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THE INFLUENCE OF PARENTS ON STUDENTS' CHOICE OF CAREER IN THESE PRESENT OCCUPATIONAL CHALLENGES

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Abstract
Decision-making in choosing a career is a very vital aspect of life, and it determines what the person will be in future. If taken wrongly, it has a great effect on someone's life which is why one needs to be careful in making a decision that pertains to a career. This career choice-making has become a major problem for students; most of them find it difficult to make the right decision; maybe they are not well guided. There is a need for parents to assist or guide their children when they are still young to enable them to make good decisions on career choices. Parents' roles in deciding on a career are of great importance to the students, so this aspect should not be overlooked by parents. The study looked at the roles and influence of parents on students' decisions on a career. One hundred and forty final-year diploma students were taken from Delta state university, Abraka, as the sample. One research question and one hypothesis were stated for the study. The study revealed that parents' roles influence their children's career choices.

Keywords: career choice, influence, parents, students

Introduction
In every decision-making process, having confidence in oneself ability is of great importance. Much of the decision-making in the career process involves belief in oneself to perform an activity or carry out a task. According to Bandura, a student's self-belief about his capabilities is very crucial in the area of planning and executing steps to attain particular personal goals. These beliefs of oneself are dynamic and related to the environment, which is linked to the type of task itself, which can be obtained from four main experiential learning,

Students tend to avoid those outcomes that they expect to be negative and accept those outcomes they are expecting to be positive, not minding whether they possess high self-beliefs about their capability. Outcome expectations are the outcomes perceived by the individual, the consequences or effects of particular behaviours. Both self-belief about one's capability and expectations of outcomes are closely related. If a student's confidence in his ability is high to perform a task, then such a student may expect a positive outcome. If students expect positive outcomes, they are likely to feel or have more confidence which will motivate them to try that particular behaviour which will result in a positive outcome.

Making career choices in this complex world today demands believing in one's capability to carry out the profession. For this reason, it calls for parental guidance for them to make the right career choice. Parents have a great function to carry out in guiding their children. The marching decision-making process in a career with the requirements in education has become more complex with the advent of technological advancement in this present world when relating it to the past (Joel, Peter & Samuel, 2017; Onoyase & Onoyase, 2009).

Students' challenges in career choice

According to Olaosebikan & Olusakin (2014), a career is an action taken by a person throughout his lifetime, which has a relationship with his occupation. A career is composed of the job held, titles acquired, and work accomplished during a given period (Business Dictionary.com, 2020). A career is an occupation or profession especially when it requires special training; it is what a person undertakes as a life job.

Different researches have shown that many secondary school students are in a dilemma as pertains to the career decisions making process (Foxcroft & Els, 2010; Issa & Nwalo, 2008; Joel, Pete & Samuel, 2017; Macgregor, 2007; Watson, McMahon, 2010). Every student undergoing deciding on the career process is influenced by various factors such as social, economic and environmental factors, educational accomplishments and personal attitude (Joel, Peter & Samuel,2017; Watson et al., 2010). International Labour Organization (ILO), 2011) attributed a lack of students' knowledge about career decision-making to the lack of school curriculum, which does not properly address and prepare the students early enough for a vocation. Many challenges that students encounter while deciding on a career in secondary schools originated as a result of ignorance, insufficient information, and lack of career exposure outlets (Austin, 2010; Joel, Peter & Samuel, 2017; Stikkelorum, 2014).

Some studies that were conducted in Kenya revealed that people get employed in different areas where they do not have professional training, which has no bearing on their profession, they choose to accept that profession because of availability not considering their skills or ability and personal interest (Godia, 2009; Joel, Peter & Samuel, 2017; Machio, 2007; Muigai, 2007,), and this may result in unproductivity and job frustration. Self-belief about one capability in deciding on a career represents the students' confidence in performing tasks or activities connected to selecting an appropriate career path (Crisan & Turda, 2015; Joel, Peter, & Samuel,2017).

Parental roles and career choices of students

Since the students find it difficult to choose a good career path, the parents should be involved in the career decision-making. The parents and their children must be close for this to take place. Researchers have revealed that the closeness of parents to children, which can be referred to as Parental attachment, correlates positively with career exploration (Navin, 2009). Navin (2009) defines Parental attachment (closeness of parent to children) as the degree to which a child feels close emotionally to his/her parents and is supported by his parents. Many factors influence the choice of a student's career. Researchers, counsellors and others who have an interest in a career choice of students have picked interest to ascertain the

root causes. Some people believed that students do not make career decisions on their own and that there exist other factors which determine vocational choices made by the students like the social and economic environment and parents of the students (Friesen, 1981 as cited in Olaosebikan & Olusakin, 2014). Friesen in Olaosebikan & Olusakin (2014) argued that students might make the right or fulfilling choice of career and unsatisfactory career choice, but the parents' guidance is very necessary.

Many parents wish that their children should be successful in their careers. They hope to see them go into an occupation that will bring joy and growth. The joy of every parent is for their children to progress in life. Parents have an important function to carry out during their children's development in career and occupational aspirations (Taylor, Harris, & Taylor, 2004). Sometimes students often find it difficult or unwilling to pursue a certain profession without the approval or support of their parents, but that does not mean that the parents take the sole decision for their children; the parents are to guide and play the function of a counsellor or an adviser.

The function of parents in their children's career choices is in the form of support and advice from their past experiences, and they do not want their children to fail in their future careers. And also, do this to avoid the same mistakes they made when making their career choices. The advice the parents usually give to their children is such as "I have made a mistake in choosing my career because of lack of advice and knowledge. I do not want you to make those same irreversible or regrettable mistakes". According to Badura, this is called verbal persuasion; it helps in building confidence in someone else; since the parents speak from their past experiences, this will or may influence the children in making choices or pursuing specific occupations.

Choosing a career begins at home, and continues from elementary school till tertiary institutions. What the child will become in future must be properly guided, which calls for parents' attention. The decision of whether to attend primary, secondary, or higher institutions or learn a trade should be the student's decision but must be judiciously guided by the student's parents not to make wrong choices. Because once a wrong choice is made in a profession, it may be difficult to reverse. This early-career decision-making affects the students' entire life. Therefore, it is important to know and understand the students' and the parents' roles in students' career development process.

Influence of Parents on the career choice of students

Many studies have been carried out; from these studies, it was discovered that many students quote their parents as a source of their inspiration in career choices and that their parents influence the career they are today (Knowles, 1998; Marjoribanks, 1997; Mau & Bikos, 2000). The researchers, educators and those concerned need to know and understand the degree of influence of parents on the education and students' career choice to assist, equip and develop effective or good strategies to support the parents in advising their children on how to select the good, satisfying and appropriate vocation.

According to Keller (2004) in Olaosebikan and Olusakin (2014), parents influence their children's career enhancement, and decision-making in a career and play a major role in influencing their lives. Keller (2004), in his findings, showed

that students are more confident to look for career information and make a career choice that would be beneficial, exciting and interesting to them when they feel their parents loved and supported them. According to Hairston (2000), family members, most especially parents, are the most influential determinant that influences students in their occupational aspirations and career choice-making process.

The parents' career aspirations can also assist students in making career choices or occupations. It can influence the students' professional knowledge and thereby provide them with the basic requirements and roles of the occupation (Hairston, 2000). Lee(1984), in Olaosebikan and Olusakin(2014) opined that parents' career or occupation orientations enable their children to be conversant with the values and the functions of occupation, which provide a conducive environment for learning that energizes or ginger the children's aspirations in going into a such occupation or career

One of the influential determinants as regard parents' influence on students' career choices is the students' desire to emulate or be like their parents. When students observe that their parents' career is beneficial or satisfactory, they show an interest in going into such a career. Students would study their parents if they discovered that their parent is making it in life; they try to choose that same vocation. But if the student's parents are a failure in their profession, no advice, the parents will give to convince that child. According to Hairston, in his findings, it revealed that those students who went into teaching vocation are a result of their parents' impact or contributions to the society; therefore, they were influenced to also go into the teaching career to impact people's life. Olaosebikan & Olusakin(2014), in their findings, discovered that parents' influence will not significantly have an effect on a student's choice of a career and that perceptions of occupation satisfaction of parents will not have an effect on the student's career aspirations based on sex, and type of school. Dobbins (2000), in his findings, reported that parents' career aspirations assist the students in choosing their goals of occupation, influence occupational knowledge and acquit them with the occupation function and requirements.

Methodology

The correlation design was adopted for this study. This was used to establish the correlation between parental roles and the choice of students in careers. One hundred and forty final year Diploma students of Delta State University, Abraka, Nigeria, were the sample for this study. This sample was drawn through the use of random sampling. The questionnaire was the instrument used to gather data on parents' roles and students' career choices. One research question and one hypothesis were used for this study. At the same time, SPSS was used for the analysis.

The following research question was stated to guide the study:
How do Parents' roles influence the choice of students in careers?

Findings and Discussion

Hypothesis

The following null hypothesis was stated and tested at a 0.01 level of significance

1. There is no significant influence between parents' roles and students' career choices.

Table 1. Parents' roles and career choices of students

	Mean	Std Deviation	N
Students' career choice (SCC)	25.2357	5.13643	140
Parents' Roles (PR)	22.1643	5.23905	140

The results presented in table 1 above show that the mean difference between Students' Career' Choice (SCC) and Parents' Roles (PR) is 3.0714, which is in favour of Students' career choice (SCC).

Hypothesis:
There is no significant influence between parents' roles and students' career choices.

Table 2. Parents' roles and students' career choices

		Students' career choice (SCC)	Parental Roles (PR)
Students' career choice (SCC)	Pearson Correlation	1	0.540**
	Sig(2-tailed)		0.000
	N	140	140
Students' career choice (PR)	Pearson Correlation	0.540**	1
	Sig. (2-tailed)	0.000	
	N	140	140

The correlation between Students' Career Choices (SCC) and Parents' Roles (PR) shows 0.540, and this indicates a high positive correlation. The p-significant value associated with the correlation was found to be 0.000 ($p < 0.01$). This means that the correlation was statistically significant. Therefore, the null hypothesis, which states that there is no significant influence between parents' Roles and students' career choices, was rejected.

From table 2, we discovered that there is a significant influence between parents' roles and students' career choices since the null hypothesis was rejected. Career choice-making is a complex decision since many factors determine students' choice of career. The students should be properly guided for them to make a good decision on a career. The influences of parents' roles on students' choice of career cannot be overemphasized. In support of this study, Keller (2004) in Olaosebikan & Olusakin (2014) emphasized the parents' roles in students' choice of career, and he stated that the parents influence the making of decisions and children's career development and also stated that parents have a major function to play in influencing their children. To support this study, Lee (1984) cited in Olaosebikan and Olusakin (2014) stated that parents' occupation influences the students' career choice since they observe their parents progressing in their profession. Parents influence the students through advice, counselling, as a model, career they are into etc. From the findings, we can conclude that parents' roles and influence are paramount to the choice of vocation students.

Conclusion

The importance of parental attachment and guidance cannot be overemphasized. In the aspect of students' choice of vocation, there are so many people today that are finding it difficult to make a good choice in a career. Some who were able to choose a career are not happy or comfortable with the choice they made due to the wrong choice. It is necessary and important for parents to start nurturing and guiding their children right from home before entering the school system, so as not to regret it in future to come.

The researcher recommends that courses on the choice of career should be built and taught in our various schools to assist the students overcome career choice problems. The teachers can also help in their part in guiding the students on their career paths. When this is done, it will help both the parents and students.

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EXPLORING THE FACTORS AND LEVELS OF STUDENTS' AUTONOMY IN LANGUAGE LEARNING

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Abstract
Students' autonomy is important in language learning since students' autonomy is considered one of the elements in successful language learning. This study aimed to explore the students' autonomy levels in language learning by considering the characteristics of autonomous students and the factors that affected students' autonomy. As a mixed-method study, this study combined questionnaires and interviews as the instruments. The sample of this research was 34 students of XII MIPA 1 of SMA Negeri 2 Semarang. The quantitative data regarding students' autonomy levels showed: emerging (0%), beginning (14.12%), intermediate (57.60%), and advanced (28.28%). It indicated that the majority of the students' autonomy level in language learning is considered at the intermediate level. While the mean of quantitative data regarding the factors influencing students' autonomy showed: students' role (21.13%), teacher's role (21.83%), task (16.90%), environment (21.83%), material (18.31%). It indicated that students agreed that students' autonomy was influenced by those supporting factors. The qualitative data revealed that the students' autonomous skills were also supported by several factors, such as students' goals and motivation, teacher and students' bond, learning materials and activities, and a supportive learning environment.

Keywords: factors, levels, students' autonomy

Introduction

English is considered the most widely spoken language in the world. English has been agreed internationally as the official language that is used universally in the field of technology, economics, education, politics, culture, and various other fields. It makes proficiency and mastery of English become a necessity. Unfortunately, the English proficiency of Indonesian people is still considered low. According to the 2021 EPI (English Proficiency Index) data which is the world's largest ranking of countries and regions by English proficiency, Indonesia ranks 80th out of 112 countries in the world and 14th out of 24 countries in Asia. Hence, from 2014 to 2021, Indonesia is constantly facing a downgrade in English proficiency.

Several factors are the reason why English is hard to root in Indonesian society, one of the reasons is the lack of understanding that English is an

important international language. The position of English in Indonesia as a foreign language hugely affects how people especially students perceive English. Thus, this perception leads to the student's motivation in learning English because there is no significant need of using English on the daily basis. The student's lack of motivation and realization in learning English is caused by a mismatch between the instructed activities in the classroom and the student's needs and interests (Marsevani 2021). It can be assumed that there is an imbalance in the process of implementing practical learning and teaching materials.

In the 2013 curriculum, the learning approach used is the Student-Centred Learning (SCL) approach, which is clearly stated in the Permendikbud No. 81A regarding 2013 Curriculum Implementation. The 2013 curriculum is applied to encourage students to be actively involved in the learning process. The basic teaching and learning process based on the 2013 curriculum is autonomous learning (Lengkanawati 2017). The 2013 curriculum changes the old method which was transferring knowledge with the teacher as the main source of information with a new method that promotes students' autonomy. Students' autonomy is essential in language learning. The main concern of English as a foreign language teaching is students' autonomy (Mardjuki 2018). Students' autonomy is believed as one of the key elements in successful language learning where independent, student-centered, and self-managed learning is spotlighted (Amirian and Noughabi 2017). On that account, the success of students in achieving the learning objectives that have been set is very dependent on the students' autonomous skills.

Students' autonomy becomes the main concern in language learning because in preparing for learning students need high motivation and it is directly related to students' autonomy. It is supported by a study conducted by Cirocki, Anam, and Retnaningdyah (2019), who emphasizes that the low motivation of Indonesian students in learning English was firmly associated with students' autonomous skills. it is important to explore the factors and levels of students' autonomy in language learning by conducting a study entitled Exploring the Factors and Levels of Students' Autonomy in Language Learning since it would help teachers to be better at planning the teaching strategy to promote the students become autonomous since students with higher levels of autonomy will be more likely to have better language learning results than those with low levels of autonomy (Tuan, 2021).

Principle of language learning

According to Abdulaziz (2016), the purpose of language learning is to provide students with the information and abilities necessary to play certain roles in another language community, to transform them into a performer in the target language (TL), and to provide them with communicative competence. In brief, applied linguists must be ready to utilize any description that their expertise and experience in language education suggest would be valuable, and they must assess descriptions in terms of their practical value. According to TESOL International Association (2017), there are four basic principles of language learning, they are:

1. A language is a tool for communication. For many students, language learning consists mostly of memorization of vocabulary and preparation for an exam without really making English a tool to communicate. Whereas the main

objective of language learning is to learn aspects of language to be able to communicate in the target language.
2. Learning a language includes the mastery of skills and also knowledge. Mastering the aspects of language is enough, students must be able to gain knowledge and apply it to share their ideas.
3. Students have to consider the influence of feelings on language learning. Emotions have such a big role in language learning because it is a long, complicated process and it requires a big amount of effort. It requires a long journey for students to finally understand the cultures of English.
4. Students have a wide range of preferred learning methods. Not all students learn the same way. There are various kinds of learners such as visual learners, auditory learners, kinaesthetic learners, and tactile learners. Students' personalities also play a big role in the learning process.

In the EFL setting where English is not needed daily, students, parents, teachers, and the community all share responsibility for language development. School provides a setting in which students may continue to develop language skills to attain personal, social, and academic goals. In this case, teachers have to be able to motivate students in language learning, help students to build accountability and discipline, and encourage students to take charge of their language learning.

Students' autonomy concept development

The concept of autonomy is not originally from the field of education especially language learning. Rather, it is an imported term from a non-linguistic term from the realm of moral and political philosophy that has been introduced into language learning via psychology and educational theory. In the education field, students' autonomy is one of the concepts that influence language learning. The term students' autonomy was first defined by Holec for the Council of Europe in 1979. Holec (1979) defines students' autonomy as the students' competence to take over their learning. He further explains that students' autonomy is not an inborn skill. However, students' autonomy must be developed naturally or in a systematic way through formal learning. Holec notes that there are five competencies of students' autonomy in language learning. It is the competence to determine the learning goals, define the learning contents, select the used learning methods and techniques, monitor the plan of action, and evaluate the obtained lessons.

The concept of students' autonomy has been defined variously. Little (1991) defines students' autonomy as the ability to detach, reflect, make a decision and take an action independently. Other than that, according to Cotteral (1995) students' autonomy can differ based on the student's ability to take charge of their learning process. The differences can be seen in the ability to set the goals of learning, determine the learning contents and tasks, set a plan to take action in learning, and evaluate the learning process. Littlewood (1996) emphasizes students' autonomy as students' capacity and eagerness to choose independently. Thus, the capacity to choose independently depends on students' motivation and confidence to decide the choices required so that students tend to be less dependent on their teachers.

The concept of autonomy is also described by Benson (2016), who describes autonomy as "a *capacity* - for detachment, critical reflection, decision-making, and independent action". The student's capacity is related to the ability to manage their language learning progress. Yan (2012) states that autonomy has, unfortunately, been misinterpreted as self-instruction. Benson emphasizes that the concept of students' autonomy enables students to have a sense of freedom in learning that makes learning more enjoyable. Likewise, Kemala (2016) states that the objective of students' autonomy is to encourage students to be less dependent on their teachers. Briefly, these concepts of students' autonomy led to one conclusion, that students' autonomy is the student's ability to be more responsible for their learning process with the actions to achieve the learning objectives.

Students' autonomy in language learning

To foster students' autonomy to be autonomous students, the teacher must reflect on their own beliefs, experiences, and expectation of the teaching/learning environment. In the process of learning, the teacher has a role to maintain the learning environment (Masouleh and Jooneghani 2012). As stated by Horváthová (2016), learning to be autonomous students is a personal, lengthy, and never-ending process. There are several approaches to assisting kids in developing independent learning skills (Çakici, 2015). Learner training encompasses a variety of tactics, including awareness raising, scaffolding, strategy training, greater social engagement, and the encouragement of reflection.

Students' autonomy comes with several characteristics. The characteristics of autonomous students are into three categories (Dang 2012), such as:

1. Initiating, in this category, students can recognize personal learning choices, set learning objectives, plan their studies, and generate learning opportunities.
2. Monitoring is likely to be the longest process of learning where the majority of learning occurs. This category is linked to the student's engagement and maintenance of the learning process, such as selecting suitable strategies, adjusting learning routes, and collaborating with others.
3. Evaluating, this learning process predicts characteristics such as proofreading an assignment and evaluating a piece of writing when it comes to reviewing learning outcomes.

Students' autonomy abilities vary from one another depending on the level of self-responsibility. The level of student responsibility can be seen from how dependent they are on the teacher. In short, the lowest level of student autonomy describes students who still need teacher assistance in determining self-regulation. While the highest level of student autonomy describes students who can understand the essence of learning and have a high level of confidence in their skills. There are four levels of students' autonomy levels, such as advanced level, intermediate level, beginning level, and emerging level (Abdelrazeq 2018). In brief, students who have a higher awareness of their role as a student are students who have higher autonomy skills.

Factors influencing students' autonomy

Students' autonomy level is varied from one another. It is because some factors influence students' autonomy. There are three factors influencing autonomous students, such as personal factors, academic factors, and external

factors (Tran and Duong 2020). Kemala (2016) finds that four factors influence students' autonomy, such as:

1. Student's Role

Students have a big role in influencing students' autonomy. Sufficient information, high awareness, and strong abilities in carrying out autonomous learning activities are the results of favorable attitudes regarding autonomous learning capacity. One of the key factors in the favorable outcome was the students' ability to choose their projects and resources, as well as express themselves in class without any psychological restrictions. Among the most crucial factors to consider while fostering students' autonomy is their attitude toward learning.

2. Teachers' Role

According to Kemala, the relationship between students and teachers is essential. It is because a good relationship between students and teachers will make the students feel at ease and secure in the classroom. Other than that, teachers have the responsibility of the whole process of learning to stimulate students' autonomy. Helping students to be autonomous students is essential thing in language teaching and learning.

3. Task

Kemala emphasizes that task encourages students to learn independently or collaboratively. Collaborative learning is a method of teaching and learning in which a group of students collaborates to solve a problem, accomplish a task, or produce a product. In addition to such activities, children are encouraged, if not compelled, to accept responsibility for their actions.

4. Environment

Environment influences students' autonomy. The first is social aspects, it represents parents, siblings, relatives, classmates, and teachers. It means that autonomous students do not merely learn by themselves without any influence. It becomes the reason to assist students to learn with the usage of a variety of alternative learning settings. Students can work and engage in pairs or larger groups, as well as encounter new situations that are not influenced by teacher-centered, non-collaborative classrooms when this is supported. The second is situational aspects, it represents the source of materials that students use to learn. It can be materials in the form of soft files, printed, or even visuals such as video, film, etc.

5. Material

Kemala reports that students' enthusiasm for learning depends on the learning materials. Students' autonomy cannot be separated from the factors that influence their development. These are the factors that cause differences in the level of students' autonomy. In short, the development of students' autonomy is influenced by various interrelated aspects.

Method

This study used an explanatory sequential mixed-methods design. According to Creswell (2014), The sequential explanatory strategy is a research strategy in which quantitative data is collected and analyzed first, then qualitative data is collected and analyzed. Pardede (2019) emphasizes that the implementation of this design strives to provide the necessary information for a better understanding of the study topic. It starts with quantitative data collecting and then moves on to qualitative data collection to explain or elaborate on the quantitative results achieved before. The sample of this study focused on the two classes of twelfth graders of SMA Negeri 2 Semarang which were XII MIPA 1 as the sample class and one non-sample class to measure the validity and the reliability of the instruments which was XII MIPA 7. The study was conducted on 34 students of XII MIPA 1. The data collection of the study was 30 items questionnaire and 8 items of a semi-structured interview. The structure of the processes for a sequential study report is quantitative data gathering and quantitative data analysis, then qualitative data collection and analysis. The writer then remarked on how the qualitative findings served to expound on or extend the quantitative findings in the study's conclusions or interpretation phase. The process of analyzing data was adapted from Creswell (2014), such as data transformation, exploring outliers, instrument development, and examining multiple levels.

Findings and Discussion

This section consists of the findings and discussion related to the question of the study, which was about the levels of students' autonomy in language learning and factors influencing autonomous skills. There are two sub-chapters, such as (1) Characteristics of autonomous students in language learning and (2) Factors influencing students' autonomy.

Characteristics of autonomous students in language learning

According to Dang (2012), there are three characteristics of autonomous students, such as: initiating, monitoring, and evaluating. In line with the previous statement, Abdelrazeq (2018) classifies students' autonomy into 4 levels, such as: advanced, intermediate, beginning, and emerging. The following table is the conclusion data.

Table 1. Students' autonomy levels percentages

Aspects	Emerging	Beginning	Intermediate	Advanced
Initiating	0%	12.35%	54.12%	33.53%
Monitoring	0%	9.41%	60.59%	30.00%
Evaluating	0%	20.59%	58.09%	21.32%
Mean Score	0%	14.12%	57.60%	28.28%

The table above is the total percentage of students' autonomy levels. The percentage level is calculated by finding the mean value. The table serves as a reference for discussion. The following is the discussion of the results.

Initiating

In the initiating learning stage, the result showed that there were no students who were at the emerging level, there were 12.35 % of the students at the beginning level, 54.12% of the students at an intermediate level, and 33.53% of the students at an advanced level. It showed that the majority of the students were often had been able to set a long-term goal for their language learning, make study plans, take the initiative to use other sources of learning, learn independently and motivate themselves to learn. It was reinforced by the interviewees' statements:

[1st Interviewee*: To get many other opportunities, from job opportunities to learning opportunities. Now, more and more companies or schools are demanding their students be proficient in English to get better human resources and be able to compete globally, and I want to participate*.]

[2nd Interviewee: *Practicing conversation skills in English. English is an international language, and by mastering English I can expand my relationship wider. In addition, with my goal to continue my education abroad, I will use English as my daily language.*]

The respondents, it indicated that students were goal-oriented and highly motivated in learning since they had clear intentions in learning English and they had the desire to learn on their own. Other than that, the majority of the students were also often able to control their emotions while learning English. From the results above, it could be concluded that the majority of twelfth graders' autonomous skills of initiating learning based on the classification by Abdelrazeq were considered at the intermediate level.

Monitoring

In the monitoring learning stage, the result showed that there were no students who were at the emerging level, there were 9.41% of the students at the beginning level, 60.59% of the students at an intermediate level, and 30.00% of the students at an advanced level. From the results above, it could be concluded that most of the students often monitored their language learning. Most of the students were active during the learning process, they had their method of language learning, understood their preferences in how to learn English effectively, acknowledged their weaknesses and tried to improve them, and understood the objective of learning. It was reinforced by the interviewees' statements:

[1st Interviewee: *I usually read books or practice book about the material that will be explained tomorrow. I always study every night whether there is an assignment or not.*]

[2nd Interviewee: *I always study for tomorrow. I Do a lot of exercises such as listening, reading, writing, and speaking. I also joined a tutoring institution.*]

From the statement from the interview, it could be indicated that students prepared for language learning by setting time to learn independently. They

prepared for their language learning by practicing and reading the materials before it was explained by the teacher. It was their strategy so that they could be ready before the learning activities in the classroom. From the results above, it could be concluded that the majority of twelfth graders' autonomous skills of monitoring learning based on the classification by Abdelrazeq were considered at the intermediate level.

Evaluating

In the evaluating learning stage, the result showed that there were no students who were at the emerging level, there were 20.59% of the students at the beginning level, 58.09% of the students at an intermediate level, and 21.32% of the students at an advanced level. The results above showed that the majority of the students often evaluated and reflected on their language learning. Most of the students were also aware of the development of their language learning. It was also proven by the statements of the interviewees:

[1st Interviewee: *Yes, I feel that in general, I improved significantly. Starting from understanding grammar, and writing, to speaking level.*]

[2nd Interviewee: *During high school, there are some improvements but they are not very significant.*]

It indicated that they acknowledged their weaknesses and reflect upon how much they had learned from the materials. From the results above, it could be concluded that the majority of twelfth graders' autonomous skills of evaluating learning based on the classification by Abdelrazeq were considered at the intermediate level.

From the discussion of the results of the analysis of the study, it could be concluded that the majority of the twelfth graders in SMA Negeri 2 Semarang had good autonomous skills. From the existing data, it showed that: there were 0% of students at the emerging level, 14.12% of students at the beginning level, 57.60% of the students at the Intermediate level, and 28.28% of the students at an advanced level. It could be concluded that the majority of students' autonomy levels in language learning of twelfth graders in SMA Negeri 2 Semarang are considered at the intermediate level.

Factors influencing students' autonomy

Kemala (2016) argues that autonomous students' characters are influenced by 5 factors students' role, the teacher's role, the task, the environment, and the material. Based on the result of the study, the autonomous skills of the twelfth-grade students in SMA Negeri 2 Semarang were influenced by those factors. The following table is a table of the number of students who agreed and strongly agreed with the questionnaire statement regarding influencing students' autonomy.

Table 2. Factors influencing students' autonomy percentages

Statement	Student's Role	Teacher's Role	Task	Environment	Material
1	28	34	27	34	28
2	31	32	25	29	20
3	33	27	22	32	31
4	-	-	25	-	-
Mean Score	30	31	24	31	26
Percentage	21.13%	21.83%	16.90%	21.83%	18.31%

The table above is the total percentage of factors influencing students' autonomy. The total percentage is taken from the answers of students who agree with the statements regarding the factors influencing students' autonomy. The percentage is calculated by finding the mean value. The table serves as a reference for discussion. The following is the discussion of the results.

Students' role

The description of the results showed that on average 30 students had high self-efficacy, they agreed that they were good students and able to finish the assignment from the teacher. Ahmad et al. (2013) state that students with high self-efficacy tend to be able to reach a higher goal of learning, they are also believed to be able to solve learning problems. This showed the students' ability to manage their learning process independently. Other than that, the interview revealed that students also took part in the learning process:

[1st Interviewee: *When it comes to whether the teacher gives choice in how the learning of the material will be done, then the answer is yes.*]

The respondent showed that students usually had an opportunity to take part in language learning. In this case, students had the freedom to choose how the learning of the material will be done. Furthermore, the table total percentage of factors influencing students' autonomy showed that at least the role of students affected students' autonomy as much as 21.13% of the total percentage of influencing factors. In conclusion, students' positive attitudes towards English and self-efficacy in language learning affected students' autonomous skills.

Teacher's role

The description of the results showed that teachers hold a very significant role in developing students' autonomy skills. The data revealed that on average 34 students agreed that teacher was the main source of learning because many of them were still worried that they cannot understand a learning topic if it is not taught by the teacher. The interviewees stated that:

[1st Interviewee: *Personally, I feel that classroom learning is the most important thing. How the teacher and student interact and the clear explanation is enough to make me understand the material.*]

[2nd Interviewee: *Yes, I feel appreciated every time there is feedback from the teacher whether it is compliments or suggestions for me.*]

It showed that the interviewees believed that the most important thing in the language learning process was the student and teacher interaction and method used during the learning process. Other than that, there was a statement that feedback from the teacher was also as important. The feedback gave students a sense of appreciation which made students feel appreciated. As stated by Selvaraj et al., (2021), giving feedback is important because it may influence students' perceptions of the teachers' intentions and drive students to strive to be better. This dynamic between teacher and students would create a healthy learning environment which could strengthen the bond between teacher and students. The table total percentage of factors influencing students' autonomy showed that at least the role of teacher affected students' autonomy as much as 21.83% of the total percentage of influencing factors. In short, Teachers' pedagogic abilities are as important as their ability to build good and healthy relationships with students.

Task

From the descriptions of the results, it showed that on average 27 students agreed that the task influenced the language learning process since it could encourage or force them to learn more. Most of the students liked a project when they can work together with their classmates because they could learn from each other. It was reinforced by the interviewees' statement:

[1st Interviewee: *I don't think assignments are the main point of learning that can make students easily and proficient in the material. Personally, I feel that classroom learning is the most important thing. How the teacher and student interact and the clear explanation are enough to make me understand the material. However, I also believe that assignments are still needed, but again they are not the most important.*]

[2nd Interviewee: *In my opinion, the assignment is only given to students who do not fully understand the material.*]

From the interview, we could understand that students tend to believe that a task is not an essential thing in the learning process if the goal of the learning had been reached. They agreed that tasks were beneficial for students who did not fully understand the material. Hence, Kemala (2016) notes that tasks will have a significant impact to develop autonomous skills since interesting and challenging tasks will stimulate students' learning. The table total percentage of factors influencing students' autonomy showed that at least the task affected students' autonomy as much as 16.90% of the total percentage of influencing factors. Given these points, tasks are considered beneficial to stimulate student learning.

Environment

The descriptions of the results showed that the environment had an important role to encourage students' autonomy skills. On average 31 students

had a good perception of English since they like to watch or read or listen something in English. It was reinforced by the interviewees' statements:

[1st Interviewee: *No, I don't. I learn English now independently apart from classroom learning. However, I quite often come across foreigners on the internet and speak English.*]

[2nd Interviewee: *Yes, I do. My study group is also not only made up of people from the same area so I can get new ways of learning.*]

From the interview, we could understand that students could learn to improve their language proficiency through anything. The 2nd interviewee mentioned that by having a study group she could gain a lot of ways in learning. Senjahari et al., (2021) emphasize that language learners would benefit from an accommodating learning environment in terms of motivation, and attaining the best skills and abilities. In conclusion, the scope of students' language learning was not limited to the classroom. The table total percentage of factors influencing students' autonomy showed that at least the environment affected students' autonomy as much as 21.83% of the total percentage of influencing factors. Nevertheless, autonomous students could find learning resources anywhere and with anyone.

Material

The description of the results showed that on average 26 students felt enthusiastic about learning English, which meant that they enjoyed that process of language learning and they had a sense of curiosity toward English materials. From the interview, we could indicate that motivation for language learning was related to the material. It was reinforced by the statement of the interviewee:

[1st Interviewee: *I like materials that comprehensively cover grammar. However, if asked to specify, I like the material about songs because the learning process is fun. Other than learning theory/material, we also practice singing, making songs, and playing musical instruments so that these things make us not easily bored.*]

From the interview, we could indicate that motivation for language learning was related to the material. An interviewee said that it was fun to learn the material about songs because she found the learning activities fun. It could be said that a learning strategy with diverse and creative learning activities was key so that learning was engaging for students. In line with the previous statement, Gaol & Sitepu (2020) state that the capacity of a teacher to understand current learning conditions, such as learning objectives, student characteristics, learning resource limits, and area of study features, is critical to the effectiveness of a teacher adopting a learning strategy. The table total percentage of factors influencing students' autonomy showed that at least the task affected students' autonomy as much as 18.31% of the total percentage of influencing factors. In short, students would tend to have high motivation to learn a subject if they are interested in the material.

Based on the discussion above it could be concluded that the factors above affected students' autonomy skills. It could be concluded that the twelfth graders in SMA Negeri 2 Semarang at the intermediate level autonomy because students had a good perception of English and also had high motivation in language learning since most of them, had clear intentions in learning English. Other than that, it could be indicated that teachers always provided feedback so that they could monitor the learning process as well as their learning outcomes. Another thing that affected students' autonomy skills was the varied learning environment.

Conclusion

It could be accomplished that students' autonomous skills are influenced by supporting factors from within and also outside the students. The students' autonomy levels percentages showed that: there were 0% of students at the emerging level, 14.12% of students at the beginning level, 57.60% of the students at the Intermediate level, and 28.28% of the students at the advanced level. In the classification, the autonomy levels of the majority of the twelfth graders at SMA Negeri 2 Semarang in the academic year of 2022/2023 were at the intermediate level. Other than that, the quantitative data regarding factors that influenced students' autonomy showed: the students' role (21.13%), teacher's role (21.83%), task (16.90%), environment (21.83%), material (18.31%). It indicated that students agreed that students' autonomy was influenced by those supporting factors. The qualitative data also explained that students' autonomy skills were also supported by several supporting factors, such as students' goals and motivation, teacher and students' bond, learning materials and activities, and a supportive learning environment. The data revealed that students' autonomy is indeed influenced by supporting factors. It can be concluded that the students' autonomy level of most of the twelfth graders of SMA Negeri 2 Semarang in the academic year of 2022/2023 was at the intermediate level, which was influenced by supporting factors such as students' goals and motivation, teacher-student bond, learning materials and activities, and a supportive learning environment.

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CALCULUS TEACHER'S COMPETENCIES AS CORRELATES OF STUDENTS' LEARNING EXPERIENCES

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Abstract
The good qualities of a calculus teacher are an asset in producing great results for students and themselves. This study aimed to investigate the different competencies of a calculus teacher as correlates of students' experiences in learning at Visayas State University, Philippines. The study employed selected secondary data from the existing study in literature such as competencies in teaching calculus subjects and different types of learning experiences of students. The study used some descriptive statistical measures to summarize the selected data and employed Spearman rho correlation to predict significant factors (teacher's competencies) that might influence the student's learning experiences. Results showed that teachers' competencies such as "prepared", "knowledgeable", "mastery", "organized", "decent", and "approachable" are highly correlated to the different learning experiences of students at a 1% level of significance. Hence, calculus teachers must be always knowledgeable in a class through rigorous preparation and studying. It is also concluded that teachers must develop a mastery of calculus subjects and apply an organized routine during class discussions to obtain desired academic performance for students. In addition, a well-groomed and professional may be integrated in front of students as well as open-mindedness and good personality to make interactive and stimulating class discussions. It is recommended that calculus teachers may undergo some rigorous training for calculus teaching to become a knowledgeable and competitive educators. Furthermore, teachers who will teach college calculus must be holding at least a master's degree in line with mathematics education or pure mathematics.

Keywords: calculus, learning experiences, regression analysis, teacher's competencies

Introduction
One of the difficult branches of mathematics is calculus. Calculus is a study of mathematical change which is often used by different sciences such as physics, engineering, chemistry, biology, and economics, among others. In the study of Casinillo and Tavera (2021), it is stated that learning calculus topic is a difficult experience, especially for college students. The reason for having difficulty in learning calculus is that students do not possess a good foundation of algebra and

pre-calculus knowledge as prerequisite courses. Another reason why students are not successful in learning calculus subjects is that they lack interest and motivation. Moreover, some negative factors are influencing students' study habits and cognitive behavior which failed. In that case, proper guidance and motivation must be integrated into the classroom environment. The study by Alam (2020) elucidated the cognitive aspect of calculus to take place among students. It suggested some teaching methodologies and pedagogical techniques which are efficient and effective in teaching calculus.

Calculus teaching is a difficult task, especially for heterogeneous students. On the face of it, the study by Alam (2020) stated that a repeated problem in introducing calculus topics (graphing, differentiating, and integrating) to newbies exists due to its difficult nature. Another difficult area in teaching calculus is problem-solving where the theoretical concepts are applied to the realistic application (Auxtero & Callaman, 2020). Likewise, Callaman and Itaas (2020) stated that students are having difficulty understanding math topics since they can't grasp the usefulness and significance of their daily learning experiences. Moreover, in college calculus classes, students and teachers are experiencing a shortage of time due to the volume of topics and entertaining questions in the classroom (Hagman et al., 2017). Additionally, teaching how to draw conclusions and solutions to a mathematical problem has been always a challenging moment for learners (Mangundayao, 2021). So, most of the students have an adverse learning impact in their calculus class due to their challenging experiences (Casinillo & Tavera, 2021). However, teachers' competencies are very crucial in helping the student's academic achievement and attitudes in learning calculus (Lin & Huang, 2017). Possibly, a competitive and high-profile calculus teacher is an effective educator that can lead to a positive learning experience. Hence, this study is realized to investigate the association of teachers' competencies to the student's learning experiences towards calculus.

Although there is research in the literature regarding teachers' competencies (Kuzu, 2020; Burrows et al., 2021; Durandt et al., 2022), its connection to students' learning experiences in calculus is not emphasized. Additionally, determining the association between students' learning experience and teacher's competencies as influencing factors is never been done. Hence, the main purpose of this study is to construct a correlation matrix to identify if teachers' competencies have a significant effect on the learning experience among agribusiness students in their calculus subject. This study may help calculus teachers to elucidate the behavior or attitude of students in learning calculus. Perhaps, the results of this study may help improve the teaching strategies in calculus that address its effectiveness and productive learning procedure. In addition, on the side of students, findings may provide some positive thoughts that will help them survive their calculus subjects in college. Furthermore, the results of this current study may serve as a point of reference for some researchers in mathematics education and contribute informative knowledge to the body of literature.

Objectives of the study

The main idea of this study is to elucidate the association between teachers' competencies and students' learning experiences in calculus with the aid of

Spearman correlation. Henceforth, the specific objectives of this study are the following:

1. to estimate the level of the different learning experiences of students in a calculus class;
2. to measure the perception of students towards the different competencies of their calculus teachers; and
3. to determine the influence of calculus teachers' competencies on students' experiences in learning calculus.

Conceptual framework of the study

To attain a successful society now and in the forthcoming, educators need to have competencies and a good foundation of knowledge in mathematics and science (Rech et al., 1993; Burrows et al., 2021). Using specific teaching strategies and technologies in mathematics can be a stimulating experience for students especially if the calculus teacher possesses good qualities in teaching complicated concepts (Burrows et al., 2021). Kuzu (2020) stated that mathematics competencies are very crucial and have a great effect on teaching efficiency and presenting the lessons. Some studies found that teaching strategies and competencies are associated with the student's motivation and learning experiences (Casinillo & Guarte, 2019; Casinillo & Casinillo, 2020). Additionally, Burgos and Godino (2022) found out that to foster effective learning in mathematics, cognitive analysis and assessing the students' mathematical problem-solving skills are competencies that teachers must have. Hence, teachers' competencies such as preparation, knowledge, mastery, organization, decent and approachability are considered as correlates of students' learning experiences. Figure 1 shows the conceptual model of this current study.

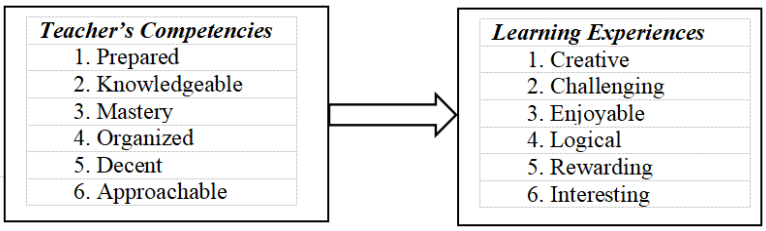

Figure 1. Conceptual model

Methods

A descriptive-correlational research design was chosen to answer the specific objectives of this current study. In that case, this study employed some descriptive statistics and inferential methods in analyzing the variables of interest. The subjects of this study are bonafide Bachelor of Science in Agribusiness (BSA) students of Visayas State University, Visca, Baybay City, Leyte, Philippines. The study used selected secondary data from the paper of Casinillo and Casinillo (2020) entitled "Econometric Evidence on Self-Determination Theory in Learning Calculus Among Agribusiness Students." This study deals with econometric models to predict some determinants that influence the students' interest in learning calculus. However, the study is only limited to students' motivation in learning and does not focus on teachers' perspectives, particularly, the teachers' competencies in teaching calculus. Thus, the study has chosen the following students' learning experience

that follows a Likert scale (1-10): (1) Creative, (2) Challenging, (3) Enjoyable, (4) Logical, (5) Rewarding, and (6) Interesting. The said learning experiences of students were considered dependent variables. As for the independent variables, the study has chosen the different competencies of their calculus teacher as follows: (1) Prepared, (2) Knowledgeable, (3) Mastery, (4) Organized, (5) Decent, and (6) Approachable. The teacher's competencies also follow a Likert scale, that is, a scale of 1 to 10. The students were asked to rate the said learning experiences and teachers' competencies as 1 is the lowest (very unsatisfied) and 10 is the highest (very satisfied). Table 1 summarizes the students' responses.

Table 1. Interval of perception scores and their corresponding interpretation

Perception Scores	Interpretation
1.00 – 2.80	Very Unsatisfied
2.81 – 4.60	Unsatisfied
4.61 – 6.40	Neutral
6.41 – 8.20	Satisfied
8.21 – 10.00	Very satisfied

The two sets of variables namely the student's learning experiences and the teacher's competencies have undergone reliability testing which assesses the reliability of an additive rating scale composed of the items specified (Likert, 1932) with the aid of Cronbach's alpha (Cronbach, 1951). Table 2 shows that the two sets of variables are reliable.

Table 2. Reliability test

Set of Variables	No. of Items	Average Inter item Covariance	Scale Reliability Coefficient
Learning Experiences	6	2.7731	0.8641
Teacher's Competencies	6	4.4797	0.9631

The collected variables in this study have undergone clearing and formatting in Microsoft excel to fit in the statistical software called STATA version 14.0. As for data analysis and extraction, the study employed descriptive statistics such as median, mean $(\bar{x})$, standard deviation (s), minimum and maximum value, and coefficient of variation $(C.V.)$ In determining the relationship of variables, a Spearman rho correlation coefficient was used since the data are ordinal and tested at a 1% level of significance. For the interpretation of correlation coefficients, the same argument with the rule of thumb used in the study of Casinillo and Guarte (2018) was employed. Table 3 shows the interval of the correlation coefficient and its degree of relationship.

Table 3. Interpretation of correlation coefficient

Range of correlation coefficient (r)	Degree of relationship
$0.0 < \|r\| < 0.3$	Weak
$0.3 < \|r\| < 0.7$	Moderate
$0.7 < \|r\| \leq 1.0$	Strong

Results and Discussion

Descriptive statistics

It is revealed in Table 4 that, on average, calculus class is being "creative" as students have rated it as "satisfied" ($\bar{x} = 6.39, s = 1.99$). This implies that calculus teacher has motivated their students to think of new ideas that relate to the topic. Being creative student results in being an active learner which develops their thinking skills and cognitive attitude in the classroom environment. This finding is parallel to the existing studies in the literature that deal with creative learning and behavior (Beghetto, 2017; Gordon, 2020). On average, calculus is very challenging ($\bar{x} = 8.33, s = 1.89$) to students as they rated as "very satisfied" with the challenge they experience (Table 4). Almost all agribusiness students are struggling to pass their calculus courses. In the study of Casinillo and Tavera (2021), it is stated that most of them are not STEM strand graduates during their senior high school. This means that most of them have less exposure which resulted in a weak foundation of calculus topics.

In addition to that, there are factors also that negatively influence their learning behavior in mathematics. The result is also supported by the median score of 9. It means that 50% of the students have rated a score of 10 (scale of 1 to 10) as to how challenging to learn calculus. In connection, students are not enjoying ($\bar{x} = 6.27, s = 2.86$) their calculus journey as they struggle to learn (Table 4). Similar arguments are found in the literature that calculus subject is challenging and not enjoyable to study (Mokhtar et al., 2013; Casinillo & Casinillo, 2020). Moreover, one of the reasons why they are baffled by calculus subject is its logical nature. It requires problem-solving skills and inquiring mind as well as the confidence to find the solution to a problem until it is solved (From et al., 2020). Most of these students are not in line with the logical and analytic procedure of the calculus subject. That is why most of them are not an enthusiast of learning calculus. Hence, it is not surprising for them that learning calculus is not rewarding ($\bar{x} = 6.31, s = 2.31$) as shown in Table 4. Furthermore, Table 4 shows that, on average, learning calculus can be interesting ($\bar{x} = 7.03, s = 2.66$) for agribusiness students. As a college students, it is necessary to put interest in their studies especially if the subject is part of their curriculum program. Casinillo and Tavera (2021) suggested that motivating students may progress their learning process and academic performance in calculus. In other words, interest is one of the keys to surviving calculus class.

Students have rated their teacher as "satisfied" with how prepared ($\bar{x} = 8.03, s = 2.22$) their calculus teacher during their class discussion (Table 4). A teacher needs to be prepared and ready in class to properly impart their knowledge. Preparation for interactive teaching targeted a student's participation attitude and active discussion so that instruction and information take place at the same time (Cronhjort et al., 2018). Moreover, students are "very satisfied" with how "knowledgeable" ($\bar{x} = 8.33, s = 2.19$) their teacher on calculus topics (Table 4). On average, 50% of the students have given a perception score of 10 (scale of 1 to 10) on the knowledge they have shown during the lecture. In that case, calculus teachers are considered outstanding regarding their understanding and information of what calculus is all about. The coefficient of variation also indicates a 26.29% of inconsistency in students' responses which is the lowest among other competencies. This implies that students are more likely convince that their calculus teacher is

knowledgeable about the subject. The students were also "satisfied" with the "mastery" ($\bar{x} = 8.15, s = 2.37$) of their teacher because of their lecture-discussion (Table 4). It is worth noting that a teacher's knowledge and mastery of calculus have a high impact on students' conceptual understanding. Likewise, teacher's organization ($\bar{x} = 8.02, s = 2.38$) in lecture-discussion is rated as "satisfied" as shown in Table 3. This suggests that teachers are following a structure or procedure in doing their lectures to make the topic understandable to students. Caughlan et al. (2013) stated that organized lectures and practices can positively influence student achievement and engagement.

Additionally, students are "satisfied" with the decency ($\bar{x} = 7.72, s = 2.39$)of their teacher (Table 4). A decent teacher provides delight appearance or manner in front of their students. A pleasing and charming teacher also can catch up the attention of students as well as a neat appearance during class discussion. The personal attributes of a teacher are appreciated and considered a factor in a productive learning environment (Casinillo & Guarte, 2018). Lastly, their teacher is rated as "satisfied" with how approachable they are to their students (Table 4). This implies that teachers are open to students' inquiries and imaginative ideas. Furthermore, calculus teacher has shown compassion and cooperation to their students as well as appreciating students' point of view on the topics. In the study of Jasmi and Hin (2014), it is stated that an approachable teacher can build trust and care for students which is part of academic motivation.

Table 4. Descriptive statistics of students' learning and teacher's competencies

Variables	$\bar{x} \pm s$	median	min	max	*C.V.* (%)	Interpretation[b]
Learning Experiences						
Creative[a]	6.39±1.99	7	2	10	31.14	Satisfied
Challenging[a]	8.33±1.89	9	3	10	22.69	Very satisfied
Enjoyable[a]	6.27±2.68	7	1	10	42.74	Neutral
Logical[a]	7.22±2.28	8	1	10	31.58	Satisfied
Rewarding[a]	6.31±2.31	6	1	10	36.61	Neutral
Interesting[a]	7.03±2.66	8	1	10	37.84	Satisfied
Teacher's Competencies						
Prepared[a]	8.03±2.22	9	1	10	27.65	Satisfied
Knowledgeable[a]	8.33±2.19	9	1	10	26.29	Very satisfied
Mastery[a]	8.15±2.37	9	1	10	29.08	Satisfied
Organized[a]	8.02±2.38	9	2	10	29.68	Satisfied
Decent[a]	7.72±2.39	8	1	10	30.96	Satisfied
Approachable[a]	8.14±2.52	9	1	10	30.96	Satisfied

Note: a - Scale of 1 to 10, b - See Table 1 for details.

Correlation Analysis

Surprisingly, all teacher's competencies are highly significant (p-value<0.01) correlated to students' learning experiences in calculus (Table 4). Although the correlation is weak to moderate (See Table 3 for details), still it shows a strong likelihood that teachers' competencies are determinants to the student's learning development in calculus. However, these results are reasonable given that teachers have a big part in students' learning development. The weak to moderate correlation can be attributed to the large coefficient of variation (at least 25%) of students'

perception scores. Firstly, the preparedness of a calculus teacher is highly significant to the learning experiences at a 1% level. Preparedness is the ability to respond effectively in every situation in the classroom setting. If the teacher is prepared, then goals and plans for the learning procedure will be realized (Cronhjort et al., 2018). The teacher can properly monitor their students and more like entertain questions related to the subject matter. Thus, it develops students' creativity and logical understanding in class. The teacher can also make the class challenging yet rewarding for students by giving them mathematical problems in real situations. Additionally, the preparation of teachers will outcome in lively and interactive students which results in an enjoyable and interesting class. Teaching mathematics has a lot of issues in classroom management, hence, the teacher must be prepared to resolve the possible problems and other concerns of students (Fiore, 1999).

Table 4 shows that knowledge and mastery of calculus teachers is a highly significant factor in learning experiences at a 1% level. The teacher is one of the sources of knowledge in the subject, hence, they must be knowledgeable and with good mastery of the subject. In that case, a knowledgeable teacher can easily express ideas and extract information whenever it is necessary. This shows that it can influence the creativity of students and their logical thinking skills. The knowledge and mastery of a teacher can also create a positive learning atmosphere that makes the classroom enjoyable and interesting at the same time. However, a knowledgeable teacher is idealistic that provides challenging mathematical problems yet rewarding in nature. Sitzmann and colleagues (2010) stated that self-assessment of content knowledge influences students' cognitive learning as well as motivation and satisfaction. In the study of Schipper et al. (2020), it is stated that knowledge and mastery will take teachers to an inquiry stance and make collaborative ideas to develop a classroom environment and improve students' academic achievement. A knowledgeable teacher can easily make a creative environment for students to discuss new and interesting ideas (Casinillo & Casinillo, 2020).

In addition, organized teaching can positively influence the student's learning experiences in calculus at a 1% level of significance (Table 4). Wang and colleagues (2015) found that organized and clear classroom management and instructions can affect the development of cognitive behavior and higher-order thinking skills of students. Likewise, Ausubel (1963) and Titsworth (2001) pointed out that organized lectures and structural learning can foster and progress motivation learning experiences. Teachers that use a routine procedure in their teaching strategy can elevate students' familiarization and study habits in the learning process (Chappell & Killpatrick, 2003; Wang et al., 2015; Casinillo & Casinillo, 2021).

Moreover, a decent and approachable teacher can significantly influence students' learning experiences in calculus class at a 1% level (Table 4). In the study of Casinillo and Guarte (2018), it is mentioned that a good personality and positive attitude are very important in classroom management which represents professionalism. A well-groomed and well-respected teacher can easily influence students' learning attitudes in the classroom. Additionally, being an approachable teacher results in interactive learning behavior wherein students can ask questions and participate in the lecture-discussion. Moreover, a positive attitude from a teacher will create a productive learning atmosphere. In that case, students can

experience a stimulating class environment due to the good qualities of a teacher (Burrows et al., 2021). In other words, a decent and approachable teacher can develop students' problem-solving skills and cultivate an interest in learning calculus even if it is challenging.

Table 4. Spearman correlation analysis of students' calculus learning experiences and teacher's competencies

Teacher's Competencies	***Learning Experiences***					
	Creative[a]	Challenging[a]	Enjoyable[a]	Logical[a]	Rewarding[a]	Interesting[a]
Prepared[a]	0.2443*	0.3378*	0.3959*	0.3025*	0.4276*	0.3578*
	(0.0069)	(0.0002)	(0.0000)	(0.0007)	(0.0000)	(0.0001)
Knowledgeable[a]	0.2542*	0.3265*	0.3159*	0.2995*	0.3574*	0.3938*
	(0.0049)	(0.0003)	(0.0004)	(0.0008)	(0.0001)	(0.0000)
Mastery[a]	0.3108*	0.3074*	0.3506*	0.3534*	0.3831*	0.4179*
	(0.0005)	(0.0006)	(0.0001)	(0.0001)	(0.0000)	(0.0000)
Organized[a]	0.2705*	0.2804*	0.4570*	0.3780*	0.4407*	0.4447*
	(0.0027)	(0.0018)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Decent[a]	0.3099*	0.3000*	0.3763*	0.3647*	0.4520*	0.3667*
	(0.0005)	(0.0008)	(0.0000)	(0.0000)	(0.0000)	(0.0000)
Approachable[a]	0.2633*	0.2673*	0.3699*	0.3541*	0.3874*	0.3559*
	(0.0035)	(0.0030)	(0.0000)	(0.0001)	(0.0000)	(0.0001)

Note: a - Scale of 1 to 10, * - highly significant at 1% level, p-values are in parenthesis.

Conclusion and Recommendations

This current study aims to elucidate the effect of teachers' competencies concerning the students' different learning experiences in calculus classes. Results revealed that the competencies of calculus teachers such as "prepared", "knowledgeable", "mastery", "organized", "decent", and "approachable" are significantly and positively correlated to the students' experiences such as "creative", "challenging", "enjoyable", "logical," "rewarding", and "interesting." This implies that calculus teachers must be well-educated during the class discussion through rigorous preparation and studying of the subject. Conclusively, teachers must develop a mastery of calculus topics and apply an organized procedure during their lectures. Additionally, a well-groomed, neat, attractive, and professional-looking may be integrated in front of their students so that respectfulness takes place and achieve a healthy learning environment. Likewise, open-mindedness and a good personality as a teacher result in an interactive and stimulating discussion. To cultivate students' interest in class, teachers must give some incentives or additional points for meritorious performance. In that case, students can have a sense of rewarding tasks to work with and set a goal in their minds. Encourage students to develop good study habits and motivate them to do learning activities that develop critical thinking skills. Moreover, teachers are encouraged to use examples (real-life problems) that are related to their degree program so that students can appreciate the subject. To obtain all these things, it is recommended that calculus teachers may undergo rigorous training and seminars concerning calculus teaching to become knowledgeable, flexible, creative, passionate, and competitive educators. In addition, it is also recommended that teachers who will teach college calculus and other higher mathematics subject must

hold at least a master's degree in line with mathematics education or pure mathematics.

Limitations and future works

The possible limitation of this current study is the number of students (small sample size) and the available data (not suitable for online learning). Hence, this study recommends that another survey should be realized during the scenario of distance learning. Moreover, it is suggested that regression models may be constructed to determine the approximate increase (or decrease) of the dependent variable concerning the independent variable. Additionally, teachers' perception regarding online learning in teaching calculus is also part of the picture and needed to be included in the analysis to further support the existing results. Furthermore, socio-demographic variables and online learning experiences might be incorporated into the regression models to get a piece of richer information.

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THE EFFECT OF VLOG CONTENT YOUTUBE MEDIA ON LEARNING ENGLISH

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Abstract
The proliferation of mobile devices and online storage space has led to an explosion of learning resources, one of which is the video-sharing site YOUTUBE. There are several types of content/videos in this application, one of which is English-based Daily Vlog content. The aims of this study are (1) to find out to what extent the content of YouTube vlogs affects English mastery, and (2) to identify the types of content that have the greatest impact on English language development. For what purpose do you watch YouTube vlogs? 3. Quantitative methods are used in this study. Quantitative studies involve the collection and analysis of numerical data to characterize phenomena, identify relationships, or test hypotheses. One of these tools is a student questionnaire. To calculate the final results, researchers use SPPS (Statistical Package for the social sciences). Research shows that vlog content on the video-sharing site YouTube has a considerable impact on student's ability to understand English.

Keywords: English, vlog content, Youtube

Introduction

The use of technology, which has many applications, is prevalent in the modern world. For instance, the vast majority of people in contemporary society use the internet to look for jobs, manage projects, and obtain general information. Due to the internet's quick development, anyone with access to a computer and a willingness to read and learn can now acquire information and understanding on a variety of subjects that can aid in their personal development. Since a few years ago, paper-based learning materials have been electronically transformed (into formats like HTML and PDF) and then presented online in the field of online and remote education. An illustration of one of these teaching resources is YouTube (Bakri, 2018).

Youtube currently holds the title of the most popular video-sharing website. "Every day, around one hundred thousand videos are seen on YouTube. There are around 65,000 new videos published on Youtube every 24 hours. Twenty million people between the ages of 12 and 17 browse YouTube every month(Burke et al., 2009). According to (Maskar & Dewi, 2020)and (Putri & Sari, 2020), YouTube is one of the online media that may be used as a medium for learning speaking skills.

YouTube is a video-sharing website where users can publish, share, and view videos.

English media is one of the many different kinds of educational information that is offered in this medium. Acquiring knowledge in an appealing visual format is quite simple. A wonderful approach to guarantee that students, and especially students, remember the subject being taught is to include appealing visuals and illustrations in the teacher's sessions (Lestari, 2013).

Students are now required to utilize the internet and social media sites like YouTube to complete school projects, according to teachers (Suryaningsih, 2020). One of the most helpful types of videos for students to watch is VLOG content written in English because, from personal experience, we know that it will hasten our progress in the language. After all, Problems with learning English are not only present at the primary, secondary, and tertiary levels of education, but will also persist until the college level(Hasan, 2000) and(Megawati, F., & Mandarani, 2016). This has been demonstrated in various studies of each English skill. The following are just a few of the several YouTube channels with helpful vlog content for English learners:

1. Gita sav

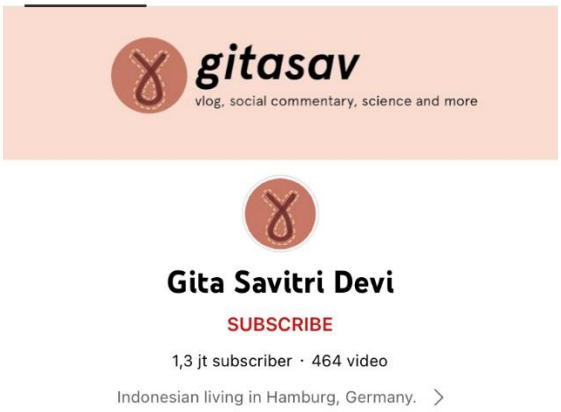

Figure 1. A content creator who uses English

2. Qaniaf

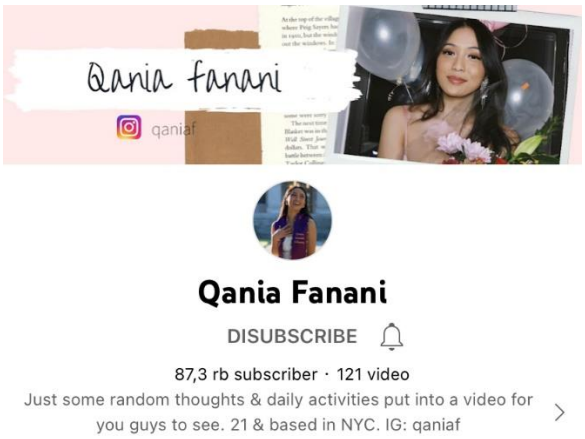

Figure 2. A content creator who uses English

3. Maudy Ayunda

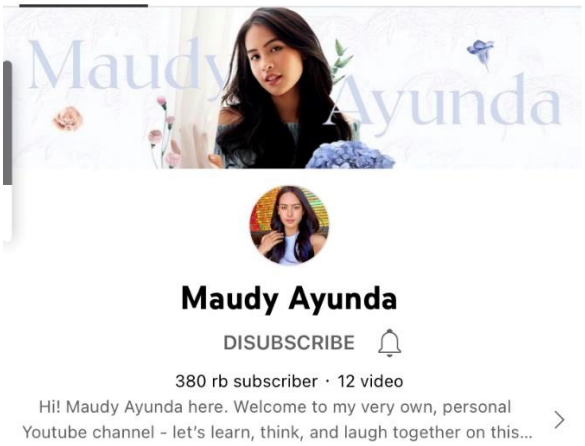

Figure 3. A content creator who uses English

A content creator is someone whose work appears online, whether in text, visual or auditory form, or a hybrid of these mediums. The content is developed for dissemination via multiple dissemination channels; these include traditional media as well as digital channels like YouTube, Instagram, Blogger, and others (Sayugi, 2018). Popular topics among Indonesian content makers include fashion, nutrition, health, technology, and economics (Tiara, 2021). with content creators who use English, it is hoped that they can have a good influence on the audience, as (Hermawan, 2018) put it, "A content producer might exert positive effect when his branding is strong."

Mentioned by we are social: Indonesian Digital Report 2021. Active social media users in Indonesia approach 170 million (61.8% of the total population in Indonesia) with an average daily use of the internet via any device: Time Required: 8 hours and 52 minutes The most often used platform is Youtube with the number of users in Indonesia 93.8% of the total population\s.

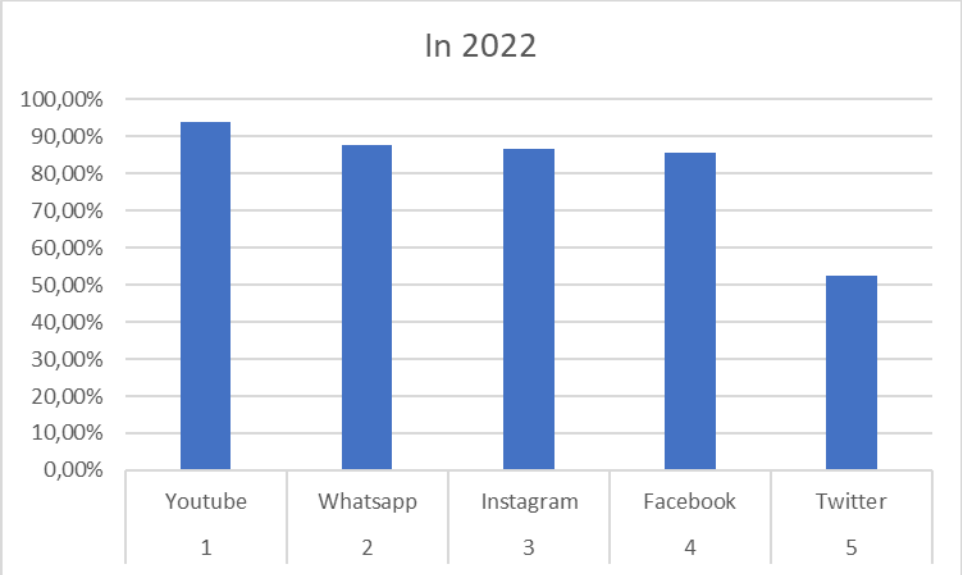

Figure 4. Social media user data according to WE ARE SOCIAL 2021

The most effective educational tools are those that make learning enjoyable for pupils, which in turn boosts their motivation to learn and, as a result, their comprehension of the material (Iwantara et al., 2014). Watching English VLOGs with English subtitles might help students develop their listening skills and expand their vocabulary. English has a large vocabulary that can be heard in numerous accents. Students translate the words they hear from texts into sentences, phrases, idioms, and expressions that they can read and comprehend. According to (Megawati & Anugerahwati, 2012) research, students' difficulty speaking English is frequently caused by a lack of English vocabulary. Listeners can easily understand students' speeches, facilitating efficient two-way communication.

According to Saputra (2019) as of the year 2018, Almost all students (95.96%) and teachers (90.91%) use WhatsApp, while almost all (73.74%) use YouTube. Facebook is a social networking service and the most popular website of its kind worldwide. In addition, Youtube also gives hundreds of thousands of videos with diverse topics that can be utilized in classroom lessons. Youtube will also be a big library of free videos for learners that will inspire them to become independent learners. English-based YouTube vlog content is expected to influence students' speaking skills and vocabulary. The many tutorials and content presented on Youtube can lead students to learn how to be good speakers. For example, by watching debate videos, students can learn how to argue well (Wahyuni & Utami, 2021). Students also get the convenience of directly practicing tutorials on YouTube with the upload feature (Afrianto, 2018)

In this study, the researcher aimed to find out how much effect watching English Vlogs has on English learning media, learning activities at SMP 5 Kota Serang still uses conventional learning approaches, where teachers exclusively use lectures, textbooks, and PowerPoint presentations to educate their students. This causes students to be bored or have low learning motivation in participating in learning in class so learning outcomes are not optimal.

Method

A quantitative methodology was used for this investigation. Using a survey and a random sample strategy. In a questionnaire, respondents are presented with a set of questions or statements and requested to fill out an accompanying form with their responses (Sugiyono, 2005). In this investigation, we only asked respondents open-ended questions. Kids from seventh grade at SMP Negeri 5 Serang were randomly selected to serve as a sample; a total of 41 students were included in the sample. The development of more sophisticated sampling techniques typically begins with simple random sampling. They make up around 10% of the overall number of 410 students enrolled in schools.

Data Analysis

Validity test

When we talk about data validity, we mean describing which measuring tool will be used to assess a certain variable. That which is measured by one tool can be used to measure another's properties and vice versa if the tools are sufficiently calibrated (Ghozali, 2011). Scholars conduct data validation checks using SPSS (Statistical Product and Service Solution) version 26 for Windows. We talk about data validity when we want to specify which measuring tool (kuesioner) will be

used to evaluate how well something fits certain predetermined criteria. In other words, a reliable measuring tool can be used to accurately assess the qualities of the objects under study. Scholars conduct data validity tests using SPSS (Statistical Product and Service Solution) version 26 for Windows. The term "content validity" refers to the degree to which a test's questions, tasks, or objects accurately reflect the typical or average performance of the population being tested. If the test questions are representative of the full subject matter being evaluated, or if they should be managed proportionally, then the exam has meaningful content (Zhang et al., 2014)

Reliability test

The Cronbach Alpha Formula was used to determine reliability in this investigation. The Alpha formula, as explained by Arikunto (2013), is employed when determining the dependability of a non-binary scoring instrument, such as a questionnaire or a form of explanation. Algorithm of Cronbach's Alpha.
Following the alpha-beta rule, we can estimate reliability as follows:

$$r_{11} = \frac{k}{k-1} \times \{1 - \frac{\sum S_i}{S_t}\}$$

Description:
$r11$: Reliability value
$\sum Si$: Total variance score for each item
St : Varians total
k : Number of items

Findings and Discussion

Table 1. Validity test

Statement	Value of r count	Value of r table	Description
1	0,370	0,297	VALID
2	0,667	0,297	VALID
3	0,723	0,297	VALID
4	0,544	0,297	VALID
5	0,512	0,297	VALID
6	0,532	0,297	VALID
7	0,676	0,297	VALID
8	0,627	0,297	VALID
9	0,519	0,297	VALID
10	0,629	0,297	VALID
11	0,652	0,297	VALID
12	0,615	0,297	VALID
13	0,387	0,297	VALID
14	0,485	0,297	VALID
15	0,681	0,297	VALID
16	0,468	0,297	VALID
17	0,634	0,297	VALID
18	0,669	0,297	VALID
19	0,744	0,297	VALID
20	0,681	0,297	VALID
21	0,585	0,297	VALID
22	0,395	0,297	VALID

Table 2. Reability test

No	Reliability Value	Description
1	< 0,20	Unreliable
2	0,20 – 0,399	Low Reliable
3	0,40 - 0,599	Reliable enough
4	0,60 – 0,799	Reliable
5	0,80 – 1,00	Very reliable

Table 3. Reliability statistics

Cronbach's Alpha	N of Items
.829	2

In addition, the values of r value 0,370 and r table 0,279 (Table 1) can be used to answer the first research question about how far vlog content on YouTube can be used for lint-free English instruction. We use Pearson's correlation to ensure reliability and validity. This study analyzed the connection between two variables using a Pearson correlation at the 0.05 level of significance. If the significance value of an answer is less than 0.05, it is considered valid, and if it is greater than 0.05, it is not valid. As of Ghozali (2016) Therefore, null hypotheses are rejected and research hypotheses are accepted. This means that the content of vlogs on the video-sharing website YouTube can have an impact on students' acquisition of the English language. The second research question is to answer how far vlog content on YouTube can be used for English language instruction without the use of subtitles. The results of the respondents' questions about the significance of YouTube content on English learning show that every answer indicates that YouTube content affects English learning.

This is demonstrated by the reliability coefficient alpha calculated using Cronbach's alpha formula. Using this method, if the coefficient reliability for a given research instrument is more than 0.6, we can declare that instrument to be reliable (Siregar, 2014). The researchers in this study obtained a Cronbach's alpha value of 0.829 (Table 3), indicating the study's reliability. Therefore, evidence suggests that both the null hypothesis and the research hypothesis were rejected. According to (David et al., 2017), students are more likely to watch instructional videos that use everyday language that is both accessible and engaging. This type of film is also more likely to be shared on social media. Students will have an easier time understanding the content of a vlog based on the English language if the language is used consistently throughout each video. This is true regardless of how long or how often they view the vlog in question.

To improve one's English proficiency, watching vlogs on YouTube is a great resource. Indications of this include 1) students' proficiency in responding to questionnaire questions and 2) students' ability to put their leisure time to good use. 3). The kids liked the idea of using English vlogs, but they needed more time to start doing it. All of the pupils grasped the concepts quickly and were enthusiastic about applying the method. The majority of students felt that the strategy greatly aided their ability to retain the teacher-provided terminology (Salim et al., 2021). Results also demonstrated that the method was successful in enhancing students' ability to use a broader range of language and their overall communication skills. Some pupils, however, continue to be unconvinced by the lessons and exercises.

Acquiring a large and varied vocabulary is crucial to improving one's command of the language; hence, vocabulary is one of the most crucial aspects of language study (Siregar, 2016).

Conclusion

This study's findings and discussion suggest that vlog content on Youtube can be an influential part of one's media diet for learning English. Learning English will be less of a chore and a greater source of interest thanks to English-language vlog content. Unavoidably, every single thing has its share of pros and cons. That being the case, we need to maximize the resources at our disposal.

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DISCIPLINE-BASED VS. SPIRAL LEARNING APPROACH TO SCIENCE EDUCATION: A CRITICAL ANALYSIS IN THE PHILIPPINE SETTING

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Abstract
The Philippines started the K to 12 curricula and spiral progression approach in 2012 turning back from the discipline-based curriculum. Many educators and researchers that it is a must to transfer to the spiral progression approach. This paper examined and evaluated both approaches based on various literature in the context of the Philippines since many people have appealed to go back to the old system. There is overwhelming literature that suggests the benefits of the spiral progression approach in terms of the academic achievement of students and mastery of learning. There was much literature also saying that there is a wide-ranging need for improvement in this spiral progression and K to 12 curricula as a whole. Being said, the country should overhaul the system but not abolish it. There are more benefits than harm in the spiral progression and K to 12 systems.

Keywords: discipline-based approach, Philippines education, spiral curriculum

Introduction

The recent clamor from the people insinuated the current Marcos administration to review the K to 12 educational programs of the country. There were calls that the 10-year program of the old Revised Basic Education Curriculum (RBEC) was better compared to the existing 12 years of basic education. The previous curriculum contains six years of elementary education and four years of high school while the present one has one year of kindergarten, six years of elementary, four years of junior high school, and two years of senior high school. The K to 12 mandates a child to finish a total of 13 years of basic education.

The old curriculum uses a discipline-based approach while the K to 12, under the Republic Act No. 10533, should use a spiral progression approach. The discipline-based curriculum is a model in which each subject matter is separated from another discipline in terms of content and pedagogy (UNESCO, 2022). Gibbs (2012) argued that the disciplinal approach to organizing science instruction is more traditional since each science subject is taught in isolation from another discipline. The subjects in high school were: integrated science in the first year; biology in the second year; chemistry in the third year; and physics in the fourth year. The K to 12 curriculum uses a spiral progression approach. The subjects were the same throughout grade three to junior high school which are physics, biology, chemistry, and earth and space sciences. As the curriculum progressed the subjects become

more complex and their application to practical life developed extensively until students master the subject content (Dunton & Co, 2019).

The spiral progression approach in organizing science lessons is more relevant in the modern age of education. It creates mastery of the lesson than using a disciplinal approach. Moreover, to sort everything out on this highly debatable topic in science education, this paper reviewed literature from various published types of research, opinion articles, and news clips, among others. This paper balanced the benefits and disadvantages of both approaches to science lessons in this modern time concerning the Philippine educational system.

Methodology

This paper is a critical analysis paper of discipline-based curriculum versus spiral learning approach in organizing science-related courses. A critical analysis is a process of evaluating a product or material, (e.g., book, movie, document) to engage the readers instead of simply accept what the facts mentioned by the product (Saint Mary's University, 2017). The Writing Center of the University of Washington cited that critical analysis is to make an argumentation out of the arguments provided by the author of the material being critiqued.

The materials that were used for this critical analysis paper were that literature regarding discipline-based curriculum versus spiral learning approach. These are articles published in various countries. The purpose is to give enlightenment to the readers of this matter on what would serve best the Philippine educational setup in terms of the two approaches. The parameters of comparison were the academic achievement of the students, worldwide utilization, and students' mastery.

Discussion

The following themes are the parameters used by this paper to compare the two approaches. This includes the critique of the related literature.

Academic achievement of students

The majority of the literature cites that a discipline-based approach to organizing science lessons has brought students less engaged in the class and their performance was much better in either an integrated approach to teaching and learning or a spiral progression approach. The study of Cooles, Harrigan-Vital, and Laville (2014) in the United States argued that transfer from traditional discipline-based education to an integrated approach has brought a tremendous increase in the performance of medical students during an external assessment. Moreover, the dissertation of Cordogan (2001) compared discipline-based students and interdisciplinary students in terms of academic performance and American College Test (ACT) admission results. There is an overwhelming indication that interdisciplinary students were better in both academic performance and ACT results. In support of this, Garcia (2020) deepens into the perception of students and teaching by using the spiral curriculum. He found out that there is a positive standpoint among teaching on the use of the curriculum and that there is a fairly satisfactory academic performance among students of grade ten in Pasig City. Following this note, a study from Capiz by Dunton and Co (2019) cited very satisfactory academic results in using the spiral progression approach. A qualitative study by Mangali et al. (2019) provided more vivid results based on the lived

experiences of the students. They argued that students of Manila were hopeful about the curriculum since it is more progressive than the old curriculum and they are learning at difficult stages.

On the other hand, the study of Venville, Wallace, Rennie, and Malone (2010) in Western Australia reports that most teachers prefer a discipline-based educational setup and that there are few benefits of integrated teaching in science and technology, and mathematics. Teachers raised issues on how to start and its implementation and possible implications in departmental structures. The research paper published by Magana, Falk, and Reese (2013) offers a different view wherein they found out that discipline-based computing can promote the acquisition of knowledge and its application. Their study is unique since students were exposed to a discipline-based curriculum since the beginning of their journey at the university.

The review of literature most perceived the disciplinal approach to be effective in higher education and the spiral progression approach in basic education. However, the disciplinal approach alone cannot assume to be effective as the literature said. There must be an integration which can be said interdisciplinary approach toward promoting higher learning outcomes in higher education (Corbacho & Basile, 2021). The Philippines' setup of the K to 12 and its spiral progression approach has gained ground in promoting students' academic success in basic education.

Worldwide utilization

The majority of high-income countries are using the spiral progression approach in their basic education except for the United States America (USA) which used the curriculum only until grade 9 (de Dios, 2013). The USA covers a wide and broad range of topics like Zoology and Environmental Science and Chemistry only in Grade 11 and Physics alone in Grade 12 (Ireland & Moothan, 2020). This wide coverage of science and math topics in the US curriculum was coined to be mile wide and inch deep which means that there is a shallow learning and broad coverage of topics.

The Trends in International Mathematics and Science Study (TIMSS) study in 2019 has offered new insight into the effectiveness of the spiral progression approach as most countries with high average scores utilized spiral progression as their national curriculum. Looking at Singapore which has 595 average marks, the highest, has leaped forward to solve its education problem at the start of 1980 when it performed low in international assessments. The solution was to incorporate the western standard of teaching most prominently the spiral curriculum. One could say that the curriculum of Singapore is a unification of various effective worldwide teaching strategies (Maths No Problem, 2022). According to Ng (2022), Singapore mathematics, the most famous Maths approach, follows the model method that incorporates spiral structure in the mathematics curriculum. He emphasized that the spiral progression commences, integrates, and intensifies the knowledge of a student.

Finland with a TIMSS average score of 555 started using the spiral progression approach in its national curriculum starting in the 1970s while Austria utilized it in 1975. Both countries implement an impressive system of basic education. A study on multigrade practices in both countries has found the use of a

spiral curriculum with the integration of other highly effective teaching practices and peer tutoring has proven to foster educational success among students (Hyry-Beihammer & Hascher, 2015).

Mastery of students

Pearson and Flory (2014) define mastery of learning as a deep understanding of a lesson before moving to the next lesson which is a requirement for students to demonstrate. Idaho Government (2012) describes it as an idea that students should possess content and skills and be able to showcase them in a product or performance tests. Both descriptions depict that students should demonstrate what they learned in content and skills by passing a test, submitting a product, or performing a skill.

Because of the discipline-based organization of science lessons, Wiggins (1991) believed that schools fail to know how to learn and essential skills of inquiry neglected is due to the discipline-based curriculum which promotes content-based teaching and learning and testing. A study in Indonesia by Chai, Rahmawati and Jong (2020) supports the idea of Wiggins. They found that Science Technology Engineering and Mathematics (STEM) students, under a content-based curriculum, failed to connect their content knowledge to its more real-world application. The pre-service teacher-students recognized that teaching is more comprehensive and extensive and there should be an interdisciplinary way of explaining a lesson to the students. However, Gardner (2007) argued that students must venture first into a discipline-based approach to learning before doing interdisciplinary work to master content knowledge.

The spiral progression approach can go in synchrony with mastery learning. Since 1980 literature had been promoting spiral progression to attain mastery (e.g., Aviles, 1998; Kryzanowski & Carnine, 1980; & Yang, 2007). Yang argued that there is increased retention of learning which leads to mastery in the spiral progression approach. This is true since the spiral progression approach revisits the topics, in complex form, as the student progressed in the spiral stages.

In the context of the Philippines, there is no doubt that the spiral progression approach can lead to mastery of learning (Igcasama, 2021). However, there were loopholes that researchers have seen in the country's spiral progression curriculum. According to Orale and Uy (2018), the spiral curriculum can be dangerous to our system of education without the needed support for teachers like resources, appropriate competencies, and encouraging educational policies. They pointed out that the mass promotion in the country makes the spiral system fragmented. There is still mile-wide inch-deep teaching in the new K to 12 as the education department failed to decongest the curriculum (Dio, 2020).

Therefore, there is a true need to revisit the K-12 curriculum of the country as demanded by various sectors of the country. The government is doing it right now. The education department should see to it that the spiral curriculum is indeed spiral. There is a sharp contrast between the western spiral progression and the Philippines spiral progression. In the western countries' curriculum, the topic momentum is taught in lower secondary (Grades 6, 7, 8) and again in Grade 9 and again in Grade 11. In each grade level, the topic momentum is increasing in complexity, depth, and application. Whereas, in the Philippine setup of the spiral, the topic momentum is only taught in grade 9 only. This is just one example. To truly master the spiral progression approach, topics must be revisited at every stage.

However, the K to 12 should not be abolished but the curriculum should be decongested and lean to a more western style of system. There is overwhelming literature that guaranteed the educational success of students under spiral progression and K to 12 basic education.

Conclusion

This paper successfully evaluated both the disciplinal approach and spiral progression approach in organizing science lessons based on various kinds of literature. From the literature, this can be said that the Philippines' basic education sector must adhere to the present K to-12 system and its spiral progression approach. The reasons are: there are good chances of academic achievement of students, the majority of countries around the world, most importantly the major economies and countries top in TIMSS, are using it; and finally, it guarantees mastery in learning. Although academic achievement can also attain such a feat, major literature suggests that students failed to connect their content knowledge to the real-world application of that content. The Philippines needs an interdisciplinary and spiral curriculum as the country progressed on this globalized planet. The government should set the bar high and find an avenue to lift us from this peril of always being below the table in international tests.

If the country turns its back to the spiral curriculum and K to 12, the students are again underserved and may be miles lagging behind their peers in other countries. People must stop their clamoring to abolish the present system and leave their nostalgic memory to their dreams. Filipino children need the spiral curriculum and K to 12 to advance their way in this highly competitive world and we must support them.

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DEVELOPING MULTIPLE INTELLIGENCES THROUGH ICT-BASED E-LEARNING PROGRAM

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Abstract
This study aims to determine the development of nine types of intelligence (Multiple Intelligences) through an e-learning program implemented through a computer network and/or personal computer (PC) with CD ROM. This type of research includes quantitative descriptive research, which describes the function of e-learning programs as a means of growth and development of all types of intelligence. The research method is carried out by comparing the pedagogical way of developing multiple intelligences with the facilities owned by the e-learning program. The degree of conformity used a percentage (%), then processed using a Likert Scale. Based on theory and virtual experiments, as well as the opinions of 2 experts and 35 education practitioners as junior/high school teachers, it was found that the e-learning program functions to facilitate the development of intelligence in the "distributed" category with a score of 4 (scale 1-5). The results of this study will help teachers and lecturers reflect on face-to-face learning so that during the Covid-19 period learning can be transferred to a system that uses an e-learning program that can accommodate the growth and development of multiple intelligences supported by technological advances. Moreover, this system does not require a network and signal but can be accessed in the form of a CD-ROOM/Flash Disk. In the future, learning like this can be a priority to be implemented.

Keywords: e-learning, ICT, multiple intelligence

Introduction
The theory of multiple intelligences supported that besides IQ, other factors determine a person's success, namely EQ and SQ factors. This theory argues that humans have nine types of intelligence that are different in dominance in each person so various methods and strategies are needed in the learning process. Variations in the delivery of learning materials are very important so that the learning process can accommodate the growth and development of all types of intelligence evenly without distinguishing some intelligence that is considered to be the most important.

Every child has dominant intelligence, and the learning process should give

more attention to accommodate each intelligence to develop so that each child can develop optimally. In line with the findings of the multiple intelligence theory, currently, the role of ICT in all aspects of life is very dominant. The role and ability of ICT be able to use to create learning programs that have a function to accommodate optimal development of all types of intelligence.

The ability of the computer as an e-learning medium is possible to create an interactive multimedia learning accommodation so that users of learning facilities be able to be active, reactive, or passive. Computers equipped with learning programs allow individual learning because teaching materials and exercises can be arranged according to the user's intelligence development model. E-learning with ICT can "concrete" abstract concepts so that they are easily understood by students. It can be realized with the help of computers.

E-learning is defined as a form of information technology that is implemented in education as a form of a virtual school (Purbo & Hartanto, 2002). ICT-based education is a form of education in which learning is done through computers by utilizing information technology (Putra, 2009). CD-ROM-based E-Learning allows teaching materials to be accessed by students on a portable basis, then learned on a computer. Another opinion says that e-learning is a learning process carried out through electronic mediums, such as the Internet, Intranet, Extranet, CDROM, videotape, DVD, TV, Mobile, PDA, etc. (Team e-learning, 2004).

Multiple intelligences

Multiple Intelligences, published in 1993 by Gardner. Gardner defines intelligence as the ability to solve problems and produce products that be able to be set in real situations. (Suparno, 2008). Based on that definition, it is clear that a person's IQ ability cannot be measured only by working on written test questions but must measure all types of intelligence that were manifested in all life activities. It was included in the Intelligence of Linguistics, Mathematical-logical, Space-visual, Physical-Kinesthetic, Musical, Interpersonal, Intrapersonal, Environment, and Executions Intelligence. An ability namely intelligence if someone shows a skill and that skill can solve problems and difficulties found in his life (Suparno, 2008).

Multiple intelligences, e-learning, and ICT

The impact of multiple intelligences on e-learning activities shows that tight integration of multiple intelligence together with e-learning models was good for use in learning (Mankad, 2015). Researchers in Turkey concluded that online education is multimodal that can support multi-literacy because some intelligence can be tracked and facilitated through analysis of multimodal learning in online mode. However, online teacher training in online education, both in technology implementation and educational theory adaptation was needed to achieve these ideas (Perveen, 2018).

Furthermore, to maximize the potential of students in South Africa, be able to do by learning based on multiple intelligences (Gouws, 2008). Learning research found that students who study in off-line mode or on-line mode through adaptive learning and the Adaptive Intelligent E-Learning system successfully classify learners at 85% of accuracy (Bhaskaran, et al 2014). The e-Learning program can be made to support all intelligence to grow and develop optimally (Pappas, 2005).

Schools and Universities be able to use e-learning models to minimize the dropout level of distance learning courses and to promote the success of students (DeGennaro, 2010).

The relationship between multiple intelligences and online education shows that multiple intelligences influence education outcomes, a good understanding of the impact of multiple intelligences in various categories can help instructors and students to create a conducive learning environment to provide useful educational outcomes (Riha et al., 2009). The experts on the MILA model in Thailand concluded that the MILA model (Multiple Intelligences Learning Activities) has appropriated factors and it has a very good category to be used in teaching and learning activities (Tangwannawit et al., 2008). European research about Howard Gardner's Multiple Intelligence provided by open and distance learning models concludes that some open and distance learning were not a medium for disseminating education, but it should be a medium for achieving new levels of understanding and awareness, that reflecting the role of education (Vieira et al., 2014).

Similar research says that Virtual Classrooms can provide more attractive options if implemented with the right approach (Marie, 2009). Virtual Learning is in great demand because its potential has been proven to streamline the learning process (Haryono & Alatas, 2012). Along with the findings of the latest research above, it is characterized by a cyber-shaped learning format (e-learning) via computers and the internet (Kim, 2015).

The results of another test through a questionnaire of 45 respondents proved that the project requirements using the Product-Service System (PSS) model to determine the e-learning development roadmap as a whole were implemented in a good and feasible to be realized (Risnandar, 2010). Research on the use of Interactive 3D e-learning in SMP No. 151 and MTs No. 77B/95 Bandung shows that Interactive 3D e-learning is preferred and highly preferred as a learning medium 74%, improves cognitive abilities 83%, is interesting and easy to use 77 %, motivates and attracts interest in learning 78%. (Sianipar, 2010).

In recent research, there has been a learning format in a Cyber (e-learning) form that is through computers and the internet (Sempurna, 2012). Online classes tend to be successful if it supported by pedagogical science and the preparation of the right teaching material (Mustadji, 2011). E-learning facilitates students to learn freely, and independently, understand abstract things easily, and be able to do practicum virtually (Mustadji., 2011). Physics learning is good for students when implemented by a good and true animation (DePorter & Hernacki., 2011). The use of computers created meaningful learning, efficient management of learning, and student administration was more effective (Morten Brekke, et al, 2010). The limited ability of lecturers to manage to learn be able to help by the use of ICT- based learning (Nawaz, 2013).

Student learning activities and achievements were increased in the subject of web-based real analysis as an e-learning form. The percentage of student learning completeness was achieved at 92.5% (Kurniati et al, 2014), E-learning effectiveness as planning has 77.57%, material making has 75.14%, material delivery has 66.14%, interaction has 75%, evaluation has 69.01%, and learning medium has 77.27% (Hanum, 2013). Students of JPTE PT UNM were motivated by learning Electrical Installation 2 using Adobe Flash CS3 animation and it has a good

category in 75% (Hasrul, 2011). Development of Learning Physics with ICT-Based Multiple Representations able to improve student concepts mastery of kinematics, perceptions, and good motivation (Ishafit, 2014). Biology learning that used e-learning based on multiple intelligences in the human motion system shows that student learning outcomes increased by 21% and learning completeness reached 100%, so the student learning process became effective (Murdiyani, 2012).

E-learning as an Information Technology-based interactive learning medium was realized in the form of modules about teacher content that includes: questions, announcements, uploading teaching material, and reviewing and announcing exam results. It has student content that includes viewing announcements, exam results, and downloading teaching material. This is a very good way as used as an Information Technology based interactive learning medium (Yazdi, 2012). The development of an interactive Integrated Science learning medium in the form of a web contains a front page, introduction, and course pages. The course page was consistent with Course 1 contained competency maps, course 2 about concept maps, and course 3 about objectives, teaching materials, experiments, discussions, figures of science, summaries, and examination material that used resources and an activity menu in Science Learning (Safitri et al, 2012). The results of the study decided that the e-learning system of Learning Management that used ANP analysis was good to use and was able to improve the teaching and learning process at SMA N 10 Bandar Lampung (Hidayati, 2010). The development of Learning Methods Based on E-learning be able to implement as good when it is supported by network facilities, infrastructure, and the socialization of that method in the academic community in the Directorate of Diploma Program of IPB (Budi & Nurjayanti, 2012). Data mining techniques and decision-making systems can use in recommending teaching materials, books, lecture materials, and journals that were under the site users of elearning-ujb.net (Agus, 2010).

The E-learning model according to appropriate medium experts is worth in used with a good category of 3.98 scores and based on beta tests has very good categories with a score of 4.15, product testing has a good category with a score of 3.90, and effective improvement student learning outcomes as a 13.24 score (Zyainuri et al, 2012). Virtual laboratory-assisted e-learning is valid to be used, it was proved by the scores of experts for material aspects as 91.67%, medium aspects as 96.75%, student questionnaire scores for online practicum as 81.30%, for the small group stage as 81.50%, and they were very practical to use (Agustine et al, 2014). The use of the E-learning Program in Physics Learning can reduce student misconceptions by 71%, from 91.7% to 20.7% (Mayub, 2017). In line with that, there is the influence of the use of e-learning programs on student motivation in the category of moderately motivated (Score as 3.52 from the range of scores 1-5) and there is a significant relationship between e-learning programs and motivation to learn (Mayub, 2015).

Based on the description above, the problem can be formulated; "Whether dual intelligence development can be accommodated by ICT-based e-learning programs? And how much do ICT-based e-learning programs contribute to the growth of multiple intelligence development?". To answer the problems, it is necessary to set research objectives, namely; “To describe the function of the e-learning program as an accommodation for the development of all types of multiple intelligences and to find out how much the ICT-based e-learning program

contributes to the growth of the multiple intelligence". We raise this title based on our experience as lecturers who teach ICT-based Learning Development subjects in the Faculty of Teacher Training and Education of Bengkulu University, for Undergraduate and Graduate degrees, and also as lecturers at the UGM Vocational School who teach programming and control systems. This research was funded by the Research Grants of the Graduate School of Science Education in the Faculty of Teacher Training and Education of Bengkulu University in the 2017/2018 academic year.

Method

This research included to Quantitative Descriptive Research model that aimed to describe the functions of ICT-based e-learning programs as an accommodation for the development of multiple intelligences and how large these functions are. The e-learning program included to Research and Development model. This section describes the process of making ICT-based Learning Programs for the Learning Program test. The process of making the Learning Program includes Analysis, Design, Code, and Testing (Mayub, 2011).

Analysis

The research analysis used is an analysis of the needs for software, hardware, and human resources needed for the realization of the e-learning program. The e-learning program must contain the features needed to be able to accommodate the growth of multiple intelligences. In this paper, Macromedia Flash software was needed, a set of computers/laptops, a person who understands physics, and a programmer.

Design

For the e-learning program to be able to accommodate the growth of multiple intelligences, it needs some study learning features that be able to display the text, images, graphics, tables, animations, simulations, feedback, data input, reactive, virtual experiments, dialogue, and sound. So it requires some learning modules which consist of modules, materials, animations, simulations, demos, assistance programs, problem answers, and evaluation modules.

Writing Program

The program was created by ActionScript Program. The button was used for system interactivity with the user.

Trial of E-learning Programs

Trials were conducted to ensure that e-learning programs can be operated and used for physics learning processes that accommodate the growth of all types of intelligence. The purpose of the test consists of; Whether the program runs as planned. Whether all buttons be able to function for interactivity? And whether the results of program execution were by the concepts of physics. Testing was done by Play and Test Movie. For this reason, it is necessary to make stages such as Figure 1

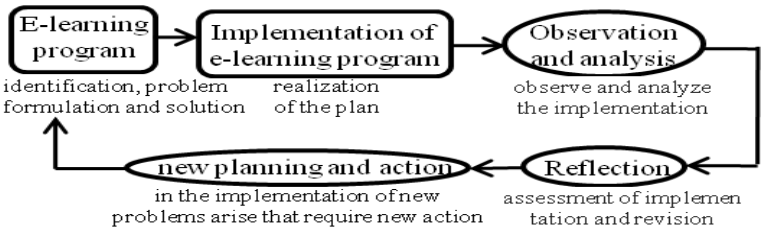


Figure 1. The stages of making an e-learning program

Test of e-learning program as a forum for the development of multiple intelligences

Time and subject of research

This research was conducted for 6 months from April to October 2020, using the subject of basic Two-Dimensional Motion of Physics Teaching material. To get the data about the function of the e-learning program as an accommodation for the development of multiple intelligences, pedagogical criteria were used to describe the activities that accommodate multiple intelligences. These activities were detailed for each type of dual intelligence, see Table 1

Table 1. Pedagogical indicators for developing multiple intelligences

No	Type of Intelligence, how to develop it	Display on an e-learning program
1	Linguistics: reading, writing, telling stories, and so on	Text display, visualization, graphics, simulation, animation
2	Mathematical-logical; problem-solving training logical thinking, reasoning, symbolism, systematic analysis of abstract concepts, systematically, using sketches.	Display text, graphics, images, curves, visualization, graphics, simulations, animations, enter data, sketch, and execute programs
3	Musical; musical instruments, students are directly involved	Visualization, simulation, animation, hearing sound.
4	Kinesthetic; experimentation, data input, demonstration	Simulation, input experimental data, animation, and running programs
5	Visual space; colors, design forms, patterns, images, graphics, symbols, sketches.	Graphics, animation, text, simulations, animated drawing exercises, quantitative analysis.
6	In Interpersonal; group learning, students conclude their opinions based on the results of group work	Exercise, quantitative analysis, feedback, active, reactive, group instructions
7	Intrapersonal, reflecting, thinking strategies, processing emotions, knowing oneself, practicing concentration.	Text, animation, graphics, simulations, quantitative analysis, feedback, training, individualized instructions, active, reactive
8	Environment; being natural as a means of learning, nature is developed into a teacher	Simulation, animation, practice, visualization, quantitative analysis
9	Existential, school direction so students are aware of their existence, and for what they are, leading to philosophy.	Simulation, animation, practice, quantitative/qualitative analysis, feedback, and compare

How to get data

The data about the function of the e-learning program as an accommodation for multiple intelligence development was obtained by making a checklist (x) for

the score or option (1,2,3,4,5) in the function of the e-learning program that compared/adjusted with pedagogical indicators development of multiple intelligences. The method used in this research was the Likert scale (Sugiyono, 2017). The person who was competent to do this checklist consisted of 2 experts and 35 education practitioners, middle school and high school teachers.

How to process data

The data was processed by a percentage (%) of suitability between facilities' e-learning programs with pedagogical activity indicators of dual intelligence development using a Likert scale (Sugiyono, 2017), see Table 3. Based on Table 3, it can be seen that the function/facility scores of the e-learning program as an accommodation for the growth of multiple intelligences range from 9 - 45. The minimum score is 9 x 1 = 9, while the maximum score is 9 x 5 = 45. When using a Likert scale, it will be got 5 categories in a width interval score for one category as 45: 5 = 9 (Sugiono, 2017).

Table 2. Indicators / criteria for determining categories

No	Categories	Suitability of x with y	Score
1	Very available	X ≥ 81 %	5
2	Available	61%≤ X ≥ 80 %	4
3	Available enough	41%≤ X ≥ 60 %	3
4	Not enough available	21%≤ X ≥ 40 %	2
5	Not available	X ≤ 20 %	1

Information: x = how to develop intelligence, y = facilities available in the E-learning Program X = percentage (%) suitability of x with y

Table 3. How to process data

No	Type of Intelligence	Functions in the E-learning Program				
		Very available	Available	Available enough	Not available	Not enough Available
1	Linguistics.					
2	Mathematic-logic					
3	Musical					
4	Kinesthetic					
5	Visual space					
6	Interpersonal					
7	Intrapersonal					
8	Environment					
9	Existential					
	Total score					
	Average score	[Σ (5) + Σ (4) + Σ (3) + Σ (2) +Σ (1)]: 9				

Data analysis

Table 4 Data analysis uses the following criteria

No	Category	Interval score	Score
1	Very distributed	37- 45	5
2	Distributed	28 – 36	4
3	Distributed enough	19 – 27	3
4	Less distributed	10 - 18	2
5	Not distributed	0 – 9	1

Hypothesis

1. An ICT-based e-learning program be able to use as an accommodation for the development of multiple intelligences
2. ICT-based e-learning programs contribute to the development of multiple intelligences.

Findings and Discussion

The results of the research show that almost all types of student intelligence can accommodate to grow and develop through ICT-based e-learning learning programs. But the forms of ICT-based e-learning programs cannot yet be specifically intended for certain types of intelligence. One type of this program can accommodate several types of intelligence because there is no strict limit on the type of intelligence of a person. A person can have several types of intelligence, but not all types of intelligence stand out on that person, only a part of it, and for each person, the type of intelligence that stands out is not the same.

Table 5. Recapitulation Scores for the contribution of ICT-based learning programs as an accommodation for the development of multiple intelligence

No	Type of Intelligence	Functions / Facilities in the E-learning Program																Total Score	Average score
		4,1 - 5			3,1 - 4			2,1 - 3			1,1 - 2			1				
		a	b	c	a	b	c	a	b	c	a	b	c	a	b	c		
1	Linguistics.	5	5	4,8													14,8	4,93
2	Mathematical-logical	5	5	4,7													14,7	4,90
3	Musical				4	4	3,9										11,9	3,97
4	Kinesthetic							3		3,1		2					8,1	2,70
5	Visual space	5	5	4,8													14,8	4,93
6	Interpersonal				4	4	3,8										11,8	3,93
7	Intrapersonal				4	4	3,7										11,7	3,90
8	Environment				4	4	3,9										11,9	3,96
9	Existential										2	2	2,3				6,3	2,10
	Total Score	15	15	14,3	16	16	15,3	3	0	3,1	2	6	2,3	0	0	0	108	4,0

Average = [{(a + b + c): (9x3)}] = [{(15+15+14,3+16+16+15,3+3+3,1+2+6+2,3):27} = 108,0 :27 = 4,0

Information: Very available (5), Available (4), Sufficiently available (3), Less available (2), Not Available (1), and a = score by expert 1, b = score by expert 2, and c = average score by teachers.

Based on the data, the ICT-based e-learning program can accommodate the growth of multiple intelligences in the distributed category with a score of 4.00

(scale 1-5). The function of the e-learning program in the type of kinesthetic intelligence was relatively small (2.70) because this intelligence will develop optimally if students directly engage in real activities, but in e-learning programs can only be done virtually through the skills of students using the mouse. The function of e-learning programs in Existential intelligence was also relatively small (2,10).

This is due to the type of intelligence that was relatively difficult to evaluate because it was relatively absent and difficult to measure as a result experts and teachers give relatively small scores. Where Linguistic, Mathematical-logical, and Space-visual intelligence was almost perfectly accommodated with scores of 4.93, 4.90, and 4.93. Learning features in e-learning programs can accommodate the growth of linguistic intelligence such as text, visualization, graphics, simulations, and animations that can be read, observed, and told by students. Learning features in e-learning programs can accommodate the development of mathematical-logical development such as text, graphics, images, curves, visualization, simulation, animation, entering data, sketching, and executing programs that can be used by students in learning. See Table 6.

The findings of e-learning program contribution in developing multiple intelligences were obtained the same result found in various countries. The experts in Thailand found that; the indicators in the MILA model (Multiple Intelligences Learning Activities) were appropriate and it was in a very good category that is used in the learning process (Tangwannawit, et al, 2008). European research also found that open and distance learning models that contain Howard Gardner's multiple intelligences not only as a medium to spread education, but act as a means to reach new levels of understanding and awareness, and also reflect the role of education (Vieira et al., (2014). Research in South Africa found that to optimize the potential of students, learning is carried out based on multiple intelligences (Gouws, 2008).

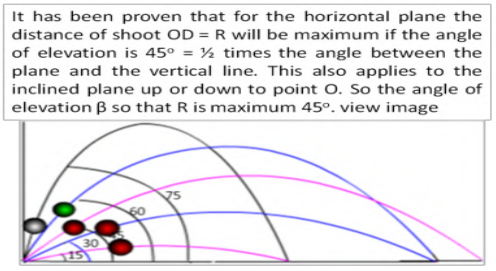
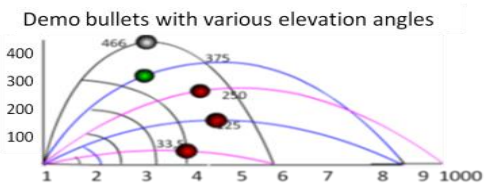
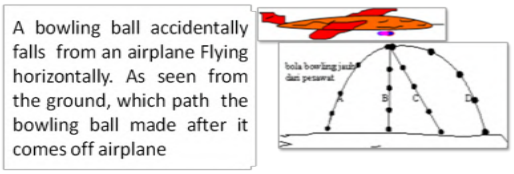
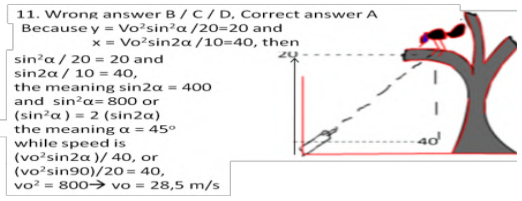
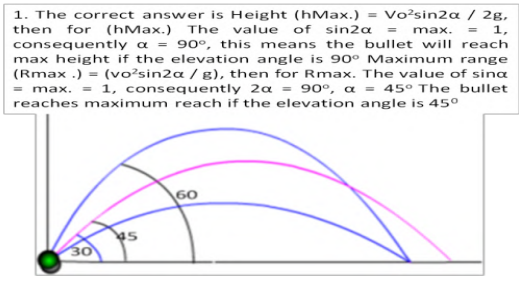
The findings were also in line with other research that said that multiple intelligences have an impact on e-learning activities that tight for integration of multiple intelligence with e-learning models (Mankad, 2015). All types of intelligence can grow and develop optimally in the learning process when applied and supported by e-Learning programs (Pappas, 2005).

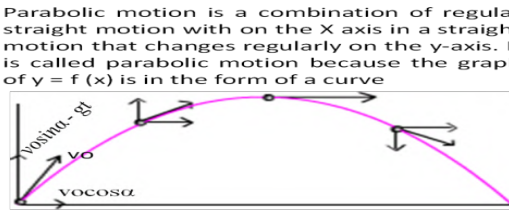
Conclusion

Multiple intelligence can be developed through e-learning programs that were realized in the e-learning modules, The nine types of multiple intelligence in theory and virtual simulation be able to develop through e-learning programs. It can see that the function of e-learning programs as a medium of intelligence in the category of Distributions with a score of 4.0 (scale of 1-5).

Table 6. The comparison of capabilities of ICT-based e-learning programs as an accommodation for developing multiple intelligence

No	Type of Intelligence or how to develop it/ e-learning Program	Forms in e-learning programs
1	Linguistic: Reading, writing, telling stories, and so on E-learning Program: Text display, visualization, graphics, simulation, animation	Problem 1. What is meant by rocket motion and what are the laws of physics that apply to rocket motion ➡ 2. Since firing until the fuel runs out, what motion is there on the rocket ➡ 3. Explain the meaning of rotational kinematics ➡

2	Mathematical-logical: Problem-solving, training logical thinking, reasoning, symbols, analyzing abstract shelf concepts systematically, using sketches Elearning Program: Display text, graphics, images, curves, graphics, visualization, simulations, animations, entering data, sketching and executing programs	
3	Musical: In musical instruments, students are directly involved. E-learning Program: Visualization, simulation, animation, hearing sound.	simulation, animation, visualization, and listening to sounds, as well as virtual experiments
4	Kinesthetic: Experimentation, data input, demonstration. E-learning Program: Simulation, virtual experimental data input, animation, and running	
5	Visual space: colors, shapes, design patterns, images, graphics, symbols, sketches. E-learning Program: Graphics, text, animation, analysis, simulations, animated drawing exercises, quantitative	
6	Interpersonal: In Group learning, students conclude their opinions based on the results of group work E-learning Program: animation for quantitative/qualitative analysis of symptoms, instructions are group	
7	Intrapersonal: Reflecting, emotions, thinking strategies, processing knowing oneself, practicing concentration. E-learning Program: Text, animation, graphics, reactive, active, simulations, quantitative analysis, feedback, training, individualized instructions	
8	Environment: Being natural as a means of learning, nature is developed into a teacher. E-learning Program: Simulation, practice, animation, visualization, quantitative analysis	

9	Existential: school direction so students are aware of their existence, and for what they are, leading to philosophy. E-learning Program*:* Simulation, animation, practice, analysis, and compare quantitative /qualitative feedback.	

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TEACHING DRAMA IN A HYBRID CLASS

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Abstract
Although drama is meant to be performed, due to the pandemic situation, it cannot be done. Besides a government regulation about the maximum number of people who gather in a class or a room, the variants of the Covid-19 virus are not easily handled. But still, educators should conduct their learning process well. Some universities in Indonesia have also shifted online learning into a hybrid one. However, conducting a hybrid class, especially in relation to drama was quite challenging. Some real problems appeared and educators should be able to solve them. This article discussed those issues including some good practices to create a meaningful drama class. Data were collected through a questionnaire which included cognitive, behavioural, emotional engagement, motivation and time management. The problems covered audibility, bad internet connection, less attention and lack of technological tools. Two of the good practices done were a dramatic reading project and gamification to facilitate students who attended the class physically or virtually.

Keywords: drama, engagement, hybrid, practices, teaching

Introduction

The spread of Covid 19 forced the world of education from face-to-face classes into an online learning mode. Managing online learning requires various aspects which include instructional materials (Suharyadi & Mulyani, 2022), assessment (Arifuddin, et al., 2021), the use of media (Khovivah, et al., 2021), students' engagement (Dumford & Miller, 2018), communication and interaction (Vlachopoulos & Makri, 2019). In addition, its success depends on the quality of institutions and services, student characteristics, internal motivation, instructor characteristics, infrastructure and system quality, quality of courses and information, and online learning environment (Yudiawan, et al., 2021). For some students and teachers, this online learning was enjoyable due to the flexible time and place (Downer, et al., 2021).

On the other side, it also had some weaknesses. Song, et al. (2004) discussed that when students or teachers had technical problems, online learning could not run well. Besides, the time constraints and lack of community sense could be other weaknesses. Dhawan (2020) underlined that online learning created a lack of direct communication as a result of technical problems. This also led to an imbalance in learning and teaching processes since the flexibility of time and place caused

students' nonseriousness. In conclusion, psychological and technological aspects were inadequate and have created an imbalance learning process. In line with Dhawan and Song, et al., Yulia (2020) stated that online learning which did not affect students' outcomes was considered a waste of time.

Theories of conducting a hybrid class

Since the pandemic has progressively changed into an endemic and many people have realized the weaknesses of online learning, some universities have shifted the mode of online learning into a hybrid one (Fedorchenko-Kutuev & Kurovska, 2021; Yeo, et al., 2021). In Indonesia, there were some universities and schools that had a hybrid learning mode (Abdulhak & Wahyudin, 2018; Mutmainnah, et al., 2022; Permana, 2021). A hybrid classroom can be defined as a classroom where some students attend the class on campus and other individuals attend the class virtually from the place where they choose (Butz, et al., 2016; Hastie, et al., 2010). In short, the term hybrid refers to synchronous instruction of both remote and face-to-face students (Detienne, et al., 2018).

The hybrid learning mode is beneficial in terms of organizational and pedagogical purposes (Raes, et al., 2020). Organizational benefits cover a chance to increase recruitment rates, access to inclusive education and equal outcomes, the efficiency of teaching the same course twice, flexibility for choosing a learning environment, and an opportunity for a multifaceted student population. Pedagogical benefits include rich learning experiences, students' equal learning opportunities, enhanced instruction, and band technological encounters.

Besides its benefits, this hybrid learning has some aspects that support its success. Park, et al. (2019) underlined that students' individual backgrounds and participation played an important role in a successful hybrid learning process. Maspul & Amalia (2021) added that the role of parents also helped the success of hybrid learning. Ahlgren, et al. (2020) explained four success factors, namely: the teacher's identity, the teacher's pedagogical solutions, organizational practices and educational technologies or facilities. Based on some factors of successful hybrid learning, a hypothesis of the implementation of hybrid learning is constructed that it does not only focus on the technological tools used in a hybrid class. Its success also depends on students and teachers or lecturers. Previous studies showed students' perspectives toward the implementation of hybrid learning (Alghamadi, et al., 2022; Hall & Villareal, 2015; McGovern & Barnes, 2009; Raes, 2022).

Due to the fact that hybrid learning and teaching processes have to be applied, educators need to adjust to it. Specifically, some teachers or lecturers realize that several subjects are more challenging than others due to their nature especially teaching art. Although a previous study could connect the humanities discipline with education (Mulatsih, 2018), the demand for conducting hybrid learning exists. One of those subjects is drama which requires physical interaction such as performing a drama script. Previous studies about students' perspectives on implementing hybrid learning still focused more on educational subjects or scientific subjects such as logistics engineering and others scientific subjects. This article provides different aspects in a form of teaching art or a humanities discipline that is literature. As it has been written before that drama means to be performed, teaching drama in a hybrid class becomes an issue that needs to be solved.

In accordance with that, this article discusses some good practices, engagement, motivation and problems which are explained from students' perspectives. Thus, the research questions are formulated as follows:

- What good practices were done when teaching drama in a hybrid class?
- What problems were faced in a hybrid class based on students' opinions?
- How did students engage during a hybrid class?

Method

This study was conducted through an online survey where participants were given a link to a google form. A written questionnaire was constructed by applying a theory from Krosnick (2018). It contained questions in relation to (1) students' gender and age, (2) good practices in a hybrid class, (3) problems faced during the hybrid learning process, (4) students' engagement, and (5) students' motivation and time management. There was only one closed question in relation to motivation. The rest questions were open. Participants answered all questions from 24th to 31st March 2022. This phase was conducted after six meetings of hybrid learning in a drama class which was held by a private university in Yogyakarta, Indonesia.

Data were gathered anonymously. Furthermore, its analysis was conducted through several steps. Firstly, the researcher spread the link to a google form. Secondly, the researcher read the answers carefully. After that, the researcher divided the answers into several categories. The theory of hybrid learning experience and satisfaction that was proposed by Xiao, et al. (2020) was applied to classify the results. The researcher also selected some significant answers which could represent other answers which had the same opinion. Then, the results of the data analysis were presented qualitatively. This research also applies qualitative methods (Creswell, 2007) since it discusses students' perspective or their voices about the implementation of hybrid learning.

Participant characteristics

Fifty-seven participants answered all questions in the questionnaire. Specifically, there were 40 female respondents and 17 male students. Their range of their age was from nineteen to 38 years old. The range can be seen below:

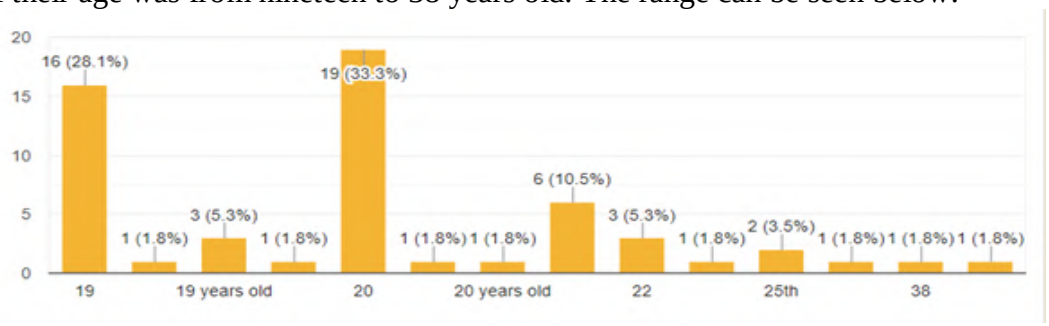

Figure 1. The proportion of participants' age

Some participants joined face-to-face classes but some who attended an online class could come freely into face-to-face classes. It means that the number of students who joined in face-to-face and online class varied. The data were also taken from all students without having a sampling method. The participants were in their fourth semester and they did not have any experience attending a face-to-

face class in their previous semesters due to the pandemic situation. Participants answered the answers in the written questionnaire naturalistically without manipulation since they did not provide their names and the results were not used as a scoring item.

Findings and Discussion

This part is divided into four sections. The first deals with good practices that were done by the lecturer based on students' answers. The second relates to some real problems faced in a hybrid class. The third part reveals students' engagement. Then, the last is students' motivation and time management.

Good practices to maintain a hybrid class

Based on students' answers in relation to good practices that the lecturer did to maintain a hybrid class, the results were classified into five parts, namely: paying attention to students' psychological aspect, gamification, providing and delivering various learning materials, promoting students' right, maintaining interaction and health protocol. The first group deals with psychological treatment. A student wrote that the lecturer had done "her best in teaching the hybrid class, such as always asking students whether they were in good health or not". Another student also underlined "good attention". Besides, a "communicative approach" was also stated. It refers to the lecturer's tolerance when students made mistakes so that students dared to participate in class. In addition, another student also answered about the improvement of counselling guidance to students. In short, students' psychological aspect is one of the elements that teachers or lecturers need to pay attention to. One simple action that can be done is by asking about their condition before the class. A lecturer or a teacher can start the class five minutes before the scheduled time for asking about students' conditions. A discussion plays an important role so that students can state their opinion and increase their creativity through some drama projects.

The second part deals with gamification and drama activities. Dealing with teaching drama in a hybrid class, students liked some activities such as playing a game and asking students to collaborate on making projects and presentations as other good practices. To be specific, students appreciated dramatic reading in a hybrid drama class. They answered: "the teacher can demonstrate the action of drama", "read the dialogue" and include "interactive learning activities". Students underlined the practice of dramatic reading in groups for teaching drama in a hybrid class. It allowed them to read some drama scripts based on their own choice, collaborate and discuss with their partners in the group. A teacher or lecturer could be the role model first then students would be brave enough to express their emotions when reading a chosen script. The freedom to choose a drama script was also able to start a discussion of a new topic contained in the script.

The third is about providing and delivering various learning materials. In this case, teachers' likeability plays an important role. Some students answered a question about the lecturer's good practice by underlining that the material was delivered in a very simple way but exciting. It relates to "the way the teacher makes the class alive". A student stated that "the presentation or explanation is enough to maintain the hybrid class". The lecturer also gave the lesson plan in the first meeting of the course. In line with it, the lecturer's excitement was also considered as a good

practice as written as follows: "she is excited when one of my friends answers or asks some questions" and "the lecturer always tried to make the class environment fun, easy and interesting". The pedagogical aspect was also stated: "make the learners get involved in the class by conducting some teaching methods". Various kinds of materials also mattered as two students wrote their opinion as follows: "setting up the good activity and materials during the learning process' and 'encourage students to do the quiz, make a lesson plan, practice the drama, provide some materials in various media like ppt, YouTube, pdf file, etc". In short, the teacher's pedagogical skill together with the teacher's likeability mattered in a hybrid class too.

The fourth part is about promoting students' rights. Paying attention to both students who joined the class virtually and physically was crucial. Some students underlined that the lecturer did "pay attention to both online and offline students". In line with it, a student also wrote "try to maintain constant interaction between the people at zoom and those in the face-to-face class, asking questions like what do people on Zoom think about this? Or explaining to those on Zoom what the people in the offline class asked or commented on and vice versa". Furthermore, the lecturer's decision to allow students who wanted to join face-to-face classes was also appreciated.

The last is maintaining health protocol and interaction. A student delivered his or her opinion that the class could run well by wearing a mask and keeping a distance. While maintaining the interaction with students was done by asking their opinion and motivating "the students to interact in class whether in the zoom or real class". Another student also wrote that "the lecturer always tried to maintain a positive atmosphere in the class by appreciating and interacting with students". The interaction between students and the lecturer or students with other students was required.

Real problems in the hybrid class

There were three main problems faced during the hybrid class, namely: technological problems, lecturer's skills and equal attention. The first one dealt with the technological problem. Some students underlined the unclear voice by writing their answers as follows: "improve audio quality on zoom", "I think amplify the audio so that it can be heard on zoom", and "sometimes the voice is not heard". For solving the problem, a student also proposed that the lecturer "should prepare and make sure that everything is good for example the sound system, technology that is used". Besides its audio, the internet connection became a problem too. Some students expressed their thought that this hybrid class required a good internet connection since sometimes it was unstable.

The second problem was the lecturer's skills in using various media and tools which needed to be improved. Student answers varied as follows: "the skills of using new media or tools", "I think the media should be added so that we who attend the class online through zoom meeting could see (and probably also interact) with friends who attend the class offline". The previous section discusses various activities but, in this case, students also added that the lecturer needed to add various teaching media too.

The last problem dealt with equal attention for students who attended both the face-to-face class and the online class. Although some students wrote that the

lecturer has paid attention to both students who attended the class physically and virtually in the previous section, some students proposed the concept of balancing the attention more. Some students who attended the class through zoom wrote: "the lecturer could pay more attention to students taking the online class", "give more attention to the online students" and "build more interaction with the students in zoom". This problem could be faced by asking students who were in the zoom meeting frequently so that they did not feel unequal attention.

Students' engagement

There were three parts in this section, namely: cognitive engagement, behavioural engagement and emotional engagement. As it has been written in the introduction part that the success of a hybrid learning implementation relied not only on teachers or lecturers, but students also took part through their engagement. Most students underlined cognitive engagement as their answers. Students' cognitive engagement was reflected in their answers such as "I always do my task on time by working carefully and diligently, doing my best", "I read the material before the class, find out another reference to support the material and pay the fullest attention to the lecturer", "learning independently before the class started", "review the materials and self-study". There was one student who connected his or her engagement with motivation: "I tried to increase my motivation and time to learn" and "Searching for some references due to the material keeps my cognitive skills alive. Taking some notes in a creative way such as adding some pictures, colours and footnotes in my notes. And sometimes I do some work out and sleep well to make me feel comfortable with my mental conditions". Their cognitive engagement also referred to self-regulated learning as represented by their answers: "I also used to read the material before attending the class so I can study better later on", "Sometimes in my spare time, I look for other information related to the material in class" and "I wake up early and sometimes I read some materials to prepare my class".

Not only cognitive engagement but the emotional engagement was also presented through students' awareness of identifying themselves with lectures and friends. Their answers varied as follows: "I always try to appreciate my lecturer and my friends during the learning session", "I personally love to come to the class, by attending an offline class" and "I try to open my camera so that I can show my respect to my lecturer. I am trying to engage in the class not only physically but also my thought". In addition to that, two students also answered that "praying helps me to keep my emotions balanced" so that they could manage their emotional engagement. Furthermore, this engagement was presented when some students wrote: "I tried to follow it with a relaxed feeling so that I could follow the class well", "I will motivate myself to enjoy the class. I always try my best to focus in class" and "I try to always follow the learning activities held by the lecturer even though I cannot come to the class". Although some students could not come to the face-to-face class, they tried their best to attend the class attentively which showed their emotional engagement.

The last type of engagement is behavioral. This engagement was represented through students' responses. Some students wrote: "through answering question or giving reaction in the zoom meeting", "follow the class from the beginning until the end", "discuss with friends" and "listen and also take notes of lecturer's

explanation". Some students also showed that they tried to be active as reflected in their answers: "keep trying to be active and follow lecture activities well", "I always attend the class unless there's something important to do. I always try my best to actively participate in class too" and "always be active and follow every material I learn with all my heart". In line with that, students' behavioural engagement was shown when students "focus on the learning process", "don't forget about the manner, and stay healthy", "follow the class outline", "read the material while listening to the teacher" and "always do the activity given by the lecturer. I always try to face and appreciate the challenges in the course also. I always try my best to do the assignments too". In conclusion, most students tried to engage with hybrid learning cognitively, emotionally and behaviorally.

Students' motivation and time management

There were some factors that related to students' motivation whether it was from their interests or other factors outside themselves. The first was the mode of learning and friends' presence. The students wrote that "I really enjoy the offline class". They were "excited to meet my friends". In line with it, a student answered: "I have best friend who is quite enthusiastic to attend this class". In addition, a face-to-face class was considered more alive as stated follows: "some subjects especially drama is more 'alive' when conducting offline". A hybrid class opened a chance for some students who like the face-to-face class so that they could also meet their friends.

The second connected to the subject and personal interest as reflected in their answers: "I like this course and I want to know deeper about drama elements" and "I know the importance of attending a class for me". Besides their interest, the class role's flexibility also built students' motivation as stated follows: "I can choose whether I want to study online or offline" and "Yes, I'm motivated cause its flexibility". The combination of some aspects was also stated by a student as described below: "I feel motivated to attend the hybrid class because the topics we are studying are very interesting, the teacher is excellent, the dynamics of the class are fun and having the opportunity to see my classmates again in face-to-face classes". The last statement showed that the source of students' motivation varied from the materials, activities, the teacher and also friends.

The third factor of motivation is related to the lecturer's likeability. Some of their answers showed that the teacher's likeability became their motivation too as stated below: "a very pleasant lecturer so I like to join", "I like to see her funny enthusiasm", "you encouraged the students", "you have tried your best to engage your student and pay attention for us" and "you are always patient to your students". The teacher did not only teach, he or she could encourage students, perform with enthusiasm and be patient.

In the case of motivation, four students felt unmotivated for attending the class. Two of them answered the closed question directly without providing further explanation. Only two students clarified their answers "to be honest, I'm not really motivated to come to the hybrid class yet because I've started to adjust to the current situation which is attending classes from home" and "I feel less motivated because to be honest sometimes students who are on zoom are not given the same opportunity to answer questions given by lecturers". Students' answers could be a

trigger for the teacher or lecturer to improve the way of teaching specifically equal attention for students who attended an online class through zoom.

53 students felt motivated. It was performed in their answers when they did some actions to manage their time. Some of them were: "I always make a schedule and try to make some checklists to manage my time", "making to do list everyday", "making sure I prepared for the next day", "prioritize college stuff'', "not postpone and do the assignments", "be discipline", "I used scale of priority to do something and try to follow it" and "plan ahead". Some students found it hard to rely on themselves. Because of that they tried to find their supporting system such as "finding friends to remind each other". In addition, a student also improved his motivation as follows: "I try to increase my motivation by connecting the materials with everyday life".

This article has explained students' perspectives on the implementation of teaching drama in a hybrid class. Their perspective was reflected in their answers which were gathered through a questionnaire. However, the limitation of this study dealt with its data gathering. The questionnaire, if it were combined with the interview method, would be more complete. For facing that weakness, the researcher combined the results of data analysis with the researcher's experience when conducting hybrid learning in the drama class. Thus, it could cover good practices, problems, student engagement, time management and motivation.

The data which were drawn from real implementation would be beneficial for other teachers or lecturers who have to teach drama or other humanity subjects in a hybrid class. The same problems may appear and this article also provides some ways to face them. Besides, some good practices that have been elaborated can be applied in future hybrid drama classes. In a nutshell, teaching drama in a hybrid class needs not only pedagogical skills but also various activities to perform drama in a fun way including the use of some media.

Conclusion

Technological problems which are faced in a hybrid class can be solved in several ways such as learning additional media, providing technological tools such as a good microphone, or increasing the bandwidth of the internet connection. Aside from these problems, the pedagogical aspects need to be fully paid attention to. It can start with the teacher's likeability, various activities, and flexibility. A teacher or a lecturer should also pay equal attention to students who attend a face-to-face class and an online one.

To be specific, a drama course can be taught in a hybrid class through several activities such as a dramatic reading project, constructing a simple lesson plan or gamification. Some students have also mentioned that dramatic reading and gamification were considered to be good practices. In addition to that, students' psychological side plays an important role. Some treatments are required. A simple example is by asking some questions about students' well-being.

This article also proposes a motion that every class is unique. Teachers' or lecturers' adaptive skill is needed. One of the ways is through listening to students' feedback on the implementation of hybrid learning so that educators can learn and improve the quality of their teaching and learning processes. For future research, studies of teaching art or humanity subjects in a hybrid class can be conducted since

this kind of learning mode will be continuously applied although the pandemic is over.

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THE PERCEPTION OF ISLAMIC RELIGIOUS EDUCATION STUDENTS ON KAHOOT! AS A QUIZ

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Abstract
Kahoot! is the most popular online platform in universities to increase student participation in class. The application is suggested as an instrument for the assessment of learning outcomes. This study aims to determine the level of perception of Islamic religious education students towards Kahoot! as a quiz in the midterm exam. The research approach used is descriptive qualitative with questionnaire and observation data collection techniques. The data were then analyzed using descriptive statistics by presenting the data in the form of tables and diagrams. Based on the results of the study, it can be concluded that students' perceptions are very positive in terms of three main indicators, namely the ease of understanding how the application works, the ability of the application to involve participants, and the relevance of quizzes to learning activities. Most students think that Kahoot! provide new experiences that are interesting, fun, and challenging. They are motivated and actively participate in taking quizzes.

Keywords: gamification, Islamic religious education, Kahoot!, student perception

Introduction
The trend of learning technology innovation in the era of the industrial revolution 4.0 leads to the use of the internet as a means of digital transformation. Several new terms in the world of education are starting to rise to the surface such as e-learning, web-based learning, online learning, digital learning, virtual learning, hybrid learning, blended learning, etc.(Astuti et al., 2020; Govindarajan & Srivastava, 2020; Singh & Thurman, 2019; Tayebinik & Puteh, 2013). These terms refer to the ability of the internet to build communication networks that connect learning systems that are limited by space and time (Sasmita, 2020). The internet was not created for educational purposes, but from the perspective of educational technology, the internet is a learning resource that needs to be utilized and managed for the benefit of learning (Martin et al., 2022). Through five domains namely design, utilization, development, management, and assessment, this field of study can produce up-to-date learning technology innovations (Suryadi, 2020).

Learning motivation is a very important aspect of internet-based learning because interaction and communication are limited to the monitor screen of the device used. Motivation is divided into two namely intrinsic and extrinsic motivation (Emda, 2018). Intrinsic motivation comes from within the student while

extrinsic motivation comes from the environment around the student. As an illustration, students' learning motivation towards online learning during the Covid-19 pandemic tends to decrease due to unpreparedness from the aspects of infrastructure, psychological and economic aspects (Adi et al., 2021; Gustiani, 2020; Izzatunnisa et al., 2021). Intrinsic motivation is not well developed because students' involvement in learning activities is low and students' focus or concentration is often diverted from other activities (Robandi & Mudjiran, 2020; Winata, 2021). Many previous studies have focused on increasing learning motivation through the development of learning technology (Agustini & Ngarti, 2020; Hapsari & Zulherman, 2021; Nurrita, 2018). Other efforts are also made by developing methods, strategies, or learning approaches (Hastari, 2019; Umam, 2019). The challenges above need to be faced by creating learning that is creative, innovative and informative (Tafano & Saputra, 2021).

Gamification is a popular term used to describe the process of adapting a learning environment into a game that enlivens the atmosphere, generates motivation, and increases engagement or application of game designs, elements, and principles to non-game contexts to achieve goals (Marisa et al., 2020). These elements include challenges, competitions, awards, avatars, badges, levels, points, and teams (Cheong et al., 2014). Gamification is often associated with game-based learning or serious games, but according to Oliver (2017), There are two types of gamification in education, namely structural and content. There are four factors for the success of learning gamification, namely the adaptation of complex and deep game elements, student learning styles, student learning motivation, and learning environment (Tóth et al., 2019). The idea emerged to increase motivation, including in learning activities (Chandross & DeCourcy, 2018). Learning activities such as assignments, discussions, and exams can be designed in the form of games to increase motivation and excitement in a class by presenting game elements such as challenges, points, difficulty levels, and player characters (Yürük, 2019).

Based on the results of the identification and early observations of the research, student motivation tends to conform as the number of meetings increases, especially among students of the Islamic Religious Education Study Program at the state Islamic institute of Manado (IAIN Manado). This happens because there is no renewal or change in the application of learning strategies that have a significant impact on the classroom atmosphere and student involvement. Group discussions became routine at every meeting, where only a handful of students were active in class. Exams that are carried out classically through sheets of paper containing column questions do not allow students to speak or cooperate and the atmosphere becomes quiet and silent. Most students did not express satisfaction after taking the test because feedback was not immediately given. It is feared that this condition will affect learning outcomes if not handled immediately. Therseveralber of gamification applications such as Socrative, Quiziz, Quizdom, Edpuzzle, and iSpring Learn LMS, are specifically designed to improve student performance and engagement in learning activities (Zainuddin et al., 2020). Of all, Kahoot! is the most popular and widely used platform in universities to increase student participation in class (Yürük, 2019). Guardia et al., (2019) suggest using Kahoot! as an instrument to test students' knowledge, skills, and attitudes during the lecture process because the application will provide new experiences that are fun, interesting,d meaningful.

Kahoot! is an online platform that provides a fun, challenging, and involving learning environment, where teachers can design it in the form of discussions, quizzes, jumbles, and surveys (Martins et al., 2019). The application was released in 2013 through a collaboration between Mobitroll, a Norwegian University, and The British Company (Anatomía, 2018). Kahoot! classified as a Student Response System (SRS) which allows students to answer questions instantly and get feedback quickly. The platform is loved for its recognizable features, pleasant appearance,e and lively music (Boden & Hart, 2018). Screen displays are divided into two types, namely the presenter's screen which displays the content of the questions or discussion, feedback on answers, the number of participants involved, the scoreboard, and the winner's podium, and the screen of the participants which displays the content of the questions or discussion, obtaining scores and rankings. The free online application (https://kahoot.com) has 70 million active users worldwide, of which 50 percent are students (Lunden, 2018). The platform requires the teacher or host to create an account and design the desired learning activities such as quizzes or discussions. To be able to play, students or participants enter using the game pin and nickname made via the https://kahoot.id page. Kahoot! equipped with game features such as player avatars, points, scoreboards, duration, background music, and champion podiums (Zhang & Yu, 2021). Kahoot can be played via devices such as laptops, smartphones, and tablets (Prieto et al., 2019).

The application is very useful for livening up the classroom atmosphere, increasing learning motivation, and reviewing learning activities (Yürük, 2019). Bawa, (2019) in his research on 96 students from the business program at the Midwestern Community College Campus proved that the Kahoot! further, improve student performance and engagement than conventional classes. Against the results and interest in learning, the application has a good influence (Wigati, 2019). Ares et al., (2018) used Kahoot! as a test facility and see the difference in the student graduation rate. From his research, it was found that the application had a positive impact on student performance in exams, where the pass rate was higher. Student perceptions of Kahoot! also tend to be positive. This can be seen from the research by Perdana et al., (2020) the results of all students have a good perception (48% very good; 44% good) of its use in Indonesian subjects. In his literacy study of 12 articles published in India, Pakistan, Sri Lanka, the United Kingdom, Malaysia, Finland, the United States, Austria, and Turkey, he reported that the majority wrote positive perceptions of Kahoot! in the big theme of motivation, performance, and learning atmosphere (Donkin & Rasmussen, 2021). Separately Wang & Tahir, (2020) shows the results of their literacy study of 93 articles about Kahoot! and 97% prove the application has an impact on learning performance, only 8% of articles include challenges, problems, and no impact on Kahoot! in learning. In his findings on learning English, the use of Kahoot! useful for motivating learning, building a learning atmosphere, helping students to focus, and facilitating positive competition (Lofti et al., 2021).

Researchers take advantage of Kahoot! as an assessment instrument for midterm exams through multiple-choice quizzes with a total of 15 questions. The content of the questions is related to educational technology courses that students have studied so far. Researchers are interested in knowing student perceptions after taking the exam through a quiz made with Kahoot!

Methodology

The research approach used is descriptive qualitative. Data was collected using an attitude assessment questionnaire which contained statements of negative and positive attitudes from 1 – 5, a Likert scale. The data consists of ratio data and verbal data. The research involved 61 students taking educational technology courses. Questionnaires were distributed after the implementation of UTS (Mid Semester Examination) using Kahoot! The data were then analyzed using descriptive statistics by presenting the data in the form of tables and diagrams. The average score is calculated using the formula:

$$p = \frac{f}{n} \text{ x } 100\%$$

Explanation:
p : Percentage
f : Total Scores
n : Max. Total Scores

The results of the analysis are then converted to the following table to determine the level of student perceptions of Kahoot!.

Table 1. Perception level conversion(Witari & Suryana, 2020)

Score Ranges	Perception Categories
85 - 100	Very Positive
70 - 84	Positive
55 - 69	Positive Enough
40 - 54	Negative
0 - 39	Very Negative

An overview of student perceptions of game-based learning Kahoot! obtained through 3 main indicators which are then developed into a statement in the questionnaire. These indicators include the ease of understanding how the application works, the ability of the application to involve participants, and the relevance of quizzes to learning activities. The following are the statements contained in the questionnaire.

Table 2. Student perception questionnaire

Question items	VD	D	E	A	VA
1. Quiz is easy for participants to play					
2. The rules in the quiz are easy to understand					
3. The appearance of the quiz is classified as "user-friendly"					
4. Quiz can be played by many participants					
5. Quizzes increase the enthusiasm of the participants					
6. Quizzes provide challenges to participants					
7. Quiz has an attraction for participants					
8. Quizzes build impressions on participants					
9. Quizzes are suitable for learning assessment					
10. Quizzes can be developed according to learning objectives					
What do you think after doing a quiz developed using Kahoot? application?					

Results and Discussion

Results

Out of a total of 90 students, 61 students gave their responses to 10 statements related to game-based learning Kahoot! Following are the results of the data analysis.

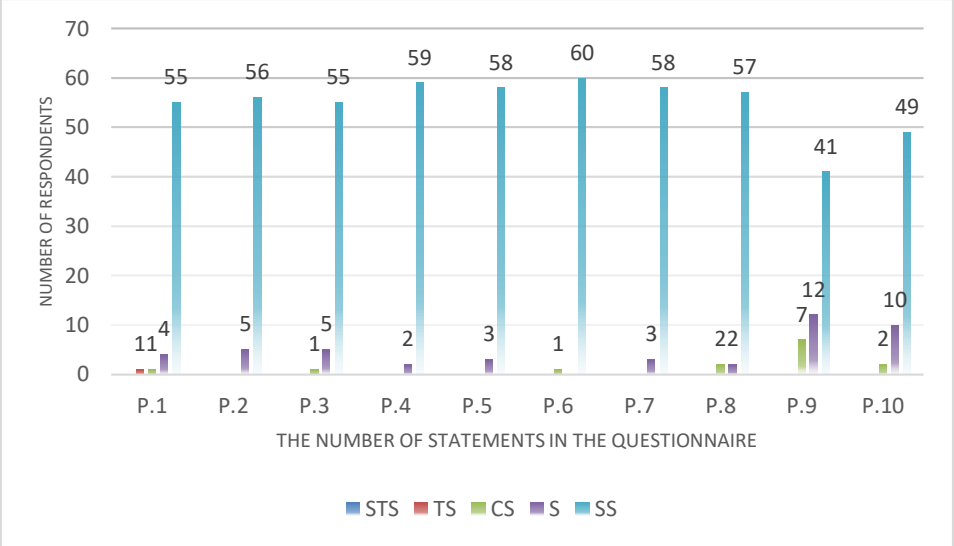

Diagram 1. Questionnaire filling results

The highest response was given by students to the sixth statement (S.6) related to the quiz which provided a challenge for students with 60 students who answered strongly agreed. The lowest response is in the ninth statement (S.9) regarding the relevance of quizzes to learning assessment with 41 students who answered strongly agree. Every single statement in the questionnaire received a strongly agree response from around 55 students. Of all the statements presented in the questionnaire, there was only 1 disapproving response given by the student. This is related to statement 1 (S.1) about the ease of playing quizzes on Kahoot!

Table 3. Average Score and Percentage of Each Statement in the Questionnaire

Statement	S.1	S.2	S.3	S.4	S.5	S.6	S.7	S.8	S.9	S.10	Average
Average Score	4.9	4.9	4.9	5.0	5.0	5.0	5.0	4.9	4.5	4.8	4.9
%	97.0	98.4	97.7	99.3	99.0	99.3	99.0	98.0	90.2	95.4	97.3

S.5, S.6, and S.7 get an average score that is almost perfect with an agreement rate of 99%. The lowest average score is at S.9 with an agreement level of around 90.2%. The average score for each statement item is 4.9 with a percentage of around 97.3%. This figure, when compared with Table 1. Perception Level Conversion is in the score range of 85 - 100, which means that student perceptions of game-based learning Kahoot! very positive.

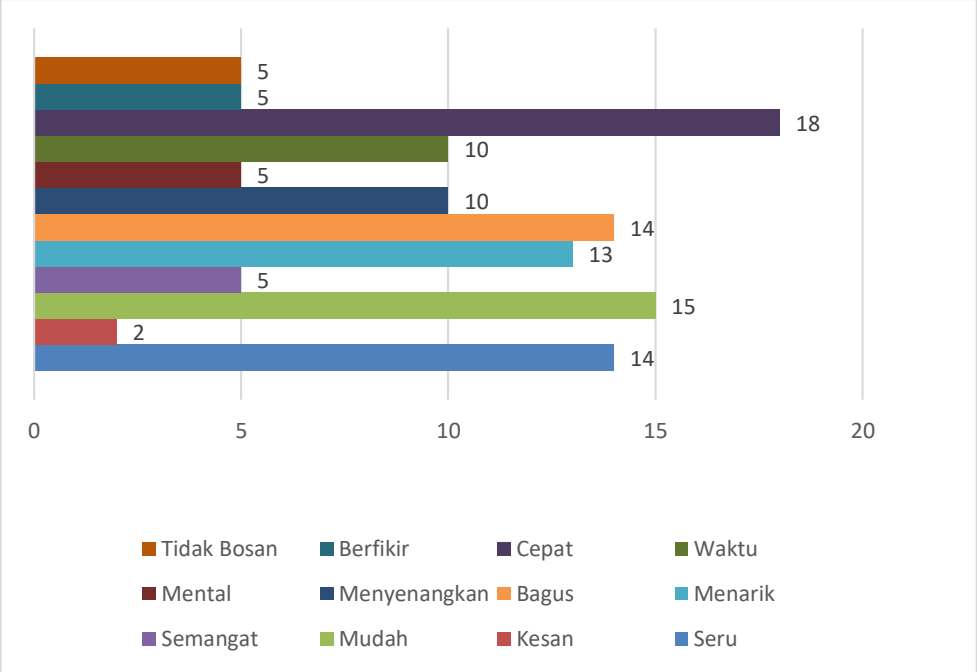

Diagram 2. Words that often appear in the opinion column

Fast words topped the list of words that appear most often with a total of 18 times. The word appears in the context of the duration of time to determine the answer to each question, which according to most students is too fast. This is also evidenced by the word time appearing 10 times. The word fast also goes hand in hand with the word think, where according to them quizzes train the speed of thinking and making decisions to determine the correct answer. Easy words are ranked second with the frequency of mentioning 15 times. Most of the students considered that the quizzes were made using Kahoot! easy to play and understand the rules of the game. Exclamation and good words appeared 14 times in the opinion column. These words appear related to the appearance, animation effects, images, and sound in Kahoot! which arouses the enthusiasm and enthusiasm of the participants to be actively involved in the game. In the next sequence, there are interesting words that appear 13 times, and fun words that appear 10 times. Words with a frequency of 5 times appear, such as enthusiasm, mentality, thinking, and not getting bored. The last sequence is occupied by the word impression.

An interesting note in the comments column is that 8 students complained that the duration of determining answers was too short, namely 10 seconds. This condition makes them more panicked and tense so they have the potential to choose the wrong answer. But many of them also consider that it is a challenge that makes the game more exciting and fun.

Discussion

The very positive perception that emerged from students could not be separated from the ability of Kahoot! in presenting game-based learning that is user-friendly because its appearance and way of working are easy to understand, especially for beginners, fun because it involves technological and psychological elements, and challenging because there is a time duration and a target score that

must be achieved to be a winner quiz. There are at least four benefits derived from using Kahoot! in the learning process namely increasing student learning motivation, building a positive atmosphere in the classroom, helping students to focus, and presenting a positive and competitive attitude (Lofti et al., 2021). Wang & Tahir, (2020) in their literature study of 82 research articles also stated that in general students had a significant positive perception of motivation, concentration, and learning atmosphere. *Kahoot! can increase the attractiveness, understanding, motivation, and involvement of students in the learning process* (Bicen & Kocakoyun, 2018). *Kahoot! not only suitable for theoretical learning but also practical learning, because of its ability to provide reinforcement and retention of the knowledge and experience learned* (Lin et al., 2018). As researched by Robiyati et al., (2020) in the Phonology class, where participants felt that learning using Kahoot! very fun and help them to understand the material discussed. The application makes the class atmosphere more active, collaborative, and participatory in both regular classes and independent classes (Zhang & Yu, 2021). The interaction that is built between students and students or teachers can form a positive attitude, especially in collaborative or group learning designs on Kahoot! (Martins et al., 2019).

Animation effects, audio, and background music stimulate students to actively participate and compete in the game (Boden & Hart, 2018). Background music, when students are racing against time to determine the correct answer, makes students more focused and concentrated because the rhythm of the music brings a serious and tense atmosphere (Lofti et al., 2021). Two types of emotions arise when students play Kahoot! namely positive emotions such as fun, excitement, focus, and excitement, and negative emotions such as tension, panic, and worry (Warsihna & Ramdani, 2020). Every student has a different emotional state because it depends on the challenge, readiness, and initial psychological condition, as well as the difficulty level of the game designed. In the learning context, Kahoot! can be used as an instrument for an icebreaker, independent study, and assessment of learning outcomes (Yürük, 2019). The application is proven to be able to improve learning outcomes, foster interest in learning, raise enthusiasm, and make learning more meaningful (Irwan et al., 2019). Andari, (2020) conducted a comparative test on the use of Kahoot! with PowerPoint. The results of his research revealed that students learning to use Kahoot! higher learning outcomes than those using PowerPoint because experimental class students were more active and directly got feedback from the assessment results which indirectly strengthened retention of the material being studied. In terms of being an assessment instrument, the application minimizes tension and worry during the exam process because the implementation and assessment take place in real time. Kahoot! make students more curious, ambitious, and interested when the level of play is increased (Yürük, 2019).

Kahoot! as a game-based learning platform or Student Respond System (SRS) is supported by Tom W. Malones theory of intrinsic motivation which consists of three categories namely challenge, fantasy, and curiosity (Malone, 1981). Challenge is the level of difficulty encountered in the game to achieve goals. In the quiz on Kahoot!, all participants feel challenged to complete their mission, namely to pass the test and become a winner in the game. Another challenge comes from the game system where participants are given 10 seconds to determine the correct answer and the score points obtained by participants are very dependent on time,

the faster participants choose the correct answer, the greater the points obtained. This aspect is also justified by several previous studies (Licorish, 2018; Pattanapichet, n.d.) The fantasy created is turning the class into a game show where the teacher becomes the host and the students become the contestants. The fantasy is enhanced by sound and animation effects, graphic design, scoreboard, participant avatar icons, and background music which further enlivens the positive atmosphere. The fantasy above in several previous studies was considered to be able to create a positive learning environment (Aktekin et al., 2018; Baydas & Cicek, 2019; Ebadi et al., 2021; Turan & Meral, 2018). Curiosity in playing quizzes on Kahoot! appears because the correct answer is displayed in real-time after working on each question, the score obtained by the participant automatically appears on the device screen after the time has ended, and the ranking scoreboard is displayed before entering the next question. This is regardless of whether their answer is right or wrong. Kahoot! is also in line with what has disclosed Dale (1969) in the "Cone of Experience" where the more students are involved in learning activities, the greater the percentage of the gain obtained. Glasser in "Learning Pyramid" also emphasized that the degree of retention is highly dependent on the methods and media used by the teacher in the classroom. The learning process should not only focus on memorization because students will easily forget after they are tested. Kahoot! is multimedia based on cognitive theory which according to Mayer (2009: 64) has three assumptions namely dual-channel, limited capacity, and active processing. At least humans have two motor sensors that can capture visual and auditory information. From the eyes and ears, information is passed on to the brain to be selected by sensory memory into short-term and long-term memory. The cognitive load experienced by participants when playing with the application is relatively light because the quiz used in Kahoot! is in the form of multiple choices that are presented briefly and clearly and rely more on what students already know and have learned.

The main challenges in using Kahoot! are internet access, an LCD projector, and Bring Your Own Device (BYOD) (Wang & Tahir, 2020). Internet is the main requirement to be able to access the application. These facilities must be fulfilled and have a stable speed because the more people are involved in the game, the more difficult access will be to process the page. An LCD projector is needed to display the main screen that is used by the host/presenter to monitor which participants have succeeded in joining and have not succeeded in joining. In addition, the main screen is also used to display quiz questions, scoreboards, and champion podiums. BYOD is a movement to bring personal devices for learning purposes. Participants can bring smartphones, laptops, or the like to be able to participate. The device is used to respond to questions in the Kahoot! quiz. Technical problems were encountered, including the speed of the internet context which was different for each device so that sometimes the background music stopped, text, images, and answer choices did not appear, and the participants left the game automatically. Participants had difficulty reading the questions and answers on the main screen due to inadequate lighting in the room. Participants also complained about not being able to change the answers they had chosen even though there was still time to answer. Short answer times can also put participants under pressure which can be frustrating, and stressful for fear of losing the game.

Conclusion

Based on the results of the research above, it can be concluded that the perceptions of Islamic Religious Education students towards Kahoot! as a quiz are very positive. This can be seen from the three main indicators, namely the ease of understanding how the application works, the application's ability to involve participants, and the relevance of quizzes to learning activities. Most students think that Kahoot! provide new experiences that are interesting, fun, and challenging. They are motivated and actively participate in taking quizzes. The findings need to be studied in more depth to see the consistency of the influence exerted by Kahoot! on students' positive perceptions through regular measurements.

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THE EFFECT OF GLOBAL ENGLISH ON EFL STUDENTS' MOTIVATION TO LEARN ENGLISH

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Abstract
This study aims to describe the effect of Global English on the learning motivation of EFL Students in learning English. The researcher used a qualitative descriptive methodology to analyze the data and several previous studies to support the data. Researchers researched EFL Students in the English Education Study Program of one private university in Cirebon. Data were specifically obtained by distributing questionnaires and direct interviews with EFL Students regarding the development of Global English and its effect on the learning motivation of EFL Students. Based on the results of the study, 2 broad categories of motivation affect the development of Global English on their motivation, which are intrinsic motivation and extrinsic motivation. As for the explanation of intrinsic motivation, namely the motivation that comes from EFL Students, that includes improving language skills for all purposes, having a larger scope of learning goals, knowing different types of English, and so on. While the notion of extrinsic motivation is the motivation that comes from outside EFL Students, which includes getting a greater opportunity to contribute to the world community, getting a better type of job, and getting a kind of higher quality education in particular.

Keywords: effect, global English, students' motivation, language learning

Introduction

In today's era, globalization has created conditions where English is important for modern communication. This has become one of the factors in the development of Global English. Different from Standard English, Global English is the concept of English as a global communication tool in various dialects and there is an effort to improve learning English. For more details, Global English is a combination of several English features that are easily understood by native and non-native speakers. Global English also allows and is open for developments and changes in the use of English as a medium of communication. (Modiano, 1999, p.3)

Harmer (2007, p.98) explains that motivation is something that drives a person to do something to get something. There are 2 types of motivation, namely intrinsic and extrinsic. Intrinsic motivation is an impulse that comes from inside of oneself, usually for stratification. Meanwhile, extrinsic motivation is an impulse

that comes from outside factors, for example, a need to have a good score after taking a test, a reward for completing a task, or punishment for not completing a task. Sometimes, these two types of motivation appear simultaneously or one of them is dominant. It all depends on each individual who is feel the motivation itself. So it can be said that, in learning, motivation is one of the main keys to achieving learning targets.

Directly, with the development of the use of Global English as a medium of global communication, it has become one of the factors increasing the motivation of residents from various countries who make English a foreign language (EFL), to learn more about English. Among other things, each motivation allows open for greater opportunities in terms of gaining broader knowledge, increasing potential and wider work opportunities, as well as getting to know cultures from various parts of the world (Parupalli, 2019, p.65)

English has been widely studied by non-native speakers outside of native-speaking countries. This can be seen from speakers of English as a second language far more than speakers of English as a mother tongue. This means that English is mostly used by non-native speakers (Seargeant, 2012). Aponte (2018) explains that the effect of English as an intermediary language allows us to transmit knowledge of the world and increase understanding and connection with that knowledge. Carpenter (2017, p.65) gives an example of English as an intermediary language for presenting international news, namely the Al Jazeera Media Network. Which initially they used Arabic as an intermediary language and then changed it to English in global news in 2005. This aims to make the news presented more accessible.

The main problem of Standard English learning is that there are often many rules, in this case, grammar, idioms, etc, which are too difficult for non-native speakers to understand, with the impact of the learning process taking quite a long time to reach a certain level in mastering Standard English (Rohmatillah, 2014, p.75). Because of this, there are still gaps in understanding and using English which may still be far from using Standard English, but researcher also wants to know whether the use of Global English can make learning English easier so that learners are more motivated to learn Standard English to achieve greater goals of their targets.

Cohen (2017) explains that the novelty of the studies refers to one or more factors which might be the new insight of the studies, which include new techniques or new statements, which results in a brand new information discovery. There have been many studies that have examined the effects of Global English and its relevance to the learning motivation of EFL students, but each of these studies has its characteristics regarding the topic. From the causes of the occurrence, the participants involved, the stages that were passed during the research, the commitments, the obstacles that were passed, and the authority of each party involved. In addition, the focus of the problem studied, namely related to the effect of Global English on local coverage in Indonesia, has not been widely carried out by previous researchers.

Global English

Blake (1996, p.4) explains that English history is divided into 3 periods, namely: Old English (450-1100 AD), Middle English (1100-circa 1600 AD), and

Modern English (since 1600). But Global English seems to have developed into the 4th period in English history. Which is the period when English is used by non-native speakers.

In terms of Global English development, Graddol (2019) claims that in the late 20th and early 21st centuries, English as a global language had a massive development. He also elaborated that for the first time in history, a language, in this case, English, could be adequately used as a global lingua franca to communicate between speakers of other languages in different countries. Which is this condition led to the birth of observers and researchers to study the Global English phenomenon in this era.

Known as a Global English pioneer, Indian linguist Braj Kachru has studied the spread and growth of English around the world. Based on his historical view, he developed three global English circles consisting of an inner circle, an outer circle, and an expanding circle (Crystal, 2003). The inner circle traditionally refers to English. In short, English is the main language used in English-speaking countries such as the United States, United Kingdom, Ireland, Australia, Canada, and New Zealand. The outer circle indicates a country (L2) that does not speak English as its mother tongue but uses English as a second language. These countries are usually British colonies, such as Singapore, Malaysia, India, and parts of Africa. The expanding circle refers to countries that recognize English as an international language. Unlike outer ring countries, these countries are usually not colonized by inner ring countries. Japan, Thailand, Vietnam, Greece, Poland, Indonesia, etc. are examples of countries that fall into this category and are expanding their circle.

In terms of Global English development in Indonesia, The Government of Indonesia recognizes that English plays a role as an international and scientific language, and has stipulated that English is one of the compulsory subjects from junior high school to university. As a foreign language, English is rarely used outside the context of the classroom. Outside the classroom, Indonesian students speak Indonesian or their local language instead, although there are still efforts to use English outside the use of formal norms. These conditions have some effect on the English proficiency of Indonesian students. The English proficiency of Indonesian students is quite inadequate (Suryanto, 2014, p.75).

Rachman (2019) found that the use of a mixture of Indonesian and English in communication is the effect of globalization, which no longer has borders or boundaries, even in today's interactions where both real and virtual interactions are becoming more prevalent, such as social media. As a result, people need the ability to interact with people from other countries and speak multiple languages called bilingualism.

The global culture that develops in Indonesian society tends to explain westward naming further confirming that English was an international language and is still the most widely spoken language by people around the world. The general attention to using a mixture of these two languages is that it is considered different from good and correct Indonesian (Rachman, 2019).

There are many factors behind the use of this mixed language, and there are pros and cons to the shift in language use in communication. There is also an opinion that the use of this mixed language brings positive things and allows Indonesians to compete with people from other countries, especially in this era of globalization where knowledge of English is very important. However, some argue

that the use of this mixed language can damage Indonesian itself, especially the language of increasingly abandoned regions. Another factor in the discussion of mixed language use is the concern that language use is appropriate or incorrect because the two languages are mixed at the same time (Rachman, 2019).

Students' motivations

Arianti (2019, p.117) explains that motivation is a psychological state that encourages someone to do something. Motivation has three main components: needs, encouragement, and goals. Needs arise when an individual feels an imbalance between what he or she has and what he or she expects. Encouragement, on the other hand, is the mental power to carry out activities that meet expectations. To explain, encouragement is a mental force that focuses on meeting expectations and achieving goals, and goals are what individuals want to achieve. In this case, this goal guides behavior, or learning behavior. Based on the meaning of the word motivation above, learning motivation is understood to mean something that creates the urge or enthusiasm for learning, in other words, the driving force behind the spirit of learning.

Harmer (2007, p.98) categorize motivation can be essentially divided into intrinsic and extrinsic motivations. Intrinsic motivation is the motivation that comes from within and is unaffected by anything outside of the person. Because every individual has the urge to do something, people whose actions are driven by their essential motives will only be satisfied when their actions achieve the consequences of the action itself. For example, a person who enjoys reading without encouragement can find and read his book. Diligent and responsible people learned well without waiting for an order. On other hand, external motivation arises as a result of an individual's external influence, but students want to learn in such situations, whether by invitation, order, or coercion from others. For example, if a student doing homework only follows the teacher's instructions, otherwise the teacher scolds them.

Another explanation from Legault (2016), intrinsic motivation refers to involvement in behavior that is inherently satisfying or enjoyable. Intrinsic motivation is essentially non-instrumental. In another word, essentially motivated actions do not depend on results that can be separated from the action itself. Rather, the means and purpose are the same. On the contrary, external motivation refers to the performance of a behavior that is essentially dependent on achieving results that are separable from the behavior itself. This is done to achieve different results.

Legault (2016) also elaborates that intrinsic motivation is a natural tendency of human beings. This means people are willing to do what they find interesting and fun. But for the intrinsic motivation to prosper, the social environment must encourage it. Social context influences the experience of intrinsic motivation by affecting perceived autonomy and ability. Essentially, when the social environment supports autonomy by strengthening the internally perceived place of causality (for example, behavior arises from individual choice and internal causality, not from external pressure), motivation is strengthened. In contrast, when the social environment ignores or hinders autonomy by enhancing externally perceived causal trajectories (for example, by providing or demanding external rewards), the attachment will be impaired. Therefore, as long as the social environment uses behavioral strategies and control external obsessions, strengtheners, and punishers,

the motivation is no longer intrinsic but external. As it undermines individual autonomy, punishments, time limits, and surveillance threats have been found to help reduce intrinsic motivation and increase extrinsic motivation. Perceived abilities also affect intrinsic motivation. When the social environment impairs perceptual abilities, intrinsic motivation diminishes. On the other hand, when the social environment enhances the perceptual ability in activity, it increases essential motivation. Positive feedback (for example, verbal praise) tends to raise awareness of the personal impact and increase intrinsic motivation. Interestingly, this enhancing effect of positive feedback on intrinsic motivation requires not only the individual to feel competent, but also to experience autonomy in performing actions.

In their study, Nuraeni and Aisyah (2020, p.51) examined the motivations of students learning English as a foreign language. The purpose of their study was to find motivation for them to choose English as their major. The importance of this study can be used as an aid to students' recognition of their learning motivation and as a teacher's foundation for students to improve their learning motivation. Interviews were conducted to achieve the research goals. The results showed that most students were initially motivated externally and few experienced intrinsic motivation. After studying English for over a year, the motives of some students remained almost the same. However, some students changed their motivation. Some students who were essentially motivated to learn English because of the difficulty of learning were extrinsically motivated. In contrast, one student turned external motivations due to curiosity into intrinsic motivations and found English to be an interesting learning subject.

Purnama, et al. (2019, p.539) found that motivation is one of the most important things in the learning process. Without motivation, it is difficult to reach your learning goals. If learners have it in the learning process, they will better understand the material, especially English. To determine the motivation of 8th-grade English students at one Islamic School in Indonesia, a descriptive qualitative method was used to carry out the study. Data were collected using a 10-item student motivational questionnaire and a 5-item interview by Clement, Dornyei & Noels (1994). The data was created with percentages and descriptions. The main results show that the learner is very motivated overall. Based on the results of this survey, the participants have this motivation based on the results of questionnaires and interviews. From the output of the questionnaire, most of the students choose the informed consent form. This means that students enjoy learning English. The interview also showed that students are very interested in learning English. However, in this case, teachers need to be more creative concerning the media, strategies, or materials provided when teaching-learning activities to motivate students.

According to Prasangani (2018), in 2012, Lamb pioneered research in Indonesia by focusing on both urban and rural EFL learners. The results of the study reveal the lack of globalization and the need for globalization, and thus the learner's ideal L2 because rural learners show a weaker ideal L2 self compared to urban learners. Self-development shows that learners are highly dependent on regional differences in English. This condition is similar in other countries. You and Dornyei (2014, p.1) found that urban L2 Chinese learners are an ambitious group compared to rural groups because Global English is important to meet globalization needs is similar. The value of Global English not only enhances the motivation to learn

Global English but also enhances the imagination of L2 learners as Global English speakers. It should be noted that recent motivational studies have revealed a strong motivation for urban learners to achieve future goals through global English. However, few motivational researchers have been able to focus on the motivation of rural L2 learners, consistently showing the weak L2 motivation of rural L2 learners. This shows that local L2 learners need to understand and investigate the motivations for studying Global English to reach their future goals (Prasangani, 2018).

The result of Global English is the emergence of a "new community" of English users. This new community is associated with non-native speakers English users, like the English-speaking community of Outer and Expanding Circles. This requires that English as the language of the world is more diverse and widespread today, not only among native speakers but also among non-English speakers around the world. Therefore, it is natural that many people who speak English other than native will appear. Communication practices need to emphasize linguistic diversity. It is important to recognize that communicating in English is no longer just for a native speaker, but communication with many English-speaking users around the world (Graddol, 2019).

The emergence of numerous English "new communities" must reflect the practice of learning English. Several questions arise, do we still need to refer to Standard English for teaching and learning English? Do learners/students need to introduce a variety of non-native speakers? English is now the international language used for communication in politics, commerce, education, and other contexts around the world. On the other hand, Standard English is not the only language type, and non-native speakers are also discussing their types. In addition, people will need to take an English test to reflect on the benefits of this "new community" (Graddol, 2019).

Standard English principles have long been used in the world of teaching English. For example, the pattern of teaching English in Indonesia has long adopted this principle. Students and learners can only teach Standard English without being told that there are many different types of English. Another consideration is the need to consider the use of language as a teaching tool in classes other than language and English, and the use of a primary language as a teaching tool in classroom activities that is a barrier to the acquisition of English skills. It means that there is. Using the first language can help students improve their English proficiency by addressing the identity of non-native speakers to learn the language. This means that English education that considers the principles of global English is no longer based solely on the use of Standard English, but on English education that respects the diversity of English in the world and considers the first medium of education as a language (Lestari & Setiyawan, 2020).

In his article, Graddol (2019) shows increased tolerance for multiple standards of English and increased flexibility and liquidity in the use of English by global citizens. In this regard, there are several mechanisms for maintaining the effectiveness of English as an international language. First, there is the principle of mutual understanding. Native varieties (including both American and British) have proved to be in fact as difficult to understand as some varieties in second languages around the world. In addition, strict adherence to certain usage standards may not be the most important means of achieving mutual understanding. Global English

speakers are welcome to adopt the linguistic characteristics of the first language, as long as they do not endanger intelligibility. Native language peculiarities that cause problems for learners and are not necessary for international understanding can be safely ignored. In other words, it doesn't have to sound like a native speaker to be understood around the world, and global English speakers don't have to sacrifice their existing identities.

Second, there is a practical strategy used by experienced intercultural communicators, which even native speakers should adopt if they want to understand the context of a common language. The "English Wave" is now being built. Within 10 years, almost one-third of the world's population is trying to learn English at the same time. But looking to the future, the flow of learners can slow down at about the same rate as it came. A successful second language English project for elementary school students around the world will bring a new generation of English-speaking children who do not need English lessons in the future. As children of this generation pass through the education system, junior high school students are expected to begin learning curriculum subjects such as math and science in English. This is already happening in many countries.

Method

To obtain the data, the researcher used descriptive qualitative and used questionnaires and interviews as data collection instruments. Descriptive qualitative is aiming to explain the phenomenon as deeply as possible by collecting data as clearly as possible. This research does not prioritize the size of the population or the sampling which can be very limited. If the data collected is deep and can explain the phenomenon under study, then there is no need to look for another sampling. Here the emphasis is more on the quality of the data, not the quantity of data. (Kriyantono, 2014, pp.56-57).

The data collected through interviews and questionnaires from data sources is the subject from which the data was obtained. Based on the type of data required, participants in this survey are a group of objects used as data sources in the survey, which can be in the form of people, objects, documents, and so on. Therefore, based on the problems that exist in this study, the researcher will use 10 undergraduate students at one of the private universities in Cirebon, Indonesia. Participants were selected according to the purpose and questions of this study.

The researchers adopt the questionnaire that has been formed by Funada et al., in 2020 called, Global Englishes Orientation Questionnaire (GEO-Q) with minor adjustments. After the answers to the questionnaire have been received, the researcher will validate the answers to the participants by conducting interviews. Interviews will be conducted if the participants are willing and agree.

Data analysis in qualitative research is performed before entering the field, in the field, and after leaving the field. However, in qualitative research, data analysis focuses on field processes as well as data collection. Qualitative data analysis is done during the data collection process, not after the data collection is complete. The stages of data analysis during the field process that accompany data acquisition according to Miles and Huberman (1984, p.16) are as follows:

Data reduction means summarizing, selecting points, focusing on points, looking for themes and patterns, and discarding irrelevant data. Therefore, the reduced data provides a clearer image and makes it easier for researchers to collect

more data. Once the data is reduced, the next step is to view the data. In qualitative research, the presentation of data takes the form of brief explanations, charts, relationships between categories, flowcharts, and so on. In this case, Miles and Huberman (1984, p.16) also found that the most common text used to present data in qualitative research was narrative text. The third step in analyzing qualitative data is to draw and validate conclusions. The conclusions made by the researchers are supported by valid and consistent evidence, and the conclusions presented are credible. These three phases of analytical activity are interrelated and will continue during the research.

Findings

In the Questionnaire section, the participants were asked to give a score of agreement on several available statements. The rating scale is divided into 4, which are Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4).

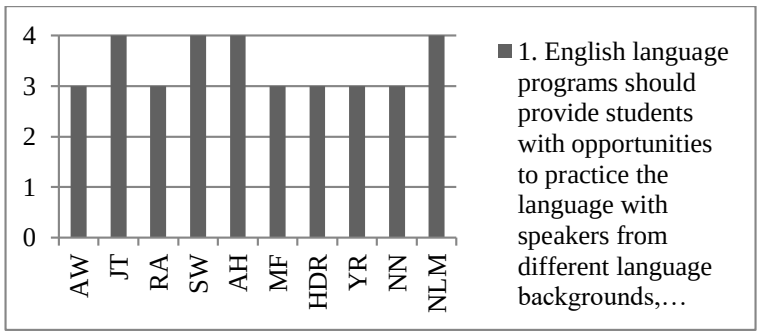


Figure 1. Questionnaire data 1

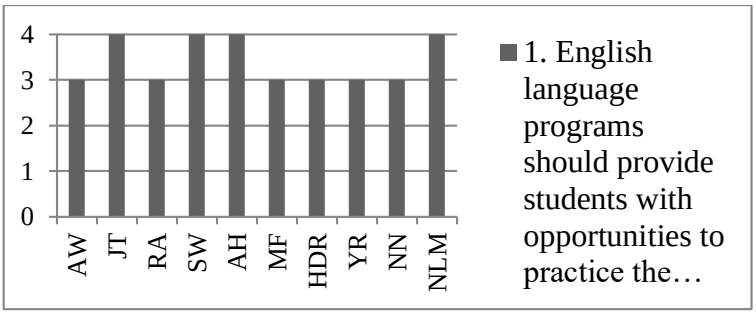


Figure 2. Questionnaire data 2

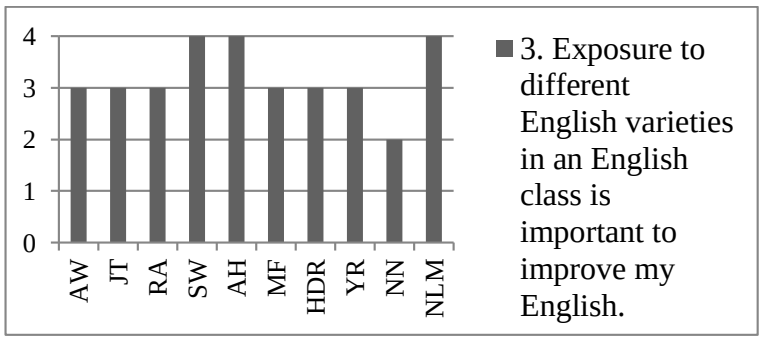


Figure 3. Questionnaire data 3

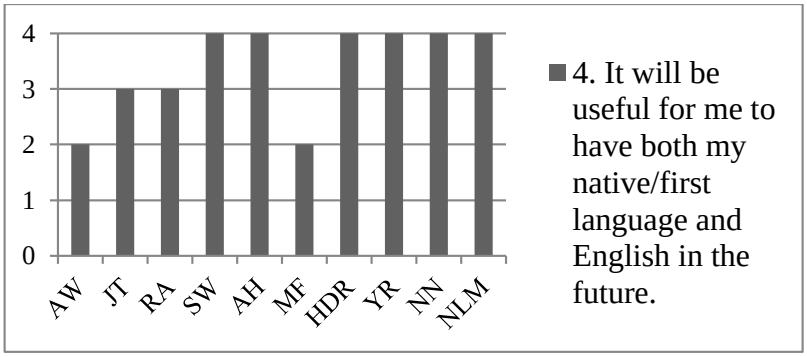


Figure 4. Questionnaire data 4

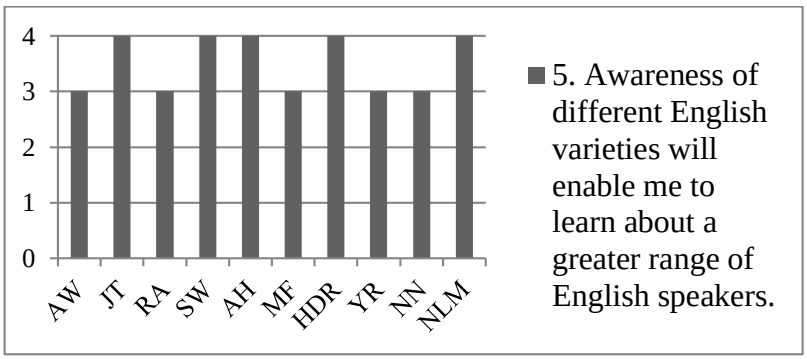


Figure 5. Questionnaire data 5

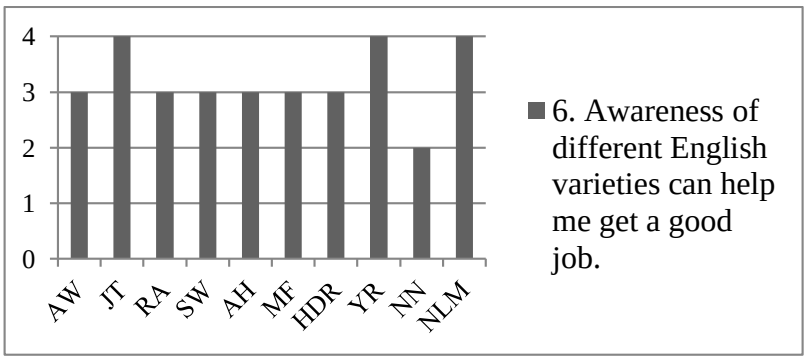
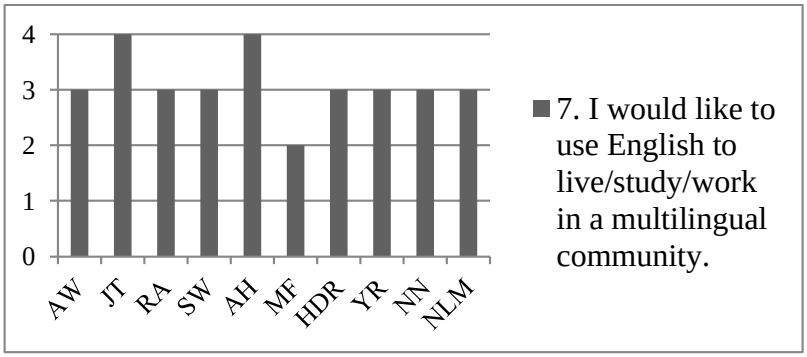


Figure 6. Questionnaire data 6



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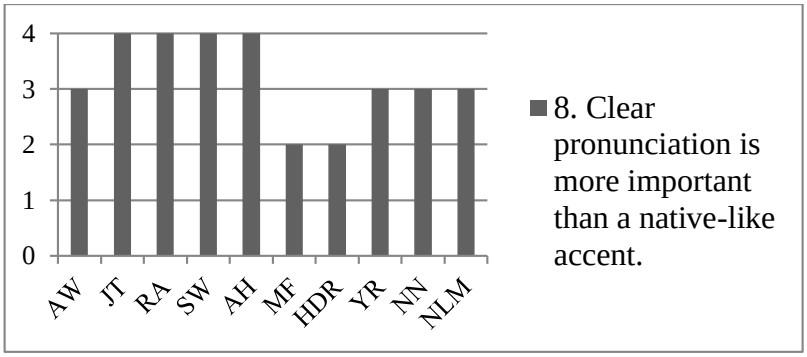
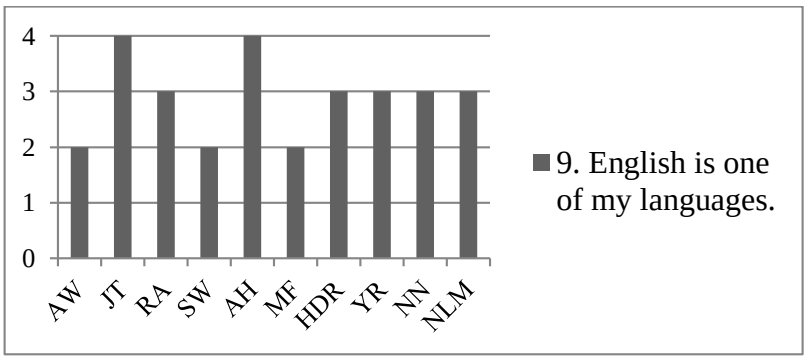


Figure 8. Questionnaire data 8



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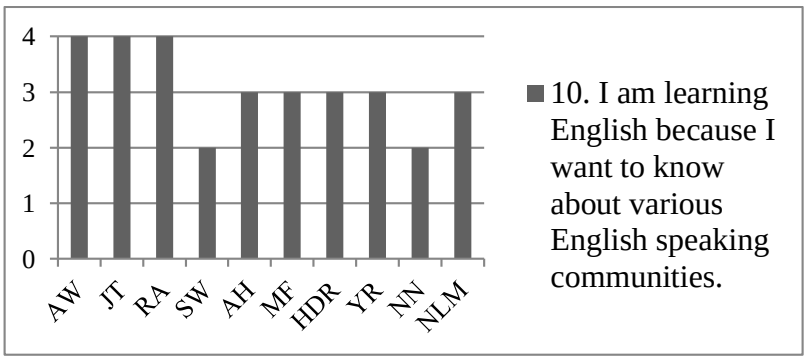

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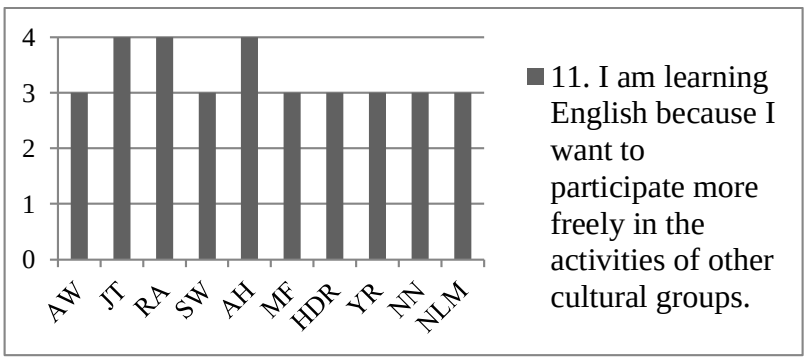

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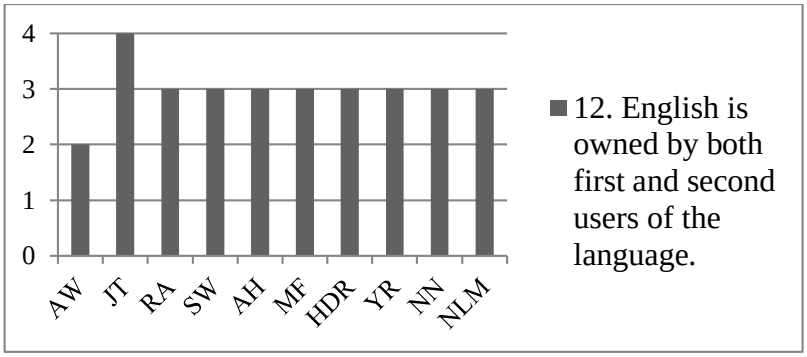

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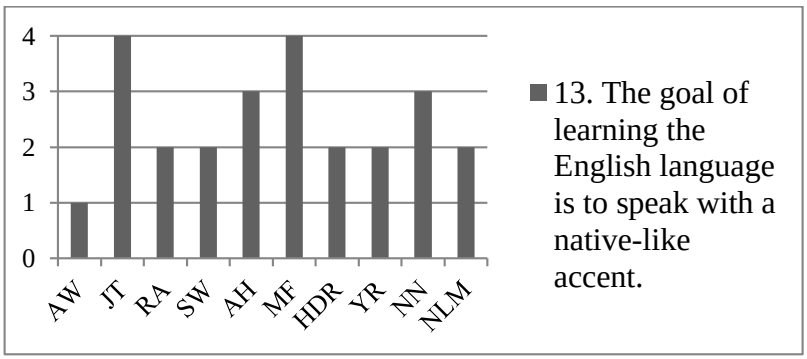

Figure 13. Questionnaire data 13

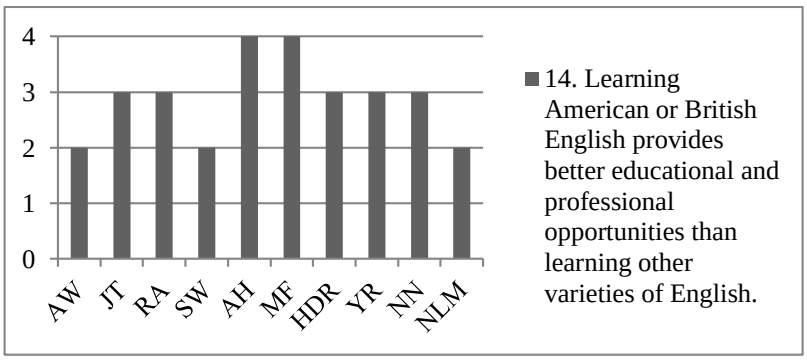

Figure 14. Questionnaire data 14

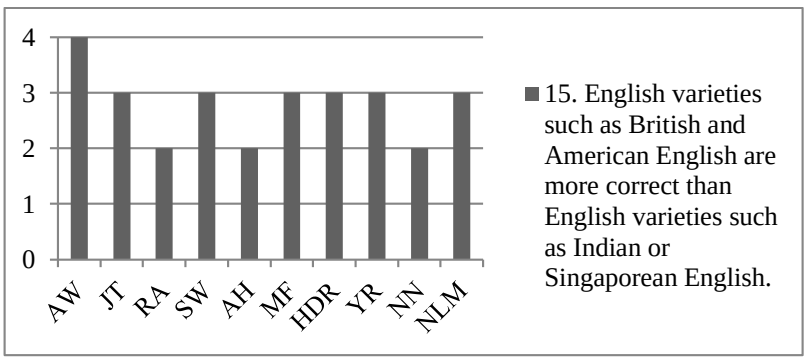

Figure 15. Questionnaire data 15

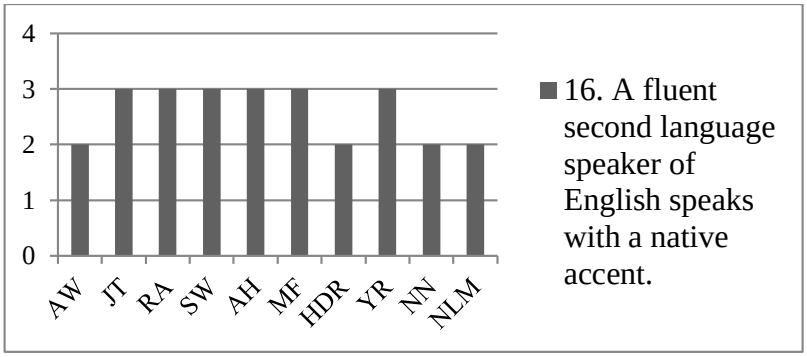

Figure 16. Questionnaire data 16

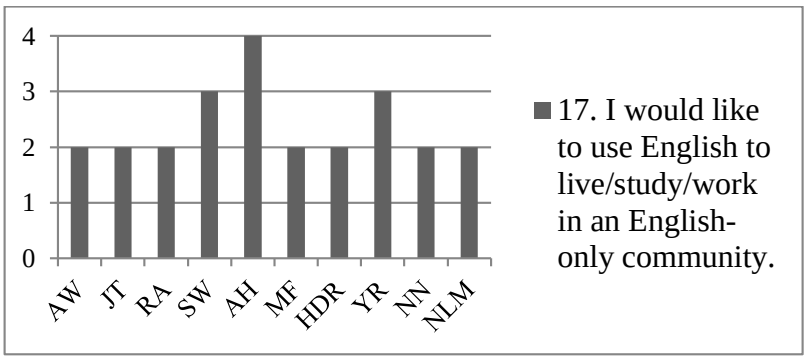

Figure 17. Questionnaire data 17

In the Interview section, all participants were asked to be willing to conduct interviews. But after being asked for their consent, only a few participants were willing to do it. JT, SA, RA, and HDR were willing to do the interview.

Table 1. Interview data

Q1. In your opinion, is there any other types of English besides Standard English? Can you mention some of it?	
	Answers
JT	Yes, there are Canadian English, British English, American English, Australia English, Bahasa Jaksel, and many more.
SA	Non-Standard English, because it is a informal version of English which contains of slang and colloquialisms that wouldn't be used in more formal or professional settings.
RA	Yes, there is. Apart from American and British English, what I know more about Standard English is Australian and Singaporean.
HDR	Yes, there is. Besides American and British English, I also know Australian English and Singlish.
Q2. In your opinion, what are the advantages of learning other types of English besides Standard English?	
	Answers
JT	We can know the variation of English, and also if we want to go to another country who doesn't speak English, we can use their accent so they will understand what we say.
SA	In my opinion, maybe this is a very cliché, but by learning English other than Standard English, it can add insight into the various types in English, besides getting a lot of new vocabulary.

RA	In my opinion, learning about types of English other than Standard English adds to my knowledge of the language and culture globally.
HDR	I became more aware of the diversity of the English language which increased my knowledge. I can also tell the difference between the words used and the accent used.
Q3. In your opinion, do EFL students have to always use Standard English in their studies?	
Answers	
JT	I think yes, because they have to know at least the Standard English that people always use. Then, they can learn other types of English if they want to improve their knowledge.
SA	Of course, because in the learning process we must use Standard English so that it is easy to understand and the learning process is also a formal activity, so we must use Standard English.
RA	Yes.
HDR	Yes.
Q4. Do you have difficulty using Standard English? And, is it easier for you to understand English without using some rules (i.e. Grammar, Idiom) in Standard English?	
Answers	
JT	No, I don't. I don't have any difficulty in using Standard English.
SA	So far nothing. Of course, I find it easier to use Standard English without sticking to rules like grammar or idioms.
RA	Yes, there are difficulties. No, because in understanding English sentences, it is necessary to pay attention to the grammar in order to understand the meaning and purpose of the sentence, as well as the use of idioms if we do not know the meaning of the idiom then we cannot understand the meaning of the sentence or expression.
HDR	Yes, there is. No, because if you don't use proper grammar, you will have misunderstandings when communicating in English. This will make us not understand the meaning of the person's words.
Q5. Do you have your own motivation to learn English, both internally and externally?	
Answers	
JT	Yes, I do. I do have my own motivation to learn English. I wanna know and also can to speak in other types of English! Because maybe some of the words may be different, so I want to enlarge my vocabularies!
SA	There is no special motivation, it's just because I like English so I learn English so that I can speak and write English well.
RA	Yes. One of my motivations for learning English is from within me which I like languages learning and I also want to open up opportunities outside because in the current era of globalization, foreign language skills are needed.
HDR	Of course. My motivation to learn English is that I want to improve my foreign language skills which will be very useful for myself.

The researchers get some data to determine the extent of participants' understanding of the topic of Global English. The author asked if the participants knew other types of English besides Standard English and got various types of answers. However, only a few correct ones are included in the Global English category, which is Bahasa Jaksel and Singaporean English or most known as Singlish (ID.1).

In the questionnaire, researchers provide several statements regarding the participants' opinions on the topic of Global English. The majority of participants

stated that they use English in their lives (QD.9) and also agreed that English is owned by the first and second users of the language (QD.12). The same thing was stated and supported by Rohmah (2005: 108), that the English language is owned by all groups of users. They also agree that clear pronunciation is more important than a native-like accent (QD.8).

Global English tends to ignore grammar and the use of native accents, this happens because it makes the use of English easier and reaches all levels of English users. The majority of participants also support that speaking with an accent like a native speaker is not their goal in learning English (QD.13). However, the participants still considered that the English native variety was better than other types of English (QD.15) and considered the fluent second language speaker of English speaks with a native accent (QD.16).

Intrinsic motivations of EFL students to learn English

Intrinsic motivation is the motivation that comes from within the participants. Currently, there are so many communities in the world that use English as their medium of communication. And not all members of the community may be at a standard level of understanding of English. The majority of participants agreed that they studied English to know the various English-speaking communities (QD.10). Several participants explained and mentioned being able to use the accent of a country so that they can communicate with them, gain new knowledge and new vocabulary, increase language knowledge and understand culture globally, and increase knowledge about the diversity of English, and know the typical words and accents that used in a community (ID.2). This is also supported by the motivation of participants to be involved in cultural activities in a community that they are interested in outside their current community (QD.11).

To be more specific, one of the participants had an internal motivation who wanted to know how to learn more types of English and expand his vocabulary. Another explained that he internally loves language studies and wants to learn them. And the last one explained that internally she wanted to improve her foreign language skills (ID.5)

Participants understand that awareness of other varieties of English can help them learn about various types of English speakers (QD.5). Therefore, almost all of the participants agreed that exposure to other types of English could improve their English language skills (QD.3) so that they indirectly try to understand other types of English.

Extrinsic motivations of EFL students to learn English

Extrinsic motivation is the motivation that comes from outside the participants. There are several effects of Global English on the learning motivation of EFL students. students expect the opportunity to communicate with English speakers who come from various community backgrounds (QD.1). Participants also stated that it would be more useful to use two languages, for example, Indonesian and English in the future (QD.4)

In addition, participants still agree that learning English natively provides better educational and professional opportunities compared to other types of English (QD.14). This was also explained by one of the participants that externally he wanted to open up greater opportunities to develop in the era of globalization

(ID.5). Therefore, participants have the motivation to live, study, or work in a multilingual community (QD.7) and if possible in an English-only community (QD.17).

About the necessity of EFL Students using Standard English in their studies, all participants in the interview section said that they should use Standard English. Because Standard English is generally used in formal activities (ID.3) Overall, the participants did not experience significant problems in understanding Standard English but admitted that it was easier to use English without being constrained by grammar. Some participants had difficulty but stated that it was easier to use standard rules to understand the aims and objectives of learning, and to avoid misunderstandings (ID.4). According to Wang (2013) this is the role of Global English, which is to become a learning bridge to understand the level that someone wants to master, which in this case is Standard English.

Conclusion

Based on the results of qualitative descriptive research using interview and questionnaire techniques conducted at the English Education Study Program in one private university in Cirebon about the effects of Global English on EFL students' motivation to learn English, several conclusions can be drawn. Global English is a phenomenon where there is a development in the use of English in several communities with different backgrounds in the world. While learning motivation is an encouragement that comes from both inside and outside a student to learn. And in this study, it has been proven that there is an influence and relevance between the two. There are several factors found in the effect of Global English on students' learning motivation which can be categorized into 2, namely intrinsic and extrinsic motivation. As for the explanation of intrinsic motivation, it is the motivation that comes from EFL students, which includes improving language skills for all intents, having purposes greater learning scope, knowing pretty other types of English, and so on. While explanation of extrinsic motivation is the motivation that comes from outside of EFL students, which includes getting greater opportunities to contribute to the world community, getting sort of better jobs, and getting sort of better quality education in a particularly big way.

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THE MOST FUNDAMENTAL EDUCATION CONFLICT IN INDONESIA: A SYSTEMATIC LITERATURE REVIEW

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Abstract
This paper aims to investigate the main issues in education in Indonesia and propose sustainable solutions so that education policymakers, stakeholders, and academics can increase their awareness and knowledge of the education conflict. This paper systematically reviews the literature on educational conflicts in Indonesia from 2000 to 2021. The journals used as the main reference in this study are quality journals indexed by Scopus. The literature sources were obtained from a trusted institution called Taylor & Francis Online. This institution is located in the UK and is a well-known multinational company publishing books and academic journals. Several issues are found in the literature, but the crucial issues that are most often discussed and need serious attention in the literature are the limited number of skilled teachers, inadequate facilities and infrastructure, lack of learning materials, high cost of education, low quality of education, and the minority of disabled groups.

Keywords: educational conflicts, education development, Indonesian education, solutions of educational conflict

Introduction
Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves and society (Indonesia, 2003). Dewantara (1976) explains the meaning of education, namely the demands in the life of the growth of children. The point is that education guides all the natural forces that exist in children so that they as humans and as members of society can achieve the highest safety and happiness.

According to (KBBI, 2022), the meaning of education is a process or method, or act of educating. Linguistically, the definition of education is the process of changing the attitudes and behavior of a person or group of people to mature human beings through teaching and training efforts. Education is a human effort made to guide immature humans to maturity. The provision of education is done by helping students to carry out their life tasks to be independent and ethically responsible (Langeveld, 1980). Education is a social heritage that is a combination of the development and growth of an individual that forms a conscience. Education is a

process carried out to shape oneself and self-determination ethically and by conscience (Henderson, 1960). Education is a conscious effort to prepare students through guidance, teaching, and or training activities for their roles in the future. Education is a continuous (eternal) process of higher adjustment for human beings who have developed physically and mentally, who are free and aware of God, as manifested in the intellectual, emotional, and human environment of humans (Horne, 1937).

From some understanding of education according to the expert, it can be concluded that education is guidance or assistance given by adults to the development of children to reach maturity with the aim that children are capable enough to carry out their life tasks without the help of others. Education as an important component of human capital has beneficial effects on individual social and economic outcomes including income, health, cognitive abilities, and political and civic engagement (Bonjour, et al., 2003; Clark & Heather, 2013; Giorgio, Daniele, & Fort, 2013; James & Fabrizio, 2012).

Teachers play an important role in bringing about change in the world of education because teachers are agents of change in education (Van der Heijden, Geldens, Beijaard, & Popeijus, 2015). The government's attention is very serious in terms of education. Education can change the future of a country (Newhouse & Suryadarma, 2011). The seriousness of the Indonesian government in carrying out the education process can be seen in the government's concrete steps, with changes to the curriculum. In the process, the Indonesian government has changed the education curriculum ten times (Hieronymus, 2017). However, the government as the state administrator cannot only focus on the education sector. Improvements in other sectors can affect the education sector so that the education sector will be left behind (Heru & Donghun, 2011; Losina, Paul W, & Ruhul, 2013). The development of education must be in line with the availability of educational infrastructure (David & Lili, 2016; Robert & Teguh, 2020). The cost of obtaining this education is also very important so that inequality does not occur (Andrew, 2016; Stephanie, Udi, & Ina, 2019). However, these costs are expected to support the availability of infrastructure (Heru & Donghun, 2011). Financial support is very important in increasing the quantity and quality of schools and teachers. This will also affect the improvement of student performance (Suryadarma, Suryahadi, Sumarto, & Rogers, 2006).

Better quality of school management will increase school grades. The quality of this management will ultimately lead to a higher level of participation. One of the factors that can influence the improvement of school quality is increasing teacher incentives (Kazushi, 2011). Increasing teacher incentives can affect teacher skills. Increasing teacher compensation and qualifications can result in better student performance (Anne, Raden, & Elan, 2019; Elisa, 2019; Grant, Soler-Hampejsek, S, & Hewett, 2011). Teacher skills and knowledge is one of the things that can affect school grades. The more friends who go to school, the greater the value obtained by the school.

The availability of learning infrastructure can affect the spirit of learning for the better (Beatriks, et al., 2021; Naibaho, 2021). However, the availability of infrastructure is not the most important thing. In improving the quality of education, it is also necessary to pay attention to the readiness of the teacher (Van der Heijden, Geldens, Beijaard, & Popeijus, 2015). The ability of teachers to use various

teaching methods and communication skills is very necessary. The most important thing in improving the quality of teachers is the ability of teachers in the use teaching methods (Rasyad, Bambang, Zulkarnain, Sucipto, & Bronwyn, 2019; Rif'ati, Insih, Zuhdan K, & Triyanto, 2019). The teaching method is expected to convey learning material well (Naibaho, 2021). In addition to the delivery of teaching materials, it is also important to pay attention to the morale of students. The morale of students is a serious concern in ordering the quality of graduates. His research questions whether teachers teach all moral values in a balanced way, or whether they consider some moral values to be more important than others to students (Sri, Melanie, & Manfred, 2021).

Indonesia's education policy framework to improve human resources and increase the country's competitiveness focuses on five areas: access to education, education quality, the synergy between government, industry, and higher education, and industry linkages and incentives (Indrawati & Kuncoro, 2021). Education can increase a person's cognitive capacity in achieving an increase in social status (Rasyad, 2017). Incentives for additional assignments may have a major effect on teacher mobility, as encouraging teachers to take the first step may lead to greater mobility in the future (Renske & Rob, 2014). In reality, there are still many teachers who live in a state of inadequacy (Anne & Sindu, 2021). The government is aware of the lack of pedagogical knowledge and skills by teachers, so the state undertakes a highly structured teacher development program (Ashadi & Suzanne, 2016).

Education services should be carried out widely, including for people with disabilities (Indra, Clemence, Dominggus, & Deborah, 2019). Educational methods should also be distinguished from people with disabilities, especially in rural areas that do not yet have supporting facilities (Farida, 2021). Current conditions indicate that three out of four persons with disabilities only receive basic education. The majority of them work in the informal sector, with very limited social protection. This obstacle causes several children to drop out of school, so it needs to be addressed comprehensively. Meanwhile, access to skills training needs to be improved, so that formal job opportunities are increased (Tendy & Jahen, 2022).

Indonesia is a developing country with a population of 275.77 million, according to a report from the Central Statistics Agency (BPS, 2020). Meanwhile, the income of the Indonesian population increased to IDR 62.2 million per year. Middle-income countries, such as Indonesia, have poor performance in terms of Human Development Indicators (HDI). Indonesia is in position 87 out of 157 countries (Anne, Raden, & Elan, 2019). This is caused by inadequate health facilities and educational facilities.

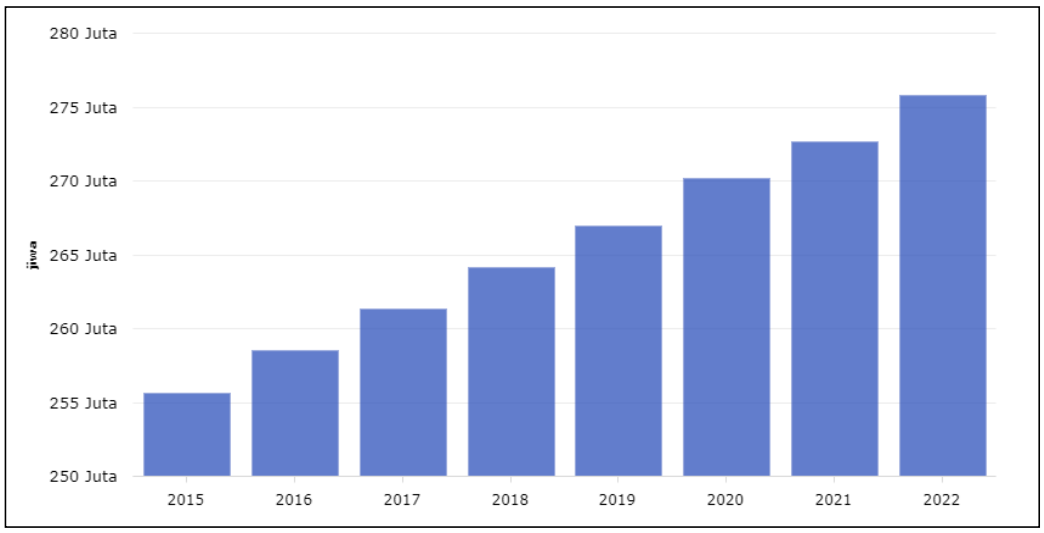

Figure 1. Graph of Indonesia's population in 2015-2022.
Source: BPS.

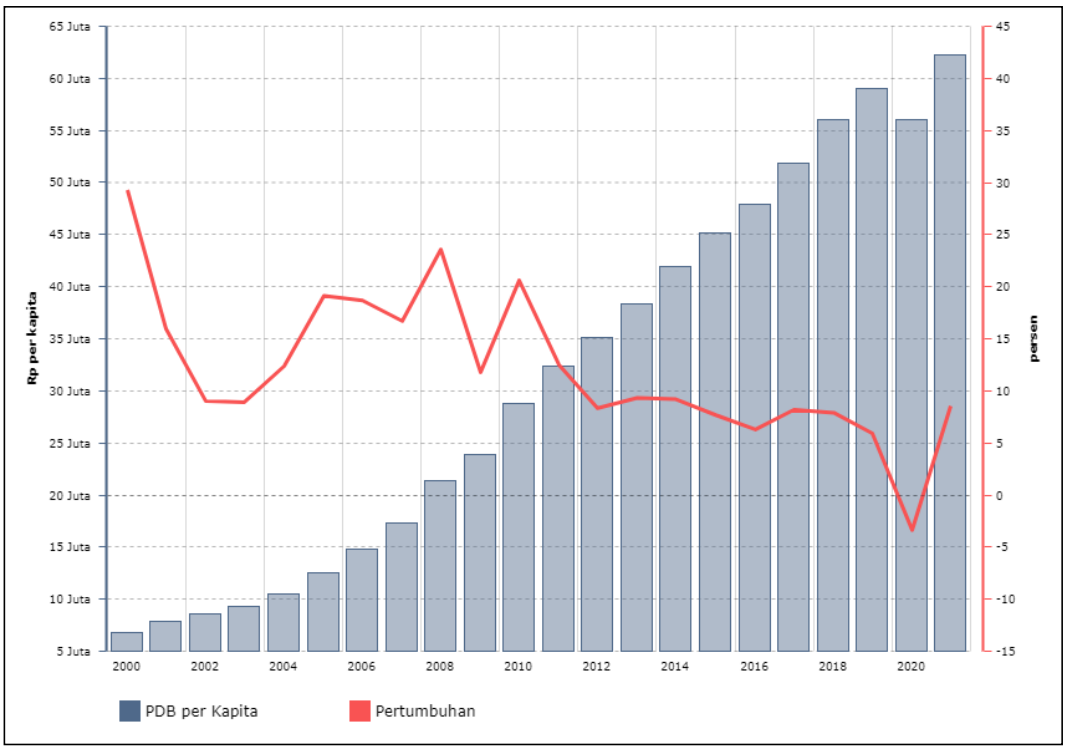

Figure 2. Graph of Gross Domestic Product (GDP) growth per capita of Indonesia's population in 2000-2021
Source: BPS

The GDP per capita growth of the Indonesian population is in line with the number of students dropping out of school in Indonesia. The poorest children, children with disabilities, and children living in disadvantaged areas of the country are most at risk of dropping out of school. Junior high school children aged 13 to 15 from the poorest households are five times more likely to drop out of school than children from the richest households. Geographically, dropout rates range from 1.3%

in the relatively affluent city of Yogyakarta to 22% in Papua, the easternmost and poorest province in the country. Recent analysis from the Intercensus Population Survey (SUPAS, 2015) shows that 57% of school-age children with disabilities are not in school. Meanwhile, many schoolchildren struggle to master basic academic skills. Less than half of 15 years old students in Indonesia have only a minimum level of reading proficiency and less than a third achieve proficiency in mathematics (PISA, 2015). Teenagers also miss opportunities to develop their full potential. Of the 46 million youth in Indonesia, almost a quarter of youth aged 15 to 19 are not in school, have no work, or have not attended the training. Youth unemployment reaches approximately 15 percent. The gross enrollment ratio for national early childhood development was in the range of 72 percent in 2016-2017 but only reached 51 percent in Papua Province.

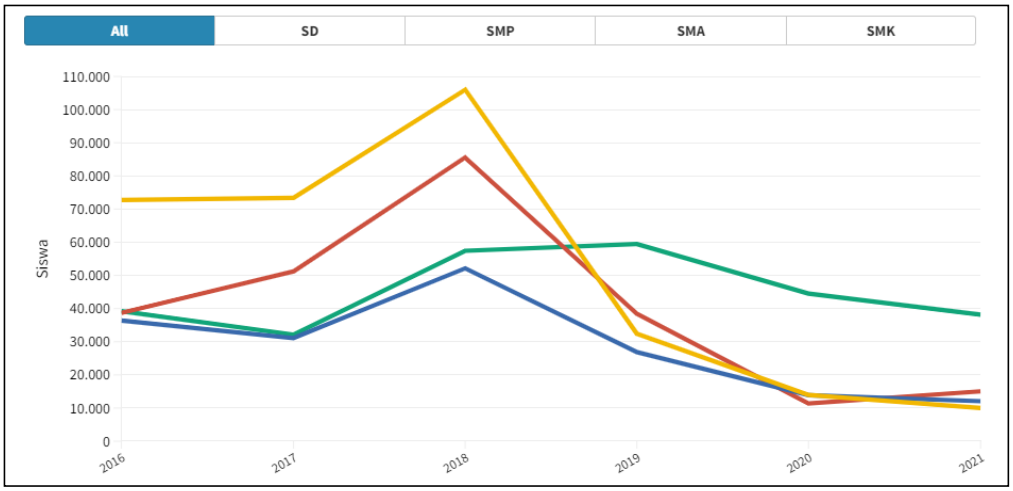

Figure 3. Graph of the number of students dropping out of school in Indonesia in 2016-2021
Source: Ministry of Education, Culture, Research, and Technology of Indonesia.

The Ministry of Education, Culture, Research and Technology of Indonesia noted that the number of students dropping out of school reached 75,303 in the 2020/2021 school year. This number decreased by 10.05% from the previous academic year which reached 83,724 students. In detail, the number of students who dropped out of elementary school reached 38,176 people. That number decreased by 14.24% from the previous year which was 44,516 people. For the Junior High School level, the number of students who dropped out of school was 15,042 people. This number increased by 32.20% from 2020 which was 11,378 people. A total of 12,063 students dropped out of high school in 2021. The figure decreased by 13.08% from the previous year, which was 13,879 people. Meanwhile, as many as 10,022 students dropped out at the Vocational High School level. That number also decreased from the previous year which was 13,951 people. Around 59% of child domestic workers in Jakarta and other metropolitan areas are girls from rural areas. More than half of them only had primary education, a further 26% dropped out in grade 7 or 8 (UNESCO, 2019). The number of graduates who work from all graduates is 70.0% and those who continue school are 3.8%, unemployed at 8.2%,

and working inappropriately at 18.1% (Agus, Sudiyono, Widodo, Khairur, & Sri, 2020).

Methods

The research method used is a literature study. Journal articles published in international journals indexed by Scopus are collected to find out the educational conflicts that exist in Indonesia. The literature sources were obtained from a trusted institution called Taylor & Francis Online. This institution is located in the UK and is a well-known multinational company publishing books and academic journals. These conflicts were inventoried and grouped into the most mentioned conflicts. To focus on the review, two research questions are addressed, namely: what are the main educational conflicts that exist in Indonesia, and what are the basic solutions to these conflicts that can be provided for education, practitioners, policymakers, and scholars?

Discussion

Educational conflicts in Indonesia

Education problems in Indonesia must be followed up and must be addressed immediately. When compared with superpower countries, Indonesian education is still said to be lagging. However, this does not mean that Indonesia does not have hope. History records that Indonesia in the Soekarno era was called the respected Asian Tiger. The problem of education in Indonesia is complex. Where the problems that arise are quite disturbing to maximize the world of education. Here are some of the problems of education in Indonesia.

Limited number of skilled teachers

Whether we realize it or not, the problem with education in Indonesia is the limited number of skilled teachers (Diana, 2002). Teachers are also prepared to create skilled workers in the industrial world, by providing productive, normative, and adaptive subjects (Ashadi & Suzanne, 2016). In general, skilled and qualified teachers are scattered in urban areas or areas that are easily accessible. Meanwhile, in marginalized and remote areas, it is very difficult to find a teacher (Anne & Sindu, 2021; Elisa, 2019).

Many factors influence, so this happens. One of the factors of the problem is the interests and opportunities of the teachers themselves (Ashadi & Suzanne, 2016). Because more teachers choose locations that are easily accessible in terms of transformation and access to basic needs is easy to obtain (Anne, Raden, & Elan, 2019). Meanwhile, remote areas are not looked at all. There may be teachers who are called to work in remote areas with minimal access, but the ratio is only 1 in 10. The number is also very small. So it is only natural that there is a gap in skilled teachers in remote areas and cities. So, there is also a gap in the quality of graduate students (Kieron & Budiyanto, 2015). No wonder the regeneration who lives in remote areas, is not exposed or comes to the surface. That is why this gap is a big task for the government to evenly distribute skilled educators in remote areas. This gap is an effort to ensure equal distribution of teachers.

Inadequate facilities and infrastructure

The problem of education in Indonesia is very often complained about by parents, teachers, and students themselves. It is undeniable that in terms of facilities and infrastructure it is inadequate (Van der Heijden, Geldens, Beijaard, & Popeijus, 2015; Robert & Teguh, 2020). Especially schools in rural areas, suburbs, and schools in remote areas (Elisa, 2019; Heru & Donghun, 2011; Indra, Clemence, Dominggus, & Deborah, 2019). This is a classic and familiar problem. However, no matter how bad the facilities and infrastructure in the suburbs and villages are, there are still more serious educational problems found in Indonesia. Indonesia is an archipelagic country that has many islands. Many parts of the area are not accessible, such as because of the difficulty of transportation.

Many future generations live on the islands, they are not only limited to facilities and infrastructure. However, they are also limited in many ways. For example, you have to cross the other side of the island every day to enter school. Living with a limited collection of books because it is not accessible and untouched. Not to mention the problem of no electricity network or internet network (Beatriks, et al., 2021). So, they have to use traditional lighting. Now is the era of globalization, and even the world of technology is completely connected to the outside world, but there are still areas that have not been touched in this country. Given the inevitable shift towards an online and digital culture, it is important to ensure that Indonesia has the infrastructure and skills to use digital technology (Indrawati & Kuncoro, 2021). As bad as the infrastructure felt by the people who live in the city, it will be better than the people who do not have access to electricity and cannot access the internet freely.

Lack of learning materials

It is undeniable that the problem of education in Indonesia also collides with the limitations of teaching materials (Elisa, 2019). Lack of limitation of teaching materials is a natural thing, because of the awareness of literacy in Indonesia, it is included in the last order (Rif'ati, Insih, Zuhdan, & Triyanto, 2019). From another perspective, it might not be because of the lack of learning materials (Beatriks, et al., 2021). But the problem is the lack of awareness to make the initiative to look for learning modules. The problem of limitations is not a concrete reason. Many will likely argue that the limitations of learning materials are inadequate. Teaching materials can be searched personally. Do not have to rely on the help of teaching materials from the government, but the initiative to search personally. If there are no learning materials available for an educator, then teaching materials can be obtained from external books. Then the message of the book is transformed for students. Or you can create or create your learning materials if you don't have one.

The high cost of education

The high cost of education funds has become an open secret (Elisa, 201; Sulfasyah & Arifin, 2016). The education fund includes uniforms, shoes, textbooks, and worksheets (Stephanie, Udi, & Ina, 2019). Meanwhile, books are given to students free of charge through the school operational assistance fund (BOS). The government also provides textbooks, but many students do not know that the government provides them. The most basic problem in Indonesia's education sector is the problem of education costs (Andrew, 2016; Stephanie, Udi, & Ina, 2019).

Even though it's been predicted to be free, there's still a part that pays for it (Al-Samarrai & Cerdan-Infantes, 2013). Ironically, many low-income people only pay a small amount, when compared to the middle-upper economic community (Philip & Marthin, 2020). Another perspective on the problem of education funding is that the general public has been stereotyped and deified with the words "where did you graduate from?", "what grade did you pass?" and whatever it is that makes education king.

It is undeniable, through the door of education can lead someone to a better future (Mustaqim, et al., 2020). Even enough with the best rank and from the best school, can determine one's fate. Education is the basic capital and everything. But judging from the science of the nature or urgency or true success of a person is not always determined by the level of education. The stereotypes of society that have been circulating and are already imprinted are difficult to change. Many great people drop out of school. People who were initially thought to be stupid and undisciplined did not have the opportunity to go to school, it turned out to have a different lifeline. In essence, the value of the best graduates will also not be a guarantee of getting a job.

From the above review, it seems that educational institutions are not important, only because of the labels and stigma circulating in the community. Seeking knowledge is an obligation for all human beings. The next problem is that many people interpret studying as always in the form of education, even though it is possible with the existence of non-educational pathways. The problem of education in Indonesia related to the high cost of education is what adds to the dropout rate.

Low education quality

One of the problems of education in Indonesia also lies in the low quality of education (Anne, Raden, & Elan, 2019; Newhouse & Suryadarma, 2011; Rasyad A, 2017). One of the causes of the low quality of education can be caused by the perspective of society in general. Where studying is not an obligation or self-awareness which is a form of obligation to oneself. Learning is the obligation of each individual as a provision for life and a provision to survive hunger. Studying as an obligation is now shifting to looking for rank, prestige, and getting a degree. This is where the low quality of education begins. Many people chase statistics or recognition. Not pursuing the essence of learning itself.

Minority to disabled groups

The problem of education in Indonesia is not much in the spotlight, it is the problem of education for disabled groups (Kieron & Budiyanto, 2015). There are still many groups of people with disabilities who have difficulty finding inclusive schools with the best services (Farida, 2021). That means there are still few inclusive schools for them (Suharto, Pim, & Pat, 2016). On the one hand, inclusive schools are also indirectly compartmentalizing and increasingly excluded from social reality. Obstacles that are often faced by people with disabilities when deciding on public schools are constrained by the construction of schools that are not friendly for the disabled (Indra, Clemence, Dominggus, & Deborah, 2019). For example, there are no special roads for people with disabilities that use roller skates or doors that are less representative of people with disabilities. Not to mention the

problem of textbooks packaged in braille (Suharto, Pim, & Pat, 2016). Not to mention the problem of road access, and bathroom facilities in schools which are also not yet friendly to people with disabilities. Everything must be built according to disability standards. Not because they are a minority, does not mean taking away their right to enjoy public facilities. At least if the development is carried out in a disabled-friendly manner, the general public can also access it.

If development standards are standardized in general, it will be difficult for people with disabilities to access them. So that they seem sidelined (Indra, Clemence, Dominggus, & Deborah, 2019; Suharto, Pim, & Pat, 2016). Even though they are both the next generation they have the same rights, have the same chances of success, and have the right to be happy. Not because of a minority, then increasingly seen as different. They are strong even stronger. They are special, not special in a negative connotation, but special in the truest sense because they have greater persistence.

Proposed Solution

From the educational conflicts in Indonesia that have been described, various solutions are proposed in the hope of solving these problems, including:

1. The government as the state administrator and education provider is increasingly paying attention to the distribution of skilled teachers to remote areas of the country. The spread can be initiated by providing incentives and equipping with adequate facilities. In addition, the government must also be consistent in granting long-term employment contracts to applicants for teaching positions. The improvement in the quality of teaching is proportional to the income of other professionals, this is also true for teachers (Granado, Fengler, Ragatz, & Yavuz, 2007).
2. The government is responsible for the welfare of the people. The government must also be present in the effort to spread facilities and infrastructure to remote areas of the country (Beatriks, et al., 2021). Such as the provision of electric lighting and internet facilities. If the central government cannot provide this, then the local government can also contribute to its procurement. What is needed is the empowerment of school-based management. This method gives authority to each school to manage its facilities and human resources. This step is also expected to be able to involve stakeholders in the implementation of education. with the formation of an Education Council operating at the district level. School Committees that work directly on activities at the school level. The School Committee consists of representatives of teachers, parents, and community members (Indrawati & Kuncoro, 2021). The school committee's function is to assist schools in making strategic decisions, including setting the school's annual budget and the number of fees charged to students (Suryadarma, Suryahadi, Sumarto, & Rogers, 2006).
3. Teaching materials are not always obtained from books that have been set in the curriculum. Other books can also be used as learning resources. In this way, it is more a solution than blaming or accusing. At least in this way, it becomes an effort to provide a way out for one's own needs and provide space for others. It does not mean siding with government negligence. However, how long do we have to wait for the government to advance education? Because it’s not

necessarily able to meet directly with the government. Even small steps, but can bring a little change.

4. People's stereotypes that are already circulating and already imprinted must be changed slowly. Because the cost of expensive education does not guarantee the birth of a person of character. Educators and students should be able to create personal and moral integrity (Sri, Melanie, & Manfred, 2021). In other words, education is not only focused on meeting the demands of the world of work but also must pay attention to the behavior and morals of graduates. The educational process has to balance the demands of industry, morality, and spirituality in the educational process (Mustaqim, et al., 2020). Because many great people drop out of school. In today's technological developments, there have been many successful people born from school, but they are born from the talent and potential they have. YouTubers, Vloggers, Gamers, Celebrities, and others have become new ideas for the next generation (Daniel, Youcef, & Rafael, 2021). This does not mean that schools are excluded, but the progress of the times has opened up new opportunities for those who have non-academic potential. The disabled are no exception, this technology-based job opportunity is a new and promising opportunity (Tendy & Jahen F, 2022). The government is expected to be able to provide access to secondary and higher education, and skills training to provide greater opportunities for decent work for people with disabilities (Tendy & Jahen F, 2022).

Conclusion

The literature used as a reference source does not discuss the frequent occurrence of policy changes in the world of education such as curriculum changes and changes to immature regulations, as well as the frequency of changes in government policies in the field of education. The literature study focuses on 5 factors, namely the limited number of skilled teachers, inadequate facilities and infrastructure, minimal learning materials, expensive education costs, low quality of education, and minority groups with disabilities.

This paper is presented as a reference on the most basic educational conflicts in Indonesia, and some of the solutions that can be offered. The author realizes that there are still many problems that cannot be presented in this paper. The author also realizes that the solution offered is not yet the best solution to be able to answer the current educational conflict in Indonesia. But with this paper, academics and policymakers will understand the most basic and most frequently discussed educational conflicts. Hopefully, education in this country will be more advanced and successful. The last word from the author is not to focus on finding a good container but to forget to fill the container. The quality of good education lies in the contents of the container, not in the shape of the container.

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ANALYSIS OF CRITICAL THINKING SKILLS AND COLLABORATION OF ELECTRONIC ENGINEERING EDUCATION STUDENTS IN ELECTRICAL MACHINERY COURSE

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Abstract
The development of the 21st century is directed at the specialization of certain abilities. This certainly influences the goals of Indonesia's national education, where graduates must be equipped with 21st-century skills. These 21st-century skills we can call the 4Cs, namely critical thinking (critical thinking), collaboration (collaboration), creativity (creativity), and communication (communication). The ability to collaborate and think critically needs to be applied in the learning process, including in the Electrical Machinery course. In the Electrical Machines course, lectures are conducted using an electric machine trainer. The use of this trainer is intended to create a student-centered learning atmosphere. To analyze students' critical thinking and collaboration skills in the electrical machine course, we conducted a series of studies related to this. The research method used is a quantitative research method with a one-shot case study research design. From the research, it was found that learning activities using an electric machine trainer were able to optimize students' critical thinking skills. This is because learning using a trainer is student-centered learning, where students play an active role in the learning process. Besides being able to optimize student collaboration skills because the learning process is carried out in groups. Discussion activities carried out in groups provide experiences for students to develop collaboration skills.

Keywords: collaboration, critical thinking, electrical machinery, skills

Introduction
The living order of society has changed along with the development of science and technology (Sanjayanti, 2020). Various innovations have been developed by humans that cause the ability of human resources in a workforce to be decisive. They compete to enrich knowledge (Ester et al., 2017). The process of enriching knowledge can be easily done via the internet. Access to information from around the world can be done very quickly. If not used wisely, this development can hurt society and the environment (Lubis, 2018; Redhana, 2019). Therefore, we have to prepare our students to become reliable students, who are ready to face the challenges of 21st-century development (Andrian & Rusman, 2019; Nurulita et al., 2022).

The 21st century is marked by the rapid development of science and technology. This also demands developments in the world of education, especially higher education (Handajani et al., 2018). The assessment of 21st-century skills is one of the "hottest" topics in education in the past decade (Geisinger , 2016). Higher education which is one of the formal educational institutions has a very important role in preparing human resources who have skills according to the demands of the 21st century (learning and innovation skills). Besides being able to master science and technology in the field they are involved in (Zubaidah, 2018), they must also specialize in certain abilities. Therefore, the goal of national education in Indonesia must be directed towards efforts to equip students with 21st-century skills.

Promotions related to various skills to face the challenges of the development of the 21st century continue to be carried out by education personnel in higher education. This is intended to prepare 21st-century students to become reliable students in the future. These 21st-century skills are commonly abbreviated as 4Cs, namely critical thinking (critical thinking), collaboration (collaboration), creativity (creativity), and communication (Redhana, 2019; Yokhebed, 2019). In the New World of Work in the 21st Century, the team of experts recommends the 4C expertise as a fundamental expertise (Khoiri et al., 2020).

One of the educational institutions that are also required to prepare graduates who have 4C skills is the Electrical Engineering Education Study Program, Universitas PGRI Madiun. Graduates from the engineering education study program are required to have 4C skills. Where these skills can be obtained from various lecture activities. Lecture activities in the classroom should be able to make the learning process meaningful and fun (Prastyaningrum, 2019). Thus this 4C skill can be obtained maximally.

The subjects in the PTE Study Program that can be used to practice 4C skills are electric machines. The electrical machine course is a course that combines theory and practicum. Where an understanding of electrical machines used in various industries needs to be discussed in depth in this course.

The ability to collaborate and think critically needs to be applied in the learning process, including in the Electrical Machinery course. Collaboration is a process of sharing information, resources, and responsibilities to jointly plan, implement, and evaluate program activities to achieve a common goal (Putnik & Cruz-Cunha, 2008). While creativity is a person's ability to generate new ideas from existing ideas. Develop these ideas and be more responsive to new things and different views (Trilling & Fadel, 2009). This is done to support the learning process that carries 4C skills so that students have the skills of the 21st century. To grow collaboration skills and critical thinking, the support for practical equipment must also be adequate.

In the Electrical Machines course, lectures are conducted using an electric machine trainer. The use of this trainer is intended to create a student-centered learning atmosphere. The use of trainers is also expected to be able to grow 21st-century skills. Based on this, researchers need to conduct an in-depth analysis of the effect of using electric machine trainers on the critical thinking skills and collaboration of Electrical Engineering Education students. This analysis is important because it can be used as a basis for evaluating the implementation of learning that is currently taking place, especially to equip students with 21st-century skills. This is so that students of Electrical Engineering Education when they

graduate have 21st-century skills that are by the demands of the world of work and the times.

Method

The research method used is quantitative research methods. The research design uses a one-shot case study. In this design, treatment (X) is only given to one group of subjects. Setyosari (2020) states that the one-shot case study research design can be represented as follows:

X O Information:

X: treatment (only once)

O: the result of observation (test)

The treatment in this study was the implementation of the electric machine trainer in the Electrical Machine course.

The instruments used in this study were questionnaires and observations. Questionnaires were filled out by students to explore students' perceptions of critical thinking and collaboration skills. The questionnaire used uses a scale of 1-5 with categories of strongly agree, agree, quite agree, disagree, and strongly disagree (Riduwan, 2015). Furthermore, the observation sheet is filled out by the lecturer in charge of the course. Observations were made to record student behavior.

Findings and Discussion

Assessment of critical thinking and collaboration obtained from the results of questionnaires that have been filled out by students obtained the following data:

Table 1. Results of questionnaires

4C	P21 Skills	Result	Interpretation
Critical Thinking	Using inductive reasoning or deductive reasoning	4,2	Good
	Analyzing the interrelationships of each part of the whole to produce a complex system	4,3	Good
	Analyze and evaluate the facts.	4	Good
	Draw conclusions based on the results of the analysis	4	Good
	Solve unusual/common problems in conventional or innovative ways	4	Good
Collaboration	1. Demonstrate the ability to work effectively in groups	4,3	Good
	2. Accept the division of responsibilities and contribute to completing group assignments	4	Good
	Provide input and show mutual respect for fellow friends	4,2	Good

Based on the questionnaire data and the results of observations made by the lecturer in charge of the course, it was found that for critical thinking skills, students were able to use inductive reasoning or deductive reasoning for various problems related to electric machines. The students are also able to think systemically and are

also able to make decisions to overcome problems that occur during the process of practicum activities. This can be seen when students begin to prepare practicum activities and check on trainers and how they overcome problems related to errors in circuit analysis.

The second indicator in the subsequent assessment of critical thinking skills is when students analyze the interrelationships of each part of the whole to produce a complex system. This takes place when students identify each component as well as practicum tools and materials until they operate the trainer and carry out practicum activities. The results of the questionnaire on the second indicator have the highest score of 4.3. This can also be seen from the results of observations where students do master the operation of the trainer and can carry out practicum well.

Furthermore, the third indicator analyzes and evaluates the facts. The achievement of this indicator has a score of 4 and is still in the good category. The achievement of this indicator can be seen from student activities in reviewing the results of practicum activities that have been obtained. This third indicator is still related to the fourth indicator, namely the ability to draw conclusions based on analysis. The achievement on the indicator obtained the same value as the third indicator, namely 4, and was included in the good category. This achievement can be seen from the results of the formulation of conclusions made by the students based on the results of the practicum activities and the analysis carried out.

The last indicator is problem-solving ability. The achievement of this indicator can be seen in the ability of students to overcome problems when experiencing obstacles in carrying out practicals. The obstacle encountered during the practicum was an error in wiring, but they could overcome this error when they checked the circuit and they were immediately able to correct the error.

Based on the description of the five indicators above, it was found that learning activities using an electric machine trainer went well and were able to optimize students' critical thinking skills. This is because learning using trainers is student-centered learning, where students play an active role in the learning process. The active role of these students can improve students' critical thinking skills. This is in line with research conducted by Ariyanto, et al. (2020) which states that learning directed at active learning activities is very effective in improving critical thinking skills. Furthermore, Hidayah, et al. (2017) also mentioned that growing critical thinking skills, it must be done by applying student-centered learning and syntax provides opportunities for students to play an active role in learning. In carrying out the practicum, students are also more intense in discussions with their groups, according to Wulandari and Sofiyah (2018), these activities have a positive impact on developing critical thinking competencies.

Learning activities carried out by students in the Electrical Machinery course provide opportunities for students to construct their knowledge and interpret their knowledge. These activities make students think critically. This is in line with research conducted by Wijaya, et al. (2017) which states that critical thinking skills are needed when learning is carried out independently by constructing knowledge. This independent learning activity makes students feel challenged. Learning experiences like this can encourage students to develop critical thinking skills. The results of research conducted by Mukaromah, et al. (2020) show that challenges in learning have a significant effect on increasing critical thinking skills. In addition, to the concept of self-learning in the Electrical Machinery course, students are also

required to be able to solve problems independently. This is in line with research conducted by Ardiyansah, et al. (2022) which states that problem-solving can develop critical thinking skills.

In addition to critical thinking skills, learning using a trainer in this Electrical Machine course can also optimize student collaboration abilities. This is because the learning is carried out in groups. Discussion activities carried out in groups provide experiences for students to develop collaboration skills. This is in line with research conducted by Ardiyansah (2022) which states that group discussions can provide collaborative experiences. Research conducted by Ariyanto (2020) states that the more intense discussion activities are carried out in groups, the more positive impact is on the development of collaboration skills.

Furthermore, in this Electric Machine learning, students learn independently so students have challenges that must be solved. The process of solving these challenges can also optimize students' collaboration skills. This is in line with research conducted by Cheung, et al. (2011) which states that learning that contains challenges can provide opportunities for students to develop collaboration skills. Furthermore, Christensen, et al. (2021) in their research also mentions that challenge-based learning is also able to increase interdisciplinary capacity and ethos such as collaboration. Another study conducted by Malmqvist, et al. (2015) also states that challenge-based learning is very effective for training collaboration skills.

Electrical Machine Learning using a trainer is carried out by carrying out the concept of student-centered learning where the emphasis of learning is placed on the active role of students, which can also improve collaboration skills. This is in line with research conducted by Darmawan (2018) which states that students who play an active role in student-centered learning have a significant increase in collaboration skills. The active role of students in learning Electrical Machines using trainers is also seen in task completion and problem-solving activities. Where this problem-solving can also improve collaboration skills. This is in line with research conducted by Fadilah, et al. (2015) which states that problem-solving carried out in group learning can improve collaboration skills.

Conclusion

Based on the results of the analysis, it can be concluded that learning using a trainer in the Electrical Machine course can optimize students' critical thinking and collaboration skills. Critical thinking skills and student collaboration can improve this because learning using trainers is student-centered learning so students do independent learning and play an active role in learning. In addition, learning using trainers carried out in groups also challenges students to complete tasks and problems through group collaboration and group discussions.

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NON-FORMAL EDUCATION OPTIONS FOR ADDRESSING SECURITY CHALLENGES IN NORTH-EAST AND NORTH-WEST NIGERIA

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Abstract
The issue of Boko Haram and Banditry insurgency has been characterized by the killing, of people, abduction of school children, kidnapping for ransom, army robbery, raping, rustling of cows, destruction of houses, schools, mosques, churches, markets, security posts, health care centers, and farms has become a great security problem in northeast and northwest, Nigeria. The issue has resulted in a waste of peoples' lives and livelihoods in the two geopolitical zones. The researchers believe that Boko haram insurgency and banditry security issues in Nigeria can be better addressed through Non-formal Education options. This study, therefore, examined how non-formal education can be explored to end insecurity challenges in the northeast and northwest Nigeria. The researchers used the Google database to get relevant journal papers. The prism technique was used to get and extract data based on the known inclusion and exclusion criteria. According to the analysis, non-formal education options can be explored to address boko haram insurgency and banditry in north-east and north-west Nigeria and if non-formal education options as described in this study are adopted, boko haram insurgency and banditry will be of the past in Nigeria.

Keywords: Banditry, Boko haram, insecurity, non-normal education, north-east, north-west Nigeria

Introduction
This paper is on addressing the security problems emanating from Boko Haram and Bandits in North-East and North-West Nigeria using the instrumentalism of Non-formal Education. Insecurity is the most serious problem confronting Nigeria as far back as 1999 when Boko Haram became a deadly group that terrorizes the people of Nigeria, particularly in the northeast geopolitical zone of the country. The insecurity has been overblown today in this country everyone has no guarantee of his life and property. After decades of peaceful co-existence among people residing in the regions, the zones are now facing the challenges of insecurity occasioned by the activities of Boko Haram bandits, kidnappers, cattle rustlers, and terrorists (Amalu, 2015, Okoli & Ugwu, 2019). Boko Haram is an

Islamic extremist group very popular in North-East Nigeria, Chad, Niger, and Cameroon. The group aimed to form an Islamic State in their respective domains. The death of the group leader; Muhammad Yusuf in the year 2000s, has led to the killing of many people and terror attacks on schools, security forces, government agencies, markets, banks, motor parks, and religious places. The attacks have led to the displacement of many Nigerians. The group has also captured many Nigerian territories, particularly in Borno (Deutche Welle, 2021), although many of these territories have been recaptured by the Nigerian security forces.

In the same vein, the North West suffered at the hands of bandits in almost all the states of the region. Banditry is referred to as a type of organized crime committed by outlaw youths typically involving the threat, or use of violence (Ugbomah, Omede & Philomina, 2022). North-west is facing the threats of herders, and kidnappers in addition to the problems of bandits. The activities of these groups particularly the bandits have led loss of human lives and peoples' livelihoods as well as displacement both within the country and outside Nigeria (International Crisis Group, 2020). In the North West area, the gangs who kidnap people for ransom attack motorists, ransack villages, and lay ambush for people on the roads. The activities are so deadly that everyone is afraid of traveling on Nigerian roads and villages that are close to the enclaves of the group have to flee their ancestral homes for the fear of brutal attacks, adductions, and killing in some cases.

The effrontery of bandits in Zamfar, Kaduna, Katsina, Niger, Sokoto, and Kebbi states in recent times is so high that not a day passes that attack on innocent Nigerians is not recorded. Kaduna state in recent days is always on the news of bandit attacks. One of the recent and devastating attacks was the Abuja-Kaduna train attack where many Nigerians, young, old, children, and women were abducted and some were killed, many sustained high degrees of injuries. It is good news to report that the government through collaboration with individuals and groups has secured the release of the victims although, ransoms were paid.

People have suffered at the hands of Boko Haram and bandits as their attacks led loss of human lives, people displacement, and human livelihoods. Women and girls have suffered in form of kidnap, rape, sexual violence, and payment of ransoms. The consequences of the evils of Boko Haram and Banditry in the country were responsible for classifying Nigeria as one of the worst states in the developing countries (Innocent & Onyishi, 2014).

Since the nefarious acts of Boko Haram and bandits became noticeable and deadly, the Nigerian government has deployed the Nigerian Police which has the statutory responsibility to maintain law and the order to combat the menace. Unfortunately, the Police cannot withstand the deadly and terrible nature of the groups' activities. This can be linked to the poor state of the Security Force to tackle the current security problems, coupled with the fact that the Police in Nigeria are grossly inadequate in number (Rosenje & Adeniyi, 2021). When it was clear that Nigeria Police alone cannot handle the situation the government engaged the Nigerian Army which has also been overstretched. In addition to these situations, Rosenje and Adeniyi (2021) argued that some Nigerian people do not trust the security agencies as many believe that the security agencies are collaborators of criminals that are terrorizing the people. This notion and mindset of people have further negatively affected the performance of security agencies in successfully fighting insurgents and bandits in Nigeria. This development has, therefore,

affected government efforts in winning the war against book haram and banditry in the regions (Rosenje & Adeniyi, 2021).

Scholars (Rosenje & Adeniyi, 2021; Okoli & Ugwu, 2019) have argued that the fact that military approach against the insurgents and bandits in north-east and north-west Nigeria has not yielded the expected results, although it is advisable to continue (Okoli & Ugwu, 2019), the right thing to do by the government is to come up with a better approach that will address the immediate and contributory factors. This approach is emended in the Non-formal Education options proposed in this paper. Non-formal Education according to Bagudo and Yusuf (2019), is an educational intervention with the capacity of addressing a myriad of problems confronting disadvantaged individuals or groups. The focus of this paper is to leverage the potential of non-formal education to address the problems of insecurity in the northeast and northwest Nigeria. In this regard, issues of Boko haram and banditry were raised and discussed, effects and factors responsible for activities of the criminal groups were reviewed while non-formal education options were identified and explored for addressing the insecurity problems in the

Method

The researchers leveraging on Fatoni, Susanto, Pratama, and Julaihah (2021)'s study used a qualitative method of research exploring secondary data of documents review as their subjects. The documents were journal articles, book chapters, and news. The researchers read, took notes, extracted facts, and processed the documents to analyze the data to address the focus of the study. This process is regarded as an inductive review (Fatoni, Susanto, Pratama & Julaihah, 2021; Zed, 2004).

Table 1. Inclusion and exclusion criteria

Inclusion Criteria
The journal articles are related to boko haram issues in north-east Nigeria.
The journal articles are related to the bandits' issues in north-west Nigeria.
The journal articles cover effects and causes of book haram insurgency in Nigeria.
The journal articles cover effects and causes of banditry in Nigeria.
The journal articles are **DOI or URL** confirmed.
The full version of the articles are available and be accessed online.
Exclusion Criteria
The journal articles are not related to boko haram issues in north-east Nigeria.
The journal articles are related not to the bandits' issues in north-west Nigeria.
The journal articles do not cover effects and causes of book haram insurgency in Nigeria.
The journal articles do not cover effects and causes of banditry in Nigeria.
The journal articles are not DOI **or URL** confirmed.
The full version of the articles is not available and cannot be accessed online.

Table 1 above showed the approach of data collection described by Zhao (2021) as a prism method following the inclusion, exclusion criteria, and extraction used. The procedure is presented in Table 1. The researchers searched the internet using google search with relevant keywords such as "Boko Haram insurgency issues in north-east", "bandits' issues in north-west" "effects and cause of boko haram in

Nigeria", "effects and causes of banditry in Nigeria". The inclusion and exclusion criteria were presented in Table 1.

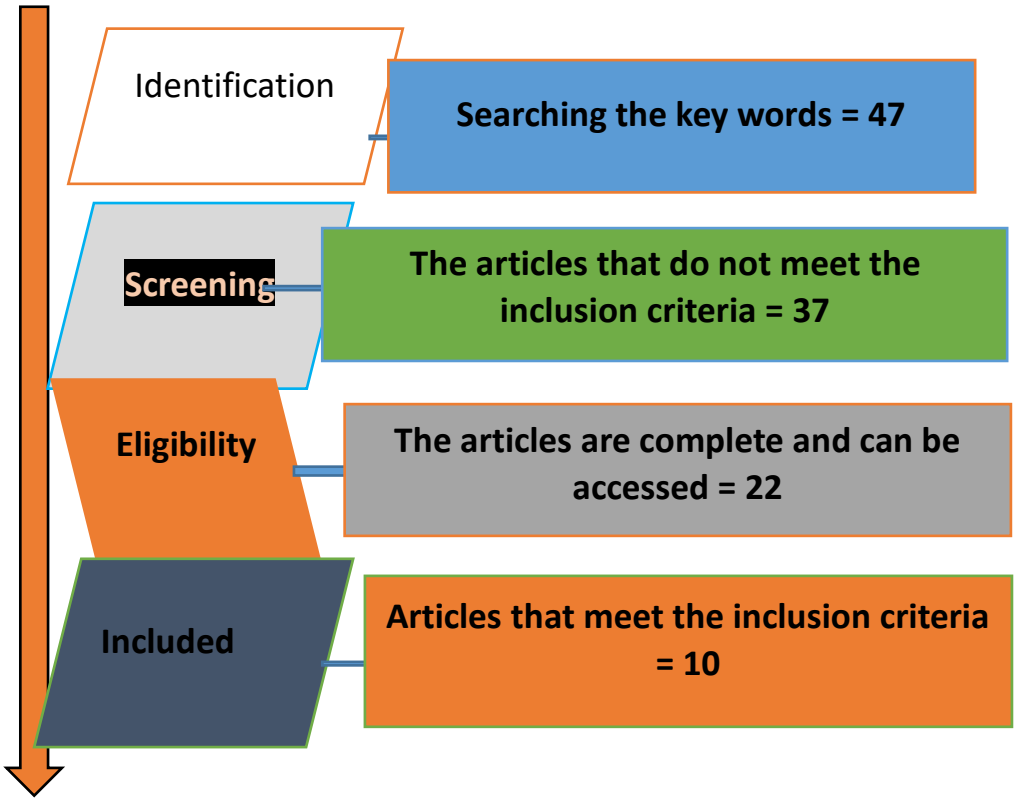

Figure 1. Prisma: The procedure of data extraction adapted from Fatoni, Susanto, Pratama, & Julaihah, 2021

Applying the Prism approach, the authors identified journal articles and sources related to the themes of the study ("Boko Haram insurgency issues in north-east Nigeria" and Bandits issues in north-west Nigeria") on the web. The results of the search brought 47 relevant articles to the theme of the study. In the second phase, the researchers made a selection of the identified journal articles and 37 articles were found. In the next stage, the researchers further confirmed whether the articles were accessible or not. In this case, the researchers found 22 journal articles. The last phase was a more laborious selection to determine sources relevant to the researchers' requirements. This led to the inclusion of 10 journal articles as showcased in Table 2.

Table 2. List of analysed journal articles

Author	Title	DOI/ URL
(Aliyu, Moorthy & Idris, 2015)	Towards Understanding the Boko Haram Phenomenon in Nigeria	http://dx.doi.org/10.5539/ass.v11n10p307
(Amalu, 2015)	Impacts of Boko Haram Insurgency on Human Security in Nigeria	doi: http://dx.doi.org/10.4314/gjss.v14i1.4

(Innocent & Onyishi, 2014)	Boko Haram and Security Challenges in Nigeria	https://www.arabianjbmr.com/pdfs/KD_VOL_3_11/1.pdf
(Ahmed, 2021)	Banditry Dynamism and Operating Pattern of Crime in North West Nigeria. A threat to National Security	https://www.researchgate.net/publication/350158153
(Awojobi, 2014)	The Socio-Economic Implications of Boko Haram Insurgency in the North-East of Nigeria	http://www.ijisr.issr-journals.org/
(Okoli & Ugwu, 2019)	Of marauders and brigands:scoping the threat of rural banditry in Nigeria's northwest	doi: https://doi.org/10.22456/2448-3923.93808
(Adedire, Ake & Olowojolu, 2016)	Combating Terrorism and Insurgency in Nigeria: An International Collaborations against Boko Haram	https://core.ac.uk/download/pdf/162155808.pdf
(Rosenje & Adeniyi, 2021)	The impact of banditry on Nigeria's security in the fourth republic: an evaluation of Nigeria's northwest	https://zjpd.com.ng/index.php/zjpd/article/download/30/33
(Ojo, 2020)	Governing "ungoverned spaces" in the foliage of conspiracy: toward (re)ordering terrorism, from Boko Haram insurgency, Fulani militancy to banditry in northern Nigeria	https://doi.org/10.1080/19392206.2020.1731109
Verjee & Kwaja, 2021).	An epidemic of kidnapping: Interpreting school abductions and insecurity in Nigeria.	https://asq.africa.ufl.edu/files/V20i3a6.pdf

Table 2 showed the 10 journal articles that were used to analyze the issues raised in the study. The sources of the articles for reference purposes as links in terms of DOI or URL were provided.

Findings and Discussion

Boko Haram security issues in north-east

North-east is a geo-political zone consisting of Adamawa, Bauchi, Borno, Gombe, Taraba, and Yobe states. It has less than one-third of Nigeria's total area with an estimated population of 23, 558, 674 in 2011 (Nyaku, 2021). The majority of the population are people Fulani while Borno people in the region are mainly Kanuri people a majority with more than 100 minority groups. The zone used to be described as the most peaceful zones in Nigeria. The emergence of insurgency in the Zone has made the Zone be referred to as the epicenter caused by the Boko Haram sect. This sect is often referred to as Jama,atul Ahlul Sunnah Lidda' Wati wal Jihad, or a group of people that are known to spread the gospel of Prophet

Muhammad (SWA). The group was established was first noticed in Maiduguri, Borno state as Boko Haram (Abolurin cited in Amalu, 2015). The word 'Boko' (Hausa) means 'book' considered to be western and Haram (Arabic) means sin or forbidden. Therefore, the interpretation of Boko Haram in the Hausa language is western education is a sin' (Gilbert cited in Amalu, 2015). Boko Haram started as an Islamic Movement group that intends to change the government structures that do not follow the Islamic way of life (Idowu cited in Amalu, 2015). There is no complete information about the origin, leadership structure, and sponsors of the group, but the actions of the group over the years showed what its ideologies are. For instance, the group does not have respect for constituted authorities, laws, rules, and institutions. It was argued that the group shared similarities with the Maitatsine religious sect of the early 1980s. They equally believe that 'anyone who is not ruled by Qur'an is among the transgressors as stated in the Qur'an. The group has an idea that Muslims shall not involve in political, or social activities that relate to western civilization or ideas (Aliyu, Moorthy & Idris, 2015). The ultimate goal of the group is to be ruled by the Qur'an and Hadiths of Prophet Muhammad (SWA) while justice and fairness are upheld (Campbell, 2014). At a later time, it was very clear that the group was on the wrong ideology and Islamic fundamentalism.

The major strategies of the group included flexible violent dimension in form of a traditional hit-and-run strategy, attacking and killing security agents in their duty posts and homes as well as destroying security installations and facilities. Other methods of attack are drive-by shootings, targeted assassination, suicide bombing, the use of Improvised Explosive Devices, and kidnapping (Amalu, 2015). These attacks have led to the killing of people, and mass abduction including the kidnapping of 276 school girls in Chibok in 2014 (Wikipedia, 2021). In 2017, the group killed 900 people in 150 different attacks. Similarly in 2018, 1,200 people were killed by the Boko Haram sect (Human Right Watch, 2018). Campbell (2014), stated Boko Haram got their finances from bank robberies, kidnapping for ransoms, and theft of weapons from government armories. This makes it very easy for the group to carry out its activities in all the states in the region and even some parts of the country including Abuja, Kano, Niger, Plateau, and neighboring countries such as Niger, Cameroon, and Chad.

Therefore, Boko Haram became a serious security challenge not only North East but the entire of Nigeria, as its activities affect the national economy and develop fear among Nigerian citizens and foreign investors living in Nigeria.

Banditry security issues in north-west

The North-west geographical zone of Nigeria has 7 states. The states are, Jigawa, Kano, Kaduna, Katsina, Kebbi, Sokoto and Zamfara. It covers an area of 216, 065 square Kilometers or 25.75 percent of the total country's land mass (Brussels, 2000). The major ethnic groups in this region are Hausa and Fulani, although, there are people who are from other tribal groups in states like Kaduna and Kebbi. The zone has a total population of 33 million based on the 2006 census. The majority of the inhabitants of the area are Muslim having farming as the major occupation with some number of the inhabitants as herders.

The zone enjoyed a long time of security and was called the most peaceful zone in the country, until very recently in 2011, when the banditry activities started in Zamfara state and later spread to the neighboring states of Kano, Kaduna, Katisina,

Sokoto, and Kebbi in North West and into Niger in North Central. Banditry according to Okoli and Okpaleke (2014) means the occurrence or prevalence of armed robbery or violent crime. It has to do to rob rape or killing. It is a crime against persons. It consists of acts of armed robbery, kidnapping, cattle rustling, rape, insult, etc. (Okoli & Okpaleke, 2014). Okoli and Ugwu (2019) classified banditry based on underline intent or motive:

Social banditry: It mostly happens when people want to show anger against the injustice done to them or their communities. Similarly, there is another form of banditry that principally occurs as a result of political or economic gains. Banditry can be mercenary or autonomous depending on how people involved carry it out. Mercenary banditry is carried out by hired groups working for a master, while autonomous bandits are carried out by individuals for personal gains mainland (Okoli & Ugwu, 2019). Organized banditry: this happens on a platform of people who are highly organized, while petty banditry happens by individuals or groups of people are not so coordinated. Roving bandits are itinerant bandits who move from one camp to another while stationary bandits are stationed in one place. Maritime banditry is offshore robbers (Okoli & Ugwu, 2019).

Since the past decades, due to economic, political, and other reasons based known by bandits, banditry and other crimes have become an appealing method of income generation in northwest Nigeria, where weak governance, youth unemployment, high level of poverty, inequality, mismanagement of Public fund have left the majority of the people, especially youths with depleted options of livelihood. The impacts are in form of cattle rustling and theft including inflicting injuries on pastoral communities in the zone (Rufai, cited in Ahmed, 2021).

The history of cattle rustling in northern Nigeria was on a small scale before 2013. The hit of cattle rustling was carried out by highly organized and coordinated bandits based in the Kamuku forest in Kaduna, Falgore forest in Kano, Dansadau forest in Zamfara, and Dajin Rugu forest stretching through Kaduna, Katsina, and Zamfara states (Africa Report No. 288, 2000). The groups have harm and ammunition. The weapons made it easy for the groups to carry out their nefarious attacks in terms of cattle rustling, kidnapping, and killing of people. The herders later came out to defend themselves. They were able to acquire weapons for self-defense. Ahmed (2021), reported that some of the animals rustled by bandits are either sold or kept in the forest zones. They sold most of the cattle rustled to purchase sophisticated weapons. The major sources of funds for bandits come from kidnapping for ransom and looting of communities' assets and livelihoods. The targets of bandits mostly are well-to-do individuals in the community who are mostly farmers and businessmen. Many times communities used to be threatened with attacks by bandits or sometimes given conditions of paying taxes by communities if they want to have access to their farms (Africa Report No. 288, 2000). The popular attacks of bandits include 333 students kidnapped by bandits in Kanakra Local Government Area of Katsina state (BBC, 2020). Similarly, 279 girls who are students were kidnapped by bandits in Jangebe, Zamfara state (Sky News, 2021).

Effects of insurgency and banditry

Since the beginning of Boko Haram and Banditry insurgencies in North-East and North-West, Nigeria, human lives have been lost, and livelihoods worth a chuck

of foreign currency have been lost. Up till today, nobody escaped from the attacks of book Haran and bandits (government officials, security agents, traditional and religious leaders, and other fellow citizens of the regions). For instance, over 30,000 people have been killed and more than two million are displayed by Boko Haram in North East, according to the Council of Foreign Relations (Egbejule, 2019). Thousands of people are being killed and kidnapped for ransom in North West almost every day. For instance, in February 2021, there were two mass abductions. On 17 February 2021, the report that 42 community members and 77 students, were kidnapped from the Government Science College in Kagara, Niger State while a student lost his life in the attack (Mbah, 2021). Similarly, between 279 and 317 students were reported to have been kidnapped by bandits from the Government Girls Secondary School in Jangebe, in Zamfara State on 26th February 2021 (Verjee & Kwaja, 2021).

It is important to report that, the major aim of Boko haram and bandits is to instill tension, fear, and chaos in the communities so that people could feel insured. Many people in the northeast and northwest are now living in tension and fear of being attacked or kidnapped by insurgency groups. The groups have succeeded in creating fear in the minds of all Nigerians as people in other geopolitical zones are afraid of the nefarious activities of the groups. Reports showed that Boko Haram has hoisted their flags in Kaure and Shiroro local government areas of the state (Obaji, 2021).

Educationally, insurgency and banditry have also affected the education sector in all the two regions of the northeast and northwest. It brought the destruction and closure of many schools, killing many teachers, and displacing millions of children in Borno, Yobe, Adamawa, Zamfara, Sokoto, and Katsina states. Reports showed that about 910 schools were burnt and 1,500 were closed down. This situation has further aggravated the problem of out-of-school children in the geopolitical zones. (Segun, Adedeji, & Donnelly, 2016).

Economically, activities of insurgency and bandits have negative effects on the economy and livelihood of Nigerians, particularly the people and governments of the northeast and northwest geopolitical zones. The damage to the economy of the regions is so serious that it will take years for the regions to come back on their feet economically (Awojabi, 2014). Reports showed that the popular Maiduguri Monday market was closed and shop owners closed their businesses and relocated to safer places (Awojabi, 2014). Farming activities have also been affected by the activities of insurgency and bandits in the regions.

Politically, Boko Haram insurgency and banditry have created mistrust between political elites of Nigeria's geographical zones, especially between the south and north. The politicians also used insurgency and banditry to advance their political activities. The politicians accuse each other of sponsoring Boko haram and banditry. For instance, Northern politicians elites accused the federal government under President Jonathan, a southern politician of using the insurgent group to decrease the population of the north particularly Muslim, and destroyed their economy to retain their bargaining powers against the 2015 political election (Aliyu, Moorthy & Idris, 2015).

Factors responsible for insurgency and banditry

There are many factors responsible for insurgency and banditry activities in Nigeria, especially north-west where the majority of the population are small-scale farmers living in the typical rural areas, among which include the following;

Religious motivation

People have different values, interests, and opinions. Some people value their religion better than any other thing; as a result, some people react toward defending their religion. Hoffman cited in Adedire, Ake, and Olowojolu (2016) argued that many terrorist organizations in Africa have opted for terrorism as a result of religious understanding. It must be made clear that Islam does not encourage terrorism in any form although there are groups who claimed to be Islamic that use the name of Islam to preach radicalism and religious fundamentalism that are violent and irrational. Islamist fundamentalism is not alone in Nigeria as evidence of extreme-right Christian groups is known (Adedire, Ake & Olowojolu, 2016).

The proliferation of weapons of war

Scholars such as Adedire, Ake, and Olowojolu (2016) submitted that the proliferation of light and hard weapons including weapons of mass destruction and or disruption, namely, chemical, biological, radiological, and nuclear (CBRN) weapons have continued to promote terrorism in a different part of the world Nigeria inclusive. The authors added that the inability of the Nigerian security forces to checkmate harms smuggling into Nigeria, especially through her neighboring countries of Niger, Chad, and Cameroon has made it easy for criminals, terrorists, and bandit terrorists to access weapons uncontrolled in northern Nigeria. This access has made it possible for bandits and terrorists to unleash unlimited terror on Nigerians.

Corruption

Corruption is believed to have promoted the activities of terrorists in Nigeria. Nigerian officials are engrossed in corruption as in the past and the ruling governments have failed to perform their duties because politicians and government functionaries have cornered the resources that are meant for the general public. People living in rural areas are more at the receiving end of the corruption as resources meant to develop the areas have been diverted by a few individuals that are charged with the responsibility of improving the living standards of people. Many people especially youths in Nigeria involve in insurgency and banditry as a result of the corruptive nature of Nigerian public officeholders (Ojo, 2020) that they must get their share of the national cakes anyhow.

Unemployment

There is a belief that terrorism started as a result of unemployment (Adedire, Ake & Olowojolu, 2016). People say the idle hand is a devil's workshop. Getting jobs after graduation from tertiary institutions is one of the serious problems confronting Nigerian youths. Naturally, when the job does not forth come after graduation, frustration may set in and this encourages youths to indulge in criminal acts that are detrimental to society.

Poverty

The vicious cycle of poverty continues to make lives unbearable for many Nigerians as a large number of people could not meet up with their daily basic needs including food (Yusuf, 2019). Campbell and Bunche (2011) said it clearly that the living standards for the majority of Nigerians have slightly altered since 1970. According to the National Bureau of Statistics cited in Olowojolu, (2016), in 1980 about 25% of the Nigerian people wallow in poverty and this statistic must have jumped to 72% in 2010.

The issue of banditry has become a very serious problem in Nigeria, especially in the northwest zone, as it affects almost all aspects of societal life, including education, health, agriculture, transportation, and other social activities. The government has deployed Special Forces in the country's North-west to combat kidnapping and bandits, but despite all of these efforts, insurgents, and bandits are still carrying out their operations in all the affected states of the region hence something new must be explored.

Non-formal education options for addressing insurgency and banditry in Nigeria

The fact that the military approach against the insurgents and bandits in north-east and north-west Nigeria has not yielded the expected results, although it is advisable to continue (Okoli & Ugwu, 2019), the right thing to do by the government is to come up with a better approach that will address the immediate and contributory factors. This approach is emended in the remedial options proposed in this paper as presented below.

Addressing uneven development in Nigeria

It has been reported that uneven development exists between and across regions, as well as within communities in Nigeria (Jaiyeola & Choga, 2020), between rural and urban areas (Yusuf, Ladan, Idris & Halilu, 2013). The rural area of Nigeria has not witnessed a significant level of development (Ugwuanyi & Chukwuemeka, 2013) when compared with the urban area. The neglect of rural areas is now a threat to the security concerns of Nigerians. Okon, Henry, and Washington (2018) submitted that people's dissatisfaction with the state of governance which fuels violence could be ascribed to state failure. Lending credence to this, Ojo (2020), decries the high level of social injustice and uneven distribution of national resources which he said has aggravated recurrent insecurity across the geopolitical zones. The situation is worst in the northeast and northwest as insurgency and banditry are the orders of the day. The government must deploy resources and attention to rural development activities to make development even. This requires that the government makes a governance presence where a governance vacuum is obvious, particularly in rural areas where poverty, lack of amenities, and ignorance are glaring. Government rural development interventions such as community development, self-help, rural electrification, rural water scheme, and rural livelihood sustainability must be revived and reached the main targets to bring development to the doorstep of the rural populace.

Fighting poverty

Poverty has been identified as a significant contributory factor to crime and violence (Olowa, 2012, Oko, et al., 2018) in Nigeria. There is this analogy that poverty tends to make poor countries vulnerable to terrorist networks and drug cartels within their borders. This analogy was credited to the United State of America's Former President, George W. Bush (Khan & Cheri, 2016). Describing the Nigeria situation, Amaechi (2017), laments that as the income gap widens, many Nigerians are wallowing in abject poverty with the increase in crime rate, thus the government must fight poverty with sincerity if the problems of insurgency and banditry are to be addressed in Nigeria. The poorest region in Nigeria is the most endemic in instability and security threat. North-east and north-west are the worst poverty-stricken regions in Nigeria with 77.7% and 76.3% respectively (Jaiyeola & Bayat, 2019). Therefore, there is a need for government to embark on viable poverty reduction programs and initiatives that will target different vulnerable rural populations, particularly the unemployed youths who are perpetuating the act of insurgency and banditry in the northeast and northwest respectively. Specific efforts must be made by the government in partnership with private sectors to initiate special programs that will boost the informal economy and employment in the regions to productively engage the youths such that they will not be vulnerable to recruitment into insurgency and banditry. Programs such as the provision of soft loans for agricultural businesses, and small-scale enterprises, and support for agricultural mechanization and security will boost the economy of the regions and help reduce poverty and fight insurgency.

Restructuring Nigerian security apparatus

It has been argued that the confrontational nature of the Nigerian security apparatus in fighting insurgency and banditry is not yielding the expected results (Oko, et al., 2018; Okoli & Ugwu, 2019). The war against insurgency has been confrontational and emphasis has been on the use of firearms in the regions with little attention on intelligence gathering. This situation must change as Nigerian security outfits must be reinvented into ones that will emphasize more on intelligence over firearms. The report from the Nigerian government has indicated that there was no serious and organized intelligence gathering and deployment to fight insurgency in north-east Nigeria (Oko, et al, 2018). Firearms are important but intelligence is more important, without information no matter the firepower you can misdirect your firepower. So, security needs to be restructured and reinvented in a way that will generate credible intelligent information and make the best use of that information to address the problem of insecurity. Community Integrative Conflict Management Approach can also be explored by Nigerian security forces fighting insurgency and banditry. This is an approach that recognizes different important stakeholders within the community in the management of conflict. The approach involves consultation, dialoguing, engaging, and seeking cooperation with community actors, who constitute important stakeholders within the community to seek a lasting solution to the insurgency and banditry. It is believed that if the Nigerian Army partners with traditional, religious, and socioeconomic groups as well as civil society organizations within the regions with sincerity success shall be attained.

The provision of education for all is urgently required

If the war on insurgency and banditry should be won education must be provided for all. A high level of illiteracy among different age groups and gender has been noted to have contributed to the thriving of insurgency in the northern part of Nigeria (Oko, et al., 2018). An ignorant population is a vulnerable population and the inability of the government to provide education will build resentment in the minds of these vulnerable people to take arms against the people and the state. Khan and Cheri (2016) reported that the northeastern region has the lowest male literacy rate and is second to the northwest zone with the highest female illiteracy among the six geopolitical zones of Nigeria. This refusal of the government to give her youths sound and functional education has made them very vulnerable to recruitment into all forms of crime including deadly Boko Haram and banditry. The government must invest in education in such a way that children, youth, and adult illiteracy will be properly addressed. One of the best ways to do this is to subscribe to Adult and Non-formal Education programs to provide second-chance opportunities for youth and adult illiterates as well as adolescents who might have missed the basic educational opportunities and could not be accommodated by the existing formal schools. National orientation programs in the northern part of Nigeria must be intensified and be focused on enlightening the general public about the importance of education in such a way that the region will embrace and pursue functional and sound education for all in the zones.

Unity of Nigeria elites

Unity of Nigerian elites is another way out of addressing insurgency and other security challenges in Nigeria. Nigeria elites are factionalized along the region, religion, tribes, sects, and political parties. The deeper fictionalization of Nigerian elites is a very stricken symptom of a failing state. This situation is one of the major causes of the inability of the government to have a coordinating point for Nigeria's state including addressing insurgency and other security problems in the north-east and north-west. Nigeria elites must be united and patriotic regardless of party lines, regional backgrounds, and religious affiliation to win the war against insecurity in Nigeria. The National Orientation Agency and Nigerian media must continue to preach about one united Nigeria nation where everyone's values, culture, and beliefs are respected and showcase the benefits of being honest and patriotic to one's country and act by the values that will promote development and growth irrespective of one's affiliations.

Taking over control of forest reserves

Taking over control of forest reserves is one of the remedial options for tackling insurgency and banditry in Nigeria. There is a huge ungoverned space in the Northern parts of Nigeria. The northeast and northwest zones are characterized by vast forestlands, hinterlands, and borderlines and are grossly ungoverned which makes them strategic hideouts for criminal groups (Okoli & Ugwu, 2019). The government must learn its lessons from abandoning forest reserves and make efforts to revive the forest reserve activities to take charge of them and explore them for economic and tourism development. The government with the support of the international community can deploy relevant technology to take over the occupied

forests by the different criminal groups and make the forests beautiful sites of tourism.

Conclusion

Based on the above discussions, the paper concluded that Boko Haram and Banditry are the most serious security challenges affecting not only North East and North West but the entire country. The activities of the two criminal groups have led to the killing of innocent souls and the kidnapping of thousands of people in the regions and other parts of Nigeria as well as neighboring countries of Cameroon, Chad, and Niger. It has led to the loss of economic activities of livelihood of people and governments. The closure of many educational and economic institutions and the destruction of properties worth billions of Naira as well as government buildings among others have left serious problems for Nigerians to contend with in the twenty years if not more. Mitigating the effects and addressing the problems of insurgency and banditry in the north-east and north-west Nigeria will sail through via explorations of the potentials of non-formal education options. The options presented here are addressing uneven development, fighting poverty, restructuring the Nigerian security apparatus, provision of education for all, fostering the unity of Nigerian elites, and taking over control of forest reserves.

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