original plans were not successful, and the last, they believed that they needed to show learners their attention and care. Based on the results of the study and the limitations, some suggestions for future studies are also presented.

Keywords: teachers' beliefs, Introduction to College English, teachers' roles, teachers' reflections, secondary data

# Introduction

Many studies have suggested that what teachers do in class are heavily influenced by their pedagogical beliefs (see Borg, 1998; Clark & Peterson, 1986; Pajares, 1992). Furthermore, teachers' beliefs can determine how these teachers teach in class and the teaching strategies that they are likely to use (Gao & Watkins, 2010). Hence, these beliefs can indirectly affect how learners learn and obtain the desired learning outcomes (Gao & Watkins, 2010; Graves, 2000; Watkins & Biggs, 2001).

In Bauch's (1984) early study about teachers' beliefs, it was suggested that teachers' beliefs are formed through their personal experiences and interactions in daily life as well as interpretations of events around them. These beliefs, furthermore, can be transformed into attitudes, which deliver intentions. These intentions, in turn, become the source of decision which will the lead to action (Bauch, 1984). Bauch's (1984) statement was later supported by numerous other authors (see Borg, 1999; Graves, 2000; Horwitz, 1988; Richards & Rodgers, 2001; Rios, 1996). Specific in educational context, Borg (1999), furthermore,

emphasised that these beliefs govern teaching behaviours. In line with that, Rios (1996) further stated that these beliefs affect numerous teachers' choices and practices in class such as determining objectives, designing tasks and activities, as well as performing assessments.

Even further, Horwitz (1988) asserted that teachers' beliefs do not only affect teachers' behaviours in class but also impose or pass their beliefs about learning on students. For example, teachers who believe that English should be learned through being engaged in communicative and meaningful tasks such as role plays, or presentations rather than teaching Grammar and forms, will likely design their activities that way. In turn, students who have been heavily exposed to such activities may then consider that learning English through communicative and meaningful tasks is better than learning English with high emphasis on Grammar.

Furthermore, Introduction to College English (ICE) program, the teachers of which became the participants of the current study, is a non-credited English program run by the Language Training Centre of Duta Wacana Christian University. It consists of three levels, namely ICE level 1, ICE level 2, and ICE level 3. This program is compulsory for all non-English majored students of the university. They have to complete all of the three levels, each of which can be completed in a semester, to take English for Specific Purposes (ESP) programs, which are mandatory and credited, in their respective study programs. In the university enrolment process, all prospective students are tested to place them in a certain level of ICE program. Thus, it is possible that new students can directly take ESP course without taking any ICE classes or that they have to take ICE level 1 and have to pass all of the three levels of ICE before being able to take ESP programs in their faculty.

In consideration that teachers' beliefs have very big influences on teachers' behaviours or their teaching in class (see Borg, 2001; Pajares, 1992; Richards & Rodgers, 2001), and the possibility of these beliefs being imposed to learners (see Horwitz, 1988), studies on teachers' beliefs become really important. Moreover, teachers' beliefs, in general, will affect learners' development (Richards & Lockhart, 1996; Williams & Burden, 1997). More importantly, as Borg (2009) and Johnson (1994) emphasised, in order to properly understand teachers and teaching, we should understand the beliefs that influence what they do.

Fifteen years ago, studies conducted in various educational contexts and practices focused mainly on observable teacher behaviours in class, but not the "engine" or what stood behind the behaviours (Freeman, 2002). Since then, there have been more studies investigating beliefs in language learning settings (E.g.: Farrell & Ives, 2015; Farrell & Lim, 2005; Ng & Farrell, 2003). However, little work has been conducted on in-service teachers' beliefs in a foreign language university setting. Kuzborska's (2011) study on teachers' beliefs in Reading class at university level was an example of the few studies in the field. In her study, she used semi-structured interviews to capture the beliefs of the teacher participants. While this study was helpful in paving the way of further studies on beliefs in foreign language university setting, other studies are still needed to investigate teachers' beliefs in classes emphasizing other skills such as speaking, listening, writing, or in integrated language classes.

In relation with that, investigating Duta Wacana Christian University's ICE teachers' beliefs is deemed necessary. First, speaking becomes the focus of instruction in ICE program, and as such the results of the study can pave the way to further investigate teachers' beliefs in relation to learners' spoken production. Secondly, more and more universities in Indonesia and abroad run ICE-like programs, regardless of the various names, for their new non-English-majored students to equip them with necessary English skills to cope with academic challenges at university or to compete in the working world upon graduation. Hence, to investigate the beliefs of teachers of such important language program become even more necessary given the crucial roles of beliefs on teachers' actual teaching practices in class.

In the light of the rationales mentioned above, this study seeks to answer the following research question: What are the Introduction to College English (ICE)'s teachers' beliefs about their teaching roles?

The first to realise in every study investigating teachers' beliefs is that the notion "beliefs" itself has been acknowledged by many experts as a construct that is quite difficult to define (see Pajares, 1992). Many experts gave different definitions. Even Borg labelled it as "personal pedagogical system" in one work (see Borg, 1998) and "personal theories" in another work a year later (see Borg, 1999). Other experts labelled it as "theories for practice" (see Burns, 1996), "maxims" (see Richards, 1996), "implicit theories" (see Clark & Peterson, 1986), and many others. These various definitions, which some people may consider slightly confusing, might partly be attributed to the use of different terms to describe or define the same concept.

With regard to this, Pajares (1992) may give a relatively more complete definition of the concept. He defined beliefs as "attitudes, values, judgments, axioms, opinions, ideology, perceptions, conceptions, conceptual systems, preconceptions, dispositions, implicit theories, explicit theories, personal theories, internal mental processes, action strategies, rules of practice, practical principles, perspectives, repertoires of understanding, and social strategy" (Pajares, 1992, p. 309). As such, beliefs in general cover such a broad concept of inner thoughts of individuals.

Despite the seemingly broad concept mentioned above, these beliefs, Pajares (1992) further explained, should be differentiated from knowledge. Pajares (1992) argued that beliefs and knowledge are two different constructs in the way that knowledge can be associated with objective facts while beliefs might be argued. In addition, while knowledge often changes, beliefs are relatively more resistant to changes (Nespor, 1987). Pajares (1992) further explained that when beliefs do change, it is not reason or argument that changes them, but rather a conversion or a shift as a whole. It implies that individual's beliefs are relatively constant and difficult to alter.

Specific about teachers' beliefs, furthermore, Borg (2001) defined the term as "teachers' pedagogic beliefs or those beliefs of relevance to an individual's teaching" (p. 187). It means that these beliefs are closely related to their teaching (Richards & Lockhart, 1996). In more detailed, in an earlier work on teachers' beliefs, Clark and Peterson (1986) asserted that teachers' beliefs influence the

process of teachers' decision-making and they also heavily influence their methods of teaching, including the tasks and the materials they implement in class, as well as their rapports with their students. This view is supported by numerous subsequent works (see Borg, 2003; 2009; Farrell & Ives, 2015; Johnson, 1994; Williams & Burden, 1997). Another important point is that teachers' beliefs are more influential than their knowledge in affecting teachers' actual classroom practices (Nespor, 1987; Williams & Burden, 1997). Implying the powerful effects of teachers' beliefs, Richardson (1996) argued that these beliefs even govern what teachers learn and how they learn.

Many experts in education, in general, seem to agree that teaching is a form of cognitive activity and teachers' beliefs heavily affect their instructional decisions in class (see Borg, 2003; Kagan, 1992; Richards & Lockhart, 1996; Tillema, 2000). Specific in the field of language education, furthermore, Borg (2003) asserted that "teachers are active, thinking decision-makers who make instructional choices by drawing on complex practically-oriented, personalized, and context-sensitive networks of knowledge, thoughts, and beliefs" (p. 81). In other words, teachers' pedagogical decisions can, to great extent, be attributed to their beliefs (Richards & Rodgers, 2001), which are personalised and complex, and can differ from one person to another (Borg, 1998; Borg, 2003; Burns, 1992), in which according to Shavelson and Stern (1981), can act as a filter to determine whether or not to do certain instructional decisions. Several empirical studies had confirmed the influence of teachers' beliefs on their classroom practices (E.g. Borg, 1999; Borg 2001; Farrell & Ives, 2015; Farrell & Kun 2008; Farrell & Lim, 2005; Ng & Farrell, 2003). Borg's studies (see Borg, 1998; 2001), for examples, found that teachers' beliefs about grammar teaching affected their teaching in class.

Earlier works on teachers' beliefs (E.g.: Lortie, 1975; Wilson, 1990) suggested that teachers' beliefs develop throughout the teachers' lifetime. This later gained supports from various subsequent works. Borg (2003) and Richardson (1996), for example, stated that teachers' beliefs stem from their prior experiences, school practices, and a teacher's individual personality. The idea that teachers' previous experiences influence their beliefs is in line with the statement of Richards, Gallo, and Renandya (2001), asserting that "teachers' beliefs are formed on the basis of teachers own schooling as young students while observing teachers who taught them" (p. 50). It means that teachers' first perception about teaching comes when they are learners and it grows from their experiences at school (Richardson, 1996). This may partly be what Horwitz (1988) meant earlier when she stated that teachers can impose their beliefs about learning on students, including students of teacher training programs.

Despite the above-mentioned explanation on the crucial roles of teachers' beliefs about education and teaching, Johnson (1994) admitted that investigating teachers' beliefs can be very tricky as teachers' beliefs are such a complex construct and are not directly observable. Johnson (1994), however, further explained that educational studies on teachers' beliefs share three basic presuppositions. First, teachers' beliefs affect both of their perceptions and judgments. Secondly, teachers' beliefs influence how information on teaching is

translated into practices. The third is to understand teachers' beliefs is important to improve both teachers' teaching practices and teacher education programs in general.

In regard with this, Calderhead (1996) stated that there are five main categories or areas of teachers' beliefs. They are beliefs about learners and learning, beliefs about teaching, beliefs about the subject being taught, beliefs about learning to teach, and beliefs about self as well as the teaching role. Despite these categorisations, Calderhead (1996) asserted that these categories are interrelated and can overlap one another. The present study, however, only focused on teachers' beliefs about their teaching roles. Dörnyei and Murphey (2003), furthermore, stated that the term "roles" "originally comes from sociology and refers to the shared expectation of how an individual should behave" (p. 109). As such, teachers' roles can be seen as what teachers are supposed to do.

Before further elaboration about teaching roles, it may be important to know the context of the study, which was ICE language program, a little further. As briefly explained in the previous section, this program had Speaking as the main focus and adopted Communicative Language Teaching (CLT) and Task-Based Learning (TBL), its offshoot, as the approach. It was characterised with group presentations, role-plays, individual presentations, discussions, and final group project presentations as the assessments. It put little emphasis on accuracy and grammar teaching even though grammar focus activities were usually present towards the end of each session. In each meeting, students were distributed handouts containing materials on certain topics or were required to download them in the university portal. As previously explained, ICE students were non-English majored students, who were placed in a certain level of ICE in accordance with their scores in the placement tests during their enrolment process. ICE program was a General English program and as such students from various faculties could take the same ICE class.

The context of the class, like ICE program presented above, may influence teachers' beliefs about their teaching roles. Teachers' beliefs about students of English Education may be different from their beliefs about non-English majored students. Their beliefs about their teaching roles may be different as well. Likewise, the top-down policy regarding the instruction focus, which was speaking or spoken production taught using CLT and TBL, might also affect teachers' beliefs. In regard with this, it became necessary to further elaborate the expected roles of teachers in such classrooms.

In communicative classrooms, teachers' roles are essential to help the learners learn the necessary skills and develop communicative competence (Harmer, 1991). In such classrooms, Larsen-Freeman (1986) stated, teachers, are expected to talk less and listen more. They should act as active facilitators of the students (Larsen-Freeman, 1986). It is in line with Richards' and Rodgers' (2001) idea stating that they should facilitate active communication among learners as well as facilitate them to be engaged in various activities. Littlewood (1981), in comparison, despite mentioning teachers' role in general as "facilitator of learning" (p. 92), described that this general role entails several sub-roles such as "classroom managers", "overseers" of learners' progress, and learners' "advisers."

Some other authors stated that teachers should also become need analysts, who are able to determine learners' ongoing needs and to meet those needs (E.g. Gatbonton & Segalowitz, 2005). Generally, Harmer (1991) pointed out, teachers should facilitate learners' progress in some way or the other, be it through their being controllers, resource persons, organizers in giving instructions, assessors, participants, observers of students' learning, prompters while learners are working together, or the ones monitoring learners' progress. Karavas-Dukas (1995), furthermore, proposed nine categories of teachers' roles. They are the sources of expertise, management roles, facilitators of learning, the sources of advice, sharing roles, caring roles, evaluators, creators of classroom atmosphere, and examples of behaviour and hard work. Harmer (1991), pointed out, teachers' roles might change one to another simultaneously from one activity to another.

# Method

In order to answer the research questions, the current study used secondary data analysis. Secondary data are data already available and are originally collected for other primary purposes, which are then reused for a study (Hox & Boeije, 2005; Kothari, 2004; Pandey & Pandey, 2015). Secondary data can take many forms such as official publications, handbooks, computer database, diaries, and many others (Pandey & Pandey, 2015). In this study, furthermore, the secondary data used were ICE teachers' written reflections. Every teacher was required to submit to the Head of the Language Training Centre, under whose supervision ICE program was conducted, two written reflection in a semester, one in the middle of the semester, and the other one at the end of the semester. The reflections were about their teaching ICE during the semester. Each written reflection was normally 500-1000 words in length. The reflections used in this study were written by the participants in mid-March and early June 2017.

It was realised that secondary data might also have some disadvantages, which are inherent in its nature (Walliman, 2011). The data were not in the first place collected for this study, and it was possible that particular information to answer the research question was not widely available (Kothari, 2004; Walliman, 2011). As such, these data were first evaluated in terms of their suitability, and adequacy (Bhattacherjee, 2012; Kothari, 2004) before being used any further. Only after the secondary data were deemed suitable, and adequate to answer the research questions, the study proceeded to further analysis.

In terms of methodology, it was acknowledged that even though studies of teachers' beliefs thus far have used various research designs, the use of secondary data analysis remained an under-used research technique. Some studies in the field, for example, used large-scale surveys (E.g.: Peacock 2001; Richards, Tung, & Ng, 1992), while some others used qualitative case studies (E.g.: Farrell & Ives, 2015; Farrell & Lim, 2005; Ng & Farrell, 2003). Methods of data collection also varied, in which some studies used interviews to obtain teachers' beliefs (E.g.: Borg, 2001; Farrell & Ives, 2015), while some others used questionnaires (E.g.: MacDonald, Badger, & White, 2001). Woods (1996), furthermore, used video based stimulated recall to obtain his participants' beliefs. Farrell and Ives (2015) did use the participant's written reflection as one of the sources of data. However,

as the participant wrote the reflection as part of the study, the data was considered primary data, not secondary (Pandey & Pandey, 2015). To the best of my knowledge, furthermore, there has not been any teachers' beliefs' study using teachers' reflections as secondary data.

Despite that, the use of teachers' written reflections as secondary data might be a breakthrough in studies of teachers' beliefs. As Bowen (2009) pointed out, the use of documents can avoid reflexivity, the possibility that the participants change behaviours because of being observed, or they give "not so honest" responses when interviewed because they are afraid to voice not so common viewpoints. Moreover, in this study, teacher participants were not under study at the time of writing their reflections. Thus, what they wrote in the reflection was not in any way influenced by this study's objectives, about which they were informed weeks after the reflection submission date. Moreover, Kagan (1990) warned that researchers investigating teachers' beliefs should be aware that it is possible that teacher participants are reluctant to express unpopular beliefs when directly interviewed. Furthermore, studies of teachers' beliefs are closely related to the idea of teachers' learning as reflective practice, which highly encourages teachers to learn through reflections on teaching experiences (Richards & Lockhart, 1994; Williams & Burden, 1997). Thus, the use of teachers' reflections as the data was considered appropriate not only from methodology viewpoint, as explained earlier, but also from viewpoint of the data's relevance to the field.

Furthermore, the secondary data were analysed using Thematic Analysis. In the thematic analysis, results are presented in the forms of themes, and these themes capture "something important about the data in relation to the research questions" and represent "some level of patterned response or meaning within the data set" (Braun & Clarke, 2006, p. 82). It means that themes should describe recurring statements in the data. Braun and Clarke (2006) further explained six steps of conducting thematic analysis conducted in this study. They are, becoming familiar with the data, generating initial codes, searching for themes, reviewing the themes, defining and naming the themes, and finally producing the report (Braun & Clarke, 2006).

# Participants and ethical considerations

The participants of the study were thirteen part-time teachers of ICE program. Four participants held Bachelor's Degree in English Education. The other nine held Master's Degree in English studies. All of the participants were females, which might be understandable as most of the ICE teachers were females. They taught ICE classes of various levels. As such, it was possible that some participants taught three different levels, some others taught two levels, and the others taught only one level. Each ICE class was taught by two teachers in which each taught in every other meeting.

Permission to conduct research and use the teachers' written reflections as the data were initially granted by the Head of the Language Training Centre, a university office which was responsible for all university-scale language programs for non-English majored students. However, as an acknowledgement of the participants' voluntary participation rights, all ICE teachers were contacted, explained about the study, and asked whether they were willing to participate. As

a result, thirteen of nineteen ICE teachers agreed to participate in the study, with the other six teachers not participating. It implied that there was no coercion in the participations and participants had autonomy in their decision (Oliver, 2006; Orb, Eisenhauer, & Wynaden, 2000). This study, however, did not use any written informed consents, which should normally be obtained to show that participants were fully informed about the study and voluntarily participated in it (Gray, 2014; Israel & Hay, 2006). Consents were obtained both orally and through WhatsApp communication. In regard with this, Mack, Woodsong, MacQueen, Guest, and Namey (2011) argued that in some cases written consents are not obligatory. Besides, the participants were highly educated adults and were fully aware of their rights to withdraw from the study at any time.

Furthermore, to protect the confidentiality of the participants (Bhattacherjee, 2012; Oliver, 2006), the real names of the participants were changed into pseudonyms throughout the report. It was realised that as the name of the university and the name of the language program were disclosed, some people might be able to predict the names of some of the participants. However, to match who stated what statements will not be possible. Other than me, the researcher, only the Head of the Language Centre, to whom the written reflections were submitted, have access to the reflections.

# **Findings and Discussion**

With thirteen teachers participating in the study and each wrote two reflections, there were in total 26 reflections, each of which was 500-1000 words in length, which became the object of the thematic analysis. To facilitate reference-tracing, furthermore, codes following participants' statements were used. "(Palupi, R1)", for example, indicates that statements prior were obtained from the first written reflection of Palupi. Likewise, "(Palupi, R2)" indicates that statements prior were obtained from Palupi's second written reflection.

Furthermore, there were four themes obtained from the thematic analysis and these themes could be seen in the following figure.

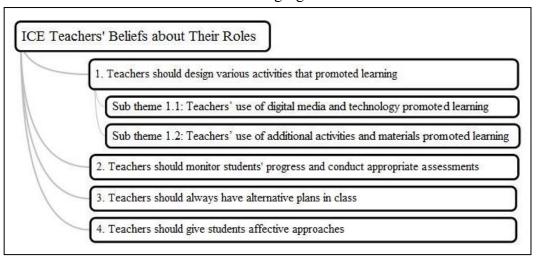


Figure 1: Themes of the ICE teachers' beliefs about their teaching roles

In the following sections, each of the themes would be elaborated further.

# Theme 1: Teachers should design various activities that promoted learning

Almost all teachers wrote that they were responsible for designing class activities that could encourage learners to learn. As written in their reflections, the way they did it was various. Some made use of various forms of technology as the teaching and learning media, and some others stated they used various games and tasks as well as extra materials from the internet.

# Sub-theme 1.1: Teachers' use of digital media and technology promoted learning

Pintan, Nungky, Titis, and Lintang stated that they utilised digital media or technology in their class activities. Pintan believed that technology could facilitate learners to access motivating and borderless learning environment. She wrote:

To create new and innovative learning environment means to facilitate students with learning opportunities which lead to autonomous, motivating, timeless, and borderless learning environment." (Pintan, R1)

"Integrating technology into teaching reading strategies would be [an] additional benefit for both teachers and students as it provides more interesting learning environment and creates students' deep engagement in teaching and learning process." (Pintan, R2).

Nungky and Titis, furthermore, also commented that the use of technology in class could make their students interested in the activities and materials. Titis developed quiz-like materials using *Kahoot*, an online learning platform, while Nungky tried to optimize the features of technology for class activities. They wrote:

"... [An]other thing is the idea of having Kahoot.... I am happy that students like it.... I'm on the way developing the content to be played in Kahoot." (Titis, R2)

"This semester I have been pushing myself to update and maximize the use of digital technology to support my classroom activity... I also learned to maximize the features provided in PowerPoint and Canva to create interesting activity for my students." (Nungky, R1)

Last but not least, as seen in the excerpt below, Lintang also stated that the use of technology was beneficial for students' learning, but she should also pay attention to the appropriateness of the contents.

"Using technology and using social media do really help boost students' motivation. Still, teachers have to think about the proper content." (Lintang, R2)

# Sub-theme 1.2: Teachers' use of additional activities and materials promoted learning

Many teacher participants seemed to agree that their use of activities and materials added to the materials from the distributed hand-outs made the atmosphere more fun and in turn made the students more motivated to be engaged in the learning activities.

Murni, Tina, and Utari, for examples, used fun activities which made their students' "unconsciously" learn. Murni and Tina, for instances, used games. The following are the excerpts.

"This kind activity [the game] is really fun to do if the number of the students in the class is quite big. I applied it to my classes in level 2 ... It went really well and [was] fun. They were curious to find the owners of the pictures and they were not aware that had practiced how to use simple past tense." (Murni, R1)

"... Every time we meet I give them vocabulary quiz. Not really a quiz though, it is more a kind of word games... I can't say that they have enlarged their vocabulary mastery through the activities, but so far they have fun doing it and they never complain and also they always do what I ask them to do." (Tina, RI)

Utari, in comparison, preferred to use a task done outside of class. She wrote:

"I asked the students to interview the cafeteria owner. A simple Indonesian interview was done in group[s] of 3, on what the ingredients are and how to make the food/drink.... Then, they had to write it [recipe] in English and presented it in a cafe, too. Everything was done in a relaxing way. And the role of the teacher is the facilitator who is always ready to help whenever learning problems appear." (Utari, R1)

Furthermore, some teachers, despite acknowledging the difficulties, acknowledged that making learning activities diverse was necessary. Titis, for example, knowing her weakness, tried to ask her colleagues for help in order to improve her teaching. She wrote:

"I always question myself about how to make teaching not monotonous and boring. Using varied media (video, audio, simple games, etc.) for brainstorming and ice breaking is what I do in class. Well, to be honest, I am lack of creativity. Here, colleagues' ideas are very helpful. I am learning from them" (Titis, R1).

In comparison, Donita expressed that she needed to keep herself updated and well-informed about her students' topics of interest in order to be able to make learning interesting. She wrote:

"They love debate, class discussion, especially about some hype topics like travelling, relationship, selebgram... I have [to] stay up-to-date to follow the need of this class." (Donita, RI)

Andara, who was a new teacher, and only started teaching ICE in 2017, as seen from the excerpt below, commented that despite her effort in familiarising

herself with ICE curriculum as a whole, she made some efforts to improvise her teaching outside the hand-outs.

"This is my first teaching ... so mostly I followed teacher's manual, however, if necessary, I added some extra materials taken from [the] internet or I made it myself, for example, flashcards." (Andara, R1)

As seen from the above-mentioned excerpts, the participants' beliefs that teachers should design various activities promoting learning were in line with teachers' expected role as the ones in charge of making learners develop communicative competence (Harmer, 1991). It was also possible that this belief stemmed from their perceived responsibility as the resource person (Harmer, 1991). Hence, they felt obliged to provide activities that would make learners engaged in the learning process. These roles were fulfilled by the participants by doing different things. For examples, Murni and Tina used games, while Utari used a task to make a relaxing atmosphere of learning (Karavas-Dukas, 1995). Furthermore, teachers' use of technology for teaching and learning media might also be attributed to their beliefs that their students liked it and the use of technology could motivate them to learn. This could be seen from Pintan's, Titis', and Lintang's excerpts above. From the excerpts, their beliefs about their role as the learning facilitators, who guided, and helped learners learn (Larsen-Freeman, 1986; Littlewood, 1981; Richards & Rodgers, 2001) could be seen. Lintang's realization that teachers should consider the appropriateness of the content materials when teaching using technology could be attributed to her beliefs about her role as an evaluator (Karavas-Dukas, 1995).

# Theme 2: Teachers should monitor students' progress and conduct appropriate assessments

Many of the teacher participants wrote about the necessity for teachers to monitor students' progress and to conduct assessments of their progress. Titis, for instance, tried to make all of her students speak by giving chance to those she considered quiet to present their ideas. She wrote:

"These smart students ... talkative and others are not. Thus, to avoid the gap, I should make sure that each of my students in class has the same portion in expressing their ideas. I usually choose those who are passive in class to answer my question and or put them in a group so everybody has chance to talk." (Titis, R1)

Furthermore, Elsa wrote about how she monitored her students' progress through digital platforms. The following is the excerpt.

"This way also helped me to monitor the students. For example, before progress test students may have individual consultation via email, WhatsApp, SMS, Facebook, Instagram, and so on... I used the personal account to remind the students about the class schedule, progress tests, assignments, and to have fun chatting with them." (Elsa, R2)

Titis and Utari, furthermore, wrote about their roles of giving their students feedbacks based on their class performances. They wrote:

"Students should be able to show their general preparation for the final test performance. It is the teacher's task to give feedback." (Utari, R2)

"I gave them written feedback but some still make mistakes on writing. I think I should provide writing activities more ... at the beginning, maybe by asking them to write a very short reflection or any ideas about the learning in some meetings. Hopefully, they're used to writing in English and [they] make good progress." (Titis, R2)

As seen from Titis' excerpt above, she was not sure whether her written feedbacks were really helpful, and she further opined that asking students to write short reflections might make them familiar with writing.

Despite the awareness of the necessity of monitoring students' progress, some teachers acknowledged that doing so was not always easy. Nungky, for instance, found it difficult to assess her students' progress because they were frequently absent in class. She wrote:

"Students' progress is neither easy to monitor nor to achieve. It is caused by students' habit of hit and go in attending the class. They sit in for one meeting, then, are missing in the next meeting, then come back before the test but are missing again on the test day..." (Nungky, R1)

Muli and Elsa, furthermore, expressed their disappointment when they found that their students did plain cheatings during their assessments. As seen in the excerpt below, Muli's student presented his friend's artwork instead of his own.

"... one student... does undesirable action. He does not make his own projects to perform, but he presents his friends' from other class. He performs Walt Disney's timeline, comic strips and journal entries which are all made by his friend. I suspected his roguish action ... I informed other colleagues about the suspicious attitude, one of my colleagues... found the exactly same projects being performed in her class... about the penalty, I plan to talk to these students that they have to redo the test for a 50 [per cent] score." (Muli, R1)

One of Elsa's students, furthermore, simply rewrote his friend's written work in a writing assessment. Regarding this, Elsa wrote:

"One problem that made me surprised was when I found my student's work was 95% similar to one student from another class....he drew the same picture and wrote the same explanation. He just added two or three phrases.... he admitted that it was actually his friend's writing and he received the consequence. After this experience... I was more thorough when I checked students' work. I always reminded the students that teacher will appreciate more if students do the assignment on their own, whatever the result is." (Elsa, R2)

Talking about cheating during assessments among some students, Lintang, as seen in the following excerpt, mentioned the necessity to warn the students to not do that as checking work originality was easy.

"I found two of my students did plagiarism... Actually, as teachers, we have that sense to know whether our students have that language competence or not. Also, checking work originality is now easy. As I haven't met them yet, I haven't warned them [about cheating] yet. So, next meeting I will let them know." (Lintang, R1)

Palupi, in comparison, expressed her belief that the ICE program's scoring rules which only necessitated students to obtain 55 out of 100 to pass each level was attributed to the low competence of some of ICE students of Level 3. She wrote:

"Having been teaching ICE for five years makes me wonder about the rule of ICE stated in the syllabus: 55 means PASS. I've got several students who got 55 and, of course, PASSED a level, but they actually did not deserve it. If they did not deserve to pass a level, why did I make them pass the level? I discussed it with some ICE teachers, and I found out that they had the same experience as well. Some comments such as: 'They are repeaters'... 'They are diligent and active'... 'The content is not really good and out of the topic, but I appreciate their effort'..." (Palupi, R2)

Palupi further wrote that the low passing grade contributed to mixed-ability classes.

"Due to this problem, I will have some students with a level 2 competence sitting in a level 3 class... The worse thing that I also observe is that some students who have repeated the SAME level for more than 2 times, and finally sit in a level 3 class, still have their level 2 competence, even level 1 competence... There are even some moments when the real level 3 students look at their "level 1-competent" classmates with their eyes questioning, 'How could you be here? It's level 3' (Palupi, R2)

With regard to all of the excerpts above, the teachers' beliefs that they should monitor students' progress and conduct appropriate assessments were generally in line with their roles as the evaluators (Karavas-Dukas, 1995). Palupi's believed role as an evaluator, for example, can be seen in her dissatisfaction in seeing some relatively low performing students passing an ICE level due to their passing the minimum passing grade, which according to Palupi, was too low. Furthermore, the disappointments expressed by some of the teachers when some of their students cheated during assessments could also be attributed to their beliefs about their role as an example of behavior (Karavas-Dukas, 1995), and their giving punishments to those students could be attributed to their beliefs about their role as the controllers (Harmer, 1991). Lintang's plan to warn her students not to cheat during assessments could also be seen as her beliefs that she, as a teacher, should have a caring role and become an advisor for her students (Karavas-Dukas, 1995; Littlewood, 1981).

# Theme 3: Teachers should always have alternative plans in class

Some participants also highlighted the necessity for teachers to have alternative plans in case their lesson plans did not work in practice. With regard to this, as seen in the following excerpt, Nungky acknowledged that despite bringing

benefits, the use of technology depended on sufficient facilities and if things went wrong, teachers should have an alternative plan.

"Relying on digital media makes me unsecured and prepare more backup plans in case that the electricity [is] down, [there is] no connection, or the computer/cell phone does not support." (Nungky, R1)

Murni, in comparison, acknowledged that alternative plans were important in case the number of the students coming to the class was much lower than the number she expected. She wrote:

"However, I was kind of surprised when I found that the number of [students].... level 2 was super small. In the list, it is 12 students but... there were only 2 or 3 students coming ... I needed to make improvisation ... It was successful and the students... enjoy with the class" (Murni, R1)

In reflection of what happened above, Murni continued to write:

"Not all things we have prepared go smoothly. Sometimes the plan that we have prepared really well does not go appropriately... there is a saying "something can always go wrong" (Murni, R1)

In her second reflection, Murni seemed to regret that she did not have an alternative plan when suddenly a student, who was no longer eligible to join the final test, showed up at a meeting scheduled to prepare students for the final test. She wrote:

"He kept coming until the second last meeting although he knew that he did not deserve the Final Oral Test (FOT)... On that day I was surprised and unprepared for handling this student... Once he sat down, I told him that he couldn't have FOT and he said ok... But he still did not move from the class. In my mind at that time, 'what are you doing here then?' That day was the time for preparing the final oral test. There was nothing he could do. However, I could not say that he could not be there... From this point, I can reflect that it is a shame for such [a] good motivated student I cannot provide a better preparation for the class including the material and classroom activities." (Murni, R2)

Palupi, furthermore, used what she called "personal approach" as her alternative plan when she thought that the activities she designed did not work well. She wrote:

"There are always some 'difficult' students in each class... too lazy ... too disobedient, and ... too passive, and so on... So far, providing various games is the best approach to handle those students and it, most of the time, works. However, when it doesn't, what I need to do is to make peace with the disappointment and do the backup plan: personal approach." (Palupi, R1)

That the teachers believed that they should always have alternative plans in class may be attributed to their realization of their perceived responsibility that they had management roles (Karavas-Dukas, 1995), in which they should organize, and manage the class. They might also see themselves as the ones responsible for creating classroom atmosphere (Karavas-Dukas, 1995). It could be seen from Nungky's, Murni's and Palupi's perceived efforts in how they tried to

be prepared in case their original plans did not work and from Murni's regret of not doing so one time. The teachers' perceived role as needs analysts who should be able to determine learners' ongoing needs and how to meet those needs (Gatbonton & Segalowitz, 2005) might also be one of the reasons why they believed alternative plans were needed in accordance with the needs of the learners. Palupi, for example, was aware that at some point activities she designed did not work, and she decided to keep her students motivated to learn using affective approaches.

# Theme 4: Teachers should give students affective approaches

Some teachers mentioned that it was necessary to let students know that they cared and paid attention to them. Two teachers labelled this as "personal approach" and another as "individual approach", yet both terms seemed to converge to mean teachers' approaches with regard to learners' feelings and emotions.

Tina, as seen in the excerpt below, acknowledged that she spent time conversing with her students who had repeated the same ICE level for several times and had some issues on attendance rate about personal life to make the atmosphere more relaxing for them. She wrote:

"...on my first day... no one came. The next meeting...one student showed up ... Then, there were two of them... both of them are repeaters [of ICE] who basically failed to pass the level due to the number of absences. Their competencies are also not that bad. So instead of having a classical mode [of] class... use personal approach. We spent some time to have a chit chat about their personal life in English. Even with a very limited vocabulary, they are encouraged to speak up." (Tina, R1)

Elsa, in comparison, had a record of her students' contacts, which the students willingly shared at the beginning of the semester, to reach them if needed, for example, to deliver important information. She noted that it was done to show them that the teachers cared about their learning.

"The last was individual approach. I had my students' phone number or social media account, so I could easily reach them anytime. The aim was to give them attention... [We] care." (Elsa, R2)

Palupi, furthermore, as briefly mentioned in the previous theme, wrote about her success in implementing what she called "personal approach" in her class. It took a number of forms, such as remembering the students' names, motivating them, and giving them some awards of making progress. She wrote:

"I did this [personal approach] several times, and it did work! My conclusion so far is that those students are actually students who need personal attention... either from the teacher, or from friends, or can be both... [I] memorize their names, and faces, and unique things about them... [I] talk to them after class... I motivate them by saying lovely words and I encourage them by saying that I believe they can be better. I do this several times, if necessary... [I] give award... Principally, it is 'making progress' award." (Palupi, R1)`

However, affective approaches seemed to not always work well. Nungky, for instances, wrote that being nice to her students despite their unsatisfactory

performance and attendance rate was not enough to make them attend the class. She wrote:

"I responded them [students] nice[ly], at least I tried to keep being nice, friendly, and encouraging, hoping they would really come in the next meeting. In fact, they did not... I learned not to be compulsive in responding to students' low attendance [rate] since it can cause them [to] be resistant to me or even anxious... I... calm and friendly to them, they behaved nice[ly], though it did not make them come." (Nungky, R2)

From the above-mentioned excerpts, some points could be commented. First, the teachers' beliefs that they should give students affective approaches might stem from their beliefs about their caring roles as friends and supporters of their students (Karavas-Dukas, 1995). It might also overlap with their role as needs analysts (Gatbonton & Segalowitz, 2005) who should be able to determine and meet learners' needs, including their needs for attention and care. Even though the use of affective approaches seemed to not always work, as seen in Nungky's excerpt, as seen from Palupi's excerpt, teachers' attention and care could be seen as a motivating drive for learners, which in turn could create atmosphere conducive for learning (Karavas-Dukas, 1995).

#### Conclusion

As the conclusion, there are several important points that need to be highlighted. There were four main beliefs of ICE's teachers about their teaching roles. Firstly, they believed that they were responsible for designing various activities that promoted learning. This might be guided by their perceived roles as resource persons (Harmer, 1991), facilitators (Larsen-Freeman, 1986; Littlewood, 1981; Richards & Rodgers, 2001), as well as evaluators of learning (Karavas-Dukas, 1995). They tried to accomplish it through optimising the use of technology as teaching and learning media and providing additional activities and materials not available in the ICE hand-outs. Secondly, they also believed they should monitor students' progress and conduct appropriate assessments. Generally, this was in line with teachers' roles as evaluators (Karavas-Dukas, 1995), and controllers (Harmer, 1991). Third, they also believed that teachers should always be ready with alternative plans in case their original lesson plans did not work well. This belief might be guided by their perceived responsibility as the class manager (Karavas-Dukas, 1995), and needs analysts, who should always know what learners need at a specific moment in class and meet those needs (Gatbonton & Segalowitz, 2005). Finally, despite the possible unsatisfactory outcome, they also believed that teachers should let the students know that they paid attention to them and cared about their learning to keep them motivated, thus believing about their caring roles (Karavas-Dukas, 1995) and their role as needs analysts, sensitive to learners' affective needs (Gatbonton & Segalowitz, 2005).

Despite the results of the study, its limitations should be acknowledged. First, as this study used teachers' reflections as secondary data, while the absence of possible reflexivity (Bowen, 2009) could be considered one of the strengths, this study did not obtain participants' confirmations or further explanations about what

they wrote. In other words, this study relied on the reflections as the only source of data. Secondly, as a qualitative study, this study inherited the characteristics of qualitative studies which, despite all merits in investigating phenomena and truths through the participants' viewpoints (Bryman, 2012; Gray, 2014), could not be generalised to wider population (Gray, 2014). Thus, the results of this study were context-specific and might not be applicable to other contexts.

The following are some suggestions for future studies formulated based on the results of the study and in reflections of the limitations. First, in relation with the study's limitation of using teachers' reflections as the only source of data, future studies might consider using reflections as secondary data and teachers' focus groups sequentially. The focus groups conducted after secondary data analysis is to gain further understanding of some points that the teachers wrote in the reflections. Furthermore, even though, as mentioned previously, teachers' beliefs substantially affect their classroom practices (see Borg, 1998; Clark & Peterson, 1986; Pajares, 1992; Richards & Rodgers, 2001; Rios, 1996), some authors did mention that at times there are discrepancies between what teachers believe they do and what they actually do in the classroom (E.g.: Farrell & Ives, 2015; Williams & Burden, 1997). Hence, it might be worthwhile to investigate teachers' beliefs as written in their reflections analysed as secondary data and their actual classroom practices through conducting class observations. This study could be conducted in the form of a case study involving two or three teachers.

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# PRE-SERVICE ENGLISH TEACHER PERCEPTION ABOUT HIGHER ORDER THINKING SKILLS (HOTS) IN THE 21ST CENTURY LEARNING

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#### Abstract

In Indonesia, the consciousness of the significance of HOTs becomes an educational purpose. This study aims to investigate what teachers' perception and the difficulty in implementing HOTS in 21st century of English language teaching. This research adopted a "sequential explanatory mixed methods" design (Creswell, 2014). It is regarded as explanatory because the initial quantitative data results are explained with the qualitative data. There were 5 participants in total who have volunteered for this study. They are the Pre-service English Teacher of Professional Teacher Program from different universities using randomized sampling. This study indicated that the participants have a high perception in implementing HOTs in the classroom. However, the participants face some difficulties in its implementation, such as time management and students' ability.

Keywords: perception, pre-service English teacher, higher order thinking skills, 21st century

#### Introduction

Nowadays, education around the world needs the improvement of the educational system in case of the information outburst, globalization, and competition to face the challenges of the 21st century. This improvement is not only about the alteration of the curriculum substance but rather the alteration of the pedagogy. It includes the change of conventional teaching which emphasizes on Low Order Thinking Skills (LOTs) to the one which emphasizes on Higher Order Thinking Skills (HOTs). In other words, this alteration process functioned as the mind of well-conceived educational improvement and reform because of the changes of the 21st century (Paul (1995) in Afandi, et al., 2018).

The Taxonomy of Educational Objectives, Handbook I: Cognitive Domain (Bloom, Engelhart, Furst, Hill, & Krathwohl, 1956) is the taxonomy which many readers "may have studied during their teacher education programs" (Brookhart, 2010). "Bloom's taxonomy is still used in many curriculum and teaching materials" including in Indonesia. The first Bloom Taxonomy consisted of six

majors, namely knowledge, comprehension, application, analysis, synthesis, evaluation.

According to Brookhart (2010), Anderson and Krathwohl published a revision of the Bloom handbook in 2001, which consists of the following six points:

- "1. Remembering means recognizing or recalling facts and concepts.
- 2. Understanding means basic comprehension, understood in light of newer theories of learning that emphasize students constructing their own meaning. The understanding process takes in interpreting, exemplifying, classifying, summarizing, inferring, comparing, and explaining.
- 3. Applying means executing or implementing a procedure to solve a problem.
- 4. Analyzing means breaking information into its parts, determining how the parts are related to each other and to the overall whole. The analyzing process takes in differentiating, organizing, and attributing and responsing multiple correct.
- 5. Evaluating means judging the value of material and methods for given purposes, based on criteria. The evaluating process takes in checking and critiquing.
- 6. Creating means putting disparate elements together to form a new whole, or reorganizing existing elements to form a new structure. The creating process takes in generating, planning, and producing".

Additionally, Brookhart (2010:5) states that higher-order thinking envisaged of as the top end of the Bloom's cognitive taxonomy. "The teaching goal behind any of the cognitive taxonomies is providing students to be able to do transfer". "Being able to think" means students can apply the knowledge and skills they developed during their learning to new contexts. "New" here means applications that the student has not thought of before, not necessarily something universally new. "Higher-order thinking is envisaged as students being able to relate their learning to other elements beyond those they were taught to associate with it".

In other hand, Indonesia Education Minister also established Standard Competences of Elementary and High Education Graduate which should be reached. It is arranged in Regulation of Education and Culture Minister of Indonesia Number 20 Year 2016. There are three aspects which the graduate should get. They are 1) attitude, 2) knowledge, and 3) skill. In line with the Bloom Taxonomy, Regulation of Education and Culture Minister of Indonesia Number 22 Year 2016 about Standard Process of Elementary and High Education states that knowledge is gained by activities "remembering, understanding, applying, analysing, evaluating and creating".

The term *Higher Order Thinking* (HOT) refers to "thinking on a level that is higher than memorizing facts or telling something back to someone". Moreover, "HOT takes thinking to higher levels than restating the facts and requires students to do something". In addition, the traditional paradigm often confronted the consciousness of the importance of building a learning process that emphasizes on HOTs in 21st century. They still focus on aspects of knowledge and material mastery. However, as a consequence, the learning process that occurs will rather

focus on LOTs and the learning activities will rely on teachers in the classroom that makes the learners become inactive recipients of information.

Afandi, Sajidan, Akhyar, and Suryani (2018) conducted research to identify pre-service science teacher perceptions about HOTs in 21st century. By employing a quantitative design using a survey research method involving 120 pre-service science teachers from Tanjungpura University. The results indicated that students were aware of the importance of HOTs and learning that emphasizes the aspects of HOTs to face the challenges of the 21st century. It is indicated by the mean score of pre-service science teacher perception about the important of HOTs to meet the challenges in the 21st century.

In addition, Hashim, Osman, Arifin, Abdullah, and Noh (2015) conducted research entitled Teachers' Perception on Higher Order Thinking Skills as an Innovation and its Implementation in History Teaching which aimed to address teachers' perception on Higher Order Thinking Skills as an innovation and to identify at what level teachers utilize Higher Order Thinking Skills in history teaching. The findings found that all of the teachers admit that the need, clarity, complexity and quality of HOTS as an innovation, had been addressed either moderately (67.2%) or well addressed (32.8%). However, in implementing HOTS, the overall findings indicate that two-thirds of the teachers (66.6%) were still low-level users of HOTS in history teaching. This research has indicated that educational change depends on what teacher 'do' and 'think'.

On the other hand, Schulz and Patrick (2016) conducted a study by interviewing "38 teachers in Kindergarten to Grade 9 classrooms from 14 schools in Newfoundland and Labrador, Canada, to obtain their understandings of critical and higher order thinking in social studies and science, and how this affects instruction and assessment". Schulz and Patrick (2016) found out that "the teachers believed that higher order thinking was important for all students, and attempted to teach thinking; however, they were less sure of how they might assess thinking".

Based on the phenomena above, the writers want to investigate teacher's perception of Pre-Service English Teacher at Professional Teacher Program towards Higher Order Thinking Skill and investigate the obstacles which they have experienced in their classroom.

#### Method

This research adopted a "sequential explanatory mixed methods" design (Creswell, 2014) that aims to identify the pre-service teacher belief about HOTs in 21st Century learning in English language teaching. This design involves a "two-phase project in which the researcher collects quantitative data in the first phase, analyses the results, and then use the results to plan the second, qualitative phase" (Creswell, 2014). It is regarded as "explanatory because the initial quantitative data results are explained with the qualitative data. It is considered sequential because a quantitative phase follows the qualitative phase".

In the first phase of the research, quantitative data was collected by inviting five pre-service English teachers from Professional Teacher Program to fill the questionnaire in Google form. The questionnaire is in English. The next phase of

the research was explanatory and provided a more in-depth explanation of the findings that was done by interviewing the participants.

There are 5 participants in total who have volunteered for this study. The participants are the Pre-service English Teacher of Professional Teacher Program from different university using randomized sampling. The instruments used for this study is a questionnaire by Fullan (2007). A total of 11 items of statements in the questionnaire used in this study to identify pre-service science teacher perception about HOTs in 21st century, range from strongly disagree to strongly agree.

Data in this study were analyzed using descriptive statistics such as mean and standard deviation using SPSS version 21. First, the data were obtained and then being converted on the four scales. Next, the data are being tested using descriptive statistics and interpreted using criteria.

# **Findings and Discussion**

In order to investigate pre-service English teacher's perception at Professional Teacher Program towards Higher Order Thinking Skill (HOTs) and the obstacles they have experienced in their classroom, the researcher used questionnaire for answering the first research question and also used interview for ensuring the first question and answering the second research question. The questionnaire has four parts, such as: teachers' perception on the need of HOTS as an innovation, teachers' perception on clarity of HOTS, teachers' perception on complexity of HOTS, and teachers' perception on the quality and practicality of HOTS. Teachers were asked to rate their response using the four –point scales of measurement that is, 4- Strongly Agree (SA); 3- Agree (A); 2- Disagree (D); 1-Strongly Disagree (SD).

The first part of questionnaire is teachers' perception on the need of HOTS. This table below shows the result of the questionnaire.

Part 1: Teachers' Per	rce ptio	n on	the No	eed of	HOTS.		
State ment	SA	A	D	SD	Me an Score	Standard Deviation	Interpretati on
I can survive in school system without having to teach HOTS.	-	3	2	-	2.6	0.548	Moderate
I do not see teaching HOTS as the priority need in English teaching.	-	1	2	2	1.8	0.837	Low
I can relate the importance of implementing HOTS in English teaching now for future.	4	1	-	-	3.8	0.447	High

Table 1. Teachers' Perception on the Need of HOTS

Based on the table above, there are three participants who agree that they can survive in school system without having to teach HOTS, however two participants are disagree toward the statement. It is obtained that the mean score of the first statement is 2.6 and the standard deviation is 0,548. Thus, it means that the participants have moderate perception that they can survive in school system without having to teach HOTS.

For the second statement, there is a participant agrees to the second statement (I do not see teaching HOTS as the priority need in English teaching), the other two participants are disagree and the other two participants are strongly disagree. It is obtained that the mean score of the first statement is 1.8 and standard deviation is 0,837. Thus, it means that the participants have low perception that they do not see teaching HOTS as the priority need in English teaching.

The result for the third statement shows that four participants are strongly agree that they can relate the importance of implementing HOTS in English teaching now for future, and the other one participant agrees. It is obtained that the mean score of the first statement is 3.8 and standard deviation is 0.447. Thus, it means that the participants have high perception that they can relate the importance of implementing HOTS in English teaching now for future.

In line with the interview, all of the participants said that teaching HOTS is important in their class because it can make the students more active, face globalization and have critical thinking in learning English.

The second part of the questionnaire is teachers' perception on clarity of HOTS. This table below shows the result of the questionnaire.

Table 2. Teachers' Perception on Clarity of HOTS

Part 2: Teachers' Perception on Clarity of HOTS.

Part 2: Teachers' Per	ce ptio	n on	Clarit	y of HO	OTS.		
Statement	SA	A	D	SD	Mean Score	Standard Deviation	Interpretation
I am not clear about	_	_	3	2	1.8	0.447	Low
HOTS goals			3	2	1.0	0.77/	Low
I am not at all clear							
about what I should							
do differently in	-	3	1	1	2.6	0.548	Moderate
implementing the							
HOTS							
The guideline related		2	2		2.6	0.540	N
to HOTS is clear	-	2	3	-	2.6	0.548	Moderate

Based on the table above, there are three participants who disagree that they are not clear about HOTS goals, even two participants are strongly disagree about it. It is obtained that the mean score of the first statement is 1.8 and standard deviation is 0.447. Thus, it means that the participants have low perception that

they are not clear about HOTS goals. In other words, the participants understand the HOTS goals.

For the second statement, the result shows that there are three participants who agree that they are not at all clear about what I should do differently in implementing the HOTS, one participant is disagree and the other one participant is strongly disagree. It is obtained that the mean score of the first statement is 2.6 and standard deviation is 0.548. Thus, it means that the participants have moderate perception that they are not at all clear about what they should do differently in implementing the HOTS.

The result for the third statement shows that two participants are agree that the guideline related to HOTS is clear, and three participants disagree. It is obtained that the mean score of the first statement is 2.6 and standard deviation is 0,548. Thus, it means that the participants have moderate perception that the guideline related to HOTS is clear.

In the interview, the writer asked the teachers to give example of HOTS question in order to find out whether the participants are surely obvious of implementing HOTS or not. The participants can give the HOTS question correctly. However, some of the participants emphasize on 'why' question for asking HOTS questions. Even, they are not given the obvious explanation from their lecturers about HOTS so they should deeply learn by themselves.

The third part of questionnaire is teachers' perception on the Complexity of HOTS. This table below shows the result of the questionnaire.

Part 3: Teachers' P	e rce p	tion o	n the (	Comple	xity of H	OTS.	
State ment	SA	A	D	SD	Mean Score	Standard Deviation	Interpretati on
It is difficult to	1	4	_	-	3.2	0.447	High
teach HOTS							-
It is difficult to							
understand the	1	2	2	-	2.8	0.837	Moderate
concepts of HOTS							
Teaching HOTS							
requires a	1	2	2	-	2.8	0.837	Moderate
sophisticated array							
of activities							

Table 3. Teachers' Perception on Clarity of HOTS

Based on the table above, there is one participant who strongly agree that it is difficult to teach HOTS, even four participants are agree. It is obtained that the mean score of the first statement is 3.2 and standard deviation is 0.447. Thus, it means that the participants have high perception that it is difficult to teach HOTS.

For the second statement, the result shows that there is one participant who strongly agree that they difficult to understand the concepts of HOTS, however

two participants are agree and the other two participants are disagree. It is obtained that the mean score of the first statement is 2.8 and standard deviation is 0.837. Thus, it means that the participants have moderate perception that it is difficult to understand the concepts of HOTS.

The third statement result shows that there is one participant who strongly agrees that teaching HOTS requires a sophisticated array of activities, however two participants are agree and two participants are disagree. It is obtained that the mean score of the first statement is 2.8 and standard deviation is 0.837. Thus, it means that the participants have moderate perception that teaching HOTS requires a sophisticated array of activities.

In line with the result of interview, the participants explained that they face difficulties in implementing HOTS in their class, such as students' ability and the time management. It needs long time and they have to be careful for time management. Every student has different background knowledge, so they have to consider what kind of HOTS questions or activity.

The four part of questionnaire is teachers' perception on the quality and practicality of HOTS. This table below shows the result of the questionnaire.

Table 4. Teachers' Perception on the Quality and Practicality of HOTS

Part 4: Teachers' Perc	e ptior	ı on t	he Qu	uality a	nd Pract	icality of HO	TS.
Statement	SA	A	D	SD	Mean Score	Standard Deviation	Interpreta tion
The preparation time							
is necessary to generate quality	4	1	-	-	3.8	0.448	High
teaching.							
High quality training							
materials in HOTS							
(print, video,	3	2	-	-	3.6	0.548	High
electronic) are							
provided along.							

Based on the table above, there is one participant who agrees, even four participants are strongly agree that the preparation time is necessary to generate quality teaching. It is obtained that the mean score of the first statement is 3.8 and standard deviation is 0.447. Thus, it means that the participants have high perception that the preparation time is necessary to generate quality teaching.

For the second statement, the result shows that there are two participant who agree, even three participants are strongly agree that High quality training materials in HOTS (print, video, electronic) are provided along. It is obtained that the mean score of the first statement is 3.6 and standard deviation is 0.548. Thus, it means that the participants have high perception that high quality training materials in HOTS (print, video, electronic) are provided along.

In line with the result of interview, the participants explained that in implementing HOTS, they need to manage the time and materials before teaching HOTS in their class.

#### Conclusion

This study indicated that the participants have high perception in implementing HOTS in the 21st century learning. However, the participants face some difficulties or obstacles in implementing HOTS in English language teaching, such as the time management and students' ability. The time management means that the pre-service English teachers need more time and they have to be careful for the time management in teaching HOTS into the classroom. The second obstacle is students' ability because every student has different background knowledge. There are some students who are capable to solve the problem or HOTs question, while there are also some students who get difficulty to solve the problem or HOTS question. Therefore, the participants have to consider what kind of HOTS questions or activity should be implemented in the classroom.

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# IGNATIAN PEDAGOGY PARADIGM TO IMPROVE STUDENTS' COMPETENCE, CONSCIENCE, COMPASSION, COMMITMENT AND INTEREST ON PHYSICS RESEARCH METHODOLOGY COURSE

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#### Abstract

This research investigates the influence of the Ignatian pedagogy paradigm (PPI) toward the development of competence, conscience, compassion, commitment, and interest of physics students on their learning about research methodology course. The sample of this research is 48 students who took research methodology course. This research uses PPI as treatment. The instruments that were used are a questionaire, observation, and documentation. The research uses quantitative and qualitative analysis. To compare the result of pretest and posttest, t-dependent test is used. The result of the research is that the competence, conscience, compassion, and interest of students significantly increase; but their commitment is not significantly improved.

Keywords: Ignatian pedagogy paradigm, research methodology course, competence, conscience, compassion, commitment, interest.

#### Introduction

For several years, Sanata Dharma University (USD) has introduced and developed the Ignatian pedagogy paradigm (PPI) in their teaching-learning process. Several lecturers have studied and began to teach using the Ignatian pedagogy method. Some of them have done a research on their learning process. USD also gave support and grant for lecturers who did their research on this matter.

Beginning 2017 the physics research methodology course applies the ignatian pedagogy method in the learning teaching process. PPI dynamics such as context, experience, reflection, action and evaluation are implemented. By using those dynamics, students are hoped to develop their competence, consciences, compassion, commitment, and their interest toward this course.

The physics research methodology course is a course that should be taken by students who are studying in physics education program in USD. The course is mandatory to prepare students conducting and doing research for theses. The course consists of research knowledge and skill such as: what concepts are important for doing research, how to prepare, to do, and to report a research.

During the course students learn those research concepts, prepare small research either individually or in group, and do research alone in a school.

Until now in physics education program, a research about the Ignatian pedagogy paradigm on the research methodology course has not been conducted. So it is not known whether the Ignatian methodology is effective for improving student's competence.

Based on the situation, the research wants to know whether the ignatian pedagogy paradigm could improve students' competence, conscience, compassion, commitment and interest toward the research methodology course.

# Ignatian pedagogy paradigm

Ignatian pedagogy paradigm (PPI) is an education paradigm that uses ignatian method for directing a retreat. In a retreat, someone wants to meet God. To do so, he/she should actively prays, meditates, and makes reflection; and a retreat guide helps him/her as a facilitator. So the most important is the retreatant. The center is the retreatant who wants to find God privately.

This paradigm is taken in the process of teaching-learning in schools. In the learning process students want to understand, to improve their knowledge and have better skills, so the important is students who wants to learn. Students should be active in learning process, they should actively think, learn the topics, and make conclusion. Students should construct their own knowledge. So the learning possess is active and put students as a center of schools. Teachers are facilitators to help students learning.

Ignatian pedagogy paradigm uses special dynamic in its learning process such as: context, experiment, reflection, action, and evaluation (Duminuco, S, J., 2000; Gallagher, Marianne & Musso, Peter, 2006; NN., 1993 & 2014; P3MP-LPM, 2012; Subagya, S.J., et.all., 2012; Suparno, 2015). Contexts are the situation of students who are learning. It can be previous knowledge, student's interest, motivation, their parent economic situation, and university learning situation. Teachers should know students' context so they can help students precisely.

Experience is what students experience during learning process. Experience can be direct or indirect experiences. Direct experience is experience that is done by students themselves. For example, students who learn mathematics, they should solve mathematics problems itself. Indirect experience is experience that is not directly done by students. For example, students learn about volcanos eruption from video or computer simulation. The task of teachers is to prepare what kind of experience should be done by students during their learning process. Sometime several teachers don't allow their students to experience for themselves. For example students learn about physics but never do experiment in their process. Students only hear the result from their teacher.

Reflection is the students' activity to reflect what they have done and experienced during learning process. They can be asked what they get from their experiences during learning process. What is useful for their life and what is not? What makes them happy and improved? What is good and not good? What is the impact of their experience for their life?

Action is an activity that emerges from the reflection. Students are asked to act according to their reflection. If students really have experiences, and they

really reflect on them, they will be driven to do something. For example, if they reflect that energy is needed and very important for all people, students will be aware to use all energy not only for themselves but also for other people. They will be happy to share energy with others.

After students learned using ignatian pedagogy, it should be evaluated whether the program is really good or not. So we can make evaluation on the program and make better.

# The dynamic of PPI in this course

PPI has special dynamics such as: context, experience, reflection, and action. Physics education students who take the research methodology course are consisted of two groups. One group is from 2014 students, and the other is from 2015 students. For the 2014 students this course is mandatory, and for 2015 students this course is election. The 2014 students are more silent, because most of the expressive students have taken the course in the semester before. The 2015 students are more active, more creative, and happier. Most of the 2014 students are still taking PPL (learning practices in schools) so they are more tired and not energetic. During this course they are tired and sleepy.

# Experience.

In this course students have many kind of experiences such as: (1) they have to read and learn the topics from the textbook before class, and they have to make presentation; (2) they have to find a special topic for their research assignment; (3) in small group they have to conduct a research about the happiness of USD students; (4) they should make proposal and conduct private research for their research assignment; (5) they should make observation and report; and (7) they should discuss some topics on research in class. By some experiences students are hoped to understand how to prepare and do a research.

# Reflection.

During reflection, students explained the meaning of their experiences in studying research methodology, what do they learn about the course, and what they get from its learning process. They are asked to explain whether they become more competent, more conscience, more compassion toward friends, and commit to others.

### Action.

During the research students' action is clearer. They plan to be more diligent, more aware about their life, and more honest. What they want to do next, can be seen from their reflection on the last test.

# Four C values: competence, conscience, compassion, and commitment Competence.

In this research competence means students' capability to do research. Whether students more understand and have skill to prepare a research and doing a research. They have competence if they know the important concept of a research, understand the research methodology, and are able to conduct and to report a research by themselves.

#### Conscience.

Students' conscience is the students 'competence to know what is good and what is bad. Students are able to analyse a problem critically, they are diligent in collecting data and analyzing data. They don't like to deceive with their jobs. Compassion. During the course students become more compassion toward their friends especially who need help. They like to help friends who have problems in their life and their study, they want to work together during learning process. They become more compassionate one another.

#### Commitment.

Commitment in this research means that students become more serious during their learning process, they commit to their study group, they are able to responsible during study, and they are involved in their study group. They become more loyal and in solidarity with their friends and their study group.

#### Students' interest

Students' interest means that students like and want to study the topic seriously, they are happy in their study, they have high motivation to study, and they are happy during their study.

# The research methodology course

The main purpose of this research methodology course is to help students understand the concepts of a research and have skill to prepare and to do a research. This course have a syllabus as follows: (1) Students understand the basic concept of doing physics research in school; (2) Students can explain correctly the research steps such as: choosing a problem; finding literature; doing hypotheses; getting sample; doing a treatment; choosing good instruments; checking the validity and reliability; and analyzing their result either qualitatively or quantitatively; (3) Students are able to conduct a research in schools; and (4) Students are able to report their research.

Based on the background, the purpose of this research is to find out whether by using the Ignatian Pedagogy Paradigm in the research methodology course, students improve their competence, conscience, compassion, commitment and their interest.

This research will be useful for giving input whether the ignatian pedagogy is really useful and helpful for students in improving their competence, conscience, compassion, commitment, and interest. It is also useful for the development of the ignatian pedagogy in Sanata Dharma University and in many schools that use PPI.

# Method

This research is qualitative and quantitative research. It is experimental research. This research uses the Ignatian pedagogy method as a treatment. Instrument that are used is pretest and posttest. The test is consisted of same questions about competence, conscience, compassion, commitment, and interest of students toward the course. Observation also is used to see the students' situation during the class. The test consisted of 40 questions: 20 for competence and 20 questions for conscience, compassion, commitment, and interest.

The sample of the research is 48 students from physics education program of Sanata Dharma University, who were taking a course on methodology of research during one semester.

The treatment that is used is learning using the Ignatian pedagogy. During the learning process students doing some activities such as: studying the topic in a small group and giving presentation, finding a topic for their research assignment, preparing instrument, preparing proposal, and doing a research in school. They also make reflection and doing action.

For analysis the data, the t-test for two dependent groups is used. SPSS computer program is used to calculate the data.

# **Findings and Discussion**

Using SPSS program, with t-test for the dependent groups, it is found the result as bellow (table 1):

Table 1. SPSS result

		Mean	N	Std. Deviation	Std. Error M
Pair 1	PreCompet	66.60	48	8.209	1.185
	PosCompet	75.56	48	8.331	1.202
Pair 2	PreConscie	18.56	48	2.072	.299
	PosConscie	20.33	48	2.035	.294
Pair 3	PreCompas	23.85	48	2.414	.348
	PosCompas	24.83	48	2.724	.393
Pair 4	PreCommit	16.21	48	1.786	.258
	PosCommit	16.33	48	2.253	.325
Pair 5	PreInterest	11.25	48	1.564	.226
	PosInterest	12.48	48	1.663	.240

Table 2. t-test result for dependent groups

# Paired Samples Test

Paire	d Differen	ces					·
			95% Confid Interva Differe	l of the	·		
Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2- tailed)
Pair PreCompet 1 PosCompet 8.958		1.464	- 11.904	-6.013	- 6.119	47	.000
Pair PreConscie 2 PosConscie 1.771		.348	-2.470	-1.072	- 5.095	47	.000
Pair PreCompas979 3 PosCompas	2.832	.409	-1.802	157	- 2.395	• /	.021
Pair PreCommit125 4 PosCommit	2.438	.352	833	.583	355	47	.724
Pair PreInterest 5 PosInterest 1.229		.275	-1.782	676	- 4.471	47	.000

According to the table 1 and 2, it can be seen that the competence, the conscience, the compassion, and the interest of students after learning process are significantly different. But the commitment of students is not significant. So it can be concluded that the Ignatian pedagogy improves students' competence, conscience, compassion, and interest; but it cannot improve students' commitment.

During observation, it could be said that students are more enthusiastic and enjoy the course. Their enjoyment can be seen from their happiness and seriousness in doing their research either individually or in their groups. They are also enthusiastic when they do a group research about the happiness of Sanata Dharma University students in Paingan. They work together happily, enthusiastic and they are happily in presenting their result. In addition, their score for the course most of them are very good (A or B).

Even though their commitment is not significant, but it is clear that students worked together in group very serious, they learned together better, and they are responsible with their job in group.

# Analysis

From statistical analysis, it can be concluded that students' competence, conscience, compassion, and interest are significantly different. It means that students improve their competence, conscience, compassion, and interest after learning the methodology research course using ignatian pedagogy method. This research indicates that the ignatian pedagogy could develop students' competence,

conscience, compassion and interest. This result is similar with some research on PPI that this paradigm could improve students' competence, conscience, compassion.

Those experiences that are done by students in learning process really improve and make students better understand about what they learn. They don't develop only their competence, but also their characters such as conscience and compassion. What did students experience in group discussion, in group work, in doing research together, improve and influence their character. They become more compassionate to others and are pushed to work together.

The Ignatian pedagogy that stresses on students' activity, creativity, and collaboration, really helps students to improve their knowledge, their conscience, and compassion. This result also similar with the constructivism method that helps students more understand because they construct their own knowledge (von Glasersfeld, in Bettencourt, 1989; Suparno, Paul, 1997).

The commitment is not significantly different. It means that students don't improve their commitment. Even though the mean of pretest and the mean of posttest on commitment is different, but it is not significant. Maybe the reason is because the commitment score is high enough so it cannot become higher. The mean of pretest is 16, 21 (from max 20) and the mean of posttest is 16, 33 (from max 20). According to the observation, it seems that most students have high commitment with their jobs, their friends, their groups, and they are responsible with their jobs. It is clear that most students are happily work together with their friends in group. During group research they looked happy, energetic, and finished their research well.

#### Limitation of this study

This study has some limitations such as: (1) this study has no control group. So it is not complete experimental study. The reason is that there is only one class for the course during that semester. It is impossible to divide the class become two classes, because all students want to get the same method of learning process. (2) The researcher are not able to follow all students' activities during implementing the research, so their activities are not observed completely.

### Conclusion

From the data analysis it can be concluded that by using the Ignatian pedagogy paradigm in learning the research methodology course, physics education students of Sanata Dharma University improve their competence, conscience, compassion, and their interest toward the course; but they do not develop their commitment. So in general the PPI really improve students' understanding and their characters. It means that the PPI can be used to develop students learning in USD.

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# BEHAVIORISM OR MENTALISM? THE CASE OF FOREIGN LANGUAGE LEARNING PROCESS IN MODERN ISLAMIC BOARDING SCHOOLS

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#### Abstract

There are two majorities of thought in the process of language learning and acquisition. They are behaviorist and mentalist theory. The behaviorist theory is based on psychological aspects of learners in their habit formation while the mentalist's come with the new approach called Language Acquisition Device (LAD) that used in the process of learning. In Modern Islamic Boarding School the term of language environment is used as the process of foreign language learning in which students communicate one another by using the foreign languages, but they are also forced to learn their structures and systems in the classes. The researcher used ethnography and narrative study to gain the data, he observed the phenomenon directly to the one most prominent Modern Islamic Boarding School located in East Java and interviewed with the responsible teacher for language development, in conclusion, both theories are used by Modern Islamic Boarding School in the process of language learning.

Keywords: foreign languages, language learning, acquisition, environment, LAD

# Introduction

Islamic boarding schools (pesantren) are genuine of an education system in Indonesia, the learning model in there rooted from long-standing as introduced by Hindu and then continued as an Islamic tradition. In colonial's era, pesantren only teach about Islamic thought and Arabic language as their moderator to achieve and study Quranic verses. As the global period comes, the need for knowledge to know about other languages is improved. In 1926, the new model of pesantren was established, with the additional term 'modern,' it changed the whole perspective about 'traditional model of teaching.' In his curriculum, Modern Islamic Boarding School added English, German, and Dutch language, as the most basic needs for building the next generation. (Nurdianto, 2018).

Now on, almost every Modern Islamic Boarding School have included both Arabic and English language in their curriculum, besides Indonesian and local languages, both as the medium of instruction in teaching/learning and daily communication. The obligation to use these foreign languages is intended to improve students' knowledge in Islamic studies, and at the same time, expand their language repertoire (Bin Tahir: 2017).

The unique old-fashioned model of language learning and teaching is interested to be discussed, both paradigm behaviorism and mentalism are applied, the behaviorist method of language acquisition is playing an important role to build students courage of speaking in target language by focusing on drilling method, while the mentalist/cognitivist method is used in the teaching of grammar. In this paper, the writer would like to share how these two methods are combined and integrated to fulfill each other weaknesses and by adding some linguist views to cultivate both ways.

# Behaviorism Theory of Language Acquisition

According to VanPatten & Benatti (2015), the environment is the most crucial factor in learning, and it consists of developing responses to environmental stimuli. If these responses receive positive reinforcement, they will repeat. If the reactions receive punishment (in the case of language learning, error correction), they will abandon. According to this theory, SLA occurs similarly. To learn any second language (L2), one must imitate correct models repeatedly. Learning requires repeated engagement in the target behavior, in this case, the production of the L2. Active participation by the learner is considered a crucial element of the learning process.

The same procedure is classical and added by Feedback System using reinforcement and punishment or Operant conditioning behavior. Behaviorists contended that mental processes were not involved in this process; it was purely a result of the association of events, a response to environmental stimuli and subsequent reinforcement or punishment. In effect, these are both responses to the answer. Support encourages the continuation of the response behavior whereas penalty discourages continuation of the reaction.

Based on the Pavlov's experiment with the dog, stimulus and responses (S&R) and classical conditioning created 1-2-3 condition which means (1) a repeated stimulus (2) specific response (3) a new behavior. The theories and then established that there is a significant role for frequency. Each time a response is made to the stimulus, it strengthens the association between them, repeated exposure, therefore, is an essential factor in developing new behaviors.

In the second language context, learners were to be trained to repress first language habits and acquire good second language habits. The correct response modifies learners' behavior over time. The pedagogical and practical implications of behaviorism resulted in the Audio-lingual method (ALM). The ALM was an approach to language teaching based on mechanical and pattern language practice called 'drills' (e.g., repetition and substitution/transformation drills). Second language learners had to repeat, manipulate, or transform a particular form or structure to complete the method. (VanPatten & Benati 2010).

"Learning itself is a cumulative process, the more knowledge and skills an individual acquires, the more likely it becomes that his experiences and activities will shape his learning. An adult rarely, if ever, learns anything entirely new; however unfamiliar the task that confronts him, the information and habits that have built up in the past will be his point of departure. Thus the transfer of training from old to new situations is part and parcel of most, if not all, learning. In this sense, the study of transfer is coextensive with the investigation of learning". (Postman, 1971).

Behaviorism banished both cognition and motivation. Even though cognitive psychology has eventually come to occupy an essential place within the field of psychology, it, too, had no role for effect and motivation, at least initially. The implication is that researchers trained in the tradition of cognitive psychology would not have tended to look for a significant role for motivation in the field of SLA, learning involves the establishment of a habit utilizing which this stimulus-response sets become associated (Gass & Selinker, 2008).

Based on those thoughts, we may say that behaviorist theory of language learning is focused on the drill with an army method, encouraging the learners to transform their idea into the target language, using reinforcement and punishment as the feedback systems, and banishing the cognition and motivation.

# Mentalism Theory of Language Learning

In 1974 Dulay and Burt did morpheme order studies as critics and contrastive analysis to the behaviorist. They found that there are innate mechanisms that cause the learners to formulate certain types of hypotheses about the process of language acquisition. The process happens gradually in the form of rules reconstruction for speech which the learners heard and experienced (Dulay & Burt, 1974). They concluded that there is a place in our brain that centralize the mental process of language learning input.

It changed the term of nurture (how the environment affects the language) into nature (how the input of learning in human's brain took place). Mentalist (or some others called as cognitivist) believed that there is some device named Language Acquisition Device (LAD) that is placed in the human brain to process the language and is only created for human beings. The function of this LAD is to trigger the input and then transform it into cognitive activity. The learners will formally study the grammar rules; they will not be able to draw on that knowledge in spontaneous communication because it has not been acquired (Ellis, 2000; VanPatten & Williams, 2015).

In addition Krashen (1981) even explained more about the human brain's activity and then approached with the five theory of second language acquisition; (1) Acquisition, which is learning distinction; (2) Natural order hypothesis, which is grammar or structure; (3) Monitor hypothesis which is avoiding the generalization; (4) Input hypothesis (how the input affects the output); and (5) Affective factor hypothesis which included the motivation, attitude, and aptitude of learners in the target language.

# The Foreign Language Learning in Islamic Modern Boarding School

The most usable model of language learning in Islamic Modern Boarding Schools is the direct learning strategy with the teacher-centered approach. It is even more strengthened by the "army method" learning model which emphasizes high discipline and teacher high authority as well as the stressing on the teacher instructions. This learning model follows behavioristic patterns that emphasize customization in language skills and combined with army method patterns that treat students with rewards and punishments. Even the motivating power of language learning process is available at the boarding house, and then the environment of using target language is created to support the students in learning both languages, Arabic and English (Risdianto, 2016).

Since the effective way to learn others languages is by practicing it in continue, to acquire the target language, the students have to apply the target words in their daily communication, and it has to be used in a correct way (Damanhuri, Mujahidin, Hafidhuddin, 2013). The language environment creation will motivate the students to improve and develop their capability in the target language. (Fatah, 2011).

There are several programs to support and facilitate the students in developing and improving the target language intensively such as language wall magazine, language bulletin, Arabic or English newspapers, books, courses, and language laboratory. The application of weekly language change, vocabulary drilling every morning, situated conversation on every Sunday and Friday morning, announcement using the target language, public speaking contest, and even the language court/judgment are also the examples of how the target languages are used. (Damanhuri, Mujahidin, Hafidhuddin: 2013).

# Method

The researcher used ethnography as the method of collecting the data which consists of an observation and an interview. The observation was conducted in one of the prominent Modern Islamic Boarding School located in East Java and the findings were clarified through an interview. First, he observed the situation and condition of foreign language learning inside and outside the classroom, and then conducted the interview with one of the responsible teacher in Language Advisory Council (LAC) to clarify. The observation and interview was done in three days from October 2<sup>th</sup> – 5<sup>th</sup>, 2018 to generate the data. When the researcher conducted the observation he was accompanied by some students from Central Language Improvement (CLI) to make sure all the activities were well observed.

# **Findings and Discussion**

Vocabulary Drills

In teaching the new vocabulary, the students are guided by the direct method, which is drilling. The vocabulary drill begins after reading of Holy Quran (around 5.00-5.30 am). One of the dormitory managers (11th-grade students) is standing in front of their members and giving them three new vocabularies

each day. In this process, the students are not allowed to take a note or write the vocabularies before the instruction. They are ordered to repeat them based on the model given, the manager then asked the students one by one to try putting them in the three simple sentences. If there are any ununderstood words, the managers are not allowed to transfer it into 'Bahasa' they have to make another meaning by showing the teaching aids (pictures, real stuff, and even explanation).

"This method of teaching is meant to make sure the students are pronouncing the exact words, while in the English language sometimes the students are asked to spell the given vocabularies. The students are only allowed to take notes and write the vocabularies after those three are already given, and then they have to put the words each in three simple sentences, it is purposed to keep the students' focus on the pronunciation. There is no translation in this method of teaching, for the students to avoid the use of the conversion instead of the target language. If the students are still hard to understand the meaning, they may look for the answer in the dictionary." (Nurcahyo, 2018).

In the classroom, the students are given similar material, but it is advanced and given intensively by their homeroom teachers. The way in its teaching is also identical for the students in the first year. For the students in their second-forth year, the learning of language in the classroom is developed. The materials are added by reading activities (stories, dialogues, narrative, procedure, etc.).

According to Saz, Lin, and Eskenazi (2014), in the term of contextual meaning, the dictionary definition and examples of sentence in which word could be used are considered to be the most effective tools for teaching new words without translating it directly, it can assimilate the concept of the original word without any reliance on their L1. It also implies that such techniques can lead to the improvement of L2 fluency and accuracy. The activities are also similar with the Ellis suggestion in Turnbull (2000) that learners who are used to hearing their teachers use of L1 tend to ignore the use of Target Language (TL) and therefore do not give full benefit from valuable TL input.

"Thus when the students are allowed to consult the resources, there has been no controlled measure of how much they use them. Furthermore, while teachers can measure the accuracy of their students' task, they can't precisely how much time it takes for each one to respond to a given question." (Saz, Lin, & Eskezani, 2014, pg. 2).

The foreign language learning begins soon after the new students are accepted and enter the first semester. The new students are allowed to use their previous language to bridge their language learning for about three months, and after that, they are prohibited to use it while the old students are not permitted in the day they enter the school environment.

"This policy are meant to accustom the students with their new environment, in the first three months they are allowed to communicate with 'Bahasa', and they will receive an intensive training to get used with the bilingual environment (Arabic or English) while the use of local language (Javanese, Sundanese, etc.) are prohibited." (Nurcahyo, 2018).

The brief explanation about language policy for the new students is similar with the concepts of using L1 in L2 learning mentioned before. The students there can only use their L1 (Bahasa) to bridge their understanding of vocabularies and afterward they have to go with bilinguals system, so they can exactly remember their language learning in short-term memory to get used into their new environment.

# Environment Building

They vary widely based on the learning environment. In the dining room, the students are taught some vocabulary and gave the examples in a multilanguage simple sentence. It implements the repetition learning method so that what is conveyed by the teacher can be memorized and transferred to the long term memory of the students. In the dorms, the students are taught about basic grammar to create simple sentences. Whereas in the sports field, the teachers applied the communicative approach in multi-language learning in which the students are grouped in pairs to make dialogue and small conversation using the target language. In the previous explanation, language learning in Islamic Modern Boarding School happens in behavioristic ways. The creation of language habit forms and then become the language environment where the students can practice their ability of foreign language in daily communication. There is no exception either the new students or old students to communicate their thought in a formal language (Arabic and English). The weekly language changes are applied twice in a month, two weeks for Arabic and two weeks for English.

"The environment here is created to encourage the students in delivering their thoughts in both formal languages. Arabic and English are changed in two weeks, so they have to accustom their input of learning based on the language that used in that week. They are prohibited to translate their thought into 'Bahasa,' and if they trespass the rule such us speaking in Bahasa, they will be punished either directly or in the nightly judgment." (Nurcahyo, 2018).

Turnbull (2000) thought that using the target language will give benefit full of the students. Although they are not a native speaker, and the use of TL is sometimes resistant, but it is necessary to do.

"I was comfortable speaking the TL to my students as much as possible, even though I am a non-native speaker of French. Although my students may have been resistant to my use of the TL at first, they quickly adjusted and often

thanked me at the end of a school year for teaching them in French. They said to me that they learned so much because I spoke French to them most of the time, whether we were analyzing a grammar point, debating a controversial topic, or talking about social activities outside of class; they said that they could never 'tune out' or ignore what I was saying to them' (Turnbull, 2000, pg. 533).

Mr. Nurcahyo also added some essential points of these activities, that the students would have 'paired-conversation' twice in a week (usually on Sunday morning and Friday morning). They will practice their capability in using the target language and controlled by the teachers and managers.

"The teachers and managers will take around the crowd where the students are already paired and then control their use of language. If the students make some mistakes, the manager will give them the direct feedback and order them to take note so that they will remember the feedback and hopefully they don't make the same mistake again." (Nurcahyo, 2018).

The teachers mixed some approaches such as structured immersion, pullout, transition, and even submersion in which the students are placed in classrooms where all the instruction, classroom routines, and peer interactions occur only in the target language. The teachers felt positive of using combination approaches in teaching multiple languages. Also, Mr. Eko Nurcahyo mentioned others secondary activities to develop students' bravery of speaking the foreign languages. The events are: Arabic and English Public Speaking which held twice in a week on Thursday noon and night and on Sunday night, Arabic and English discussion forum which specialized for the final grade students, Nightly judgement which held every night after Maghrib prayer, and Dictionary examination which stayed in the end of semester as language test.

# The Teaching of Explicit Grammar

According to Mr. Nurcahyo in his interview, the grammar is taught explicitly. The study of Arabic grammar is begun in the second year until the sixth year of the study, while the English grammar is explained in the third year until the sixth year of the study. The differencing phase of grammar study for Arabic and English is because almost the 75% of subjects that taught are delivered in Arabic, while English only take in 5%-10% from all the lessons, and the rest 15% are shown in Bahasa (Math, Biology, History, Physic, Chemistry, etc.).

"The grammar learning here begins from the sentences, the students are given the sentences, with the help from their vocabularies capacity, to be analyzed, and then find the rules from the sentences. So sometimes when we assess the students, they are likely to remember the sentence, but they forget

the rules or formula. This kind of teaching is used for Arabic and English grammar." (Nurcahyo, 2018).

According to Steiglitz (1955), grammar teaching is based on the systematical and relevant materials given to the students in the range of oral expression (sentences). The grammatical items are kept as small as possible, and they will receive individual attention and then introduced to the students when the requirements are met, and the drills have been assimilated. The grammar will not contain any new vocabularies, so their explanation is not impaired. In this way, the sentence is gradually developed and the principle of 'single emphasis' is applied in full. The sentence structure grows together with the given vocabularies; the tasks are blended to serve over-all-objective to increase the ability to use the target language accurately.

#### Conclusion

Based on the explanations, examples, and thoughts from the interview and theories we may conclude that the foreign language learning and teaching in Islamic Modern Boarding school are mostly based on these three main activities (1) Vocabulary Drills, (2) Environment Building, and (3) The Teaching of Explicit Grammar. Vocabulary drills and Environment building belong to behaviorist theory, and the explicit grammar belongs to mentalist theory. There are many secondary activities there to develop students' courage to speak such as Public Speaking (held twice in a week), Discussion (held for the final grade students), and daily judgment. Both theories are running in balance along with students' activities inside and outside the classroom. It is just like what Krashen (1981) has said that the solution to language teaching problem lies not in the expensive equipment, unusual methods, good linguistic analyses, or well-established laboratories, but in full using of what we already have, language, the speakers have to use it for real communication.

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# PROMOTING SUSTAINABILITY IN UNDERGRADUATE PROGRAM: STUDENTS' PERCEPTION IN GREEN CHEMISTRY COURSE

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#### Abstract

Global challenges such as climate change, decreasing natural resource and environmental pollution become major threats to global society now. Transformation toward sustainability should be promoted in practices. Universities and higher education (HE) plays an essential role in shaping the individual way of thinking and acting to become sustainability change-maker. This research aimed to study about students' perception towards implementation of Green Chemistry Course in undergraduate program of Chemistry Education Study Program, Sanata Dharma University. Through the implementation of green chemistry course, it is expected to promote sustainability to prospective teachers. Findings from this research indicated positive perception towards Green Chemistry Course in terms of students' awareness of environmental issues and implementation of principles of green chemistry in life.

Keywords: green chemistry course, sustainability in higher education (HE), education for sustainable development (ESD)

#### Introduction

Global society nowadays faced global challenges such as climate change, decreasing natural resource and environmental pollution. There is a need in the movement toward more sustainable practices. Sustainability development refers to the development which can meet people's needs in the present without ignoring the needs of future generations (Eilks & Rauch, 2012). Implementation of sustainable development does not involve only one particular area but several areas in our daily life including education. It is believed that education has an essential role in achieving sustainable development. Education for sustainable development has always been promoted by UNESCO. Since 1992, UNESCO has been actively promoting Education for Sustainable Development (ESD) and through program UN Decade for ESD from 2005 to 2014. Follow up program include Global Action Program (GAP) on ESD (UNESCO, 2011, 2017).

UN release new global framework toward sustainability with 2030 Agenda for Sustainable Development. The main issues of 2030 Agenda are 17 Sustainable

Development Goals (SDGs). It addresses global challenges those related to inequality education, climate, environmental degradation, prosperity, and peace and justice. The main purpose for SDGs is to ensure a sustainable, amicable and flourishing life for people now and in the future (UNESCO, 2017). For reaching the goals, government and stakeholders needs to be involved. Transformation towards sustainable development implicates a change in the individual way of thinking and acting. Thus, education plays a central role in shaping individuals to become sustainability change-maker.

Higher education (HE) has a great role to promote sustainability and can be called a change agent (Stephens, 2008). HE has meaningful contribution in preparing and shaping prospective individual becoming decision maker, policymaker in the future. Thus, it is necessary to include sustainability in curriculum (Kim E. Walker, 2004; Tilbury, 2004). Recent finding stated that every student should have the opportunity to learn sustainability in HE regardless of study program (Tilbury, 2004). In line with the global challenges, chemistry education should take part in promoting sustainability for today and future society (Burmeister & Eilks, 2013; Hamidah, 2017).

Chemistry Education Study Program of Sanata Dharma University commit to providing holistic experiences for students. Chemistry Education Study Program has the vision to become a leading study program in printing competent and humanist prospective teacher for conducting research and community service in education and chemistry areas with the principle "Chemistry for Sustainable Future". The contribution of chemistry education in education for sustainable development (ESD) can be done with promoting Principles of Green Chemistry. Green Chemistry aims to make chemistry more efficient in using energy, minimizing waste and produce innovative products using minimal natural resources (P. Anastas & Eghbali, 2010). Various experimental design, new material, and product are developed with consideration of the needs of future generation.

Education in chemistry is faced with challenges to prepare competently and actively contributed young generation in society. Students need to be prepared with competencies and problem-solving skill related to social, environmental and sustainable development issues. Students as a part of future generation are expected to learn sustainable chemistry and environmental friendly. Thus, Green Chemistry should be introduced to students as early as possible. Students are guided to grow awareness and importance of sustainable strategy in chemistry research.

In the curriculum of undergraduate program of Chemistry Education Study Program, Sanata Dharma University, Green Chemistry Course is a mandatory course for Chemistry Education Study Program students. However, students from different study program at Sanata Dharma University can take Green Chemistry Course as an elective course. This purpose of this study is to investigate the students' perception towards implementation of Green Chemistry Course in undergraduate program of Chemistry Education Study Program, Sanata Dharma University. Through the implementation of green chemistry course, it is expected to promote sustainability to prospective teachers and awareness in terms of

awareness of environmental issues and implementation of principles of green chemistry in life. The elaboration mentioned above raise importance in conducting research and making Sanata Dharma University as a pioneer in the implementation of Green Chemistry Course in undergraduate program in Indonesia.

# **Theory**

The concept of green chemistry is introduced in the beginning 1990s in a scientific forum and vastly adopted by mass media as new approach in chemistry. Green chemistry approach also known as sustainable chemistry is new approach in chemistry to solve the problem related to environment in terms of waste production, process or reaction step used. Anastas & Warner (1998) develop the formulation "Twelve Principles of Green Chemistry". The Twelve Principles of Green Chemistry give guides for chemists to design process in chemistry with aim of sustainability. The concept of Green Chemistry has been applied in industry sectors such as cosmetics, pharmaceutical, and energy. The concept of Green Chemistry has a large impact not just in industry but also in education, environment, and society.

Table 1. The Principles of Green Chemistry ((P. T. Anastas & Warner, 1998)

after it has been created.  2. Atom Economy  Synthetic methods should be designed to maximize the incorporation of all materials used in the process into the final product.  3. Less hazardous chemical synthesis  4. Designing safer  after it has been created.  Synthetic methods should be designed to use and generate substances that possess little or no toxicity to people or the environment.  Chemical products should be designed to affect their
incorporation of all materials used in the process into the final product.  3. Less hazardous chemical synthesis or no toxicity to people or the environment.  4. Designing safer chemical products should be designed to affect their
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<ul> <li>3. Less hazardous chemical synthesis</li> <li>4. Designing safer</li> <li>Wherever practicable, synthetic methods should be designed to use and generate substances that possess little or no toxicity to people or the environment.</li> <li>4. Designing safer</li> <li>Wherever practicable, synthetic methods should be designed to use and generate substances that possess little or no toxicity to people or the environment.</li> <li>Chemical products should be designed to affect their</li> </ul>
chemical designed to use and generate substances that possess little synthesis or no toxicity to people or the environment.  4. Designing safer Chemical products should be designed to affect their
synthesis or no toxicity to people or the environment. 4. Designing safer Chemical products should be designed to affect their
4. Designing safer Chemical products should be designed to affect their
chemicals desired function while minimizing their toxicity.
5. Safer solvents The use of auxiliary substances (e.g., solvents or separation
and auxiliaries agents) should be made unnecessary whenever possible and
innocuous when used.
6. Design for Energy requirements of chemical processes should be
energy efficiency recognized for their environmental and economic impacts
and should be minimized. If possible, synthetic methods
should be conducted at ambient temperature and pressure.
7. Use of A raw material or feedstock should be renewable rather
renewable than depleting whenever technically and economically
feedstock practicable.
8. Reduce Unnecessary derivatization (use of blocking groups,
derivatives protection/de-protection and temporary modification of
physical/chemical processes) should be minimized or
avoided if possible, because such steps require additional
reagents and can generate waste.
9. Catalysis Catalytic reagents (as selective as possible) are superior to

	stoichiometric reagents.
10. Design for	Chemical products should be designed so that at the end of
degradation	their function they break down into innocuous degradation
C	products and do not persist in the environment.
11. Real-time	Analytical methodologies need to be further developed to
analysis for	allow for real-time, in process monitoring and control prior
pollution	to the formation of hazardous substances.
prevention	
12. Inherently safer	Substances and the form of a substance used in a chemical
chemistry for	process should be chosen to minimize the potential for
accident	chemical accidents, including releases, explosions and fires.
prevention	

Green Chemistry can be used as a learning approach of teaching chemistry to promote environmental literacy to students. Green chemistry is considered an appropriate tool to increase awareness and teach practical problem-solving skill through the content of chemistry (Haack, 2005; Karpudewan, 2011). Green chemistry is closely related to environmental issues and can be described as interdisciplinary in origin. It can promote integrative learning practice and train student to become a problem solver. Student can use critical thinking and communication skill to solve the problem related to chemistry, environment and socio-scientific issues in daily life.

HE should implement environmental literacy and ESD in curriculum in particular in teacher training curriculum. Teacher training institutions have the crucial role because they are producing prospective teacher. In some manner, teacher is key role in changing and shaping the individual way of thinking and acting. Teacher in school can influence their student by using learning and teaching way which promote sustainability.

Lack of implementation of ESD in the classroom, teacher training and in educational research may be one of the obstacles in the progress of sustainable development. Curriculum and pedagogies in HE should focus on general education skill. Students should learn how to be involved in societal debates and participate actively in society. Thus, chemistry education and ESD contribute to the realization of sustainable development. In practices, controversial socioscientific issues related to environmental or industrial can be chosen to give the students perspective precisely how societal issues are managed (Burmeister & Eilks, 2013). It guides the students to contribute to sustainable development in the present and future society that they live.

Several efforts for implementation of ESD has been made in chemistry education and pedagogy. Some examples are taken from Germany and Malaysia with the comparison in Indonesia. Germany is a notable country for actively ESD in HE. Implementation of ESD has been done in secondary education and HE through the development of course module on sustainability issues and ESD in German pre-service chemistry teacher education (Burmeister & Eilks, 2013; Burmeister, Rauch, & Eilks, 2012; Burmeister, Schmidt-Jacob, & Eilks, 2013). ESD in Malaysia has been implemented in academic program from different HE

within science, social science, and engineering disciplines at graduate and postgraduate levels (Reza, 2016). In addition, Green chemistry was employed in chemistry teaching methods course (Karpudewan, 2011).

Implementation of ESD in Indonesia is limited to inclusion of topics from environmental. The green chemistry and its relation to sustainable development are not explicitly taught in tertiary level students. Therefore, green chemistry is not well known for students as well as chemistry teacher. Implementation of ESD at HE in chemistry in Indonesia was initiated by UGM through German Academic Exchange Service (DAAD) over a series of green chemistry research project and a master's dual degree program in chemistry (Hamidah, 2017). All of them were held at graduate and postgraduate level. Considering the aforementioned, Sanata Dharma University attempt to implement ESD as early as possible through Green Chemistry Course for undergraduate program in Chemistry Education Program. With the ESD goal in mind, Green Chemistry Course is expected to promote students' awareness of environmental issues and implementation of principles of green chemistry in life

#### Method

This research was a survey study set in Sanata Dharma University. Green Chemistry Course was held in Chemistry Education Study Program, a department in the Faculty of Education and Teacher Training. All enrolled students of Chemistry Education Study Program were required to take Green Chemistry Course as a mandatory course in the first semester of their study. Students from another department in Sanata Dharma University may take Green Chemistry Course as an elective course. This research employed questionnaire instruments using Google Form which consisted of closed-ended and open-ended questions. The problem formulations for this research are:

- 1. What is students' perception related to awareness of environmental issues and the implementation of principles of green chemistry in life after joining Green Chemistry Course?
- 2. What is students' perception of the implementation of Green Chemistry Course to promote sustainability in HE?

The survey was conducted at the end of 2018/2019 fall semester to 39 respondents. The respondents were students from Chemistry Education Study Program (29 students), Biology Education Study Program (6 students) and Elementary Education Study Program (4 students) and aged from 17-20 years. Discussion forum in class, assignments and observation were reviewed in addition to the survey.

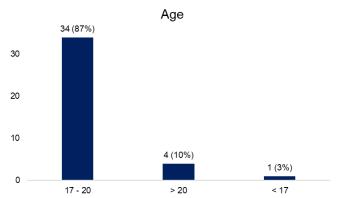


Figure 1. Demographic chart of research participants

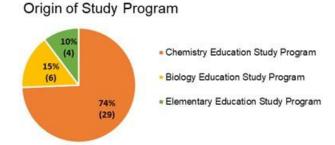


Figure 2. Demographic data of research participants

#### **Findings and Discussion**

Implementation of ESD in course explicitly called Green Chemistry Course in the undergraduate program is considered new in Indonesia It is making Sanata Dharma University as the pioneer in implementing those course in undergraduate level at HE. This study showed positive perception towards Green Chemistry Course to promote sustainability in HE in terms of student's awareness of environmental issues and implementation of principles of green chemistry in life.

As a starting point of the survey, the students were asked about their familiarity and interest with Green Chemistry Course. The bar chart below shows that only half of total respondents said that they have heard about Green Chemistry (45.20% agree and 28.60% disagree) and understand the meaning of Green Chemistry before joining the course (54.80% agree and 19.00% disagree). Almost all of the students were excited in joining Green Chemistry Courses (95.2% agree). This means that the students feel interested and open in learning the new topics related ESD.

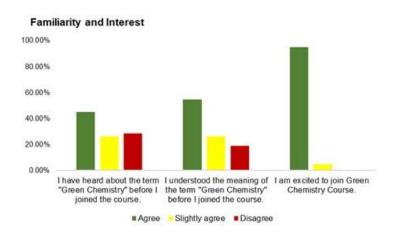


Figure 3. The result of questionnaire in terms of familiarity and interest in Green Chemistry Course

Learning Green Chemistry is closely related with environmental issues. Through Green Chemistry Course, the students were exposed to different topics covering environmental issues such as water resources, air pollution, energy resources, and chemical substances in daily life. Andraos & Dicks (2012) elaborate that one of the effective ways to use "real-world" case studies or up to date case studies to teach Green Chemistry in HE. The discussion in class and the assignments were made for the students based on real-life issues so the students can understand how society deals with environmental issues in reality. Several topics for assignments were described in Figure 4.

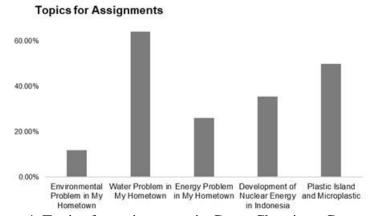


Figure 4. Topics for assignments in Green Chemistry Course

Topic for assignments are related to environmental issues (water and energy) and recent issues (plastic island and microplastic). The students were asked to make a short essay or opinion related to the topics. For making them more personal, the topics were connected to the context of their hometown. In fact, the students are coming from different provinces in Indonesia. Green Chemistry Course is expected to be an effective tool to make the students understand and aware of the environmental issues in their hometown. Some of them probably will

come back to their hometown and working there. It is hoped that the students will contribute actively to their hometown's issues. The inclusion of local context is the goal of ESD pedagogies. The students develop toward positive change and a sense of social justice as members of the community (UNESCO, 2012a). The survey was conducted to know which the most interesting topic for students. The most interesting topic for the students was "Water problem in my hometown" (64.30%) and followed by "Plastic island and microplastic" (50%). From Figure 4, it can be inferred that students were the most interested in knowing the problem at their hometown through the topics of assignments.

The student's awareness of environmental issues was surveyed. All of the students one hundred percent do think that they understand more about the environmental issues through Green Chemistry Course. In addition, they become more aware and care about the environmental problems in their hometown from the topics covered in Green Chemistry Course (97.6 % agree, 2.4 % slightly disagree).

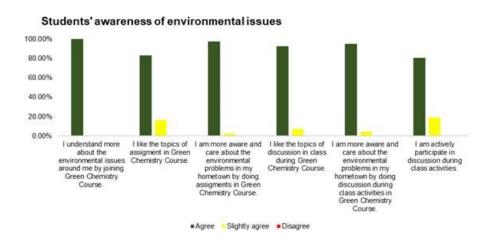


Figure 5. Students' awareness of environmental issues.

From the Figure 5, it indicates positive perception of students that Green Chemistry Course can promote students' awareness in environmental problem. The results above also supported by the results of open-ended questions.

P2: "I became more aware of the environmental problems that were happening around me. I feel happy because I can know the situation around me, but also feel concerned about all the damage that happened"

P10: "It is nice because I can know more about problems that occur in the environment around me and can better understand how to overcome or reduce the problem"

In addition to the student's awareness of environmental issues, the students were asked about their perception of principles of green chemistry. The principles

of green chemistry were introduced to students in class activities by lecture and discussion. As the conclusion, for the final exam of Green Chemistry Course, the students were asked to make a short paper. The problem formulation for the exam was:

"Propose an idea or solution to solve the environmental problem covered the Green Chemistry Course or in your hometown by using Twelve Principles of Green Chemistry!"

The purpose of the final exam was to ask the students to implement the knowledge of Twelve Principles of Green Chemistry that they already got to be implemented into real-life solution. By doing their final exam, they will collect data either from books, journals or trusted online sources about one particular environmental problem that they choose, how to overcome the problem and implement the Principles of Green Chemistry to solve the problem. This approach leads to discovery learning for the students (Andraos & Dicks, 2012). It is expected the students will use their critical thinking and creativity to solve the problem. Pedagogies with ESD goal encourage the students to ask question, analyze, discuss and think critically of contexts (Robert Laurie, 2016; UNESCO, 2012a). Several titles of shorts paper taken from students' final exam are presented in Table 2.

Table 2. Titles of short paper taken from students' final exam in Green Chemistry Course

No	Title of short paper
1.	Utilization of Aquatic Plant (Cyperus papyrus) as Phytoremediation of River
	Polluted by Household Wests

- Polluted by Household Waste

  2. Use of Purple Sweet Potato Starch as an Environmentally Friendly Plastic
- 2. Use of Purple Sweet Potato Starch as an Environmentally Friendly Plastic Material
- 3. Making Soap using Used Cooking Oil
- 4. Design of Utilization of River Waste into Green Chemical Based Compost Fertilizer in the Sa'dan River, Toraja
- 5. Bio-paper Cup
- 6. Use of Dry Corn Skin in Making Ink Markers based on Green Chemistry Principles
- 7. Use of Kesumba Keling Plant Seeds (*Bixaorellana l.*) as Eco-friendly and Safe Hair Coloring
- 8. Design of Utilization of Carica Seed Waste into Green Chemical-Based Compost as the Control of Carica Waste in Wonosobo Regency
- 9. Utilization of Waste as a Source of Electric Energy
- 10. Utilization of Corncob as Adsorbent for Industrial and Textile Field Waste

The topics proposed by students are discussed about different environmental problem for instance water pollution; wastewater management; environmentally friendly products: biodegradable plastics, eco-friendly ink marker, eco-friendly hair coloring; and energy problem. It indicates that the students are aware of several environmental issues around them. Students were asked about their perception of Principles of Green Chemistry. The results of the survey about perception of Principles of Green Chemistry is presented below.

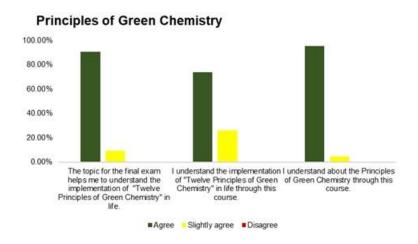


Figure 6. Students' perception of principles of green chemistry.

Figure 6 shows that 90.5% of the students agree that the problem formulation in the students' final exam help them to understand the implementation of Principles of Green Chemistry in life. The chart above shows that overall 95.2% of the students understand the Principles of Green Chemistry. This result is supported by the results of open-ended questions.

P8: "I can understand what the principles of green chemistry in theory and how to apply it in everyday life."

P28: "My impression is that I am happy because with this course I have come to understand that in fact, chemistry is not always dangerous, but on the other hand chemistry is very useful to save the world."

Nevertheless, there are still a small number 4.8% of students do not understand the Principles of Green Chemistry. It can be caused by some factors such as the unfamiliarity with the term. The term of "Green Chemistry" is still unfamiliar for some students as shown in Figure 3.

P33: "I had pleasant experiences after attending this lecture, although it is rather difficult to understand the material because green chemistry is something that is still unfamiliar to me. Nevertheless, I still enjoy this lecture."

P25: [...] I was very happy because I am able to learn the problems caused by the use of chemicals, and get a solution to overcome this problem.

However, I did not understand the difficult words I had just heard for the first time. I'm still confused in some part of the course.

In line with ESD goals, Green Chemistry Course intend to make students familiar with Principles of Green Chemistry with can be implemented in various sector, not just chemistry. It leads to the positive change of students' way of thinking and acting in a way they develop social responsibility as a member of society. Thus, students' perception of implementation of principles of green chemistry were evaluated. The students were asked about their perspective after attending the course. Figure 7 showed the students' perception after joining Green Chemistry Course.

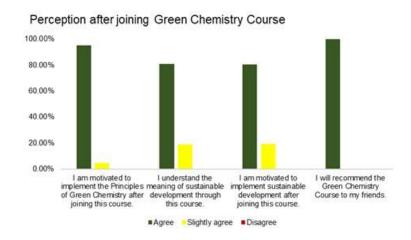


Figure 7. Students' perception after joining Green Chemistry Course

The majority of students, 95.2% of the students feel motivated to implement the Principles of Green Chemistry after joining the course. In addition, 80.5% of the students agreed to feel motivated about implementation sustainable development after joining Green Chemistry Course. These results are also supported by the results of open-ended questions.

P16: "I felt very motivated when I attended this Green Chemistry Course. Because I can know the impact, how to reduce and find solutions to overcome the negative effects caused by the use of chemicals themselves." P24: "After taking Green Chemistry Course, I gained a lot of knowledge. I feel happy by following this course because of the many benefits. The knowledge that I have gained will be given to my students later when I have become a teacher."

The results indicate that Green Chemistry Course can stimulate toward positive change in students' way of thinking and acting in the present and in the future as the member of society. In particular, the student stated that they will spread the knowledge from Green Chemistry Course to their prospective students later when they become a teacher. This behavior supports the ESD goal in

pedagogy. Teachers are one of the agents that have a bigger chance to convince the number of student during their career (Powers, 2004). Their methods of teaching and learning may influence the students toward sustainability. In addition, From Figure 7, one hundred percent of the students stated that they will recommend Green Chemistry Course to another student. It shows that regardless the origin of the study program, either Chemistry Education, Biology Education or Elementary Education, it is important to introduce the concept of sustainability in HE.

#### Conclusion

Green Chemistry Course has contributed to promoting sustainability in HE. The topics covered in Green Chemistry Course is multidisciplinary and related to environmental issues. The students are encouraged to analyze, discuss and think critically to solve the problem based on the context in society. This supports the goal of ESD in pedagogy.

The finding from this research indicated positive perception toward implementation of Green Chemistry Course to promote students' awareness of environmental issues and implementation of Principles of Green Chemistry in life. The survey in this course did not provide quantitative analysis using, for instance, SPSS measurement in order to ensure validity. Therefore, the current researcher suggests that future researchers include statistical analysis to increase the reliability of survey results.

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## HIGH SCHOOL STUDENTS' READING HABIT AND PERCEPTION ON READING FOR PLEASURE

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#### **Abstract**

This paper aims to identify high school students' reading habit and describe their perceptions on reading for pleasure. There were 41 high school students grade XI involved in this study. Data were collected from questionnaires, observation, and an interview. Results indicate that during holidays nearly 50% of the students read sometimes, 12% read once a week, 9% once in a month, and 29% never read although books are available. The students agree that reading for pleasure give many benefits, but the quantitative data indicate students' low interest in reading. This may be due to the reading culture which has not been sufficiently developed since the early ages. In addition, the availability and accessibility of reading materials seems to play roles in determining the students' reading interest. Reading materials should also vary in genres, in themes, and in forms of both printed and on-screen regarding students' digital nativity. This study has, therefore, initiated the needs for libraries with good book collection, facilities, and interesting design to attract students.

Keywords: extensive reading, reading for pleasure, reading habit

#### Introduction

Reading is one of the important skills that students need to acquire in language learning especially for student in expanding circle country such as Indonesia that found English as Foreign Language (EFL) is considered hard to learn. As cited in (Ness, 2009), Gambrell et al (2002) claim that the most important thing about reading is comprehension. In line with (Quinn, Wagner, Petscher, & Lopez, 2014) that stated the improvement of reading comprehension depends on the vocabulary knowledge. Many researchers agree that through reading student can increase their vocabulary knowledge which is very useful in acquiring other skills in language learning. Therefore, it is very essential for student to improve their reading skill.

In this modern era, there are many researchers that have tried to develop an effective way to improve students' reading skill and 'reading for pleasure' is one of it. Through reading for pleasure student can independently read anything that they like such as magazine, newspaper, comic, and so on that also can take place

in school, home, library and wherever they want. Clark & Rumbold (2006) explain reading for pleasure could impact not only in educational aspect but personal development as well. However, based on World's Most Literate Nations, Indonesia's rank is at 60 out of 61 countries before Bostwana at 61. It is final rank among few considerations such as: Newspaper, Computer, Education system, Libraries, Education test score. Because of activities that conducted in Ngaglik 2 Senior High School that located in Sleman, Special Region of Yogyakarta, Indonesia, it shows that most students there have many perceptions on reading for pleasure. Therefore, this paper focuses on exploring students' perception on reading for pleasure.

Reading is activity of acquiring meaning by understanding it through form of text. Reading allows reader to gain knowledge depends on what one read. Nunan (2003) postulates that reading is a process of gaining information that should be combined with readers' knowledge to construct meaning. The more one reads, the larger information he/she could merge. The thing needs to be considered by a reader is vocabulary mastery. Because literacy always deals with words, good vocabulary mastery level will be highly likely to be useful in the process of reading and inferencing meaning.

At some points, people read unconsciously, for instance, in the supermarket reading a product when choosing his favorite cereal, in the kitchen reading the new recipe to make fried rice with egg or reading an important message from a manager. Reading, according to Grabe & Stoller (2013) is indicated to have six different purposes: reading to look for information (readers tend to read faster), reading to learn (remember and understand information), read to integrate information (comparing information), read to evaluate (analyzing an issue), read to use the information (making decision), and read for comprehension (general purpose of reading). With those purposes, one should determine which that suits the most for their reading activity.

One purpose of reading, which is reading for general understanding, is commonly geared to reading for pleasure. Such a reading, which can be defined as reading during the leisure time to get the reading satisfaction (Clark & Rumbold, 2006), seems to be the simplest reading activity. It implies that reading for pleasure involves pure intension that comes from the readers. In similar view, Mikulecky & Jeffries (1996) add that readers are free to choose the book they want to read. It is not what they read but more on how they enjoy it. In other words, it can be implied that reading to enjoy books may lead to reading satisfaction as the drive to read comes within the intension.

A reading activity that encourage readers to choose their own reading topics, books, and read in their pleasure time is extensive reading. Krashen (2011) uses the term Free Voluntary Reading to refer to reading many books with the goal to understand the content. Renandya (2007) proposes that the book selection should be based on the readers' vocabulary range and that tests should not worry them.

As research findings have shown, extensive reading has many benefits including enhanced language learning, increased knowledge of the world, improved reading and writing skills, greater enjoyment of reading, more positive attitude toward reading, and higher possibility of developing a reading habit

(Renandya & Jacobs, 2002). Therefore, this study was conducted to get the description of high school's students reading habit and how they perceive the activity of extensive reading.

#### Method

This study involved 41 high school student respondents grade X. A questionnaire was distributed, and descriptive results are expected to be obtained. A semi-structure interview was also conducted with three students in a group interview. The interview lasted for 30 minutes.

The interview was transcribed verbatim and themes were extracted from the transcription. The next step was categorizing the themes into more general themes. Analysis and interpretation were carried out based on the themes.

#### **Findings and Discussion**

The number of the students are 41 students. From the data, it can be seen from the table that 68% students read novel, short stories, humor, poems, and plays. As many as 27% of the students opt for reading anime, 20% read *online e-books*. In addition, 7%, 7%, 5% of the students read newspapers, magazines, and other kinds of books.

The second item asks about students' motivation to read books in English language in their leisure time. Reading for pleasure has many benefits such as improving students' reading and writing skills, enhancing their knowledge, growing positive reading attitudes and reading habit (Jacobs & Renandya, 2014) (Renandya & Jacobs, 2002). In addition, extensive reading activities can increase students' English vocabulary (Soltani, 2011). Besides, extensive reading is indicated to have impacts on students reading comprehension, language acquisition, and reading attitudes (Leung, 2002). Therefore, it can be concluded that reading for pleasure is an important step to develop students' reading interest. The reading interest, hence, is expected to become ways for students to have a reading habit. Consequently, this activity can be done in fun ways and in good environment. The reading materials should also be adjusted based on students' varied ability so that they do not feel intimidated with unknown vocabulary.

Students think that reading English books in their leisure time is important (38%) and beneficial (54%). As many as 8% of the students feel unsure whether the activity is useful or not. In addition, kinds of books that the students like (in ranking) include fiction/novel, mystery/detective, adventure, romance, hobbies/travelling, non-fictions, science fiction, magazines, and poems. One interesting finding is that all students thinks that *reading for pleasure* is important because it gives a lot of benefits such as enhance knowledge, vocabularies, widen the horizon, entertainment, and increase grammar skills.

Table 1 shows that of 41 respondents, 59% students sometimes read books in Bahasa Indonesia in their leisure time or when in vacation. In addition, 29% of the students read once a week or more than that. As many as 10% of the students read once in one or two month(s), while 2% of them prefer doing other activities.

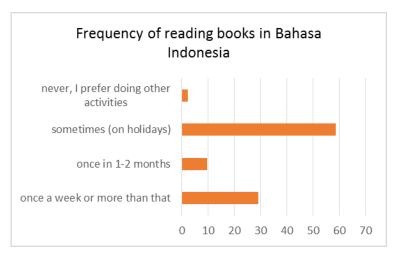


Figure 1. The frequency of reading books in Bahasa Indonesia

In the meantime, within the last 12 months, the average number of books read in their leisure time is 1-2 books (39%), 3-5 books (32%), and more than 5 books (29%). Nearly half of the respondents spent their holiday time reading books (see Graph 2).

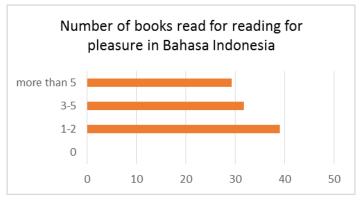


Figure 2. The number of books read for reading for pleasure in Bahasa Indonesia

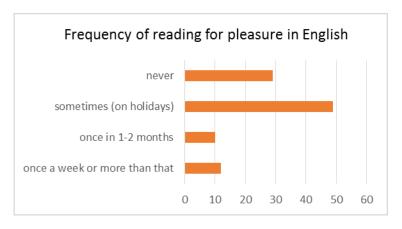


Figure 3. Frequency of reading for pleasure in English

The majority of the students (nearly 70%) read fictions such as novel, short stories, comedy, poem, and plays. While the rest read newspaper, magazines, anime, and others. The types of English books that the students read for pleasure are shown in Figure 4.

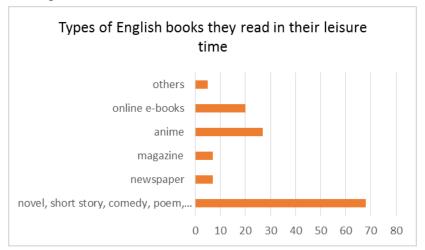


Figure 4. The types of English books that the students read for pleasure

In the last 12 months, nearly 50% of the students read 1-2 books, while the rest read 3-4 books, and 4 books. Interestingly, nearly 30% of the students did not read at all. The number of English books that the students read for pleasure is shown in Figure 5.



Figure 5. The number of English books that the students read for pleasure

When books are accessible, 46% of the students will allocate 1 hour/week to read, 33% of them allocate 2-3 hours/week, while the rest of 10% of the students allocate more than 3 hours/week, and the rest 10% do not allocate their time for reading books at all. Data show that there are students who have not been motivated to read in English although the books are available. Many of the students who allocate their time to read for 1 hour/week is considered as not

having enough reading interest or even not enough to increase their English language skills.

From the results of the questionnaires, it can be summed up that students' reading habit needs to be improved. Reading has not become their habit yet and their time for reading is still limited to reading during holidays in their L1, let alone in their L2. However, when book collections are good and reading materials are interesting, they are likely to be more encouraged to read. This is in line with the result of interviews with three students.

There are 8 issues that the students concern in relation with reading for pleasure—reading habit, reading model, awareness, facilities, interest, benefits, challenges, and digital books. Reading habit becomes the foundation for someone to read for pleasure. If not early encouraged, it may not be easy to enjoy reading books even reading for pleasure.

Reading habit is apparently connected with reading for pleasure in that reading for pleasure during one's leisure time needs habituation. Such a habit should be commenced early so that reading becomes his/her hobby. This is revealed from the participants' interviews.

Yes, reading during leisure time is like reading novels or newspapers. For me, reading is one of my hobbies (A/R.HABIT/line 6)
I rarely read at home [I don't read for pleasure] (B/R.HABIT/line 7)
If not a habit, it's difficult [to read]. Since I was a kid, I read. It's been my habit (A/R.HABIT/line 50)
It should be made a habit since early on. It should be forced... Later we will like reading (A/R.HABIT/line 56)

Children reading habit can be built by reading easy books or literature which is aimed to enjoy the reading activity. Such a reading activity, which is called as reading for pleasure, is believed to be linked with reading achievement (McKenna & Kear, 1990). It can then be assumed that one's reading achievement will somewhat be influenced by their reading for pleasure activities. When this reading activity continues and become one's need, it turns out to be one's reading habit. According to Bignold (2003) as cited in (Chettri & Rout, 2013) reading habit helps children improve their reading skills. Therefore, when children are encouraged to read since their early age, they will get reading benefits in the future.

Reading model seems to give strong impacts on someone to like reading. When parents love reading, have a collection of books, and read together with their children, the children's sense of love for reading tend to grow.

When I was a kid, my parents want me to read lots of books and learn English from TV channels. All books that they bought were all written in English (A/R.MODEL/line 52)

According to Clark, Osborne, & Dugdale (2009), 78% of children have a role model which is predominantly their parents. Parents can be inspiring figures that

are closest to children. They can provide books, read for the children as well as read for themselves, and explain the importance of reading for their future. Love of books, therefore, can be grown in the homes where book collections and role models exist and reading inspiration are available.

One of the students is aware of the importance of reading. He views reading as the "windows to the world" and the fact that not many people love to read has raised his concern. Although he is fully aware of the importance of reading, he cannot help himself to love reading because he is not used to it.

In my opinion, reading is "the window" [to the world], but only few people read. I was so sad. For myself, I rarely read because I don't like it. It is difficult to raise the interest in reading (C/AWARE/line 49).

Like reading role models, awareness of the importance of reading can be raised by parents or family members, neighbors, teachers, and friends. When such awareness has been fostered at early ages in families, schools and teachers can continue to nurture the awareness, encourage them to read, and provide facilities to book access as well as establishing a reading program that can systematically help students to build their reading habit.

In line with this study is the research of Clark & Foster (2005) who find that primary and secondary pupils in England read because it is a skill for life and it is important. The difference is that those pupils are aware of the importance of reading and they read whereas student C merely understands that reading is important and serves as the windows to the world, but he fails to make himself like reading. This indicates that there should be more concerns from parents, societies, governments, and education institutions to set up a sustainable program of literacy throughout the country. Such a program needs to be supported by all elements and parties and should become a national movement towards better literate citizen.

To motivate students to read, facilities must be provided such as book collections, variety of genre, and internet connection to access e-books.

It depends on the topic, whether it's fantasy or others. I prefer fantasy stories (C/FAC/line 24)

Book varieties [are also needed] (A/FAC/line 50)

Libraries should be improved to make it more attractive so that people want to visit it. The internet connection as well should be improved (B/FAC/line 51)

The books in the library should be up dated, not the old ones... The books written in English are also limited. Mostly there are lesson books written in Bahasa Indonesia (C/FAC/line 52).

That websites become important reading resources are indeed true (Karim & Hasan, 2007). When reading resources are extensively available, it can be good opportunities for teachers to make good use of those materials. Reading activities can be set up and induced into the regular courses. What teachers need to do

include setting the goals, give instructions, and follow-up activities. Activities can vary because students have easy access to reading materials.

Someone may be interested to read when the stories are good, the book cover looks interesting, and the book is popular. In this case, regular renewal of book collections should be considered so that students are attracted to read.

What is interesting is the story, I think... (A/INTEREST/line 2) Reading is fun because of the stories. Fiction can open new horizon, while detective stories are interesting because of the characters and the plots. It makes the mind juggling, thinking... (A/INTEREST/line 12) Books are chosen because of the covers (B/INTEREST/line 22) If the cover is good, continue checking the back of the book (B/INTEREST/line 23)

...or whether the book is popular or not (A/INTEREST/line 25)

Based on this research finding what makes people interested in books are the story, the genre, and the popularity. To respond this issue, libraries should provide extensive range of both fiction and non-fiction. However, for some countries it is not easy to provide libraries with such book collections as fund is limited or even unavailable. Even when e-books can be accessed freely, literacy and internet connection should also be available. It is, therefore, understandable that reading for pleasure can be fun when facilities and infrastructure fully support.

It has been widely confirmed that reading brings huge benefits. This study finds that the benefits of reading include getting information, expanding horizon, and feeling the fun of reading.

After reading, I hope that I can get information from what I read... from non-fictions books I can get knowledge of something... from fiction books I know various stories... and improve my reading interest and expand my horizon (C/BENEFITS/line 58).

The result of this study is in line with a research finding that reading fiction can increase empathy (Bal & Veltkamp, 2013). Being empathetic is a good character that one should have to interact with people well. Such a character, in fact, cannot be possessed instantly. It should be trained and developed overtime to become spontaneous.

Mood has been a reading's bedrock. One might give a good book to be recommended based on the reader's mood, but it may be ineffective for others because people have different interest and condition.

For me, it also depends on mood too, sometimes [we] may not like it [the story], [we may like it] based on the story. But there are some boring stories too (C/CHALL/line 3).

According to the research result, it is in line with the study of Ross & Chelton (2001) that readers' knowledge regarding the previous book might influence the

mood and interest. Or else, mood can be affected from the book's review, cover and synopsis, and recommendation from family and friend as well. Therefore, it is necessary to understand readers' mood condition. If the reader is under pressure, he/she might want to read something lighter and visual. But if the reader has less pressure, reading heavy book can be a piece of cake.

Another problem raised by the research participants concerns with the digital-related issues. The current high school students belong to the generation Z (McCrindle Research, 2008), thereby their digital nativity seemingly gives big influence to their reading preference due its flexibility and accessibility.

I prefer using digital book because it is so much easier. I could read it on my smartphone and I could carry it everywhere (C/DIGI/line 46).

Through digital books students can enhance their reading experience since the improved text and improved screen allow them to interact with it such as search, scan, select, cut, paste, highlight and so on (Brown, 2001). Those provided capabilities from digital book give benefit for student to create their personal library on their own devices. Students can manage their personal library through the genre, author, and even related topic. As a result, it is essential to provide the access to digital books for students in this modern era.

#### Conclusion

Reading for pleasure is an important reading activity that should be fostered since an early age. Regarding many benefits that it gives, parents should have the initiatives to introduce this activity to their children. Because having awareness that reading is important is not enough to make young people like reading, educational institution, libraries and other infrastructure should be made available and accessible and support the reading activity as a national movement.

This study is a small-scale study which is limited by the number of participants and sources of data. Therefore, results of this study could possibly be used for context-bound site. As this study is an initial inquiry prior to an extensive reading program, more data gathered after the program ends do provide more comprehensive results.

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# TEACHERS' PERCEPTIONS ON THE USE OF THE COMMUNICATIVE LANGUAGE TEACHING APPROACH IN THE ENGLISH CLASSROOMS

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#### **Abstract**

In teaching English, many teachers employ different approaches in order to make the teaching and learning process successfully delivered to students. One of the approaches which is oftenly used is the Communicative Language Teaching (CLT) approach. This research aims to investigate the teachers' perceptions on the use of CLT in English classrooms. This qualitative study used personal interview method to collect the data. Five REAL English teachers at IONS International Education were chosen as the subjects of this research. The results showed that the teachers had positive responses towards the use of this approach. There were also several different perceptions on the weaknesses, difficulties, and criteria on applying it. The researcher hopes that this research can be beneficial to readers, particularly English teachers who wish to seek out the perceptions on the use of CLT approach in teaching students.

Keywords: communicative language teaching, IONS International Education, REAL English, teachers' perceptions

#### Introduction

The world of education has never got separated from any different kinds of issues. Recently, there have been many issues which are related to the language teaching and learning in classrooms. Indonesia is one of the countries which has various issues in terms of education. Some examples of the recent issues include government spending and policies, technology and education, assessment and attainment, education and the curriculum, school reform, and many others (Knowles, 2018). Among them, there is one issue which is mostly discussed by many teachers or instructors, namely teaching approaches.

In teaching subjects, particularly in teaching language, the use of appropriate approaches in different situations is very important. Teachers need to know that the choice of correct approach in teaching the correct subject is necessary. That is why teachers, instructors, or educators need to have proper knowledge of each approach and be able to use them in teaching their students correctly. The approaches which are commonly used are Natural Approach, Task-Based Language Teaching (TBLT), Content-Based Instruction (CBI), Communicative

Language Teaching (CLT), Structural Approach, Oral Approach or Situational Language Teaching. One of the approaches which is widely used currently by teachers is the Communicative Language Teaching approach.

Communicative Language Teaching (CLT) is one of the teaching approaches which mainly focuses on improving the communicative competence in order to develop good communication and effective language use. Similarly, Richards and Schmidt (2010) also state that it is "an approach to foreign or second language teaching which emphasises that the goal of language learning is Communicative Competence and which seeks to make meaningful communication and language use a focus of all classroom activities" (p. 99). In IONS International Education, there are many teachers or instructors who employ various approaches in teaching their students, specifically Communicative Language Teaching approach.

IONS International Education is one of the non-formal institute of education which is located in Yogyakarta. This institute was built in 2007 under the same founder as NEUTRON institute of education. Currently, there are eleven various courses which are offered within IONS International Education. One of the well-known course programs is REAL English. There have been many students from various regions who come and apply to study in REAL English as it has an excellent reputation in teaching English to them.

This research aims to find out the teachers' perceptions on the use of Communicative Language Teaching (CLT) in the English classrooms in IONS International Education, specifically REAL English. The reason why the researcher would like to study the perceptions is because this kind of approach becomes popular in the 21<sup>st</sup> century teaching and learning processes and the researcher wants to know the teachers' feelings and opinions toward the approach.

Previously, there were several research which investigated the teachers' perceptions on the use of Communicative Language Teaching approach. The first research was conducted by Khan (2016) in the paper entitled *EFL Teachers' Perceptions on the Usefulness of Communicative Language Teaching (CLT)*. The research tried to examine EFL teachers' perceptions on the significance of Communicative Language Teaching (CLT) approach. The result of the research showed that most of ELT teachers agreed that CLT was a highly useful approach for teaching the English language. The ELT teachers found that CLT approach was more convenient since they found sufficient instructional materials to use for teaching and conducting activities.

The second research was conducted by Chang (2011) in her paper entitled *EFL Teachers' Attitudes toward Communicative Language Teaching in Taiwanese College*. The purpose of the research was to investigate Taiwanese college teachers' attitudes toward CLT and the reasons behind attitudes the teachers held toward CLT. The results showed that teachers held favorable attitudes toward principles of CLT and displayed characteristics of CLT in their beliefs. They also demonstrated that Taiwanese college English teachers believe CLT can make English teaching effective and meaningful.

The third research was done by Daflizar (2013) in the paper entitled An Investigation of Indonesian EFL's Teachers Perception of Communicative Language Teaching. There were three aims of the research, namely to investigate

Indonesian EFL teachers' perceptions of CLT, to look at whether the teachers had implemented CLT in the classroom, and to identify difficulties the teachers face in implementing CLT. The results showed that the teachers generally had had considerably good understanding of principles and activities of CLT. Also, it was revealed that all teachers had faced several constraints in implementing CLT activities in their classrooms.

Based on the short description above, the researcher aims to answer a formulated research question, namely "What are the IONS International Education teachers' perceptions on the use of the Communicative Language Teaching approach in the English classrooms?" Through the results, the researcher do hope that this research can contribute scientific information on the Communicative Language Teaching approach. Also, it is expected that this research will give valuable information to teachers, instructors, or educators in using the approach within their classrooms effectively.

There are some theories related to this research which are discussed by the researcher. They are Communicative Language Teaching, Perception, IONS International Education, and REAL English. The discussions of each theory are as below.

#### Communicative Language Teaching

Communicative Language Teaching (CLT) is one of the teaching approaches which mainly focuses on the development of the communicative competence rather than the grammar competence. The purpose of this approach is to make students able to communicate in the target language. Richards and Rodgers (2001) say that the aim of this approach is "to make communicative competence the goal of language teaching and develop procedures for the teaching of the four language and communication" (p. 155). Therefore, they need to understand knowledge of the linguistic forms, meanings, and functions (Larsen-Freeman & Anderson, 2011, p. 122).

In Communicative Language Teaching, the learners play the role as negotiators, which means that they need to interact within groups and within classroom procedures and activities to which the groups undertake. Learners are supposed to contribute as much as possible in order to make them able to learn in an interdependent way (Breen & Candlin, 1980). Meanwhile, the teachers have two main roles, namely to facilitate the communication process between all participants in classrooms and various activities and texts, and to act as an independent participant within the learning and teaching group.

Thus, it can be concluded that Communicative Language Teaching aims to put a focus more on the communicative and interactive competence rather than the accuracy of the language structures. Also, this approach refers to a diverse set of principles which reflect a communicative view of language and language learning and that can be used to support a wide variety of classroom procedures (Richards & Rodgers, 2001, p. 172). Therefore, in the classroom context, it will be helpful for teachers who are trying to teach students on how to communicate and interact with their friends, teachers, or groups.

#### Perception

The term perception can be simply defined as an opinion or belief which is held by people on how they view something. This means that people can have different perceptions based on their individual view. According to Woolfolk (1995), perception can be defined as "an interpretation of sensory information" (p. 245). In complementing it, Chaplin (1968) defines the perception as a process to understand something through the human sense which involves the awareness of people's belief about something.

#### IONS International Education

IONS International Education is one of the non-formal educational courses which is situated in Yogyakarta. Specifically, this institution is located at C. Simanjuntak Street Number 50, Terban, Gondokusuman, Special Region of Yogyakarta. It was built in 2007 and is run under the same director as NEUTRON learning institution. It is one of the well-reputable non-formal education institutions which is equipped with current advanced facilities and infrastructures, and professional employees and teachers.

Currently, there are eleven departments which are available whether to give students good provisions or educate them in preparing their upcoming futures, namely REAL English, True Mandarin, World Languages Centre (WLC), i-Link, Neutron Priority, IONS Potential Detection, IONS Culinary College, Fun Science, Kawai Music, Publishing Learning and Training Centre, and Progress Prima. Students can choose their own departments based on their interests and needs. Also, the teachers or instructors in every department are certified to teach their students well.

#### REAL English

REAL English is an English course which was established by a businessman named Ir. Handojo Mawardi, who was assisted by Daniel Batey and Moniq Van Devard on 4<sup>th</sup> January 2003. This course was built in order to give an alternation in teaching English by using full native English speakers. At first, there were only 30 up to 40 students per month who applied in the institution. However, as the time went by, the rate of students acceptance became larger, that was, around 70 students per month.

The first office when it was built was located at Tentara Pelajar Street Number 16/40, Yogyakarta. Three years later, REAL English opened its first branch on Komplek Ruko Niaga Permata Sukajadi, Batam. Currently, the number of the branches are 7 in total, including in Yogyakarta, Muntilan, Seturan, Magelang, Klaten. They are well-developed in terms of the facilities and infrastructures which are provided.

The purposes of REAL English course is to be a colleague in introducing English to the society without putting aside the development of other aspects, and to create a condusive, healthy, and enjoyable learning environment for students. Aside of that, this course contains several various programs for different purposes, namely REAL Young Learners, REAL General, REAL Conversation, REAL Business, REAL TOEFL-IELTS, TOEIC.

#### Method

This research was included into qualitative research, which means that the data were analysed and interpreted in the forms of descriptions. According to Ary, Jacobs, and Sorensen (2010), qualitative research is defined as "a generic term for a variety of research approaches that study phenomena in their natural settings, without predetermined hypotheses" (p. 648). It means that the type of research seeks to investigate something as natural as possible without expecting the results first. In qualitative research, the data are collected from various different sources such as recorded interviews, field notes, journal, diary entries, documents, images. In processing the data, then, they are transformed into a written form since qualitative data analysis is done with words (Dörnyei, 2007). Thus, it can be concluded that qualitative research deals with descriptions rather than numbers.

The method which was used in this research was interview, specifically personal interview. In this research, the researcher made some questions to be answered by the interviewees in a face-to-face setting and records the answers (Ary et al, 2010).

#### **Findings and Discussion**

In order to find out the teachers' perceptions on the use of Communicative Language Teaching in English classrooms, the researcher conducted personal interviews to five English teachers at IONS International Education, in REAL English department, to be specific. The findings and discussion are as below.

#### **REAL Teacher 1**

- 1. What do you think about the use of Communicative Language Teaching approach in teaching English?
  - Answer: For me, using Communicative Language Teaching approach is very good, especially in this 21<sup>st</sup> century in which learning language primarily focuses on achieving the communicative competence.
- 2. When do you think the Communicative Language Teaching approach is applied?
  - Answer: Almost every time, especially during teaching speaking and playing games in group when the students are needed to speak in English with their friends.
- 3. In your opinion, what should be the criteria when using the Communicative Language Teaching approach?
  - Answer: It should be related to what materials which are going to be delivered to students. Also, the teacher must have good knowledge of the approach itself of how to implement it during the teaching and learning process.

4. What are the difficulties did you encounter during applying the Communicative Language Teaching approach?

Answer: Well, the difficulties which I ever encountered were students who did not want to speak in English, so they kept using Indonesian. Second, it was difficult to choose proper activities and materials which are suitable to the approach.

5. Can you mention several weaknesses in using the Communicative Language Teaching approach?

Answer: Based on my knowledge, it was difficult for the students to produce correct grammar during the communication since this approach considers grammar as the secondary focus, instead of the primary one. Then, teachers who are delivering materials in English but students whose native language are not English will be difficult to understand them.

From the questions and answers above, it can be seen that REAL Teacher 1 contended that the Communicative Language Teaching approach was a very good approach to be used in the teaching and learning process in the current century. It is due to the communicative competence in learning language, English, in particular, is viewed as the primary focus rather than the grammar or language structure competence.

Then, the teacher explained that the CLT approach was applied almost every time. Mostly, the teacher used the approach when she taught speaking and when she asked students to play games in groups to which the communication and interaction skills were needed. Thus, it can be concluded that she would use the approach frequently, particularly during teaching communicative and interactive activities in her classrooms.

On the other hands, she found two difficulties which she encountered during applying this approach. The first difficulty was that the students who did not want to speak English would keep using Indonesian, their native language. The second difficulty was she, sometimes, found it difficult to choose proper activities and materials which were suitable to the CLT approach.

Finally, according to the teacher, there were also some weaknesses in using the approach. First, several students could not produce utterances with accurate grammar since it was not the main concern of this approach. This means that the teacher would rarely correct the grammar when the students produced it incorrectly. Second, students whose native language was not English, would be oftenly difficult to understand materials delivered by teachers who kept using English.

#### **REAL Teacher 2**

1. What do you think about the use of Communicative Language Teaching approach in teaching English?

Answer: Basically, the approach is really helpful in fostering students to speak and interact with their friends and teachers in English.

2. When do you think the Communicative Language Teaching approach is applied?

Answer: It is applied when I need to achieve the communicative competence based on the materials I deliver to them. In teaching speaking, especially, I always apply this approach.

3. In your opinion, what should be the criteria when using the Communicative Language Teaching approach?

Answer: It must be suitable to the materials which I give to the students. The materials should be communicative, instead of fully-theoretical.

4. What are the difficulties did you encounter during applying the Communicative Language Teaching approach?

Answer: I have two difficulties based on my experience. The first difficulty is that the students who are still new to learning English, especially, will find it uncomfortable to speak in English with teachers and friends so that they are less-competent. The second one is the classroom will be too noisy since almost every student speaks with louder voice so the teacher, sometimes, gets a difficulty to manage the class.

5. Can you mention several weaknesses in using the Communicative Language Teaching approach?

Answer: Well, I can say that students with low levels of proficiency in the target language may find it difficult to participate in oral communicative activities. Another one is that this approach focuses more on the fluency, not the accuracy. No wonder if there are several students who have good speaking skill but their grammar and pronunciation are not good enough.

According to the teacher's answers above, the use of the Communicative Language Teaching approach was beneficial to students as they could learn how to speak and communicate with their friends as well as teachers in English. Besides, he said that the approach was applied when the materials needed it to deliver them successfully. When he taught speaking, he always applied it in order to make students be more communicative.

The criteria to use the Communicative Language Teaching approach, in his opinion, is that the materials should be properly suitable to it, which means that they must contain communicative activities, not only written theories. Also, in terms of difficulties in applying the approach, the teacher gave two examples according to his own experience in the teaching and learning process. The first example was that students who were still new to learning English would find it uncomfortable to speak in English since it made them less-confident to do it. The second example was the classrooms would be difficult to manage and handle since each student spoke with louder and louder voices, especially in a large classroom with many students.

The teacher also gave some weaknesses in using this approach. The first weakness was the students may find it difficult to participate in oral

communicative activities, particularly those who had low levels of proficiency in using English. The second weakness was this approach emphasised more on the fluency, not the accuracy. So, there were some students who could speak fluently but the grammar was not accurate enough.

#### **REAL Teacher 3**

1. What do you think about the use of Communicative Language Teaching approach in teaching English?

Answer: It is very good since it helps students well in learning the spoken language in English. Moreover, we are in the 21<sup>st</sup> century in which communicative competence in language is viewed as a primary need.

2. When do you think the Communicative Language Teaching approach is applied?

Answer: I will say that this approach is applied almost in teaching every language skill. Speaking, in particular, is the most frequent skill which employs the approach.

3. In your opinion, what should be the criteria when using the Communicative Language Teaching approach?

Answer: The first criteria, for me, is that having good knowledge on the approach is a must for teachers. The second criteria is that the approach must be suitable to materials delivered. The third criteria is that the approach must be joyful for the students.

4. What are the difficulties did you encounter during applying the Communicative Language Teaching approach?

Answer: From my own experience, I found that the difficulties during applying this approach were that there were some learning textbooks which contained inappropriate CLT-related features, unbalanced interaction between teachers and students, and big classes were sometimes difficult to employ the CLT approach and to handle students.

5. Can you mention several weaknesses in using the Communicative Language Teaching approach?

Answer: Several weaknesses which I have known so far are such as students' insufficient motivation towards English learning, students' unwillingness to communicate in English, students' low English proficiency, and the exclusion of oral proficiency tests at school.

Based on the teacher's answers above, she found that the use of the Communicative Language Teaching approach was very good. Furthermore, she stated that communicative competence was viewed as the primary need in learning language in this 21<sup>st</sup> century. The approach was applied almost in his every class, particularly when the students were trying to learn speaking.

The teacher explained that in order to use the approach well, the criteria was that teachers must have good knowledge on the approach first. Then, the teachers had to choose suitable materials to the approach. Last but not least, the execution of the materials must be enjoyable for students' learning process.

The difficulties, according to her, were that some learning textbooks contained inappropriate CLT-related features. This means that the communicative materials in the books are not qualified enough to be used to teach communicative lessons. Aside of that, another difficulty was unbalanced interaction between teachers and students. Students would be difficult to understand the materials which were given by teachers who kept using English during the teaching and learning process. As a result, students could hardly comprehend the information delivered by teachers. The next difficulty was that bigger classes were difficult to handle when all students spoke and interacted to each other. The classes would be too noisy that teachers had to work more to control the classrooms.

#### **REAL Teacher 4**

1. What do you think about the use of Communicative Language Teaching approach in teaching English?

Answer: I think this approach is really helpful in developing students' communication and interaction skills, especially during using English both inside and outside the classrooms.

2. When do you think the Communicative Language Teaching approach is applied?

Answer: According to my experience, I employ this approach frequently in my classes because the materials for students mostly require communication in English. In role-play and other language games, the approach is also implemented.

3. In your opinion, what should be the criteria when using the Communicative Language Teaching approach?

Answer: In my opinion, the criteria of applying this approach are that there should be more engaging communicative activities or materials. Since this approach focuses more on the communicative competence, teachers should also be able to make students communicate and interact using English, instead of only sitting on their seats and doing written tasks or learning theories from textbooks.

4. What are the difficulties did you encounter during applying the Communicative Language Teaching approach?

Answer: I found that it was difficult to me in teaching students who are not willing hard to speak or learn English. Oftenly, the students would prefer to use Indonesian, their native language, than English. Aside of that, it is difficult to employ the approach when the materials are not suitable.

5. Can you mention several weaknesses in using the Communicative Language Teaching approach?

Answer: Yes. I can give three examples of weaknesses in using this approach. First, students tend to use Indonesia in group discussion, instead of English. Second, students are mostly found unwilling to speak in English. Third, the grammar will be mostly inaccurate when students speak English fluently.

The teacher said that the use of Communicative Language Teaching approach was really helpful in developing students' communication and interaction skills, particularly when they used English inside and outside the classrooms. In the term of the application, he said that the approach was applied frequently in his classes since the materials delivered mostly required communications in English. Furthermore, when he wanted to use role-play or game, the approach would be implemented.

In terms of the criteria, the teacher gave two examples of them. The first criterion was that there should be more engaging communicative activities or lessons. It means that the materials delivered or given to students must be fun, interesting, as well as communicative to do so that they are willing to learn and communicate to each other. The second criterion was teachers must be able to make students communicate and interact using English, which means that teachers have to choose proper communicative activities, instead of only sitting on their seats and doing written tasks or learning theories from textbooks.

There were two difficulties which were encountered by the teacher during applying the CLT approach. The first difficulty was the teacher found it difficult to teach students who were not willing to speak or communicate in English. Instead, they would prefer to use Indonesian, their native language. The last difficulty was there were many materials which were not suitable with the approach. It means that the materials are fully theoretical, not communicative.

#### **REAL Teacher 5**

- 1. What do you think about the use of Communicative Language Teaching approach in teaching English?
  - Answer: This approach is really useful in teaching and learning English. The class becomes more alive to which the students are more active in participating the classroom activities.
- 2. When do you think the Communicative Language Teaching approach is applied?
  - Answer: Actually, I can always apply this approach as long as I teach lessons which require students to speak in English.
- 3. In your opinion, what should be the criteria when using the Communicative Language Teaching approach?
  - Answer: The criteria are such as being able to make students actively speaking in English and able to make the learning process more enjoyable.

4. What are the difficulties did you encounter during applying the Communicative Language Teaching approach?

Answer: The first common difficulty which I encountered in using this

approach were like some students found it hard to produce correct grammar during communicating to others. Another difficulty was the students were not competent enough to speak English since it was not their native language.

5. Can you mention several weaknesses in using the Communicative Language Teaching approach?

Answer: Yes. The first weakness is that students with low levels of proficiency in English may find it difficult to participate within oral communicative activities. Second, it needs a consideration also that this kind of approach may not be appropriate in EFL classrooms where English is rarely heard or used outside of the classroom. Third, during applying this approach, there is less-emphasis on the correction of pronunciation and grammar errors.

According to the first question and answer above, it can be seen that the teacher gave a positive response towards the use of the Communicative Language Teaching approach. He said that the approach was really useful since it could make the class more alive and students became more active in participating in the class activities. Then, according to him, the approach could be implemented as long as the materials delivered were communicative enough and students were willing to speak in English.

For the criteria of implementing the CLT approach, he gave one example, namely the teacher who used the approach must be able to make students spoke actively and make the learning process fun and enjoyable. As for the difficulties of applying the approach, he mentioned two examples, such as several students found it hard to produce correct grammar during communicating to others, and students were not competent enough to speak English since it was not their native language.

Last but not least, there were three weaknesses which were given by the teacher. The first weakness was students with low levels of English proficiency may find it difficult to participate within oral communicative activities. The second weakness was the teacher needed to consider that the approach may not be suitable in English as a Foreign Language (EFL) classrooms where English was rarely heard or used outside the classrooms. The last weakness was there was less-emphasis on the correction or feedback of pronunciation and grammar errors, which made the students were less-accurate to produce them correctly.

#### Conclusion

This research aims to find out the IONS International Education, specifically REAL English teachers' perceptions on the use of the Communicative Language Teaching approach in the English classrooms. The results showed that the teachers who involved in this research had positive responses towards the use of the CLT approach. All of the teachers agreed that the approach were useful and helpful to be used in the current century since the communicative competence is

viewed as the primary need in learning language, particularly English. However, despite of the usefulness and helpfulness, the teachers also contended that there were various difficulties and weaknesses during implementing the approach.

From this research, the researcher suggests that future researchers can conduct the same research with different subject. There are still other communicative teaching approaches whose teachers' perceptions have not been researched yet. The researcher wishes that the future research discusses about teachers' perceptions on other communicative approaches, such as the Natural Approach, Cooperative Language Learning, Content-Based Instruction, Task-Based Language Teaching, Lexical Approaches, Competency-Based Language Teaching, Multiple Intelligences, Neurolinguistic Programming, and Whole Language. Last but not least, the researcher also suggests that future research on teachers' perceptions can be conducted quantitatively.

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## INTERLANGUAGE ANALYSIS OF SYNTACTIC AND DICTION ERRORS FOUND IN THESES WRITTEN BY *MAGISTER* STUDENTS

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#### Abstract

Postgraduate students are expected to show more advanced writing skill than others. However, the writer observed that they still made some errors in their thesis writing. Having reread the theses written by graduate students, Linguistic Surface Category and Surface Strategy Taxonomy proposed by Dulay, Burt & Krashen were utilized to analyze the data. It was found that syntactic errors (89%) such as subject-verb agreement (15.42%), tenses (15.71%), redundancy (13.14%), article (7.71%), and pluralization (6.28%) are the most frequent errors occurred. While lexical errors (11%) such as wrong selection of verb (5.14%) and adjective (3.14%) also still made by graduate students. The study revealed that intralingual interference still be the cause of the blunders in writing a thesis. It is hoped that the present study could initiate university students to contemplate that selfcorrection and self-awareness in making errors in scholarly writing are essential. Emphasizing more assignments in academic writing can be applied by the lecturers of higher education know students' ability and train students to write academically. Faculty of teacher training of education should afford students with seminars and workshop of academic writing to motivate them to write and enhance their knowledge about academic writing.

Keywords: interlanguage, error analysis, graduate students' errors

#### Introduction

When learners learn a second or a foreign language, they tend to make errors. Errors are an inevitable part of the natural process in acquiring and learning a new language. Everyone makes errors when she or he constructs a new utterance of a new language. However, regarding this natural process of learning, errors cannot be seen as an offense. Instead, errors could help the learners to be more aware of the blunders they have made in a professional way. Having a good writing skill is an undeniable benefit for students. Hourani (2008) confirms that writing skill involves many other sub-skills like the general knowledge about the subject in question and the ability to translate ideas into grammatical sentences. According to Graham and Perin (2007), writing is regarded as an essential skill which has to

be possessed by the students because it is an academic success predictor and a basic requirement for participation in social and global life. Thus, making errors in writing is unavoidable, especially if students write passages in a short-period of time. Wrong use of tenses, pluralization and other parts of speech are often found in students' writing that can lead university students to be unsuccessful in formulating good sentences in academic writing. It could be understood that writing in the target language is not an easy task, because it is different with writing in the first language. Manzolim and Gumpal (2015) exclaim that students' errors in writing is due to the interference of first language which effects the English grammar construction. Besides, learners also have their own linguistic knowledge to rely on when they compose their target language, or rather a linguistic system which is named as interlanguage (IL). The use of correct words or vocabulary in a text is the key to enhance and develop academic writing competence of foreign or second language learners other than linguistic and communicative ability (Sajid, 2016). In addition, syntax and diction are essentials in enhancing students' writing skill academically. Hence, it is worth noticing that students' writing in university levels are needed to be investigated. Budiharto (2014) discovered that English department students of Madura University still made errors in writing their thesis proposals. The findings showed that the university students often use complex sentences such as adjective clauses, noun clauses and adverbial clauses. Further, Sinaga and Sihombing (2014) also revealed that graduate students of English Department and Applied Linguistics of the State University of Medan still made syntactical errors in their theses' writing with the total of erroneous sentences are 387 sentences.

The above study findings prove that syntactic errors are major process in students' academic writings that involve more complex sentences rather than simple sentences. Consequently, they should be eligible in composing good sentences in their academic writing. According to Sajid (2016) graduate students are expected to have developed academic writing competence and must show novice writers other than linguistic and communicative capability. Regarding the importance of examining error analysis in students' writing and the initial studies above, the writer considered that it was crucial to conduct a study of an analysis of the linguistic system occurred in learners' language. Based on observation, the writer found out that Magister students of Language Education Study Program Sriwijaya University Palembang still made syntactic and diction errors in their theses writing. Syntactic errors found such as errors in using tenses, wrong used of articles, agreement, and inappropriate used of lexical items. Hence, it is worth noting to investigate students' errors, especially errors made by university students. It is important to describe kinds of syntactic and diction errors that students made, the possible causes of the errors and the possible ways to eliminate those errors. By examining error analysis study, students and teachers could be more aware of the kinds of the errors and find better methods in teaching and learning.

#### Method

Content analysis study was the design of this research with the qualitative approach. Qualitative research investigates the quality of relationships, activities, situations, or materials (Fraenkle & Wallen, 2009). The writer endeavored to search for deep information of the materials that was going to be analyzed. The writer also portrayed and categorized the data according to the research problems.

### Objects/Data Collection

The researcher applied documentation technique in collecting the data. Then, some steps were conducted in selecting the sample;(1) reading comprehensively chapter 1 and 4 from 118 theses to identify the errors and mistakes, (2) taking notes for each theses in each academic year to select the theses that contain syntactic and diction errors, which then 16 theses were selected, (3) taking pictures of the sentences that contained errors from chapter 1 and chapter 4 (4) analyzing the erroneous sentences.

Theses written by *Magister* students of Language Education Study Program of Sriwijaya University in the academic years of 2014, 2015, 2016 were the objects of this study. Two considerations were taken into account in selecting theses of these three academic years, namely; (1) the researcher wanted to take the current theses, (2) the errors occurred in theses of these three academic years were much more frequent rather than theses written in academic year of 2011, 2012 and 2013, which was found more mistakes than errors. There were 47 theses in the academic year of 2014, 42 and 29 theses respectively in the academic years of 2015 and 2016, with the total number of them were 118 theses as the population. However, of the 118, the researcher took 16 theses as the sample. Six theses represented the academic year of 2014, and respectively each academic year of 2015 and 2016 were taken five theses.

The sixteen theses were chosen based on three considerations; (1) the researcher focused only on syntactic and diction errors found in chapter 1 and chapter 4, (2) sentences were regarded as mistakes were not taken into account, (3) out of 118 theses, only 16 theses that regarded containing errors on syntactic and diction errors. Since the theses have five different chapters, the researcher focused on chapter 1 and chapter 4 only as the object of the research due to some reasons, namely; 1) chapter 1 and chapter 4 contained more of students' own writing, 2) chapter 2 and chapter 3 were more focus on the theories, so there were a number of citations and quotations found, 3) chapter 5 was the rearranged of chapter 4 whereby the result and discussion was explained.

#### Data Analyses

In analyzing the data, the writer used Linguistic Surface Category and Surface Strategy Taxonomy. There were some steps that the writer did in analyzing the data, they were; 1) collecting all the chapter 1 and 4 from 16 theses that contained syntactic and diction errors, 2) reading comprehensively each sentence in chapter 1 and chapter 4, 3) identifying the errors by using Linguistic Surface Category and Surface Strategy Taxonomy, 4) classifying the errors by using Linguistic Surface Category and Surface Strategy Taxonomy, 5) describing the syntactic and diction errors based on Surface Strategy Taxonomy, and 6)

explaining the syntactic and diction errors in order to elaborate to some effective remedial measures.

#### **Findings and Discussion**

After analyzing the 16 theses of *Magister* students of Sriwijaya University in the academic year of 2014, 2015 and 2016, there were 249 erroneous sentences found containing 350 syntactic and lexical errors. The types of syntactic errors were subject-verb agreement, tenses, gerund, passive, article, preposition, word order, redundancy, parallelism, modality, noun, verb, pluralization, relative pronoun, possessive pronoun, correlative conjunction, and syntactic ambiguity with the total number 310 (89%). Forty (11%) were classified as lexical errors. The types of lexical errors dealt with verb, adjective, noun, adjective phrase, and verb phrase. The number of erroneous sentences was less than the total number of errors found because one sentence could contain more than one error. The chart and table below show the occurrence of the two types of errors.

Syntactic and Lexical Errors
Made by Magister Students

11%
Syntactic
Errors
Errors

89%
Lexical Errors

Chart 4.1. Kinds of Errors Made by Magister Students

Table 4.1 Kinds and Frequencies of Syntactic & Diction Errors

Types of Syntactic Errors	Frequency	Percentage
		(%)
Subject Verb Agreement	54	15.42
Tenses	55	15.71
Gerund	7	2
Passive	16	4.57
Article	27	7.71
Preposition	18	5.14
Redundancy	46	13.14
Modality	3	0.85
Parallelism	5	1.42

Noun	9	2.57
Verb	15	4.28
Pluralization	22	6.28
Possessive Pronoun	4	1.14
Relative Pronoun	11	3.14
Correlative Conjunction	1	0.28
Syntactic Ambiguity	13	3.71
Word Order	4	1.14
Total	310	100
Types of Lexical Errors		_
Verb	18	5.14
Adjective	11	3.14
Noun	7	2
Adjective Phrase	1	0.28
Verb Phrase	4	1.14
Total	41	100
Total Number of Syntactic and Diction Errors	350	100

# **Syntactic Errors**

#### Subject Verb Agreement

Errors in subject verb agreement basically included three subcategories in the present study: errors in subject-predicate agreement, errors in subject-verb agreement, errors in determiner and noun and errors in pronoun-antecedent agreement. This type of errors accounted for 15.42% (54) of the total syntactic errors in the present study and can be illustrated by the following examples. *Examples:* 

- \*It means that in order to be successful in reading comprehension, the <u>readers</u> need to motivate <u>his/herself</u> to have more concentration in reading.
   (disagreement pronoun-antecedent)
- → It means that in order to be successful in reading comprehension, the <u>readers</u> need to motivate <u>themselves</u> to have more concentration in reading.
- 2. \*This media requires students to see the real world from what will be delivered in front of the classroom (Disagreement of subject & verb)
- This medium requires students to see the real world from what will be delivered in front of the classroom
- 3. \*Therefore, the writer <u>had to designed</u> the recount texts first ...(Malformationarchie forms attachment of the past marker to the dependent verb)
- Therefore, the writer <u>had to design</u> the recount texts first...

#### **Tenses**

Fifty five (15.71%) errors were found in tenses. Errors in using tenses or shifting tense from present tense to past tense were the most frequent errors found, or vice versa. At the main clause, *Magister* students wrote the correct form of past tense, but in the second sentence or subordinate sentence, they produced present sentences which did not fit the main clause, that should be pasted. The examples are described below:

- 4. \*In dealing with self-confidence, students of...<u>faced</u> many problems when they <u>are</u> asked to speak English. (tense sequence)
- → In dealing with self-confidence, students of...<u>faced</u> many problems when they were asked to speak English.
- 5. \*Besides, the date given by ...showed that only 168 students <u>visit</u> the library to read the books from January to October 2014 (Tense sequence)
- Besides, the date given by...<u>showed</u> that only 168 students <u>visited</u> the library to read the books from January to October 2014.

#### Gerund

The occurrence of gerund is 2% (7) of the total errors found in the present study. Errors found in gerund were related to wrong use of 'to infinitives' and 'bare infinitives' and the use of 'verb-ing' after preposition. For instance:

- 6. \*The poetry also provided the key words that students would use to write the text; here they began to try to understand the meaning of the text. (problems in using 'to infinitive')
- The poetry also provided the key words that students would use to write the text; here they began trying to understand the meaning of the text.
- 7. \*15% students just expressed their idea without used creative and logical idea (verb-ing after preposition)
- 15% students just expressed their idea without using creative and logical idea

#### **Passive**

The *Magister* students still make 15 or 4.8% incorrect and inappropriate form of passive sentence. Some examples are below:

- 8. \*The result of questionnaire <u>was described</u> the students response after <u>they taught</u> by sociogram. (active sentence becomes passive, passive sentence becomes active)
- The result of questionnaire <u>described</u> the students' response after <u>they were taught</u> by sociogram technique.
- 9. \*The questionnaire only <u>gave</u> to the students in experimental class <u>after gave</u> the treatment. (omission verb in passive, passive sentence becomes active)
- The questionnaire <u>was only given</u> to the students in experimental class <u>after</u> they were given the treatment / after the treatment.

#### Article

The total errors of article was 26 (8.28%). Addition of article 'the' is the most dominant error found in students' sentences, followed by addition of article 'a' and 'an', omission, and some misuse of articles. Examples:

- 10. \*The students were encouraged to be <u>the</u> independent learners to do their best. (addition of article 'the')
- The students were encouraged to be independent learners to do their best...
- 11. \*Next, the writer wanted to know the students wanted when they got new topic. (omission of article)
- Next, the writer wanted to know the students wanted when they got a new topic.
- 12. The result of this study is expected to give <u>a</u> contribution for students in English Education Study Program of...
- The result of this study is expected to give <u>some</u> contribution for students in English Education Study Program of...

# Preposition

Preposition errors occurred 15 (4.8%). The errors were divided into addition and misuse of preposition.

- 13. \*The result of this study is expected to give a contribution <u>for</u> students in English Education Study Program of...(misuse of preposition)
- The result of this study is expected to give some contribution <u>to</u> students of English Education Study Program of...
- 14. \*It can be assumed that ..to help the students to practice contextual clues in every meeting was <u>resulting in a significant</u> vocabulary growth..(addition of preposition)
- It can be assumed that ..to help students to practice contextual clues in every meeting resulted a significant vocabulary growth..
- 15. \*Learning a language means trying to get a good mastery of the language for the purpose as communication. (misuse of preposition)
- → Learning a language means trying to get a good mastery of the language for the purpose of communication.

#### Redundancy

Redundancy of the sentences occurred 46 (14.64%) of the total errors. It is not because the *Magister* students did not understand the form of the English tenses, or subject-verb rules, but it is probably because the students wanted to strengthen their sentences and add much more information. Some examples are below:

16. \*Reading is regarded as one of the most important skills that a student must acquire at school since one must learn to read in order to be able to read to learn.

- → Reading is regarded as one of the most important skills that a student must learn at school.
- 17. \*By having good English, people can <u>do have communication</u> with other people around the world who also use English as mean of communication.
- → By having good English, people <u>can communicate</u> with other people around the world who use English as well.
- 18. \*In reading a text students should be good readers in order to comprehend what they read in the texts.
- → Students should be good readers in order to comprehend what they read in the texts.

# Modality

Three or 0.95% were found in modality. It seems that the students were not aware of the structure of modality. Take examples below:

- 19. \*From this result, the writer knew that the students <u>can easy to understand</u> the story if they knew the relationship among the characters in the story. (omission of verb in modality)
- ...the writer knew that the students <u>can easily understand</u> the story if they knew the relationship among the characters in the story.
- 20. \*Where she <u>must recalling</u> what the students' already know about the topic... (misuse of verb in modality)
- →...where she <u>must recall</u> what the students already know about the topic..

#### **Parallelism**

Parallelism contributed 4 or 1.27% of the total errors. The students could correctly produce the complex sentence, but the grammatical structure is not the same. Take the example below:

- 21. \*There were four major issues based on the results of the questionnaires; they are vocabulary, facility, motivation, and the environment.
- There were four major issues based on the results of the questionnaires; they are <u>vocabulary</u>, <u>facility</u>, <u>motivation</u>, <u>and environment</u>.
- 22. \*It is hoped that they are able to find out better <u>media and strategy</u> of teaching listening skills.
- → It is hoped that they are able to find out better <u>media and strategies</u> of teaching listening skill.
  - This study could help the students to improve their vocabulary and aided them to comprehend an English text well.

#### Verb

The most frequently errors found in verb construction were caused by omission verbs. Thirteen errors or 4.14% were counted as verb errors. Two examples are below:

- 23. \*And the result was ...students able to understand (omission of to be)
- ...students are able to understand

- 24. <u>There some</u> strategies can be used by teachers to improve their learners such as.. strategy.
- There are some strategies can be used by teachers to improve their learners such as.. strategy.

Students were mostly agreed and interested in learning to read English texts through interactive multimedia

The expert reviewing the product was an English lecturer in...

#### Noun

The problems in noun was that the students used noun as adjective. The noun errors occurred 4 (1.27%). The examples are shown below:

- 25. ...they were brave to speak out their ideas and opinion, and they became more <u>confidence</u> in the discussion. (noun instead of adjective)
- -->...they were brave to speak out their ideas and opinion, and they became more confident in the discussion

#### Pluralization

The errors found in pluralization occurred 23 (7.32%). There are some plural forms which are written singular, or some similar singular and plural form of a sentence were made plural. Take examples below:

- 26. \*After *seeing* the <u>students grade</u> which <u>was</u> taken from their <u>daily test</u>, <u>mid</u> test and semester test the writer knew that...
- After looking at the <u>students' grades</u> which <u>were</u> taken from their <u>daily tests</u>, mid tests and semester tests...
- 27. \*The first issue deals with a great number of vocabularies needed..
- The first issue deals with a great number of <u>vocabulary</u> needed..

# Possessive Pronoun

Four or 1.27% were found as possessive pronoun. The errors were about the wrong use of possessive pronoun or the addition of possessive pronoun in correct structure of a sentence.

- 28. \*...they sister helped them in choosing the books. (misuse of possessive pronoun)
- ...their sister helped them in choosing the books.
- 29. \*If we use this strategy, reading will not be a <u>waste of our time</u> (addition of possessive pronoun)
- → If we use this strategy, reading will not be a <u>waste of time</u>. It showed that the students had *the* equal *ability in Speaking ability* and *their self confidence*

# Relative Pronoun

Most of the sentences that students used in their theses writing were in compound and compound-complex sentences which meant that relative pronoun should be used. 11 or 3.50% of the errors found were stated as error in the use of relative pronoun. The errors could be either omission of relative pronoun or misuse of relative pronoun. Some examples are below:

- 30. \*The main idea of a passage is overall fact, feeling, or idea <u>the author wants</u> <u>to convey about the subject.</u>(Omission of relative pronoun)
- The main idea of a passage is overall fact, feeling, or idea that the author wants to convey about the subject.
- 31. \*Next, the writer wanted to know the students wanted when they got new topic. (Misuse and omission of relative pronoun)
- Next, the writer wanted to know what the students wanted after they got a new topic

It indicates reading is important because it provides access to information

# **Correlative Conjunction**

One error or 0.31% was found in the use of correlative conjunction. The example is below:

- 32. \*Moreover, we need to involve students in thinking, <u>not just</u> about the content of listening, <u>but more</u> importantly about the process of listening. (misformation of correlative conjunction)
- → Moreover, we need to involve students in thinking, <u>not only</u> about the content of listening, <u>but also more</u> importantly about the process of listening.

#### Syntactic Ambiguity

Many sentences were found ambiguous since they had two meanings within one sentence. 11 sentences or 3.50% of the total sentences were considered as ambiguous sentences or syntactic ambiguity. For example:

- 33. \*The issues must also be observed by the educators and the educational institutions and <u>other stakeholders are trying to create a situation motivate</u> students to read.
- The issues must also be observed by the educators, educational institutions, and other stakeholders who are trying to create situation so that the students are motivated to read.

#### Word Order

Four (1.27%) errors were also found in the sentence, that was word order error. The example is below:

- 34. \*The one who reads a lot will improve his / her vocabulary so he/she can comprehend the text easily and they will become life-long readers.
- The one who reads a lot will improve his / her vocabulary so he/she can comprehend the text easily and she / he will become long life readers.

#### **Lexical Errors**

Of 283 errors, 33 (12%) were diction errors. Students failed to make correct words in their theses. Most of diction errors found were in the use of verb, but the writer found wrong choice of noun as well. The examples are below:

- 35. \*She thinks that it is necessary to <u>make</u> an experiment in reading comprehension by applying...
- → She thinks that it is necessary to <u>conduct</u> an experiment in reading comprehension..
- 36. \*Because of those problem most of clienteles who were mostly English students couldn't find enough sources for their needs especially for <u>making home works</u> or their final projects.
- → Because of those problems, most clienteles who were mostly English students could not find enough sources for their needs especially for <u>doing homeworks</u> and final projects.
- 37. \*The last, the students were in second semester of their school.
- The last, the students were in the second semester of their college/university.

#### **Discussion**

Regarding the results of the study, it could be interpreted that Magister students made syntactic and diction errors as the result of their intralingual interference rather than their interlingual interference. Three kinds of intralingual errors are mentioned in the previous section to be regarded as the possible causes of the errors they made. However, the writer infers some lines regarding the errors that Magister students made. First, the errors of syntax and diction were still made by Magister students. After analyzing the 16 theses in the academic year of 2014, 2015 and 2016, 239 sentences were found containing errors. Of the 238 sentences, 314 were detected as syntactic and diction errors. The kinds of syntactic errors were subject-verb agreement, tenses, gerund, passive, article, preposition, word order, redundancy, parallelism, modality, noun, verb, pluralization, relative pronoun, possessive pronoun, correlative conjunction, and syntactic ambiguity. This result is in line with Sinaga and Sihombing (2014) that graduate students still made syntactical errors, and Silalahi (2014) which confirmed that university students still committed errors such as article, preposition, spelling, word choice, subject-verb agreement, auxiliary verb, plural form, verb form, capital letter, and meaningless sentences. The error in the choice of words is also in line with Ahour and Mukundan (2012), state that "Some variations were also found in the word choice of the students in the three ethnic groups of the study, whereby these choices might be the reflections of their cultural background and world view" (pg.55).

Second, errors that *Magister* students made were caused by their intralingual interference. Al-kresheh (2016) explains that intralingual interference as one of the major linguistic factors that affect the process of SLA, it is quite important to discuss the general characteristics rule of language learning that has been reflected by intralingual errors. In fact, *Magister* students tended to ignore the rule of English, wrong used of appropriate analogy in certain context and overgeneralized

the rules by their exist knowledge of their TL. Take for instance, Magister students wrote vocabularies for plural form of vocabulary, instead of vocabulary, because the plural or singular of word vocabulary is similar. They also overgeneralized the lexical item to strengthen their opinion, but inappropriate context, "very urgent" and "very necessary" for example. Turton and Heaton (1996) state, "Do not use very or extremely with adjectives which already have a strong meaning, if you want to increase the strength of these words, use absolutely or completely, totally and utterly" (pg.348). So, instead of using two strong meanings within the adjective phrase, it is better to say "absolutely urgent" or "absolutely necessary". Ratnah (2013) found out that errors made by university students in Makasar were caused by interference, overgeneralization, ignorance of rule restriction, and false concept hypothesized. Ihsan (1999) asserts that based on various possible sources of errors in foreign language learning as well as in second language acquisition mentioned, the intralingual errors are predominant compared to the interlingual errors. He also mentions that psychological factors like students' low motivation to learning and their bad learning strategies, and consequently, their monitoring does not work. Intralingual interference that caused Magister students' errors is also similar with Hariri's (2012) finding, he discovered that 51.50% of the errors' sources were caused by intralingual interference. Another intralingual aspect that contributes predominantly in students' errors was found by Kaweera (2013); false analogy, misanalysis, incomplete rule application, exploiting redundancy, overlooking co-occurrence restrictions, hypercorrection and overgeneralization were the aspects of intralingual errors that influenced students' writing compositions.

Third, Magister students should be more aware of rectifying the syntactic and diction errors. It seems that students were lack of awareness in correcting the errors. In fact, still found in the thesis background that the students did not alter the tenses into past tense. As Corder 1981) states that errors are as the devices for students to know how good they are in learning a language, and Ihsan (1999) who claims that errors are as the reflection for students so that they do not make the same mistakes anymore in the future. So, if Magister students make errors and rectify it by reading a lot of books in a regular way, they can eliminate errors in their writing, especially theses writing. By being aware of the errors, students will recognize their mistakes, then they will study harder and the flawed sentences finally can be eliminated. As a result, Magister students can write academic writing more professionally. The choice of appropriate words should also be attention by Magister students, because readers might confuse with the meaning of the sentences that they want to convey. Sajid (2016) state that postgraduate students must show mastery in English language not only in communicative competence but also in linguistic competence.

Fourth, in addition to the term fossilization, the errors that Magister students made were not fossilized yet. Some evidence proved that they could construct very good sentences which close to native-like competence. In other words, their IL is permeable and is easily penetrated by new linguistic forms derived both externally from input and internally through such processes such as overgeneralization (Ellis & Barkhuizen, 2005). The writer assumes that the IL

productions of *Magister* students were still in the process of stabilization, which means that their errors were not permanent, and if they keep continue learning, the errors may be eradicated. In relation to that, Fauziati (2011) confirms that IL errors of Indonesian secondary school students grade twelve who are learning English as a foreign language were stabilized just temporarily It means that the stabilized errors could be eliminated (destabilized). However, some of the IL errors of Indonesian secondary students were likely fluctuated and even destabilized, it is due to the fact that her study was done in three different stages. Stabilized errors of her students were similar with the present study which revealed that the errors that *Magister* students made were not permanent and would keep enhancing as long as they continue learning.

Last but not least, lecturers' attentions are needed towards errors made by the students. Despite the fact that some students have mastered the grammar, but some others might have not. Thus, teachers/lecturers are responsible to identify and correct the errors. As stated by Darus and Subramaniam (2009), EA can help the teachers to identify in a systematic manner the specific and common language problems students have, so that they can focus more attention on these types of errors. Because teachers will get an overall knowledge about the students' errors, the teacher should learn to tolerate some errors (Fang & Xue-Mei, 2007). Likewise, regarding syntactic errors found in academic writing, Usha and Kader (2016) exclaim that the teaching of academic writing could be placed more importantly or written within the syllabus. They also state that for ESL learners, syntax should be to be taught effectively and systematically, the teacher factor is crucial. Suhono (2016) and Dipolog-Ubanan (2016) emphasize that the lectures or teachers should respect the students' errors and give guidance to the students, and be aware of the difficulties students face in the process of writing in order to help them overcome these difficulties in teaching and learning process.

#### Conclusion

Regarding the errors made by Magister students, some conclusions could be drawn. First. Magister students of Sriwijaya University still made errors in their theses writing in terms of syntax and diction. The errors were classified by Linguistic Surface Category and Surface Strategy Taxonomy proposed based on Dulay, Burt and Krashen (1982). Of the 238 sentences, 283 were detected as syntactic and diction errors. The kinds of syntactic errors were subject-verb agreement, tenses, gerund, passive, article, preposition, word order, redundancy, parallelism, modality, noun, verb, pluralization, relative pronoun, possessive pronoun, correlative conjunction, and syntactic ambiguity. 261 (89%) errors were classified as syntactic errors, and 33 (11%) were diction errors. Ignorance of rule restriction, false analogy and overgeneralization are the three possible causes of syntactic and diction errors made by Magister students of Sriwijaya University. Be more aware of the syntactic and diction errors, more frequent in practicing academic writing, keep learning English grammar and academic writing, revise and edit the theses continuously and concern more of the syntactic and diction errors are the possible solution to eliminate the errors. Emphasizing more assignments in academic writing can be applied by the lecturers of higher

education not only to know the students' ability, but also to train students to write academically. Further, faculty of teacher training of education should hold seminar and workshop that relate to academic writing for both graduate and undergraduate students to motivate them to write and enhance their knowledge about writing academically.

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# COURSE SYLLABUS: RESPONDING TO STUDENTS' NEEDS IN THE FOURTH INDUSTRIAL REVOLUTION

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#### Abstract

Universities are required to improve their service mainly in offering effective reading course which meets diverse issues. Reading course syllabus should be designed appropriately dealing with the students' needs and the shift of current global issues. This study was carried out in the purpose of evaluating pre-existing reading course syllabus and intending the novel one. The study utilized various methods namely questionnaire, interview, and documents. The data were analyzed statistically and descriptively. It was found that students focus on the general-literary skills mastery only so they have unclear goals in the content-specific literary skills. Given that findings, backward design was employed. Skill syllabus and content-based syllabus are selected to promote students' skills in their contextual learning. Integration of contextual and flexible topics, materials, and mobile apps in the course syllabus is significant to transform their learning to be more fruitful.

Keywords: backward design, need analysis, course syllabus design

#### Introduction

Conducting English course program which is needed by the Students is a highly prioritized in any level of education. Students are expected to have particular skills they need in order to improve their life standard as part of society and the world. The organization of education itself, recently, is widely influenced by the issue of 4.0 industry revolution (Kemenristekdikti, 2018). Thus, the educational practitioners must be ready for future challenges mainly in the English course program planning so students can cooperate each other by having less difficulties or barriers in the process of world collaboration.

Related to the organization of English course program specially reading course program for EFL students in higher education, the lecturer must have arranged, purposeful, and meaningful plan for them. Reading is quite significant to teach and learn altogether because in the digital era, "millions across the globe routinely access expository information from the internet written in English—a second language for the overwhelming majority" (Bernhardt, 2010). So, reading is not only an activity which enables students to obtain information but it also

challenges them to be more critical while reading those information widely available on the internet and social media. The EFL students' reading skills is required in order to assist them comprehending academic texts (Dreyer & Nel, 2003). The more students read, the more they are able to express their ideas in the written or, even, oral communication because they can produce a well-structured content referring to the topics they focus on. However, the practice of reading course program will not be optimally conducted when the lecturer does not do need analysis. Need analysis is important since it leads the lecturer to design appropriate syllabus based on students' needs. Certainly, one of the advantages of need analysis is to overcome students' reading problems. In short, the availability of reading syllabus which can cover up the students' wants and needs is necessary.

Considering previous explanation, this paper aims at proposing reading syllabus which meets the students' needs in order to hold the teaching learning process which employs technology-based and support 5Cs (Communication, Critical Thinking, Collaboration, Creativity, and Character) as highly required in the Indonesian higher education setting.

#### Method

This study was designed to propose reading course syllabus. Hence, it is rooted within quantitative and qualitative approaches using questionnaire, interview, and documents. The quantitative approach was chosen because it provided the stated information by the students related to their needs. In addition, the qualitative approach enabled the researcher to get the information from the trusted source in the field and documents. The participants were the fourth semester students of English Education Department at one of universities in Borneo island. The participants were selected purposively.

The data were collected through questionnaire, interview, and instruments. The questionnaire was modified from Richards (2001), Cunningham (2015), and Salam (2017). The interview was conducted in the semi-structure form. Then, the documents were English Education Department curriculum and existing reading course syllabus.

Related to the procedure of the study, the researcher administered the questionnaire and made it accessible through Google form. The participants were flexible in giving their response and finding less problem in submitting the questionnaire. The questionnaire was posted on May 19th, 2018 and the due date was May 21st, 2018. All submitted questionnaires were filled out completely. The questionnaire was based on the 4 and 5 point Likert scale rating of assessment, yes no options, and short answer. The collected data were downloaded in the excel format to be used for further analysis. Next, the interview was conducted in order to get the additional information from the course lecturer. Considering the different locus and time, the researcher made use WhatsApp to contact and gather the information from the interviewee. Then, the documents such as curriculum and current syllabus were collected and analysed in details mainly output profile, course description, and other components available in the curriculum and syllabus. After all the entry data were analysed statistically and descriptively, the

proposed syllabus for Reading 3 course program, then, was offered as the product of this study.

# **Findings and Discussion**

# 1. Findings

The findings are based on the students' needs analysis towards their reading course program named Reading 3.

# a. Demographic Information

The age of the participants ranged from 19 up to 21 years old with the average of 20 years old. 90% of them are full-time students and it results in their use of English. 75% of them use English at school and other 60% responded that they make use of for internet browsing. Further, the participants have already been learning English for twelve years (15%).

# b. Overview Of Skill Needed and Difficulties Encountered

60% participants respond that they expect to use reading skill in their course of study. 50% of them found that they have difficulty with the reading skill.

# c. Objective

The majority of participants gave similar response towards the question related to their learning objective. 10% of them stated that their objective is to improve their reading skills.

## d. General Statements

50% students respond, closely to moderate level (2.25), that they thought reading ability is important to be successful in their course of study. Meanwhile, 35% respondents asserted that reading ability is important to be successful after their graduation in between high and moderate level (2.15).

# e. Reading Skills in English

75% agreed that "When I read, I understand most of the words immediately". 45% responded that "I understand the structure of texts I read". It shows that students do not get difficulty with the vocabulary. However, they get difficult for the text structure.

# f. Reading tasks

- 1. Types of material
  - 50% respondents chose journal articles as the material they expected to read. Meanwhile, the least chosen materials were photocopied notes and workbook or laboratory instructions.
- 2. Frequency of difficulties in reading types of materials

  The least frequent difficulty was found for the newspaper article (2.3) while the most frequent difficulty was workbook or laboratory instructions (1.8).

# 3. Difficulty level

The least difficulty level was "Reading a text quickly in order to establish a general idea of the content (skimming)" (2.1) while the most difficulty level was "Guessing unknown words in a text" (1.6).

# g. Skills you would like to improve

The high priority of skills to improve is knowledge of vocabulary (1.35) while the low priority ones are summarizing material and general reading comprehension (1.75).

#### h. Genre of text

The most frequent genre of text to read is biography (55%) while the least frequent genre of text to read is hints (20%).

# i. Reading Strategy

The most frequent reading strategy to use is "Predict the content of the text to be read" (2.2) while the least frequent reading strategy to use is "Give criticism of the content of the text or the author's opinion" (3.4).

# j. Topic of text

The most frequent topic of text to choose is "education & language" (75%) while the least frequent topic of text to choose is "natural disaster" (10%).

# k. Learning Activities

The most frequent learning activity to do is "group discussion" (70%) while the least frequent learning activity to do is "presentation" (25%). Moreover, the participants like to "Predict the text content" and "Guessing the meaning of a word or phrase by context" (1.35) and are less to "Criticize the author's opinion on the author's text" (2.3).

# 1. Contents of teaching materials

The most frequent contents of teaching materials to choose are "The examples given are easy to understand" and "The presentation of the material is balanced between the theory and examples of texts" (1.55) while the least frequent contents of teaching materials to choose are "Learning materials are in accordance with the level of student needs" and "Learning activities are associated with the development of listening skills" (1.85).

# m. Organization of teaching materials

The order of the teaching materials organization is "sorting material based on text difficulty level is correct" and "loading the material between the learning units in the teaching materials is balanced" (1.7), followed by "sorting of materials based on the difficulty level of reading strategy is appropriate" (1.75).

# n. Evaluation of learning

The order of the learning evaluation is "the test or evaluation at the end of each learning unit (formative test)" (1.7), "the test at the end of the learning program (final exam semester)" (1.75), and "test in the middle of the learning program (midterm exam)" (1.8).

#### 2. The Current Syllabus

Curriculum has different designs and uniqueness, which is related to the educational program being organized. Hence, the curriculum designers in particular level of education arrange the curriculum based on certain consideration. Additionally, curriculum can be defined as teaching-learning program plan and how the content of the plan is used in order to achieve the learning output (Brown, 1995; J.C. Richards, 2001; 2013). In the context of Indonesian higher education, definition of curriculum is found in the regulation of

the Minister of Research, Technology, and Higher Education (Permenristekdikti) of the Republic of Indonesia Number 44 year 2015 article 1 verse 6 (Kemenristekdikti, 2015).

Based on the aforementioned definition and regulation, curriculum can be considered as a plan for the lecturers to run their teaching-learning activities starting from preparation, process, and evaluation. As a plan, curriculum contains the complete components such as students' needs, goals and objectives, testing, learning materials, activities, and evaluation for students' achievement and the program itself. However, curriculum must be actualized through the blueprint-making and implementation. Therefore, curriculum functions as plan and implementation mainly in the higher education system.

Curriculum is, then, used to make a syllabus as the operational document because it "provides a focus of what should be studied, along with a rationale for how the content should be selected and ordered" (Brown, 1995). It can be inferred from the statement that syllabus is more detailed in explaining the way of teaching-learning activities will be. Furthermore, it leads the language lecturers to be more organized, purposeful, and meaningful in their teaching practice. In addition, the syllabus has a payoff for the students because it enables them to learn the materials which are not only needed but also meaningful for them in the real-world context.

Syllabus ideally enables the language lecturers and the students as well to know what, how, and why the learning process should discuss certain topics of materials and should be taught in particular approaches, design, or procedure. However, in the field, the practice shows that syllabus cannot be used repeatedly to different students. Their various background knowledge, skills, needs, and wants should be put in the first place. As a consequence, the language lecturers have to redesign the syllabus in order to provide appropriate sequence, materials, and kinds of evaluation in pre-, during, and post-teaching learning activities.

In English Education Department at which this study was conducted, the need of redesigning syllabus was found especially for advanced reading course. The syllabus target is the fourth semester students who had previously taken prerequisite course. This advanced reading course aims to enable students develop their reading comprehension especially in analyzing English texts. Therefore, they deal with variety of longer texts in order to find topic sentences, predict the context, and paraphrase the texts. However, related to the two previous prerequisite courses named Reading 1 and Reading 2 the students had taken, the course aim of Reading 3 still require changes in order to meet students' needs. Further, the analysis result of existing syllabus in Table 1 also showed that some components require completion.

Table 1. Analysis of present syllabus

Components	Available	Not Available
Rationale		V
Identity	$\sqrt{}$	
Course description	$\sqrt{}$	
Course objective	$\sqrt{}$	
Session	$\sqrt{}$	

Indicator of CLO		$\sqrt{}$
Material	$\sqrt{}$	
Learning activities	$\sqrt{}$	
Time allotment		$\sqrt{}$
Assessment		
Resources	$\sqrt{}$	

Besides, the inconsistencies among the Reading series course description also influence the students' clarity on their learning purposes. The inconsistencies bring an impact on students' vocabulary mastery and reading skills as stated by lecturer A. Moreover, the students who take Reading 3 ideally focus on the critical and extensive reading because they are in the highest level of reading course. However, it is not reflected through the course content and the students' skills and readiness. This condition was depicted through the result of need assessment in which students sound their expectation, comments, and suggestions for the improvement of Reading 3 course especially focusing on the components of learning purpose, reading difficulties, reading strategies, preferred learning activities, preferred learning assessment, learning evaluation, and other related components.

To strengthen the needs of redesigning the syllabus, the serial course descriptions were also compared. The result showed that there was slight difference among them and it is recommended to carry out the analysis of current syllabus and propose the new syllabus for reading course.

# 3. Syllabus Construction

Based on the analysis results of students' need and the present syllabus, a proposed syllabus is significantly constructed. In order to be well-defined about the complete version of proposed Reading 3 course program syllabus, the following are the explanation covering description of syllabus rationale, course objectives, syllabus type, course contents, the assessment.

# a. Syllabus rationale

This course is designed for the fourth semester students who wish to develop their competence in critical and extensive reading of academic texts at intermediate level. All the students have finished the prerequisite subjects of Reading 1 and Reading 2. It teaches students the intermediate reading skills needed to comprehend a variety of text types. The course seeks to enable students who will work as teacher, translator, and edupreneur to develop their visual reception strategies, comprehension, production of notes from academic texts, analysis on academic texts and credit sources of information. The course is conducted by utilizing students-centered approach. Case study, inquiry-based, media creation, KWL, problem based learning will be the major activities supported by the digital-based instruction in the course. Besides, in the purpose of developing reading skills and collaboration, communication, critical thinking, creativity, character (5Cs), the students are expected to be independently and actively involved in the teaching learning processes both online and onsite classroom settings. Thus, students will have wide opportunities to work individually, collaborate with their peers or other members in a group.

Meanwhile, lecturer has a role as the navigator or facilitator during the process of teaching and learning. Concerning about the learning outcomes, students will be assessed through various appropriate kinds of assessment which are appropriate with the course contents, which take account of in and out-of-school experience, and meets the course objective.

# b. Course objective

Regarding the students' needs and the level of students being expected after taking this course, the course goals of Reading 3 are to develop students' competence in critical and extensive reading, utilize strategies to improve their reading speed, skills on complex academic texts comprehension, employ strategies of writing production, strategies of using printed and/or online dictionaries to deal with unfamiliar vocabulary, conduct exploration and evaluation of research techniques and resources, credit and cite sources of information. Meanwhile, the detail information related to the skills being learnt is discussed explicitly in the course objective per meeting based on the arranged course goals.

In accordance with the goals of Reading 3, the reading focus is on reading comprehension, vocabulary mastery, evaluation of features of texts, writing academic summary and report based on the readings. Certainly, in order to synchronize the learning objectives, the learning outcomes, the curricular objectives, and the measurement of learning objectives, the students will have to prepare themselves for the assessment emphasized on vocabulary, text evaluation, text comprehension, and writing production. And so, in the end of the course, they can be classified to achieve the level 3 or not based on assessment results.

#### c. The entry and exit level

Due to the terms of taking Reading 3 course program mentioned in the curriculum, the entry level of the students should ensure that they can interpret data, meaning, charts, visual information, graphs from academic and non-academic texts, decoding new words in particular contexts, comprehending simple and compound sentences in authentic materials, identifying main idea, supporting details, chronological order, and simple transitions in texts, recognizing the use of root words, prefix, suffix, antonym, synonym and homonyms, transition words, words with multiple meanings, and reading to compare and contrast information available in text to complete anticipated coursework successfully. Based on those indicators, students are classified as at pre-intermediate level. Data revealed that their average reading score is 76 (AB/  $75 \le AM < 80$ ) for the Reading 2 course while the minimum score to pass Reading 2 course is C ( $60 \le AM < 65$ ).

The exit level of the students ensures that students can read, evaluate, criticize, and write the results of their readings sufficiently in order to handle future work-related and/or education related reading tasks successfully. These indicators reflect the intermediate level of their reading proficiency. Besides, students are expected to demonstrate adequate achievement of exit level competency standards determined by the department (score is no less than C ( $60 \le AM < 65$ ).

# d. Syllabus type

Referring to the result of need assessment, course goals, and course objective, the syllabus was designed using backward design. It started from the the preferred results or outcomes, determined teaching and activities and contents, and assessment tasks (Taba in Jack C. Richards, 2013; Wiggins & McTighe, 2006). In the effort of producing a sound syllabus, backward design was utilized because it is based students' need. Moreover, students' skills mastery (output) is the "prerequisite to devising the means to reach them" (Tyler, Taba in J. C Richards, 2013). Based on the need assessment, students' belief of learning reading is to master reading skills for various types of texts. To facilitate students' belief, skill syllabus and content-based syllabus are selected.

Referring to the previous consideration, the skill syllabus and content-based syllabus are going to be manifested throughout the proposed syllabus. The content-based syllabus covers particular topics. Further, three other language skills are also included as they are interrelated in the learning activities and teaching practices of EFL context.

# e. Choosing course contents

In order to meet students' needs, the course planner has to take into account of course content. According to Richards (2001), course content can expose the assumptions of the course planner about "the nature of language, language use, and language learning, what the most essential elements or units of language are, and how those can be organized as an efficient basis for second language learning." Considering those aspects, the course planner should also pay attention on what subject-matter knowledge to focus on, "students' proficiency levels, current views on second language learning and teaching, conventional wisdom and convenience." (J.C. Richards, 2001). More specifically, Day (1994) mentions several factors to cogitate in selecting a passage for the reading class. The factors are: (1) interest; (2) exploitability; (3) readability (lexical knowledge, background knowledge, syntactic appropriateness, organization, discourse phenomena, length); (4) topic; (5) political appropriateness; (6) cultural suitability; and (7) appearance (layout and type size and font). Based on the two given viewpoints about the factors in course content selection, the proposed syllabus reflects both of them.

In addition, to meet the challenges of 21<sup>st</sup> century, students are also required to utilize and enhance their digital literacy skills. Briefly, they have to be literate and make use of "technology effectively in order to do research, reach information sources, read-write and comment efficiently, make reasonable choices, and make right decisions" (Özdamar Keskin, Özata, Banar, & Royle, 2015). Therefore, the use of online tools and/or apps such as YouTube, PowerPoint, Google Search, WhatsApp, Facebook, Prezi, Kahoot!, Instagram, Padlet, TED Talks/Ed, Powtoon, Google Scholar, Google Forms, Quizlet, Grammarly, and any other apps is highly demanded in order to support the course content to be more interesting, up-to-date, and meaningful for students. In addition, the use of online tools and/or apps is also an effort to familiarize students with the use of multimodal and multisemiotic texts on their learning process as one of the characteristics of 21<sup>st</sup> century teaching-learning process. Concisely, new trends of

multimodal and multisemiotic pedagogy (M2P) (Suherdi, 2017) can be integrated in reading course syllabus since it can yield significant impact for the course instruction.

#### f. Assessment

In this course, there are three tests which are going to be utilized. They are formative, middle, and final tests. The formative test will be conducted at the end of particular unit while the middle test is done in the middle of the semester. Further, the final test is organized and conducted at the end of semester. The tests will be focused on students' content delivery based on their reading, students' writing on certain topics being determined/ appropriate with the syllabus, and mainly, suitable with the learning outcome, determined indicators, and students' learning experiences. Moreover, assessment can be held in both onsite and online settings by considering program learning outcome, course goals, and course objectives.

#### Conclusion

Needs analysis is significant to conduct since the center of teaching-learning process is students and their interest. Particularly, students' interest and their literacy of digital tools and/or apps can encourage students to reach the determined learning goals. Focusing on the needs analysis also provides fruitful information as basic steps for lecturer to plan the whole package of course program. Certainly, students' needs are still the priority in holding teachinglearning process. However, they are also being guided, supervised, supported, and evaluated by their lecturer. Moreover, lecturer has to consider several highlighted points such as students' difficulties on reading, learning orientation, learning activities, preferences of materials and its contents supported by use of multimodal and multisemiotic texts, evaluation, and the use of digital tools as the supporting media towards teaching-learning process. Undeniably, the use of digital tools is not the sole focus in the educational practices of the fourth industrial revolution yet it should be regarded as the context in which students improve their 5Cs (Communication, Critical Thinking, Collaboration, Creativity, and Character) by making interaction, learning, debating, arguing, and respecting for different viewpoints so they can expand their knowledge and improve reading skills simultaneously in the purpose of given tasks accomplishment in onsite or online classroom and their social physic world. Overall, course syllabus should be designed by taking students' interest into account, capturing students' barriers to overcome through the organization of materials, learning activities, use of digital tools, use of appropriate kinds of assessment, and use of evaluation.

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# EFFORTS TO SUPPORT AND EXPAND THE USE OF EDUCATIONAL TECHNOLOGY AS A MEANS OF DELIVERING LEARNING

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#### Abstract

Indonesian government has made improving basic education a priority, and indicated that it sees technology as a way to provide teachers with the means to teach innovative lessons while closing the performance gap between rural and urban schools and between poorer and richer provinces. The role of technology must be aligned with the existing education ecosystem. It should not replace the traditional education system that involves teachers, schools, universities and parents, albeit offering wide range of information and allowing independent learning. Education is not only about learning in school, but also building a character. That is why the role of technology is intended as a tool to support the learning process, to open access, and improve quality. This paper describes the efforts taken by the Indonesian government in supporting and expanding the use of technology in the field of education in Indonesia. The discussions are supported by related research findings and literature.

Keywords: education, digital technology, supporting, teaching, learning

#### Introduction

Education is the main basis for human character development, not only includes what is happening in a classroom but also the utilization of other factors, such as technology. "Technology can be diffined as the product or process minimizing the difficulties ... Parallel to the rapid development of information and communication technology, the demand for its use ... is increasing" (Tugun, 2016). "While digital technologies are used for fun and communication, they are also used in education and provide a learning process for both teachers and students" (Tugun, 2016).

Indonesians have embraced technology warmly, like many part of developing countries "taking advantage of rising incomes to buy smartphones that give them access to a host of social networking platforms and other services". In 2014 Indonesia had 44.7m active smartphone users, a number that is expected to rise to 53.86m in 2016. In 2018 there are 70.22m, and by 2019-2022 there are forecast to be more than 89m smartphone users across the archipelago, the fourth-highest

level in the world after China, India, and the Us (Central Bureau of Statistics 2011). Against that backdrop, and Indonesia's geographical and fiscal realities, the government has turned to technology as a cost-effective way to expand learning and ensure more people. Digital tools are being introduced throughout the system, from basic education to tertiary, spawning a flurry of start-up activity in the sector. Indonesia set up its own school broadcast, TV Edukasi (TV-E), in 2004 and is part of SEA Edunet, a satellite-based learning platform design to share educational materials among countries in South-east Asia. In 2006 it launched Jardiknas, a national education network to connect all the state's various educational institutions.

Indonesia has approximately 147,000 elementary schools, 37,000 junior high schools, 13,000 general senior secondary schools, and 13,200 vocational senior secondary schools. These schools serve around 25,618,000 students in elementary school, 10,145,000 students in junior high schools, 4,659,000 students in general senior secondary school, and 4,682,000 students in vocational senior secondary schools (Ministry of National Education 2016/2017). "Out of 208,000 schools in Indonesia, 118,000 have been connected to internet, whereas 17,000 still experience a lack of electricity" (Anies Baswedan, former minister of education). Papua, the country's poorest and most eastern province, provides an indication of the scale of the challenges. When ACDP Indonesia, a cooperative initiative by the Indonesian and Australian governments and the ADB, carried out an evaluation of TV-E and other IT initiatives in Papua, they found that most schools surveyed had less than five computers, with few laptops and no tablets. It also found that teachers were more likely to use ICT than students, but did so for administrative purposes rather than for lessons.

# Theory

Indonesia start-ups are also eyeing opportunities in education technology, focused on the provision of online classes. While these digital initiatives have generated plenty of positivity, underlying infrastructural problems may limit their potential. A lack of electricity also affected attempts to use technology, with unstable power in urban areas and only 30% electrification overall. Some 78% of primary schools and 8% of secondary schools relied on diesel generators after dark. In "Global Information Technology Report 2015", the World Economic Forum ranked Indonesia 79th out of the 143 countries it surveyed. However, it dropped to 98th in infrastructure and digital content, which looks at network coverage, bandwidth, and electricity production.

Considering the large number of schools and wide geographical distribution of the schools in Indonesia, "Indonesia could face a shortage of 9 million skilled workers by 2030. As internet penetration gets better and infrastructure improves, online education or digital education one of the potential solution". Therefore, educational technology in Indonesia will be fully dependent on the internet and electricity in every provinces as described above. Further description of the efforts taken in supporting and expanding the use of technology as a means of delivering learning in Indonesia is explored in this paper in order to provide a more information about educational technology in indonesia. Educational technology in

Indonesia are then presented at the end of this paper as predictions based on the use of educational technology in the process of learning in schools that is happening at this moment and will continue in the coming years.

# Digitizing Education in Indonesia

Progress in the development of science and technology has contributed well to education. This can be felt by the education community (lecturers, teachers, students) in terms of accessing learning materials. Learning materials can be easily accessed through electronic media. The emergence of digital technology as one of the electronic media has formed a new paradigm in the learning process and management of educational organizations. The rapid development of information and communication technology has brought enormous changes to the world of education. The application of information and communication technology, especially in the development of national education, is now mandatory. The development of digital technology has triggered a shift in education from conventional (face-to-face) education towards more open education. Education will be more bidirectional, competitive, multidisciplinary, and high productivity.

The development of technology is enough to have a positive impact on Indonesian Education. Actually Education in Indonesia itself has undergone many innovations from year to year in the form of infrastructure that is used to expedite the course of teaching and learning activities as well as the entire Education system. The goal is that Education becomes more effective, efficient, and attractive to students and teachers. Even today Indonesia has run a UNBK (Computer-Based National Examination) which increasingly adds quality, simplifies, and cheapens the course of the National Examination itself.

Based on a survey conducted throughout 2016 by the Indonesian Internet Association (APJII) revealed that more than half of Indonesia's population is now connected to the internet. It is estimated that Indonesia's population of 256.2 million people, there are as many as 132.7 million people who become active users of the internet. "Based on education level, as many as 88 percent of internet users in Indonesia are S2 or S3 graduates, then 79.23 percent are undergraduate or diploma graduates. Internet users who are high school graduates or equivalent reach 70.54 percent". The internet users graduating from junior high school or equivalent reached 48.53 percent and elementary school graduates or equivalent reached 25.10 percent. The data shows the magnitude of the potential for digitizing the world of education in Indonesia through platforms that have been and are being built by various companies. And then Education will become a huge new market in the digital world itself.

Digitizing educational technology seeks to make use of various learning resources so as to facilitate or facilitate a person to study anywhere, anytime, and by anyone. By utilizing educational technology, learning and learning problems can be solved in every educational activity. This is a fundamental important point of innovation, namely problem solving. Digitalization of Education is also expected to be able to solve the problem of inequality in education in Indonesia. Because Indonesia is an archipelago country that is very large and wide, it is necessary to innovate technology in solving education problems in order to

facilitate and facilitate the distribution of education and solving other educational problems. With the increasingly widespread internet access today it is appropriate that Indonesian Education must be "forced" to use the internet and digitize so as not to lag behind other countries. This must be accompanied by the cooperation of various parties that take part in it, such as the government, the private sector or the company, and cover the entire range of people involved in the Education unit.

# Theory Application

Accelerating access to education facilities through digital is expected to solve the problem of inequality in education in this nation. Because the access of the large Indonesian people and almost more than fifty percent are active users of internet media, is the main capital in solving these educational problems. That means the users are spread in almost all parts of Indonesia. "Indonesia needs 128 years to be able to catch up with education from developed countries, and to be able to catch up, technology is the answer" (CEO Ruangguru). In catching up must be done by developing an educational application, where students throughout Indonesia can access the subject matter by watching videos or learning animations, and other teaching materials for free. Today many companies have emerged that are building platforms for the world of education, ranging from course provider services, connecting students with mentors, to educational social media that have begun to emerge and are growing.

# Education Start-Ups In Indonesia

The growth of education start-ups in Indonesia is slow but steady, a new report titled "Indonesia Digital Education and E-Learning Market Outlook to 2018 Rising Trend of Blended Learning to Drive the Future Growth" notes that "the total spending on digital education in Indonesia has grown over the last five years, and that there has been improved collaboration between educational institutions and digital education providers in order to equip their classrooms with digital educational facilities". There are five of the top education start-ups operating right now in Indonesia that have chosen to take part in improving the education quality. These are some of education start-ups that have come in to fill the need-gap in Indonesia:

## 1. Harukaedu

Harukaedu is an online education platform for tertiary education in Indonesia. Harukaedu was established in 2013 by Jakarta Founder Institute director Novistiar Rustandi, Harukaedu "monetises through a revenue-sharing scheme with its university partners. The start-up raised an undiclosed amount of series a Funding from CyberAgent Ventures, a well-known Japanese tech investment firm with an office in Jakarta". Harukaedu helps Indonesians earn degrees online, and helps colleges and universities build online degree programs from scratch. Recently, the start-up partnered with The London School of Public Relations and Wiraswasta Indonesia University in Jakarta to offer an online degree in Communication Studies and and Management. The start-up also offers online technology entrepreneurship classes in Indonesia, and plans to incorporate several other webbased certification programs in the future. Harukaedu believes online learning is one of the best solutions for solving higher education problems in Indonesia.

# 2. Ruangguru

"Launched in 2014, the startup operates Ruangguru.com, an online marketplace for private tutoring with over 150,000 teachers covering more than 100 subjects. It also offers a mobile app and a learning management system". Ruangguru is committed to being a partner for the regional government to provide quality education through the Learning Management System (LMS). Ruangguru succeeded in cooperating with 32 (of 34) provincial governments and more than 326 city and district governments in Indonesia. In addition, Ruangguru also offers subscription learning videos, private tutoring marketplaces, on-demand learning tutoring services, online exam tryouts, and others.

Ruangguru is not only present as a business, but also aims to improve the quality of teachers by creating jobs and additional income for teachers in Indonesia. Ruangguru believes, with the improvement of teacher quality, the quality of education in Indonesia will also be better. Ruangguru also believes that technology can help students, teachers, and parents to carry out their activities more effectively and efficiently.

# 3. Quipper School

Quipper is an educational technology company with the mission of providing the best education in remote areas. First established in 2010 in London - United Kingdom, Quipper services can now be enjoyed in several countries such as Japan, Philippines, Mexico and Indonesia. Since 2015, Quipper has become part of the Indonesian education ecosystem by helping to provide, improve, and distribute quality education for teachers and students.

#### 4. Kelase

Established in March 2013 under the banner of PT. Edukasi 101, Kelase was initiated by Brimy Laksmana as founder and president director and Winastwan Gora as director of research and development. Kelase is a social networking service and a safe online learning environment for both formal education institutions (elementary, junior high school, senior high school, vocational school, colleges, and universities) and non-formal (courses, tutoring institutions, and home schooling providers). Kelase can be accessed from a variety of devices, both PC and mobile devices such as smartphones and tablets. The purpose of creating Kelase is to provide learning spaces that promote social aspects and collaboration, rich learning experiences, facilitate the governance of the educational process, monitor the development of the learning process, and bridge communication between teachers, students and parents. By using Kelase services, the learning process can be done anywhere and anytime. Kelase has been used by more than 80 educational institutions from various levels and is one of the training materials for the Indonesian High School Teachers' ICT Information and Communication Technology that will be implemented by the Directorate General of Secondary Education, Ministry of Culture and Republic of Indonesia.

# 5. Zenius

Zenius Education is a company engaged in education in Indonesia which has started its business activities since 2004 and was registered as an official company (PT) in 2007. The business model of Zenius Education is to sell access to teaching for all subjects from elementary school level (elementary ) to high school (SMA)

in the Indonesian language video format presented both online through the website (zenius.net) and offline in the form of CD / DVD that can be accessed multimedia plaform (Personal Computer, Laptop, Tablet, and Smartphone). As of 2018, Zenius has successfully documented more than 74,000 video material lessons for 15 subjects from elementary - high school level. Zenius also provides more than 3,400 practice questions that can be downloaded for free, including the discussion of the National Exams/National Exams for elementary, junior high and high school level. In addition, Zenius also provides a video discussion of the questions.

# The Scale of the Challenge

I concern with the fact that teachers and students need to have access to a computer and good internet connection to run the technology. This fact can be obvious challange, for lacking an access to a good internet connection and computer facilities remains a well-noted issue at many schools in some parts of Indonesia (Mali, 2015a,b;Tempo, 2015a,b; Redaksi1, 2015; Kaltim Post Group, 2015). To deal with this situation, "requesting a related Network Administration Team of a school or university to provide a free high-speed internet Wi-Fi within its area can be a possible solution. Importantly" (Thien, Phan, Loi, Tho, Suhonen, & Sutinen, 2013), "if sufficient computer facilities assisted by technical support are available at schools, teachers would be inspired to use CALL actively in their classrooms" (Park & Son, 2009, p.23).

Another challenge is also related to how teachers view the use of technology in their teaching practices. Some of them still have doubts if they possess technological skills to integrate technology in their future classrooms (Javad & Leila, 2015) and if they should "use online teaching such as e-mail, chat, or blog, in their teaching activities" (Cahyani & Cahyono, 2012, p.141). In that case, I agree that the teachers need technological training to "utilize technology into their teaching practices" (Cahyani & Cahyono; Javad & Leila) "and introduce them with 'types of computer technology that can support their immediate needs" (Gilakjani, 2012, p.73). Then, the teachers should feel sure whether to use online or offline technology because I believe that they can always utilize both to support their teaching. Chaney, Chaney, Eddy (2010) make an important note that it is not a matter of on infusing a course of study with the latest and the most sophisticated educational technology but is more on utilizing technology that suits unique needs and interests of teachers and students.

# The Steps Taken in Support

The government as the regulatory (policy) authority holder has taken concrete steps in the form of teacher competency improvement programs as policy implementation as stated in the Teacher Competency Improvement Program. Learners are designed based on Teacher Competency Standards (SKG) which refers to Minister of National Education Regulation No. 16 of 2007 concerning Academic Qualification Standards and Teacher Competencies. The capacity building includes activities that aim to improve and develop abilities (abilities), attitude (attitude), and skills (skills). From this activity, it is expected that it will produce a change in teacher behavior which in reality changes in behavior have an impact on improving teacher performance in the teaching and learning process in

the classroom. The lack of infrastructure is still a major obstacle in any implementation of technology-based programs but apart from all indicators of human resources in this case the teacher is an actor who is at the upstream part of the nation's educational problems.

In December 2015 Indosat Ooredoo pledged \$1m over five years to enhance digital education. Working with two foundations, it will provide tablets loaded with the relevant apps and software to schools in five provinces. Cloud-based interactive learning materials willbe introduced in 65 schools and Indosat Ooredoo will work with the Ministry of Education to train teachers in the relevant IT skills. Microsoft has pledged to provide software to all the country's schoolchildren, and is working with the government to help teachers who may not be as comfortable with technology as their tech-savvy students. "We are developing software and tools for classroom activities to help teachers keep up with current trends and culture," (Andreas Diantoro, president director of Microsoft Indonesia).

In August 2015, IndonesiaX in partnership with EdX, founded by Harvard University and the Massachusetts Institute of Technology, launched a project to provide massive open online courses specifically tailored to Indonesian students. EdX also includes courses from Indonesia's Open University (UT), which launched in 1984 in the archipelago, making it a pioneer in the field of alternative learning. The institution currently has more than 450,000 students. While Indonesia's infrastructure development, Google is working on a technology that uses large balloons in the sky to ensure remoter areas have internet connectivity. In 2015 Google signed agreements with Telkomsel, Indosat, and XL Axiata to start testing the technology titled Project Loon in Indonesia. The reality that there has been a far gap between competence and computerization makes acceptance of technology not an easy thing.

#### Conclusion

The use of technology in education still needs adjustment. Adaptation needs to be thought through because technology that is now said to disrupt, actually not only has a positive impact but also has a negative impact if it is not wise and careful. It is important to connect various strategic points in the education map to move forward, not only the use of advanced technology, but also understand the role of each stakeholder, understand the risks, challenges, and impacts, for current and future generations. Technology needs to be harmonized together with the existing educational ecosystem. Traditional education systems that involve teachers, schools, colleges and parents are not necessarily eliminated simply because of broad access to information that promises independent learning methods. The role of teachers, parents and schools will not be replaced because education is not only about gaining knowledge but also character building. The role of teachers, parents and schools will not be replaced because education is not only about gaining knowledge but also character building. With technology, educators and educational institutions can organize material and processes more efficiently, focus more on the formation of children's character. This policy is in accordance with the government's aspiration to make Indonesian students future leaders of Asia and provide the ability to compete at the global level.

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# **Author Guidelines**

The editors of *International Journal of Indonesian Education and Teaching (IJIET)* welcome authors to submit articles written in English in accordance with the following guidelines -- points 1-10:

- 1. Articles have not been published or accepted for publication, or are being considered for publication elsewhere.
- 2. In addition to the manuscript, a written statement should be attached which clarifies the originality and free of plagiarism.
- 3. Types of articles suitable for publication include research reports and conceptual ideas.
- 4. Each article should be between 2,500 and 4,500 words long and in form of essay written in English which includes:
- a. Title (15-20 words) in bold type, upper case, and in 12- point size of Times New Roman font,
- b. Author's name (without academic degree) with an e-mail address and institution's name.
- c. Abstract in English (150-200 words) which includes research problems, methods, and results.
- d. Keywords in English (3 5 words).
- e. Introduction (without subsection) which includes the background and objectives. The introduction section ends with an emphasis on items to be discussed.
- f. Theory (literature reviews/theoretical construct) of the research.
- g. Method
- h. Results (with sections)
- i. Discussion (with sections) which includes data analysis, verification of hypothesis, findings, and the interpretation.
- j. Conclusion (without sections) which includes the concluding remarks, research implications, and suggestions.
- k. Reference list should appear at the end of the article and includes only literatures actually cited in the manuscripts. Reference list should contain at least 60% new primary literatures and at most 40% new secondary literatures. References are ordered alphabetically and chronologically. When writing a reference list, please use the APA style (the sixth edition).
- 5. Conceptual Idea
- a. Introduction
- b. Theory
- c. Theory Application
- d. Conclusion
- e. Reference
- 6. Every section heading is in bold type and in upper case for the first letter, for example, Introduction, and every subheading is in bold type, in italics and in upper case for the first letter of each content word and in lower case for the first letter of each function word, except for the first letter of the function word which begins a subheading, for example, Data Analysis and Engaging Activities and Tasks.
- 7. Another suitable type of article is a book review. Please note the following requirements for submitting book reviews:
- a. Books being reviewed should be newly published.
- b. Book reviews should be between 2 4 pages in length.
- c. A copy or scan of the book cover should be attached.
- 8. The editors appreciate if authors excerpt information from subsequent published articles in IJIET.
- 9. Articles should be uploaded onto IJIET website in soft-files using Microsoft Word application, double-spaced on A4-sized paper, using 12 size Times New Roman font. Each article, written in English, should be between 2,500 and 4,500 words long.
- 10. Authors will be sent notifications of the receipt of manuscripts and editorial decisions (whether the articles are accepted or not) by e-mail.

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