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EDITORIAL

Polyglot adalah jurnal ilmiah tentang Pendidikan, Bahasa, Budaya, dan Literatur yang diterbitkan oleh Fakultas ilmu Pendidikan, Universitas Pelita Harapan. Mulai Volume 15 No 1 Edisi Januari 2019 Polyglot telahterakreditasi SINTA 3 oleh Menristekdikti dengan keputusan No.10/E/KPT/2019 tertanggal 4 April 2019 yang berlaku 5 tahun. Semua artikel yang diterbitkan dalam Jurnal Polyglot merupakan hasil penelitian, hasil pemikiran / kajian literatur, hasil reviu dari buku, film, atau karya lainnya, atau pengalaman praktis guru di sekolah yang disajikan dalam karya tulisan yang memenuhi standar ilmiah.

Jurnal Polyglot Volume 18, No. 2 edisi Juli 2022 ini menyajikan sepuluh artikel yang terdiri dari 9 artikel hasil pemikiran dan penelitian berkaitan dengan pendidikan, budaya, dan bahasa dengan menggunakan metode kualitatif ataupun kuantitatif, dan 1 artikel lainnya merupakan hasil diskusi tentang *school practice experience*. Dari 9 artikel, 4 artikel yang diterbitkan dalam edisi ini merupakan artikel terpilih dari suatu Konferensi Internasional tentang Pendidikan Kristen bertajuk *Christian Education in Digital Technology Era: Challenges and Oppourtunities* yang diselenggarakan oleh Teachers College, Universitas Pelita Harapan pada tanggal 3-4 Juni 2022. 4 artikel tersebut adalah:

1. *Student Teachers' Experiences of Spiritual Formation and Digital Learning in a Christian Higher Education*

2. *Cultivating Biblical Learning in a Virtual Learning Environment through Group Project-based Learning*

3. *Teachers' Competencies Profile in Digital Technology Era: Spiritual Formation and Biblical Community*

4. *Implementation of an Educative Assessment in Physics Education Study Program UPH during Online Learning*

Untuk edisi berikutnya yaitu edisi januari 2023, tim redaksi menerima tulisan yang memenuhi kaidah ilmiah dari para penulis untuk dipertimbangkan. Setiap naskah yang masuk ke redaksi akan reviu oleh ahli dibidangnya dan hasil reviu akan diberitahukan kepada penulis untuk ditindaklanjuti.

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THE PRACTICE OF REFLECTIVE PEDAGOGY IN INDONESIAN CLASSROOMS:
A SYSTEMATIC REVIEW

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ABSTRACT

This was a systematic literature review study aiming at exploring the implementation of a reflective pedagogy paradigm in the Indonesian educational context. The works being reviewed in the study were gathered using Harzing's Publish and Perish software. The criteria for including the works were being indexed by Google Scholar, published between the last ten years (2012-2021), the most cited works during their year of publication, and published in, at least, peer-reviewed journals. This review excluded conference papers published in proceedings and other works that were not published in journals. The results of the review showed that the reflective pedagogy had been widely used across subject areas and levels of education in Indonesia. It was also found out that, as the fundamental part of the pedagogy, reflection had been regarded as a process where learners looked back at their learning process to identify their experiences and the values they had learned during the process. Based on the results, this study concluded that the implementation of the reflective pedagogy could improve learners' achievement and awareness of life values and virtues. It also recommended implementing the pedagogy to encourage learners to be autonomous in assessing their learning to prepare themselves to be lifelong learners.

Keywords: reflective pedagogy; systematic review; learning practice

ABSTRAK

Ini adalah studi tinjauan pustaka sistematis yang bertujuan untuk mengeksplorasi implementasi paradigma pedagogi reflektif dalam konteks pendidikan Indonesia. Karya-karya yang ditinjau dalam penelitian ini dikumpulkan menggunakan perangkat lunak Harzing's Publish and Perish. Kriteria untuk memasukkan karya sedang diindeks oleh Google Scholar, diterbitkan antara sepuluh tahun terakhir (2012-2021), karya yang paling banyak dikutip selama tahun publikasi mereka, dan diterbitkan setidaknya di jurnal *peer-review*. Tinjauan ini mengecualikan makalah konferensi yang diterbitkan dalam prosiding dan karya lain yang tidak diterbitkan dalam jurnal. Hasil review menunjukkan bahwa pedagogi reflektif telah banyak digunakan di seluruh bidang studi dan jenjang pendidikan di Indonesia. Ditemukan juga bahwa, sebagai bagian mendasar dari pedagogi, refleksi telah dianggap sebagai proses di mana peserta didik melihat kembali proses belajar mereka untuk mengidentifikasi pengalaman mereka dan nilai-nilai yang telah mereka pelajari selama proses tersebut. Berdasarkan hasil tersebut, penelitian ini menyimpulkan bahwa penerapan pedagogi reflektif dapat meningkatkan prestasi dan kesadaran peserta didik akan nilai-nilai dan kebajikan hidup. Direkomendasikan pula penerapan pedagogi untuk mendorong peserta didik menjadi mandiri dalam menilai pembelajaran mereka untuk mempersiapkan diri menjadi pembelajar sepanjang hayat.

Kata kunci: pedagogi reflektif; tinjauan sistematis; proses pembelajaran

Introduction

The ability to reflect is one of the abilities that distinguishes us, humans, from other living creatures. This ability allows us to look back on anything we have done, its success or failure, and consider options to make changes whenever they are required. Reflection is, then, an important step to making improvements in anything we do.

Reflection also has a significant role in learning in any area and level of education. It incites teachers to look at and investigate their daily teaching practices to find better solutions and explore other more

challenging or supportive learning environments for their learners (Wittmann, 2021). It also helps learners to develop their cognitive skills to form, underpin, or modify their current understanding and perspectives about the subject matter (Wijnands, 2021).

The act of reflecting is not an activity designated for adolescent and adult learners only. Children as young as those learning at the elementary level of education are also capable of being reflective in some ways. To a certain extent, they are capable of making thoughtful decisions about their behaviors and keen observations about their environment (Epstein, 2003). That is why, as Clarke (2020) suggested, teachers also need to find suitable ways to reflect with children to know their voices and unique perspective rather than relying on their own reflections and analysis of the learning process to inform their planning and improve learning quality. Considering these young learners' voices and perspectives benefits the learners in some ways as well. Shea (2021) noted that reflection could help children remember what they had learned and give them a sense of accomplishment. They are contributing to their ongoing learning by building their confidence and fostering self-efficacy in new skills (Clarke, 2020). Being confident about their learning will help children manage thinking, metacognition, and other skills that can assist them to learn in new areas of learning in their later schooling and adult life (McGaskey & Olsen, n.d). That is, they are equipped with the skills required to become lifelong learners.

Reflective Pedagogy

In recent years, the importance of reflection in education has found its legitimacy in what many educators call reflective pedagogy (Bautista & Schussler, 2010; Jakeman, et., al., 2017; McGuire & Lay, 2020; Phillips, et.al., 2017; Smith & Scharmann, 2008). Referring to Bailey (2012), reflective pedagogy can be defined as practices in which teachers carefully evaluate their own work while seeking to understand their purposes, rationales, and practices to improve upon their work. This pedagogy involves continuous processes of experience and reflection with the intention of facilitating learners' examination of previous life experiences in light of new learning (McGuire & Lay, 2020). However, as the context of a classroom requires the presence of both the teacher and the learners, the implementation of reflective pedagogy in a classroom

context requires a balance between the teacher's instructions and the learner's autonomy (Guthrie & McCracken, 2010).

On the learners' part, reflective pedagogy encompasses the practices in which they evaluate their performance while trying to make sense of the learning process as well as those in which they assess the strategies they use in attaining the learning objectives with the purpose of improving their future learning. The practices of reflective pedagogy require learners to exhibit and employ their metacognitive strategies in looking back at their learning process, recognizing their own strengths and weaknesses, and thus, finding suitable solutions to overcome the weaknesses and optimize their strengths to solve the problems that may arise during the process. Thus, it aims to foster self-regulation on the learners' part. That is, they empower themselves to be assessment-capable learners who are autonomous and able to equip themselves with the skills they need to further their learning.

As already implied by its term, the focus of reflective pedagogy practices in the classrooms is on the use of learners' reflections as the foundation of learning. As the key activity during the learning process, the purpose of reflections has to move beyond recalling facts about the subjects being learned. Reflections should move beyond reflecting on what has happened and what has been learned during the process to the benefits and values of the learning. Facilitated by teachers, reflecting should function as a self-motivated activity that empowers learners to self-assess their learning quality (Fines, 2014). Reflecting should be considered a more critical activity than a technical one (Larrivee, 2008). By developing reflection skills, learners are allowed to focus more on the quality of their learning process and how to improve it. As it can motivate learners to improve the quality of their learning, reflective activities have significant influences on the process of assessments as well. Reflections move the process of assessments from assessment of and for learning to assessment as learning where learners take charge of their learning by actively seeking feedback from their teachers and peers to improve themselves (Carlzon, 2019).

While implementing the reflective pedagogy, it is also important to keep in mind that the habit of reflecting should not be imposed on learners only. As an integral part of the teaching and learning process, teachers too should do their part in reflecting on their roles as facilitators

and mentors for their learners. They have the responsibility to be reflective practitioners who are required to continuously reflect on their practices. In line with what Schön (1992) proposed almost four decades ago, teachers are required to be able to reflect-on-action as well as reflect-in-action. By doing reflection-on-action, they are able to look back at their previous practices to gain insights to improve their future practice while performing reflection-in-action encourage them to observe their own experiences during the teaching and learning process and, therefore, allow them to make sensible judgments based on the experiences at the very moment (Bates, 2019). This ability to reflect on as well as reflect in their practices will not only benefit them in designing learning environments that fit the needs of their learners but also help them to be increasingly proficient teachers.

As much as it benefits the teaching and learning process, the implementation of the reflective pedagogy in the context of Indonesian classrooms is still frequently overlooked. Having reflections as its core process of learning, reflective pedagogy is often confused with the mere activities of reflection conducted at the end of a learning session. While it is not uncommon to observe teachers asking reflective questions concerning how the learners feel about the lesson, what is difficult for them, what they have learned during the lesson, etc., teachers are rarely observed asking such questions to themselves. While they plan the reflection session and detail the activity for their learners in their lesson plan, they often miss the opportunities to do the reflection themselves. They facilitate their learners to be reflective learners but frequently pass over the chance to be reflective teachers themselves.

This study aims to systematically review the implementation of reflective pedagogy in the context of Indonesian classrooms. It attempts to answer the question of how reflective pedagogy is implemented and so to identify the key principles of how the pedagogy is used in the teaching and learning processes across different levels and subject areas. These findings are expected to provide insights on what areas and how reflective pedagogy should be used in future research.

Method

This was a systematic review study adopting and modifying the systematic review process model proposed by Bolan, et. al. (2017). There were four main phases employed in the study. The first phase of planning

included determining scoping searches, identifying a review question, and determining inclusion and exclusion criteria. The second phase of literature searching was the phase where the researcher searched for relevant titles and abstracts, obtained the papers, selected accessible full-text papers, and did data extraction from the papers. The third and fourth phases of the systematic process were performing quality assessment and analyzing as well as synthesizing the data resulting from the extraction process respectively. The phases and the detailed procedures included were illustrated in the following figure.

Figure 1. The systematic review processes

Results and Discussions

This systematic literature review used Harzing's Publish and Perish software to search and gather the studies being reviewed. An initial search strategy using the keywords "*pedagogi reflektif*" and "Indonesia" resulted in 77 studies from various indexed publications. Inclusion and exclusion criteria were then employed to narrow the results of the search. The inclusion criteria were (1) being indexed by Google Scholar, (2) being published between the last ten years (2012-2021), (3) being the most cited studies during their year of publication, and (4) being published in journals. Conference papers published in proceedings, other studies that were not published in journals, and studies that were not available in full texts were excluded from this review. The final identification using the inclusion and exclusion criteria resulted in 10 studies listed in Table 1.

Table 1. The identity of the studies gathered for further analysis

Year	Author(s)	Title	Publication
2015	Anggraini	*Penerapan model lingkaran sastra dan pedagogi reflektif dalam meningkatkan kemampuan mengapresiasi sastra*	*Kembara: Jurnal Keilmuan Bahasa, Sastra, dan Pengajarannya*, 1 (1)
	Iswari, Muhtar, and Akip	*Peningkatan kompetensi pada pembelajaran tematik di kelas III menggunakan model berbasis paradigma pedagogi reflektif di sekolah dasar*	*Jurnal Pendidikan Dasar*, 3 (1)
2016	Hartana, Setyosari, and Kuswandi	*Penerapan strategi pembelajaran paradigma pedagogi Ignatian (reflektif) terhadap peningkatan hasil belajar dan motivasi berprestasi belajar ilmu pengetahuan alam (IPA) siswa kelas V sekolah dasar*	*Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 1 (4)
	Pratini	*Implementasi paradigma pedagogi reflektif dalam pembelajaran matematika untuk meningkatkan* competence, conscience, *dan* compassion *mahasiswa*	Elementary School, 3 (1)
2019	Printina	*Pemanfaatan media komik digital melalui unsur PPR (paradigma pedagogi reflektif) pada matakuliah Sejarah Asia Barat Modern*	*Jurnal Pendidikan Sejarah*, 1 (8)

Year	Author(s)	Title	Publication
	Printina	*Analisa potensi geografis Timur Tengah menjadi kekuatan teritori melalui komik digital berlandaskan paradigma pedagogi reflektif*	*Jurnal Agastya*, 9 (1)
2020	Printina and Hasudungan	*Pembelajaran sejarah Asia barat kuno berbasis paradigma pedagogi reflektif*	*Jurnal Swadesi*, I (1)
	Husniatun	*Peningkatan sikap kedisiplinan dalam pembelajaran PKn menggunakan model paradigma pedagogi reflektif bagi peserta didik sekolah dasar*	*Jurnal Ilmu Pendidikan Ahlussunnah*, 3 (2)
	Nugroho and Sariyatun	*Konsepsi triprangama untuk menanamkan kesadaran hukum dalam pembelajaran IPS melalui pedagogi reflektif*	*Jurnal Pendidikan Sejarah Indonesia*, 3 (1)
2021	Raharjo	*Pengembangan model pembelajaran sejarah kepemimpinan berbasis pedagogi reflektif untuk meningkatkan sikap kepemimpinan siswa SMA*	*Jurnal Agastya*, 11 (2)

At the outset, this review intended to take the most cited study on reflective pedagogy from each year between 2012 and 2021 as its objects of analysis. A further identification using inclusion and exclusion criteria, however, revealed that there were no studies agreeing with the criteria between 2012 and 2014 as well as in 2017 and 2018. Accordingly, the researcher included other studies that complied with the predetermined selection criteria from other corresponding years to be included in the analysis and synthesis stage. In addition, as the information gathered from the studies was largely qualitative, the analysis was also meant to

describe and synthesize the data in a qualitative manner (Tai, et. al., 2020). The results of the initial analysis of the studies included at the analyzing and synthesizing stage are presented in the following Table 2.

Table 2. The attributes of the studies and their key findings

Author(s)	Setting and Subject Area	Implementation of Reflective Pedagogy	Key Finding
Anggraini (2015)	University; Indonesian Literatures	Combined with another model to increase students' ability in literature appreciation. Students reflected on their learning process and the teacher reflected on the teaching process.	The literary cycle model and reflective pedagogy paradigm made students more active during the learning process and improved their ability and skills in appreciating literary works.
Iswari, Muhtar, and Akip (2015)	Elementary school; Thematic – Mathematics and Social Studies	As an instructional model to increase students' competence in a thematic unit. Students reflected on what they had learned during the learning process and the teacher reflected on the teaching process.	Reflective pedagogy paradigm could increase students' competence in a thematic unit comprising the subjects of Mathematics and Social Studies.
Hartana, Setyosari, and Kuswandi (2016)	Elementary school; Science	As an instructional model to improve students' achievement and motivation in learning science. Students did the reflection by actively identifying humanistic values from the materials they had learned and by seeking ways on how they could apply the values in real life. The teacher facilitated the students' reflection process.	Reflective pedagogy paradigm could improve students' achievement and motivation in learning science.
Pratini (2016)	University; Mathematics	As an instructional model to assess students' competence, compassion, and	Reflective pedagogy paradigm could increase and develop students' competence,

Author(s)	Setting and Subject Area	Implementation of Reflective Pedagogy	Key Finding
		conscience through assessments and reflections. Students did the reflection on their compassion and conscience by filling in a questionnaire and the teacher reflected on the teaching process.	conscience, and compassion.
Printina (2019a)	University; History	As a framework to analyze the use of digital comics in teaching a historical topic. Students reflected on their learning process and the teacher reflected on the teaching process.	The use of digital comics could enhance the development of competence by assessing students' understanding of the subject, conscience by the reflecting activities within the digital comics, and compassion by planning an action relevant to the topic.
Printina (2019b)	University; History	As a framework to develop learning media in the form of digital comics. Students reflected on their learning process and the teacher reflected on the teaching process.	The principles of the reflective pedagogy paradigm could be used to make digital comics, making teaching history more creative and up to date.
Printina and Hasudungan (2020)	University; History	As an instructional model to teach a historical topic. Students reflected on their learning process and the teacher reflected on the teaching process.	Teaching a historical topic using the reflective pedagogy approach could improve students' competence, conscience, and compassion.
Husniatun (2020)	Elementary school; Civics Education	As an instructional model to improve students' discipline through Civics Education subject. Students reflected on their learning process and the teacher	Reflective pedagogy paradigm could improve students' discipline.

Author(s)	Setting and Subject Area	Implementation of Reflective Pedagogy	Key Finding
		reflected on the teaching process.	
Nugroho and Sariyatun (2020)	Junior high school; Social studies	Combined with a learning concept to increase students' legal awareness. Students reflected on what they had learned from the learning materials and the teacher reflected on the teaching process.	The cycle of reflective pedagogy could facilitate students to develop their legal awareness as inferred by the Triprangama inscription.
Raharjo (2021)	Senior high school; History	As a basis to develop a teaching model embracing leadership values. Students reflected on what leadership values they could learn from the historic character while the teacher supervised the learning process.	Leadership attitudes among students could be improved by using the eight leadership indicators from Northouse and Ignatian.

The gathered studies indicated that reflective pedagogy had been widely used across any education level in Indonesia. It had been implemented in elementary levels (Hartana, Setyosari, & Kuswandi, 2016; Husniatun, 2020; Iswari, Muhtar, & Akip, 2015). Studies from Nugroho and Sariyatun (2020) and Raharjo (2021) showed how reflective pedagogy could be implemented in secondary levels of education such as junior and senior high schools. Further, the implementation of this pedagogy could be witnessed in the studies conducted by Anggraini (2015), Pratini (2016), Printina (2019a, 2019b), and Printina and Hasudungan (2020).

The subject areas in which the reflective pedagogy was implemented in Indonesia also varied. As shown by the studies, it could be used as a teaching and learning framework for single-subject areas such as literature, science, mathematics, history, civics education, and social studies in the elementary, secondary, and higher levels of education. Implemented specifically at the elementary level, the reflective pedagogy could also serve as a basis for teaching a thematic

unit where several subject areas were merged together under one common topic (Hartana, Setyosari, & Kuswandi, 2016).

There are, however, some noted points on how teachers in Indonesia make use of the reflective pedagogy to base their classroom practices. These points are worth some thoughtful consideration if we are to look at what actually underlies the implementation of reflective pedagogy in our educational setting. These thoughts will allow us to also reflect on whether we have appropriately used the pedagogy to improve our teaching as well as to facilitate our learners in their quest to progress and grow themselves by means of their learning process.

All the gathered studies mentioned the activity of reflections performed by their student participants in their studies. Nevertheless, how the activities were carried out tends to vary among the studies. On its basic level, reflection could be viewed as a process of remembering what learners had learned during the learning process (Nugroho & Sariyatun, 2020). However, more than just recalling and remembering, reflection was more a process where learners looked back at their learning process and identified what changes they had experienced during the process (Anggraini, 2015; Iswari, Muhtar, & Akip, 2015, Husniatun, 2020; Printina, 2019; Printina, 2019a; Printina & Hasudungan, 2020). Taking it further, reflection is supposed to be a process where learners can gain some insights from their past learning and make use of these insights to facilitate their learning in other areas. The studies by Hartana, Setyosari, and Kuswandi (2016), Pratini (2016), and Raharjo (2021) illustrated this point in some ways. Implementing reflective pedagogy in different levels of education, the three studies described the reflecting process in the pedagogy as a process where learners assessed their own learning processes to find life values and virtues that they could later use in their real life. The process can be carried out by writing journals (Hartana, Setyosari, & Kuswandi, 2016), peer discussions (Raharjo, 2021), or simply by filling in questionnaires of which items were designed to assess their present or future intentions as well as goals as the outcomes of their current learning process (Pratini, 2016). While there is no definite guide on how reflection should be carried out at different levels of education, teachers should always make sure that the processes of reflection should always bear the purpose of making the learners aware of the benefits and values of the learning for them

(Larrivee, 2008). That is, at any level, teachers and learners may agree upon and employ any reflection activities as long as the activities allow them to go deeper into the learning process and discover the learned lessons, why they are important for them, and how they will affect their further learning.

At any level of education, the roles of the teachers during the reflection process are also worth viewing. All the studies mentioned previously reported that at some points teachers did the reflection processes too. All the studies infer that the teachers did some reflections on the teaching processes, and for this reason, it is reasonable to assume that they were doing a reflection-on-action process – which is an important practice in an educational context (Bates, 2019). However, none of the studies provided details on how the learners were engaged in their reflective activities. While learners are the main subjects doing the reflection, teachers need to model the process through their own reflective process. Merely asking learners to reflect on their learning without providing them with a model of how they should reflect properly will only result in them not being able to differentiate reflecting from simply reporting. While reflection may include reports about what learners have done and got from the learning process, self-assessing is the main part of the reflection process. Teachers at any level of education should take time to guide and facilitate their learners to self-assess themselves in ways that suit their characteristics, backgrounds, and cognitive as well as metacognitive levels for being able to self-assess is the core of any reflective activity (Fines, 2014).

All the analyzed studies also concluded that the implementation of the reflective pedagogy could increase learners' achievement in specific subject areas or skills such as science and literary appreciation (Anggraini, 2015; Hartana, Setyosari, & Kuswandi, 2016; Iswari, Muhtar, & Akip, 2015), or improve their attitudes and motivation in engaging with the learning process (Hartana, Setyosari, & Kuswandi, 2016; Husniatun, 2020). It could also improve learners' awareness of certain concepts and values (Nugroho & Sariyatun, 2020; Raharjo, 2021). In another context, the reflective pedagogy could improve not only competence on certain subjects but also other learning outcomes such as conscience and compassion (Pratini, 2016; Printina & Hasudungan, 2020).

Apart from their effectiveness in improving learning outcomes and learners' skills, attitudes, motivation, and awareness about certain topics, concepts, or values, teachers should be able to design reflecting activities that suit their purposes (McGaskey & Olsen, n.d). Reflecting activities intended to assess learners' cognition or metacognition skills will be different from those aiming at assessing their personal growth or change. Similarly, those intended to assess their prior knowledge will also be different from the ones aiming at assessing their competence in certain areas. While there are numerous activities that can function as means of reflection, teachers should be able to select ones that fit the purpose(s) of the reflecting activities. More importantly, they should be able to opt for activities that suit the characteristics of their learners.

Conclusions, Recommendations, and Limitations of the Study

During the past ten years, reflective pedagogy has been used in various subject areas as well as levels of education ranging from primary to higher education. As the fundamental activity in the implementation of the pedagogy, the reflective activity is performed by the learners for various purposes. While recalling and remembering facts about the topic learned are also part of reflection, reflective activities should focus more on facilitating learners to look back at their learning experiences and examine what changes they have undergone during the learning process. Teachers should also use reflective activities to encourage learners to assess their performance and identify their strengths and weakness and the specific strategies they use to overcome their learning obstacles. As learners become autonomous in monitoring their own learning, teachers can use reflection as a means of doing an assessment for learning and an assessment as learning.

Based on the results of the review, this study recommends the use of reflective pedagogy in classroom practices as it will provide learners and teachers at any level of education to develop and enhance their ability in reflecting on their processes of learning and teaching. As reflective pedagogy also provides learners with the opportunities to look back and assess their learning independently, this study also recommends the use of reflective practices as classroom assessment activities. For this reason, it is also recommended to conduct studies on how reflective activities can facilitate teachers in promoting their learners

to be lifelong learners who are autonomous and empowered in taking charge of their own future learning.

This systematic study has a few limitations. The first is that it only covered studies on the implementation of reflective pedagogy within the past ten years. Another limitation is that there is a possibility that the search process using different keywords such as reflective pedagogy or reflective pedagogy paradigm will result in indexed different studies.

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USING FLIPGRID AS ELECTRONIC PORTFOLIO IN SPEAKING ASSESSMENT

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ABSTRACT

Given the prolonged pandemic situation that forced schools to run online in both synchronous and asynchronous modes has impacted some changes in either teaching practice or conducting the assessment. With the limited timetable provided to each school subject, there is a significant adjustment that the teachers should take to make the teaching and learning meaningful, not to mention in assessing students' learning. In the English as a Foreign Language (EFL) setting, assessing speaking is another challenge the teachers encounter specifically during online teaching. Consequently, English teachers are required to have specific strategies to manage this assessment still. Electronic portfolio-based assessment has been shown to serve both as an effective learning tool and assessment tool. Hence, this study was aimed to investigate the use of the Flipgrid as the electronic portfolio in assessing speaking. The qualitative design was applied in this study with students' scores, teacher's field notes, and questionnaires as the instruments to collect data. This study was expected to describe the washback of the Flipgrid as electronic portfolios in speaking assessment.

Keywords: Electronic portfolio; Flipgrid; Speaking assessment; Students' attitude

ABSTRAK

Situasi pandemi yang berkelanjutan telah memaksa setiap sekolah untuk melaksanakan pembelajaran daring baik secara *synchronous* maupun *asynchronous*. Hal ini berdampak pada berubahnya praktik mengajar dan penilaian dalam pembelajaran.

Dengan jadwal pembelajaran yang terbatas untuk setiap mata pelajaran, guru harus dapat melakukan penyesuaian yang signifikan untuk membuat proses kegiatan belajar mengajar menjadi berarti, begitu pula dengan penilaian hasil belajar siswa. Pada pembelajaran bahasa Inggris sebagai bahasa asing, penilaian keterampilan berbicara menjadi tantangan tersendiri bagi para guru khususnya pada saat pembelajaran daring. Sebagai konsekuensinya, setiap guru bahasa Inggris harus memiliki strategi tertentu untuk dapat mengelola penilaian dalam proses pembelajaran. Penilaian berbasis portofolio elektronik telah menunjukkan bahwa penilaian ini digunakan sebagai alat pembelajaran dan penilaian yang efektif. Oleh karena itu, penelitian ini bertujuan untuk menelaah penggunaan Flipgrid sebagai portofolio elektronik pada penilaian keterampilan berbicara dalam pembelajaran Bahasa Inggris. Pendekatan yang digunakan dalam penelitian ini adalah pendekatan kualitatif dengan menggunakan nilai siswa, catatan lapangan guru, dan kuesioner sebagai instrumen untuk mengumpulkan data. Penelitian ini diharapkan dapat mendeskripsikan dampak penggunaan Flipgrid sebagai portofolio elektronik pada penilaian keterampilan berbicara dalam pembelajaran Bahasa Inggris.

Kata kunci: Portofolio elektronik; Flipgrid; Penilaian keterampilan berbicara; Persepsi siswa

Introduction

In the situation where schools face prolonged closure as there has not been any good signal when the pandemic is over yet, teachers are expected to maintain effective, efficient, and meaningful either teaching practice or importantly conducting the assessment. With a significant reduction in the teaching duration, applying a particular strategy will eventually help the teachers run the teaching and assessment activities correspondingly. Furthermore, the fast rapid of technologies resulting from pandemic strikes have given the teachers more opportunities to explore various tools to assist them to be applied in both synchronous and asynchronous meetings (Innes, 2020; Syahrizal & Pamungkas, 2021).

However, conducting either teaching or assessing speaking among other skills is another challenge the teachers encounter specifically during online teaching mode. The limited interaction between students and teachers in one online class gives teachers another obstacle to checking their students' speaking ability. Shyness, the fear of making mistakes, and nervousness to speak in the class have been indicated as the negative washback that students might feel, particularly in a synchronous mode (Innes, 2020; Nuridah, Sari, Damayanti, & Citraningrum, 2021). Long before the pandemic strikes the world, studies revealed that speaking English has become the biggest challenge the students meet as they framed speaking as a frightening skill. The fear of making mistakes, lack of confidence, and feeling stressed were psychological factors that hinder students to perform speaking English in the class (Ariyanti, 2016; Suleimenova, 2013; Tuyet & Khang, 2020; Yalçın & İnceçay, 2014).

A portfolio presents as one of the assessment tools that might cover these issues. Portfolio-based assessment has been shown as the tool to embrace either learning or assessment (Lao-un & Khampusaen, 2018). Another supported study was research conducted by Cheishvili (2018). The result said that there was a significant benefit from the use of electronic portfolios as a means of assessment of the students' speaking skills during their studies. The application of e-portfolios could enhance their speaking skills.

Moreover, the rapid development of technologies to assist a teacher in conducting online learning during pandemic situations has made the use of electronic portfolios becomes more possible. Flipgrid is one of the powerful tools that appear to support the implementation of an e-portfolio. This online teaching tool allows the students to record and share short videos (Adams, 2020; Agan et al., 2019; Kiles, Vishenchuk, & Hohmeier, 2020). Several research studies on the implementation of this tool showed that Flipgrid decreased learners' speaking anxiety, covered different types of students, improved speaking skills, and had a positive attitude on the students as the crucial point (Budiarta & Santosa, 2020; Difilippantonio-Pen, 2020; Innes, 2020; Kiles et al., 2020; Lim, Shin, & Yunus, 2021; Lowenthal & Moore, 2020; Miskam, 2019; Nuridah et al., 2021; Petersen, Townsend, & Onaka, 2020; Safari & Koosha, 2016; Syahrizal & Pamungkas, 2021; Tuyet & Khang, 2020).

Electronic Portfolio Assessment in ELT

The implementation of portfolio assessment in the English Language Teaching (ELT) context has received much attention from several researchers lately. As to give a glance understanding, the portfolio is defined as "a purposeful collection of students' work" that encompasses the collection, reflection, and selection as the three essential elements that should be considered (Hamp-Lyons & Condon, 2000; Kwak & Yin, 2018). Rather than separating learning and assessment, portfolio assessment focuses on the ongoing process of learning and improves learning based on the information gained from the assessment (Hamp-Lyons & Condon, 2000). Additionally, other works revealed that a portfolio can serve as an effective tool to empower students in their learning process and bring a positive washback effect during the instruction (Kwak & Yin, 2018; Lam, 2016; Lam & Lee, 2009).

In contrast with several limitations the teachers face during this pandemic outbreak, the rapid development of online platforms is there to assist teachers in solving these limitations. As a result, the transformation of the portfolio into an electronic portfolio has more potential as it enables students to collect, store, and manage their works more efficiently. Besides, the students can easily transfer the content of their portfolios and access them simultaneously (Kwak & Yin, 2018).

Align with the aforementioned study, an electronic portfolio assessment appears to provide useful quality feedback that is more individualized through two-way communication between the teachers and their students. This portfolio is effective to improve self-regulated learning as well (Yastibas & Yastibas, 2015). This statement fits with the current condition where students take more portion of responsibility for their learning. Moreover, the study conducted by Yastibas and Cepik (2015) also revealed that both teachers and students have a positive attitude toward the implementation of the electronic portfolio in speaking assessment. As a result, the electronic portfolio becomes more possible specifically in assessing speaking skills during the pandemic outbreak.

Flipgrid

Accommodating students to have an opportunity in practicing English during the instruction is a crucial matter to reach the communicative objective stated in the curriculum. With the fast development of teaching tools nowadays, teachers have several options

to choose the platform that fits their purpose. Among numerous applicable platforms, Flipgrid appears to have more benefit particularly in teaching and assessing speaking skills.

Flipgrid is a free video platform where teachers can create communities by posting discussion prompts that students can generate responses through short video recordings (Difilippantonio-Pen, 2020). Moreover, Flipgrid enables students to customize their video responses as it has rich features, not to mention its user-friendly aspect and secure digital environment between teacher and students (Forsythe & Raine, 2019; Kiles et al., 2020).

Several studies on Flipgrid have been conducted where similar results were shown in those studies. Most of the studies that investigated both teachers' and students' perceptions showed a positive attitude toward the use of Flipgrid (Difilippantonio-Pen, 2020; Lim et al., 2021; Petersen et al., 2020; Syahrizal & Pamungkas, 2021; Tuyet & Khang, 2020). Moreover, other studies revealed that Flipgrid improves students' speaking skills, decreases speaking anxiety, and increases students' motivation (Nuridah et al., 2021; Syahrizal & Pamungkas, 2021; Tuyet & Khang, 2020).

Speaking Assessment

It has been highlighted in the introduction that assessing speaking is another challenge the teachers face during online learning. Particularly in the online teaching model where teachers have limited control over their students, either teaching or assessing speaking at some point seems to be neglected due to its trickiness. Long before a pandemic strikes the world, studies on speaking assessment showed that in the EFL context, students have a negative experience with speaking activities which led to a high level of speaking anxiety (Ariyanti, 2016; Cepik & Yastibas, 2013; Safari & Koosha, 2016; Suleimenova, 2013; Yalçın & İnceçay, 2014).

With the current situation that forces teachers to shift the traditional teaching activities into online mode, speaking skills become even harder to be taught due to the existed limitations. However, as has been explained, utilizing Flipgrid as electronic portfolios is applicable to serve both teaching and assessing speaking skills. This pair, by all means, is a bridge that linked the two purposes and still allows teachers to see their students' improvement at the same time. A study conducted by Johnson and Skarphol (2018) claimed that utilizing Flipgrid as an

electronic portfolio is recommended to be implemented in online learning.

On the other hand, due to the restraint that the teacher faces in online teaching, the assessment should be still conducted purposively. In terms of assessing speaking, teachers might apply a scoring system that fits with the materials being taught. The scoring rubric utilized by Basak (2019) could be applied in assessing speaking as the rubric items are easier to be applied in online assessment. Taking the 5 scales of measurements, the scoring system has 5 aspects that consist of grammatical accuracy and range, vocabulary, content, fluency, and pronunciation.

As Flipgrid emerges to be a useful platform in online teaching and electronic portfolio appears to be the powerful tool to cover both teaching and assessment, these two combinations utilize as a promising pair that help teachers in assessing speaking skills during the pandemic outbreak. However, most research studies under this topic only focused on the students' perception and its effect on their motivation separately. Not much has been done in investigating the use of Flipgrid as an electronic portfolio assessment. Thus, the implementation of Flipgrid as an electronic portfolio in speaking assessment and the student's perception of the use of the pair is the focus of this research.

Research Method or Approach of Discussion

The research design was a qualitative research study approach as it encompasses investigating an in-depth understanding of one phenomenon (Creswell & Creswell, 2018). A total of 45 ninth-grade students of a madrasah in Cimahi were the participants of the study. The ninth-grade students were chosen as they were already familiar with the Flipgrid platform and has used this platform more often during the online learning than the seventh and eighth grade students.

The study was conducted for three months started from February to April 2021. Applying Basak's (2019) speaking scoring rubrics the students' pre-test and post-test scores were collected and the teacher's observations were made upon completion of one speaking assessment. Then, a questionnaire was administered at the end of the investigation to find out the students' attitudes on the use of the platform. As the aim of the study was to investigate the implementation of Flipgrid as an electronic portfolio in speaking assessment and the student's perception

of the use of the pair, the data collections were utilized to answer the following research questions:

1. *How does Flipgrid affect students' achievement in speaking assessment??*
2. *To what extent does the use of Flipgrid as an electronic portfolio help teachers in speaking assessment?*
3. *What is the student's perception toward the use of Flipgrid in speaking assessment?*

The data gathered were then analysed The students' scores were proceeded using statistics computation namely SPSS 28.0 version. The pre and post-test scores were analyzed by generating the N-Gain scores of each student score to report the improvement of the speaking skills. The teacher's observations were compiled to examine the effectiveness of the tools in each assessment. The last, the questionnaire results were also proceeded using the SPSS computation to the frequency distribution and its validity of each item.

Findings and Discussions

The Students Achievements on Speaking Assessment

There are three speaking assessments during the study. Before each assessment, the students were given an explanation and practice on how to do the test. The following table 1 is the description of each Flipgrid assessment topic.

Table 1. Flipgrid Video Assessment Topic

No	Date	Task
1.	24 February	Miming movie dialogue related to present perfect tense
2.	31 March	Telling about a favourite song
3.	21 April	Cooking Project – describing how to make a dish

At the end of the study, the students' scores of each assessment were collected and analysed. The descriptive data distribution was presented in the following table 2.

	N	Minimum	Maximum	Mean	Std. Deviation
Pre-test	45	75	98	83.91	4.880
Post-test	45	84	100	94.84	4.253
Valid N (listwise)	45				

Table 2. Descriptive and Distribution Score

Table 2 above showed that the students' speaking scores were increased as the data displayed the improvement from the pre-test scores to the post-test scores. To strengthen the positive trend toward the implementation of this platform, the N-Gain analysis was done, and the summary of the computation was portrayed in the following table 3.

Table 3. N-Gain Score Distribution

No	Category	Number of Students
1	High (g>0.70)	26
2	Medium (0.70<g>0.30)	17
3	Low (g<0.30)	2

Along with the improvement of the speaking score, the application of Flipgrid as an electronic portfolio has a positive impact on the students. This finding aligned with what Hamp-Lyons and Condon (2000) said in their study. It is said that portfolio assessment focuses on the ongoing process of learning and improves learning based on the information gained from the assessment. Other studies also go along with this finding that claimed a portfolio can serve as an effective tool to empower students in their learning process, and the quality of the learning instruction is improved as well (Kwak & Yin, 2018; Lam, 2016; Lam & Lee, 2009).

The Washback on the Use of Flipgrid as Electronic Portfolio

Before using Flipgrid as a platform to assist in teaching speaking, speaking activities were rare to be conducted as the teachers felt that it didn't find easy to provide students with the opportunities to both practice and access the skills. With the help of this tool, it is possible to have both teaching and assessing speaking during an online class setting. At first, the students needed to be introduced to the important features

of Flipgrid to help them submit the task. What was highlighted in the first task was the small number of students who submitted the task. The main reason was the video post setting that was set in active mode. This meant that all posted videos appeared in their account and made them feel reluctant to do so as they were afraid of becoming humiliated by their peers. In this case, the students had issues with their comfortableness and their confidence. These issues also found in previous studies saying that some students were uncomfortable being on screen as they avoided being judged by other peers in the 'home' features of their Flipgrid page (Lowenthal & Moore, 2020; Syahrizal & Pamungkas, 2021).

What was occurred in the first task would be the rationale for the following speaking tasks. The second and the third tasks were set moderate as this setting made the uploaded video kept hidden and avoided other students access them. The results were satisfying as most of the students were willing to submit the tasks on time not to mention their speaking improvement, too. Thus, the psychological factors that usually occurred in speaking activities might be decreased by using the appropriate platform to assist the instructions. This finding has aligned with what Innes (2020), Kwak and Yin (2018), and Tuyet and Khang (2020) found in their studies stated that the appropriate online speaking tools might result in their speaking improvement. Furthermore, the speaking assessment in this study concentrated on merely fluency aspect. It was aimed to assess the content of their speaking matched with the tasks given.

The Students' Attitude on the Use of Flipgrid

Upon completion of the learning process, the questionnaire was distributed to students to get their perception of the use of Flipgrid as a portfolio to assess their speaking skills. The questionnaire results revealed that the students share the same point with the previous studies (Forsythe & Raine, 2019; Lowenthal & Moore, 2020; Syahrizal & Pamungkas, 2021; Tuyet & Khang, 2020). It is said that there was an improvement regarding their speaking skills during the period of speaking assessment. Moreover, the questionnaire is divided into three aspects namely accessibility, psychological fulfilment, and speaking improvement. The three major findings would be elaborated on through the following explanation.
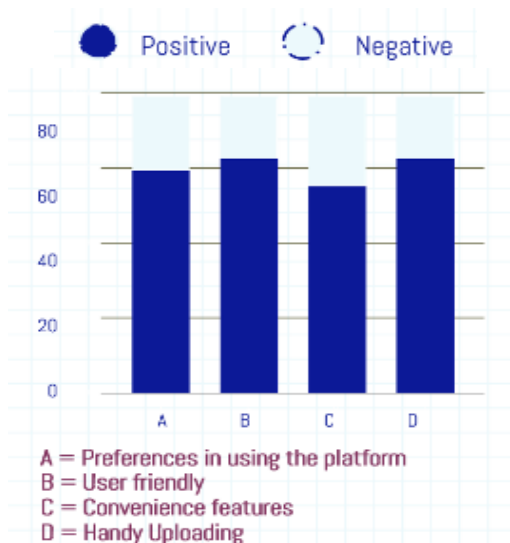
Figure 1. Accessibility

Regarding the findings on the accessibility aspect, it is found that most students had a positive attitude on the use of the Flipgrid platform as a speaking portfolio. Figure 1 above represented four accessibility aspects that covered preferences in using the platform, its user-friendliness, convenience features, and handy uploading. Each aspect supported the idea that almost all students felt that Flipgrid was an accessible platform during the class.

The aforementioned findings supported previous research under the same topic stating that Flipgrid enabled students to customize the students' video responses as it has rich features, not to mention its user-friendly aspect (Forsythe & Raine, 2019; Kiles et al., 2020). Also, Syahrizal and Pamungkas (2021) in their study claimed that Flipgrid is a compatible platform that can engage with other applications such as social media or Google Classroom, Microsoft Teams, and others.
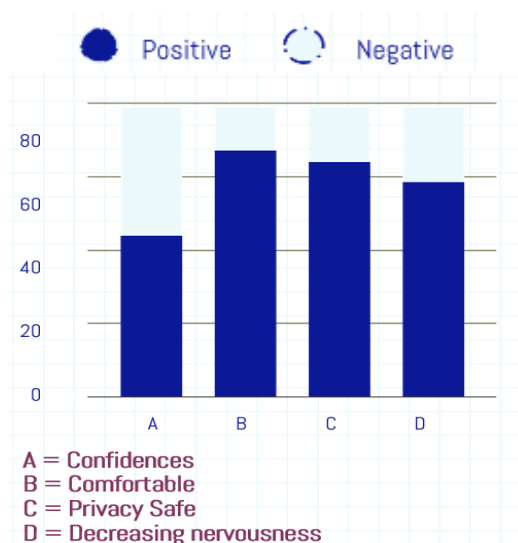
Figure 2. Psychological Fulfilment

In terms of students' psychological fulfilment, the findings showed that using Flipgrid could overcome students' speaking shortcomings that might appear when it came to either speaking activities or assessment. The above diagram revealed that they felt comfortable, confident, and less nervous when they used Flipgrid. Also, they didn't need to worry as their video would not be seen by their peers once they submitted the tasks. This finding supported the research result conducted by several researchers claiming that Flipgrid decreased learner's speaking anxiety, covered different types of students, and had a positive attitude on the students as the crucial point (Budiarta & Santosa, 2020; Difilippantonio-Pen, 2020; Innes, 2020; Kiles et al., 2020; Lim et al., 2021; Lowenthal & Moore, 2020; Miskam, 2019; Nuridah et al., 2021; Petersen et al., 2020; Safari & Koosha, 2016; Syahrizal & Pamungkas, 2021; Tuyet & Khang, 2020).
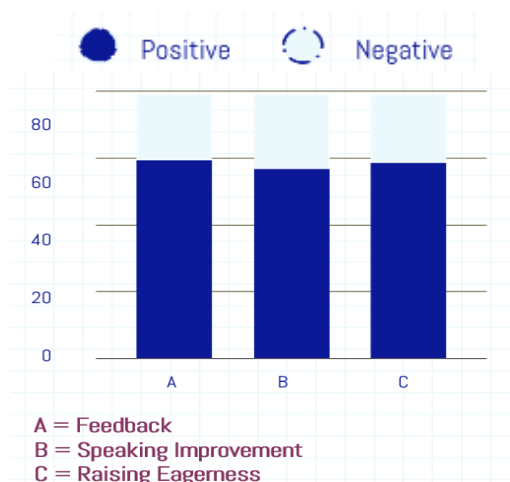
Figure 3. Speaking Improvement

What could be inferred from the table above was that the students felt their speaking improved as they used the platform during the instructions. The table also portrayed three aspects that might help students in having satisfying results. Regarding these findings, some previous studies also had similar results. At some points, Flipgrid is an effective learning tool that can enhance students' speaking skills, provide learners with more speaking practice, and help increase students' communication with their teachers (Tuyet & Khang, 2020).

Aligned with the findings under students' attitude on the use of Flipgrid, it supported the idea generated from some previous studies saying that Flipgrid improves students' speaking skills, decreases speaking anxiety, and increases students' motivation (Nuridah et al., 2021; Syahrizal & Pamungkas, 2021; Tuyet & Khang, 2020). All in all, it was shown that students have a positive attitude toward the use of Flipgrid as a speaking portfolio.

Conclusion

Apart from the limitation the teachers face during the pandemic outbreak, the teaching of speaking skills has been solved by the presence of the technologies that could assist teachers to conduct effective and meaningful teaching and assessment. The speaking anxiety and the students' negative experiences that could hinder them in having speaking assessments have been overcome by the implementation of Flipgrid as an electronic portfolio. The user-friendly features and the accessible

platform made it easier for the students to join the assessment and still manage convenience and security at the same time. Thus, the use of Flipgrid as an electronic portfolio in speaking assessment is recommended as they serve both improvement and conveniences to students, particularly in the instruction during the pandemic outbreak.

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RELIGIOUS BROTHERS' EMOTION REGULATION TO PURSUE WELL-BEING IN ONLINE LEARNING

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ABSTRACT

Effective learning is supported by a conducive environment. However, pandemic situations with their demands have changed the learning system from face-to-face to a virtual learning environment, which in some ways affects the emotions of the students. This study aimed to investigate the way undergraduate students regulate their emotions to pursue well-being in online learning challenges. Two research questions were proposed, namely (1) how do the undergraduate students manage their emotions to cope with the online learning challenges; and (2) what factors did they find facilitative to cope with the challenges? Qualitative research was utilized through semi-structured interviews. The respondents were two first-year and two fourth-year undergraduate students from 2 private universities in Yogyakarta, Indonesia. The result indicated that community context as an ecological perspective provides security, trust, and meaningful activities that help its members cope with their negative emotions to pursue well-being in online learning. Furthermore, the school context played a crucial role in facilitating the learning goals through various supports and strategies. The lecturers and future researchers are expected to emphasize and develop more empirical studies concerning the importance of self-regulation of emotion to attain well-being in online learning challenges.

Keywords: Online learning; Regulation of emotion; Religious brothers; Well-being

ABSTRAK

Pembelajaran yang efektif didukung oleh lingkungan yang kondusif. Namun, situasi pandemi dan tuntutannya telah mengubah lingkungan pembelajaran dari tatap muka menjadi pembelajaran virtual, yang berdampak pada emosi siswa dalam beberapa hal. Studi ini bertujuan untuk menyelidiki cara mahasiswa sarjana mengatur emosi mereka untuk mengejar kesejahteraan dalam tantangan pembelajaran online. Dua pertanyaan penelitian diajukan, yaitu (1) bagaimana mahasiswa sarjana mengelola emosi mereka untuk mengatasi tantangan pembelajaran online; dan (2) faktor apa saja yang mereka temukan fasilitatif untuk mengatasi tantangan pembelajaran online? Penelitian kualitatif digunakan dalam studi ini melalui wawancara semi-terstruktur. Respondennya adalah dua mahasiswa sarjana tahun pertama dan dua mahasiswa sarjana tahun keempat dari 2 universitas swasta di Yogyakarta, Indonesia. Hasilnya menunjukkan bahwa konteks komunitas religius sebagai perspektif ekologis memberikan keamanan, kepercayaan, dan kegiatan yang bermakna yang membantu anggotanya mengatasi emosi negatif mereka untuk mengejar kesejahteraan dalam pembelajaran online. Selain itu, konteks universitas memainkan peran krusial dalam memfasilitasi tujuan pembelajaran melalui berbagai dukungan dan strategi. Para dosen dan peneliti masa depan diharapkan untuk menekankan dan mengembangkan studi yang lebih empiris mengenai pentingnya regulasi emosi untuk mencapai kesejahteraan dalam tantangan pembelajaran online.

Introduction

Learning is one of the most vital aspects of our ecosystem for preserving and improving our quality of life since it is the process of obtaining new knowledge, skills, beliefs, attitudes, and preferences (Richard Gross, 2010). The value of an ecological perspective to learning is that it encourages us to understand learning and development as a comprehensive and profound process that connects us to other people, material resources in our surroundings, life events and situations, and the things we want or need to do and achieve (Jackson, 2016).

Based on this ecological approach, it is proven that learning is enhanced by the systems, for instance, how school is managed, how problems are solved, and so on, to support the learning process by guaranteeing effective and efficient use of available resources in the school system (Usman, 2016). To exemplify, Osher, Bear, Sprague & Doyle (2010) claimed that the learning environment is improved for instructors who use an ecological approach, giving room for students to share their load within a supportive, dynamic system.

Besides, home context is also of great value that supports students' academic performances. Parents or community members play a significant role in one's learning process, which is not only the duty of educational institutions. In today's online learning environment, parents' role in aiding their children in using technology while studying from home is critical, particularly in terms of preserving and developing desire to continue learning (Rizaldi, Nurhayati, Fatimah & Amni, 2021).

This study is set to investigate how brother-undergraduate students manage to deal with their emotions during online learning due to Covid-19 Pandemic. These undergraduate students lived as Catholic brothers in a religious community. The life of religious brothers in a community as a unique ecosystem - a typical learning ecology that consists of male adults who agreed to follow a certain way of life, as opposed to a secular lifestyle in general.

On the one hand, from a Bourdieuan perspective, members of the community develop a certain habitus, which characterizes consecrated life- "the total gift of self to God" (Arumi, 2015:5) by living out the evangelical counsels for the service of neighbor. Habitus refers to how people perceive and react to the social environment around them. It includes socially established habits, talents, and dispositions. People with comparable origins and opportunities are more likely to have these attitudes (Bourdieu, 1977). On the other hand, community members also interact with the wider communities, in the framework of their apostolic duties and in social life in the community, especially for those who are studying education to prepare their ministry.

Thus, members of the community still must balance the spiritual life as members of a particular community, and social life as students and as apostolic workers. Under normal circumstances, things have been going relatively well. However, the situation has changed due to the impact of

the pandemic in which the community members are forced to limit themselves. Even internal relationships in the community must follow strict health protocols. In addition, the limited number of computers, weak Internet connection, a lack of skills in utilizing technological tools, limited time, etc., also bring some impacts on learning achievements.

This study has two limitations. The first is that it deals mainly with the investigation of the interplay between the institutional system of schooling (of two different school cultures) and the home support among first and fourth-year students. Second, it conducted an in-depth investigation of a small number of research participants, which did not allow generalizations to be made.

To stress the point, this study was conducted for two major purposes. The primary purpose is to investigate the way the brother-undergraduate students manage to deal with their emotions and to uncover the elements that help them while online learning due to Covid-19 Pandemic. The second is to strengthen the empirical data on pursuing well-being by the catholic religious brothers and sisters.

Previous studies presented the various aspects of attaining well-being, but not about the regulation of emotion in online learning. To have it proven, some of the current research studies (from 2016 to 2021) are investigated. First, the study conducted by Campbell & Vitullo (2016) revealed that the well-being of the religious communities is gained through their religious values and practices, reinforced by social ties and norms that affect so many aspects of human flourishing. Second, the study proceeded by Cnaan & Heist (2018) discovered that congregations' well-being is enhanced by service as a primary source of mutual support and bonding social capital for their members. Third, the study held by Valadez (2019) indicated that the well-being of Christian Brothers is pursued by providing a high-quality education infused with a strong sense of Catholic virtue, such as a commitment to social justice, emphasized the role of community building, and so on. Another research by Büssing, Beerenbrock, Gerundt & Berger (2020) found that religious brothers and sisters achieved well-being during the spiritual crises is through a comprehensive assessment of the triggers. Lastly, Boonstra (2021) found that the well-being of the brothers of the 'Common Life' was attained through maintaining close personal ties with their lay visitors to communicate their message not merely through important readings but by examples of how to read them.

To fill the gap of the previous studies, this study made use of a qualitative approach attempts to emphasize the role of emotion regulation to cope with the online learning demands to pursue well-being by the Piarist religious brothers in Yogyakarta, Indonesia. To guide this research, two research questions were proposed: (1) how do the Piarist brother-undergraduate students manage their emotions to cope with the online learning challenges; and (2) what factors did they find facilitative to cope with the online learning challenges in attaining well-being?

To address those questions, some reviews of literature are consulted.

Self-regulation of emotion

Self-regulation of emotion, according to Koole, Dillen & Sheppes (2011: 23), is wide and extensive, encompassing the control of particular emotions like anger and fear, as well as global mood states, stress, and various affective responses. Therefore, emotion, or the 'affective' component, is critical to students' online learning, because emotion in emotion regulation refers to students' attempts to redirect the natural flow of their emotions in the difficult situation they confronted.

Online learning in higher education

Online learning refers to the practice of learning through the internet. It is the most recent development in distance education, which began in the mid-1990s with the broad adoption of the internet and the World Wide Web (Kentnor, 2015). The majority of online learning takes place through a learning management system (LMS), which is a software application used to administer, and deliver educational courses at a college or university (Ellis, Ryann, 2009). Its functions include distributing and maintaining various types of information, such as video, courses, and papers.

Well-being: A determination of the quality of life

According to Seligman (2011), well-being refers to positive feelings, being interested in an activity, having good connections with other people, finding significance in one's life, and a sense of progress in the pursuit of one's goals. In addition, Crisp (2017) claimed that well-being, often known as wellness, prudential value, or quality of life, refers to what is intrinsically significant to a person.

Research method

Research design

This study used a case study from the qualitative research paradigm to explore brother-undergraduate students' emotional intelligence, which was thought to be a dynamic process. By incorporating a small number of participants in the case study technique, the researchers were able to dig deeper into the data within a specific setting (Ebneyamini & Sadeghi Moghadam, 2018). The researchers decided on a case study technique after examining contextual factors that were directly related to the study's focus (Yazan, 2015), namely the undergraduate students' self-regulation of emotions in coping with online learning challenges.

Data collection procedure

In gathering data, the interviews were transcribed by preparing some open-ended questions about the challenges in online learning and factors that support the learning process to pursue well-being. The interview results were arranged in the form of extracts that presented the challenges and factors which facilitated the undergraduate students' success in online learning. The multiple readings on the transcripts were done to obtain a full understanding/comprehension. Ideas were thematically categorized.

Participants

The participants of this study were four catholic religious brothers who are studying education in two different private universities in Yogyakarta, Indonesia. Two among the participants were first-year and the other two were fourth-year. These differences aimed to identify the different levels of emotion regulation in both home and school context.

Data collection methods

The semi-structured interview was utilized in this study because it is best suited for small groups and is used to investigate unique scenarios that give greater insight into perceptions and opinions (Laforest, 2009). The fundamental goal of a semi-structured interview is to challenge preconceived notions about a topic or to expose fresh information about it (Gavora, 2006). A sample of interview questions is provided in the table below.

Table 1. Samples of Interview Questions

No.	Aim	Contexts	Interview Points		Questions
1.	To discover some ways of coping with negative emotions	Home context	Communal activities	1)	What are the common activities in the community that help you cope with your negative emotions in online learning?
			Individual activities	2)	What are the individual activities you did/do to cope with your negative emotion in online learning?
			Spiritual guidance	3)	How do you find spiritual guidance, in terms of managing your negative emotion? Please indicate, in what sense it helps?
2.	To identify the support-system of online learning goals		Other supporting aspects	4)	Besides the communal and individual activities in the community, what more factors do you find facilitate your online learning challenges?
		School context	The schools' support system	5)	What factors (internal and external) in the university do you find facilitate to cope with the online learning challenges?

Data analysis procedures

The data gathered during the interview was transcribed. The researchers used open code to analyze the data. Furthermore, the interview transcript was divided into a series of relevant components in order to identify specific associated categories related to the Piarist

brothers' well-being while learning online. The categories were reorganized and re-examined in order to make meaningful connections with the conceptual framework used in this study.

Results and discussions
Results

The emotion regulation of four brother-undergraduate students in facing online learning challenges has been established as a result of the recurrence of the patterns. These patterns are divided into two categories: ways to cope with the negative emotions and the support-system of both community and the school where they live and study.

Ways to cope with the negative emotions
Communal activities

Participant number 1 stated that as a first-year student, he feels worried because the lessons were not delivered well and often times he got lost of focus. But, joining the community activities and apostolic work, he was able to manage his negative emotions that motivated him to re-focus.

"I experienced that playing sport, pedaling a bike r, and singing together, enabled me to reduce my anxieties and refresh my positive feelings. Besides, my presence in the apostolate areas was really helped me overcoming my negative emotions."

Participant number 2 expressed that as a first-year student, the biggest challenge for him in the online learning is the ability to understand the message delivered, especially in English. His skill in using technological tools is also still limited. But the community activities and the help of his co-brothers enabled him enjoying learning.

"For me, the formation that was given by my master, community encouragements and support, enabled me to balance my emotion regarding the online learning demands. Besides, there are some activities that help me release my tensions, namely helping hand of my co-brothers, movie viewing, community prayer, and house cleaning."

Participant number 3 acknowledged that as a fourth-year student, who prepared his teaching practicum and thesis proposal, he experienced

some degree of negative emotions. But, the various activities prepared by the community, helped him to cope with those negative emotions.

"Praying, sharing Gospel, watching movies and working together helped me managed my negative emotions."

Participant number 4 said that as a fourth-year student who prepared his final task, has a dificulty with the time duration, limited interaction, limited internet connection and the responsibility in the community has no connection to the school demands. However, participating in the community activities, his negative emotional burnouts were released.

"The activities prepared by the community that help me managed my negative emotions are community recreation, sports, prayers, and community recollection and spiritual retreats."

Personal activities

Participant number 1 (first year) argued that the personal activities are more helpful for him to overcome his negative feelings and saturations, compared to the communal activities since they last longer.

"I enjoy more the personal activities to cope with my negative emotions, such as exploring my talents through compose poems and songs, playing the guitar or the piano. Besides, faithful to my personal prayer, read spiritual books, meditation, and personal walking, are other powerful means to balance my emotions."

Participant number 2 (first year) expressed that his personal activities are really important because it is more on the private times and specific situations.

"Personal prayer time, afternoon walk-taking or jogging and read spiritual readings are some of my personal activities that help me cope with my negative emotions."

Participant number 3 (fourth year) said that his feelings of preoccupying by many tasks affected him in the online learning achievements. But, these negative feelings were overcome when he was doing some personal activities.

"The personal activities that I did/do to cope with my negative emotions to face online learning demands are doing exercises, reading books, faithful to my personal prayers and have enough rest."

Participant number 4 (fourth year) stated that sometimes the conflict between individual schedule and community's timetable creates tensions and led him to feel bad. However, he still values most the personal activities that help him manage well his emotions.

"The personal activities I did to cope with negative emotions were playing the musical instruments, bicycling, personal prayer, play games."

Spiritual guidance

Participant number 1 (first year) realized that spiritual guidance directed by a master is crucial to his faith-deepening and self-actualization.

"The spiritual direction helps me to clarify my doubts and deepened my faith in God which leads to a proper self-actualization. Through this activity I am helped to be more opened."

Participant number 2 (first year) stated that oftentimes he abandoned his personal projects and commitments; and therefore, spiritual guidance is a way of reminder to be refocused on the priorities.

"Spiritual guidance for me is really important as a reminder to be faithful to my personal schedules and projects."

Participant number 3 (fourth year) valued spiritual guidance as a way to cope with his negative emotions and weaknesses under the light of God's Words.

"I got strength by the words of God through the sharing of my brothers in the community. Besides, having individual conference with my formator helped me to express my emotions in a good way."

Participant number 4 (fourth year) expressed that spiritual guidance is crucial to be guided to see things clearly with the help of the master, without any prejudices and blaming.

"The spiritual guidance is necessary that helps me to see the situation objectively that leads me to the releasing of tension and negative emotions."

Factors that support the online learning challenges

Besides the community and personal activities, there are some supporting factors that are being considered:

Participant number 1 (first year) perceived both community and schools as ecologies of learning support in various aspects that facilitated his self-growth and online learning success.

"Community has provided the learning tools and fraternal love. While from the school's context, group discussions, creativity from the lecturers, quota gratis, et., helped me to achieve the online learning goals."

Participant number 2 (first year) believed that the community trust and the collaborative learning system are two different factors that facilitated his online learning achievements.

"The community trust is a powerful support in my online learning development, such as discipline, advices, fraternal love, help me feel secure and calm down my negative perceptions to face the online learning challenges well. While from the school's system, the support from my classmates helped me cope with the difficulties in using technological tools."

Participant number 3 (fourth year) valued highly the community support and the Learning management system as intertwined factors that facilitated his online learning success.

"In the community, there is a trust given to serve in cooking, do marketing. While from the school, the group discussion, google meet, quizzes, reflections, provided quota and LMS, etc., facilitated me to cope with my online learning challenges."

Participant number 4 (fourth year) believed that both community and school context helped him in terms of learning flexibility and learning strategies.

"Other factors in the community that I found facilitated to cope with my online challenges are: the changeable environment, the accommodation of individual differences, an atmosphere of brotherly support and trust. While from the school, the peer supports have a

positive influence, the LMS is helpful and the lectures were approachable."

Discussions
The significance of community life in brothers' emotion regulation

The researchers found that joining the community's social, spiritual-physical activities is helpful to maintain the balance in the religious brothers' emotion to face the online learning demands. The value of religious brothers' communal activities, such as apostolate, community bonding, build relationship with other people in the society or in campus were grounded on the idea of self-giving to others (Asiain, 2018:38). Therefore, it is certain that the community's training aids the religious brothers in balancing their emotions and confronting the problems of online learning in a peaceful manner.

Second, the individual activities also helped the religious brothers manage their negative emotions during online learning situation. Precisely, exploring their talents through composing poems and songs, playing musical instruments, faithful to personal prayer and spiritual reading, meditation, and personal walking, play games, rest, etc., help them release their negative emotions to attain well-being. All of these are very important for self-transformation, especially prayer life. Anderson and Nunnelley (2016) found that regular private prayer is linked to significant improvements in depression, optimism, coping, and other mental health disorders including anxiety. Therefore, to overcome negative emotions, private prayer is crucial, since "prayer is a dialogue of love" (Asiain, 2018: 56).

Finally, spiritual direction (one-to-one relationship with spiritual director) and sharing problem to a close friend help the religious brothers release their tensions. This kind of dialogue is categorized as authentic listening which leads to a deep discernment to make some proper decisions since authentic listening involves an attitude of humility (Gonzalez, 2019).

The significance of both community and school system

The study' findings revealed several community and university supports which the religious brothers received during their online learning process. On one hand, the community brotherly support and

acceptance, accommodating the differences in community, the value of mutual trust are emphasized. All these virtues are drawn from the call to live in fraternal love which is defined as a welcoming, responsible, benevolent, caring, and respectful attitude toward all people; it's a love that's not exclusive and welcomes everyone (Arumi, 2015:153).

On the other hand, the school in which the brothers are studying provided them the Learning Management System (LMS) and quota internet to facilitate their online learning activities. In addition, the atmosphere of peer learning and interesting lessons are significant support system in which the brother-undergraduate students received from their respective university in which they belonged. Without those basic equipments, the online learning process will not be possible.

Conclusion

This research was conducted to answer the question "how do the religious brothers manage their emotions to cope with the online learning challenges; and what factors did they find facilitative the learning process? The findings revealed that community context as an ecological perspective provided security, trust and interesting activities that help its members cope with their negative emotions to pursue well-being in online learning. Besides, the school context played an important role to facilitate the learning outcomes, through different supports and accommodations. The pedagogical implications of this study grounded in the awareness of teachers, instructors, community leaders, students, and researchers to give more attention to the importance of emotion regulation in academic development. As regards, teachers and lecturers are expected to emphasize the importance of designing and implementing teaching processes that provide students with effective strategy on how to regulate one's emotion to meet the online learning challenges. Then, it can be a tool that opens a new horizon for the students to regulate their emotions in order to achieve well-being in online learning. Finally, this study could be a reference for future researchers to develop more empirical studies concerning the importance of self-regulation of emotion to attain well-being in online learning demands.

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STUDENT TEACHERS' EXPERIENCES OF SPIRITUAL FORMATION AND DIGITAL LEARNING IN A CHRISTIAN HIGHER EDUCATION

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ABSTRACT

The main purpose of Christian higher education is to provide a holistic development of students, including spirituality. In order to enhance student's spiritual growth, a Christian private university has been developing a comprehensive approach to educational practices regarding the integration of faith and learning. However, the pandemic COVID-19 has been limiting student's opportunity to experience those practices. The aim of this phenomenological study was to explore the student teachers' experiences of spiritual formation and digital learning in a Christian Teachers' College. The number of participants was 20 and data were collected by conducting interviews and self-reflection reports. The findings were classified in three main themes: personal attachment, support network, and diverse learning applications. The findings and implications are expected to reinforce digital learning in Christian higher education in promoting student's spiritual formation.

Keywords: student teachers; spiritual formation; digital learning; Christian higher education

ABSTRAK

Tujuan utama dari pendidikan tinggi Kristen adalah menyediakan perkembangan naradidik secara holistik, termasuk spiritualitas. Demi meningkatkan pertumbuhan spiritual naradidik, sebuah universitas Kristen telah mengembangkan sebuah pendekatan pendidikan yang komprehensif secara khusus mengenai integrasi antara iman dan ilmu. Akan tetapi, pandemic COVID-19 telah membatasi kesempatan naradidik untuk mengalami praktik-praktik pendidikan tersebut. Tujuan studi fenomenologi ini adalah untuk mengeksplorasi pengalaman mahasiswa guru tentang formasi spiritualitas dan pembelajaran digital di sebuah fakultas keguruan Kristen. Partisipan berjumlah 20 orang dan data diperoleh melalui wawancara dan laporan jurnal refleksi pribadi. Hasil penelitian diklasifikasikan dalam tiga tema utama: keterikatan pribadi (*personal attachment*), jaringan pendukung (*support network*), dan penerapan variasi pembelajaran (*diverse learning applications*). Hasil penelitian dan implikasi diharapkan dapat memperkuat pembelajaran digital serta mendukung formasi spiritualitas nara didik di pendidikan tinggi Kristen.

Kata Kunci: mahasiswa guru; formasi spiritualitas; pembelajaran digital; pendidikan tinggi Kristen

Introduction

The outbreak of COVID-19 has globally impacted all spheres of human beings, including the educational field. The traditional face-to-face learning which requires the presence of both a teacher and students in a physical classroom has changed to online distance learning in which the meeting is conducted by using online platforms, such as Google Classroom, Zoom and Teams. The challenges are rising since specific school programs are considered more effective when it accomplished as not virtually.

As a faith based institution, Christian higher education has a mandate to facilitate student's spiritual needs during their education, including student teachers. It is crucial for them to experience spiritual formation since they are promoted as the main figures to help students in the future. Their perceptions and experiences of spiritual formation in

a Christian Teachers College are presented in this study. The research questions in this study were: 1) How is student's perception of spiritual growth in a Christian higher education? 2) How are student teachers' experiences on digital learning in order to promote their spirituality?

Spiritual Formation

Spiritual formation is a must for every Christian. Mulholland (2016) defines a spiritual formation as "an intentional and continual commitment to lifelong process of growth toward wholeness in Christ" (p. 29). Spiritual formation requires a wholly self-commitment toward Christlikeness. Christians' commitment refers to self-awareness to participate in the spiritual journey with Christ in order to distance ourselves from sin and have a close relationship with God.

In addition to spiritual journey, Pettit (2008) describes spiritual formation as a dynamic relationship between God and the believers. He points out that spiritual formation is "God's work and man's cooperation" (p. 23). At the very first, God initially plans for salvation, then the Holy Spirit enables sinners to respond to God's effective callings. Here, human ability does not contribute to human salvation; it is only by the grace of God. However, after being converted to Christ, the believers now work mutually with the Holy Spirit to produce all qualities of a sanctification lifelong process. Christians are responsible to participate in the process of spiritual formation. There is no other way to connect with Christ without subduing ourselves through spiritual practices, such as Bible meditation, prayers, worship, and other disciplines.

Becoming a Christian Teacher

In a Christian perspective, being a teacher is not merely a profession, but it is God's calling. It implies that student teachers should be aware and responsible to equip themselves for the ministry of teaching. Yount (1999) explains three elements of maturity and its interrelationship in which student teachers need to develop during their education: thinking, feeling and doing (p. 22). It means that student teachers need to experience the beauty of being transformed during their study, so that they are able to become a good role model for their students. The ultimate goal of being a teacher is "to be examples of godly thinking, godly priorities, and godly behavior, thereby setting the stage for student growth toward excellence" (Yount, 1999, p. 37).

Christian Higher Education

The integration of faith and learning which results in spiritual formation has been a benchmark of the distinctiveness' evangelical universities. Christian colleges and universities are called to shape students to have a biblical worldview in which it affects their actions. Dockery (2018) points out that the main goal of Christian higher education is "to prepare a generation of Christians to think Christianly, to engage the academy and the culture, to serve society, and to renew the connection with the church and its' mission" (p. 12). Christian higher education has special mandate to pass Christian teachings from one generation to another generation.

In line with the calling, Christian higher education needs to incorporate spiritual practices into academic settings. Spiritual discipline is believed to be effective in enhancing students to experience biblical understanding as well as spiritual practices. Foster (2018) proposes the ideas of spiritual discipline -inward, outward, and corporate- as "a means of receiving God's grace" can be considered to foster students' spiritual formation in Christian universities (p. 7).

Digital Learning

Smith, Sevensma, Terpstra, and McMullen (2020) promote spiritual formation through digital learning. By claiming technology as a tool, spiritual formation can be facilitated so that both teachers and students are able to experience growth. In this way, spiritual disciplines can never be replaced by technology. The focus of spiritual discipline still lies on the Bible as the Word of God and digital learning becomes a mode. During this pandemic COVID-19, many communal activities such as worship, prayer meetings, and communal fellowship as well as classrooms have been strengthened by digital technology. Digital learning provides opportunities for human interactions in a community. Even though digital learning has many benefits, the excess also needs to be addressed by giving some regular explanations and directions about safe and ethical boundaries (Smith, Sevensma, Terpstra, & McMullen, 2020, p. 355).

Research Method

This study was designed by using a phenomenological approach. This approach is typically to describe personal experiences under the same phenomenon through their stories (Creswell, 2013; Christensen, Johnson, and Turner, 2011). In this present study, a phenomenological design is to explain student teachers' experiences in a Christian private university in terms of spiritual growth as well as digital learning. The participants were chosen by using a purposive sampling strategy. Specific criteria applied in selecting the participants. This study was conducted at a Christian teachers college located in Tangerang, Indonesia. Related to sample size, there must be at least five participants (Creswell, 2013). The number of participants was 20 students.

By using virtual focus group discussion, the participants were assigned into four groups which depends on their availability. Each interview was recorded by Zoom for 40 minutes to 1 hour in length. Then, the researchers transcribed all interviews and translated them into English. Data were classified into codes and themes, then categorized those themes into main findings. An important note is that all the processes were done manually. Three ethical issued were maintained. First, the participants have filled an informed consent form. Second, neither monetary nor academic benefits were given to participants. Third, the use of pseudonyms and anonymity to keep their identity confidential.

Results and Discussion

Three main themes were constructed from student teachers' experiences: personal attachment, support network, and diverse learning applications. The findings are presented in figure 1.
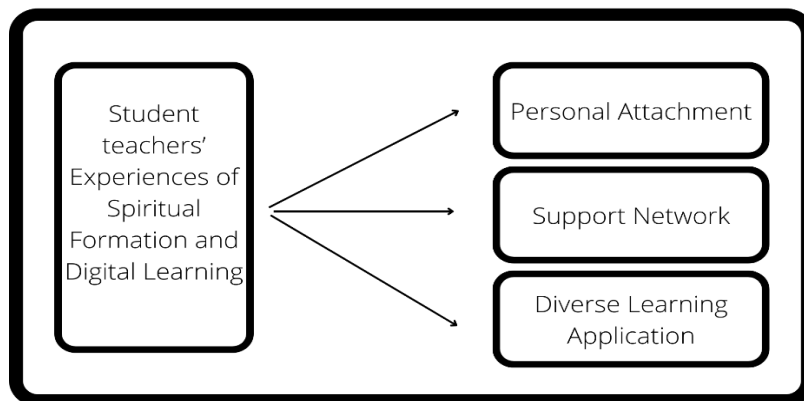
Figure 1. Findings into themes

Theme 1: Personal Attachment

This theme represents the shifting paradigm perceived by the participants through their experiences on spiritual formation provided online by the Christian Teachers College. Being involved in digital spiritual exercises gradually changed their perceptions from required attendance to self-commitment since they have been experiencing the process and benefits. Spiritual formation has improved not only participants' perception, also their motivation and behaviors.

From mandatory perspective to inner understanding. Since spiritual formation is the core of teachers' development, many spiritual program designs have been created to support it. Those spiritual activities are finally becoming mandatory in order to facilitate student teachers' growth. At the beginning, the participants, of course, feel burdensome since they think that the mandatory things are usually not attractive and demanding. Then, by the time they are about to taste and digest the spiritual formation, they realize that the good things are about to happen as well. The internalization starts with their inner understanding.

> At first, it is mandatory…to attend our chapel and fellowship. However, it comes to my understanding that I am now on the right track to grow in God. (ST 2)
> Because I had to fill the attendance file, I joined the chapel. It was kind of the feeling that I was forced to be "there", but finally I understood why. (ST 8)
> I become closer to God through mandatory spiritual activities. And I thank the university who provides everything online. (ST 9)
> I think it was kind of a struggle to follow all the mandatory programs. It is hard, but I know it is good for me. (ST 11)

> I had a lack of self-awareness of the importance of reading the Bible. Then, it is mandatory to read for a class and I realized that it is good to read the Bible for my growth. (ST 20)

Two studies done on religious participation (Lee, 2018; Nichols, 2015). By using qualitative study, Lee (2018) discovered that partaking in spiritual practices regularly has a strong impact on consistent spiritual development. Meanwhile, a quantitative study by Nichlos (2015) identified that there was no significant difference in students' characteristics who attend spiritual activities online and on campus regarding their spiritual growth. It means that the pursuits of spiritual growth can be accomplished whether students access it online or onsite.

Hence, committing to spiritual disciplines regularly contribute to flourish spiritual understanding, including God's image. Based on a case study on Jesuit higher education, Gallagher (2018) reported that daily practices such as Bible meditation, prayer, and reciting verses, seem to lead the richness of inward spiritual journey. However, another study done by Yo (2017) among Korean Christians revealed that misconception about God has a negative relationship to religious behavior. Therefore, it is important to raise awareness of both content and practice. Christian teachings and spiritual disciplines are reciprocal.

From inner understanding to self-habituation. The internalization process continues on how participants were identified with the sense of enjoyment while participating in spiritual practices. This condition is reflecting how deep and well they have been engaged in spiritual formation. The emerging enjoyment from within is the result of the greater benefits in which they obtain, not only for personal interest, but also impact to others.

> Devotion, chapel time, and sharing are new things for me. By doing that, I feel enjoy and grow in faith. I realized that some changes have happened to me. I become more respectful to others. (ST 2)
> Even though I attended all spiritual programs online, I love to do it and feel that I am blessed spiritually by those activities. I became more sensitive to others' needs. (ST 4)
> During this online learning, the university provides many services, such as chapel, devotion, bible study, etc. Even during the online class, I can feel that everything I learned is always related to God. I really like it all. (ST 6)

> I enjoy devotion, Tuesday and Sunday chapels. I feel that I am growing up spiritually. I am grateful that there is no obstacle when I come to God while it is online. I pray for others that they can experience it as well. (ST 18)

Enjoying spiritual formation is identical with spiritual wellbeing. A study conducted by Francis and Penny (2016) showed that young people who are regular to attend spiritual activities are more likely to have a strong correlation between spiritual wellbeing and positive attitudes. A similar study done by Krause and Ironson (2019) investigated the relationship between spiritual wellbeing and life satisfaction. They found that spiritual perception leads to a greater hope and a sense of contentment. However, Christian spiritual wellbeing needs a paradoxical understanding. A study done by Burns (2020) affirmed that Christians can also grow, even, through bad circumstances such as pain, brokenness and illness.

Theme 2: Support Network

Participants reported that attending class through a digital platform is challenging. They claimed that school elements such as faculty, classmates, and mentors have a powerful impact to make them survive. Encouragement from faculty, positive interaction with classmates, and mentoring relationships have been identified as positive factors in helping them to adapt.

Encouragement from the faculty. Interactions with faculty members become a serious challenge since new students sometimes feel nervous and face hardship during early adjustment in class. Moral support from faculty, such as motivation through words, openness, and acceptance will result in reinforcing their spiritual journey in college.

> In online class, the faculty encouraged me to ask everything. It makes me feel comfortable because I feel accepted. (ST 1)
> I feel amazed because our faculty members were treating me with love. The way they support me gives me motivation to learn. (ST 5)
> The faculty members are able to be contacted after class. They are always ready …. I was texting some of them in the evening, and they answered my questions. It helps me a lot in communication. (ST 6)
> I really enjoyed the class because the faculty included me in the discussion. Also, they are open with any students' questions and explain it patiently. (ST 13)
> The faculty gave me support to explore the lesson. (ST 19)

Satisfaction in the relationship between faculty and students has a strong correlation to students' academic success as well as welfare. Ash and Schreiner (2016) pointed out that some faculty attitudes, such as being sensitive to diverse students' needs and facilitating communication outside of class are the key factors to strengthen mutual trust on students who experience difficulties during their study. A similar study conducted by Sriram and McLevain (2016) proposed that faculty-student interaction is crucial in order to develop a greater benefit for the whole community regarding a holistic-missional education.

Positive interaction with classmates. Friendship becomes a major support during study. A close and healthy relationship among students contributes to reducing psychological distress. Acceptance, attention, and help from classmates are crucial to sustain living at campus. Prayers from classmates have been identified as a spiritual force. Student teachers are showing a Christian affection in order to sustain those who are struggling in study and lives.

> I feel blessed to have classmates who understand me well. They rebuked me when I was doing wrong. I was happy because I know that I am not left behind. They always direct me in a good way. They have been my family here. (ST 2)
> I got support from my classmates…. They cheer me up when I am in trouble. They also pray for my family. (ST 3)
> Regarding courses, my classmates are always ready whenever I need more explanations. They help me to understand the class that I missed. (ST 6)

Some studies done in investigating the role of social support in Christian colleges. Dangel and Webb (2017) found that there was a positive connection between psychological wellbeing with the sense of spirituality. The emotional support from the religious community has a significant contribution in developing God's image in individuals. Hence, Sartor et. al (2018) revealed peer and group discussions have been associated with student's beliefs in order to enhance their relationship with God and others. Otherwise, another study explained the lack of community support resulting in self-depression (Klausli & Caudill, 2018).

Mentoring relationships. Mentoring has been a great value for transmitting certain understandings, values, and habits. Participants who experience mentoring from the senior would express gratitude since they have been monitored in positive ways. Relationships between mentor

and mentee provide spiritual growth because there are so much love, care and support as well.

> My biggest support comes from my mentor. Sometimes, I feel tired because of studying, but I get unending support and motivation. (ST 17)
> My mentor supports me by giving a solution when I am in trouble. I learn from her sharing so that I can adjust well in college. (ST 18)
> I feel great support from my mentor since she encouraged me to participate in many activities. She sent me words of affirmation as well. (ST 19)

Spiritual mentoring has been associated with college students. A study done by Yoder (2013) indicates that group mentoring has cultivated the sense of community in a Christian college. Faith transmission occurs when mentor-mentee relationships demonstrate commitment and openness to one another. He also reported that a mentoring relationship has improved students' academic achievement. In particular, Harvey (2016) investigated whether spiritual mentoring has an effect on male students or not. The findings showed that spiritual mentoring has a positive impact to student's self-confidence, self-regulation, faith, and academic excellences. Interestingly, a study reported that there was no significant difference impact on student's growth between online and face-to-face mentoring (Mullen, 2012). It seems that electronic devices, such as computers, emails, and (smart) phones have been applied for both one-on-one and group mentoring, even before pandemic Covid-19.

Theme 3: Diverse Learning Applications

This theme concerns how the participants for the first time experienced using a new application and learning management system as well as learning methods during digital learning. The privilege to be exposed to new learning designs and platforms as well as advancing digital skills in person become the key aspects of student teachers in experiencing online learning.

The privilege to be exposed to new learning designs and platforms. Since the Christian private university offers a better quality of education, it is a great opportunity for many young people to pursue it, including the participants. By receiving a holistic education, the participants are being educated gradually to be a digital literate generation, while in fact, pandemic COVID-19 has unexpectedly accelerated it more. For the most of the participants are from rural areas, it is a privilege to experience

digital learning under professional faculty. The participants are fascinated by how electronic platforms lead to new experiences of learning.

> It's impressive … to know lots of new digital applications, so that I can use them to develop my skills. (ST 1)
> It's my first time being exposed to synchronous and asynchronous methods for learning… I used to learn simply using Zoom meetings. (ST 3)
> It is a new experience to use Teams' application (ST 8)
> Using Teams' applications is new for me. (ST 14)
> I have never been using this digital learning application (ST 15)
> What makes me impressed is that I can get my score directly after answering quizzes and tests. (ST 16)

Several studies conducted in different countries during this pandemic COVID-19 pointed out some positive attitudes on digital learning as well as the challenges. Lilian, Ah-Choo, and Soon-Hin (2021) found that college students seem to have a positive image of digital learning in Malaysia. It is understandable since young people have been using technology to gain information. However, it is reported there is poor self-regulated learning among undergraduate students. By using a single case study, Peimani and Kamalipour (2021) explores students' learning experiences during pandemic COVID-19. Regarding learning design, the study points out that a synchronous mode of learning, such as live online lectures, is preferable than asynchronous ones (only watching pre-recorded seminars). However, an asynchronous mode of learning is needed to balance healthy reasons, especially for eyes. The researchers agree that both synchronous and asynchronous modes of learning are useful to assess students' progress in regard to giving and receiving feedback from faculty and classmates.

Advancing digital skills in person. One best benefit during digital learning is how to improve self-efficacy relating to digital literacy. Using various technological applications, the participants now proceed to producing educational-content videos for class requirements. Of course, there was no formal guideline and assistance on how to create a video. The participants are about to intensify their ability continually to achieve best results. Eventually, the participants have gained greater benefit from becoming digital citizens through their self-efficacy.

> It is a positive way to learn… digital applications such as Teams, Zoom, Google Meet, video editing, etc. I learn how to use a lot for my study. (ST 7)

I got opportunities to explore more digital applications for making video, including editing and adjusting the sound. (ST 12)

I have to learn how to make videos by myself, then edit and upload them…. I came to know how to use Microsoft 365 and I know how to edit video by using other applications. I use many applications as well to create designs. (ST 13)

Akcil and Bastas (2020) found that there is a significant correlation between digital citizenship and digital behaviors. Since there was no other option during pandemic COVID-19, digital learning rapidly spread and was accepted by most educational institutions. Therefore, the more students engaging in digital learning, the more they are familiar with it. Meanwhile, a survey study by Eri, Gudimetla, and Star (2021) examined to what extent students' resilience to digital learning. This survey was actually conducted in five different countries, however, only general findings were presented. According to the study, since the university did not provide any help to students in adjusting to digital learning, mental stress occurred among students. Some suggestions to each country were provided. A comparative study done in several countries by Cranfield, Tick, Venter, Blignaut, and Renaud (2021) also reported the availability of infrastructure and economic discrepancies became main obstacles in conducting digital learning.

Conclusion

During pandemic COVID-19, the focus point of Christian higher education is to incorporate spiritual formation and digital learning. The purpose of this study was to explore student teachers' experience in perceiving their own growth through digital learning in a Christian private university. The findings revealed that spiritual formation can be facilitated by digital learning in which involves personal attachment, and strengthened by the faculty, classmates, and mentors as the support network. Then, student teachers are able to demonstrate the benefits of spiritual formation and digital learning related to diverse learning application in their daily lives.

For implications and recommendations, the Christian university needs to bridge students' experiences into the real world. The social phenomena that exist in society need to be addressed as a part of spiritual responsibility (Christian praxis). Students' teachers are about to have great opportunities to enhance their perspective of spiritual formation through social services. Interaction with social issues, such as

poverty, social justice, children at risk, and ecology will contribute to a greater spectrum of students' spirituality. Despite pandemic COVID-19 is still ongoing, the university can begin to facilitate student teachers with discussion about the social phenomena through digital learning and ended by making digital campaigns as a social project.

Acknowledgement

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CULTIVATING BIBLICAL LEARNING COMMUNITY IN A VIRTUAL LEARNING ENVIRONMENT THROUGH GROUP PROJECT-BASED LEARNING

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Abstract

For the last two years, the Covid-19 pandemic has caused students to learn in a virtual mode, cultivating a learning community that fully supports students is therefore particularly challenging. Studies have proved that in a virtual learning environment there is a greater possibility of learning loss including loss of interaction and relationship values. From a Biblical perspective, relationship in the learning community needs to be built, repaired, and maintained to make learning fruitful, constructive, and meaningful to students. This study focuses on the experiences of how the biblical learning community is cultivated through an iterative process in group project-based learning. This study uses a qualitative descriptive method on cohort-2020 primary student-teachers at Teachers College, Pelita Harapan University. The data was obtained from observation, performance rubric, and questionnaire. Results from the performance rubric showed that around 65-66% of total students have consideration for the feelings and learning needs of other members in his/her group and encourage others to contribute, and 73-74% of total students show solid cooperation in the group. In addition, data from observation and questionnaires indicated that few students still need time to develop those abovementioned aspects.

Keywords: Biblical learning community; online learning; Christian teacher; iterative process; group project-based learning.

Abstrak

Pandemi Covid-19 yang terjadi selama dua tahun terakhir telah menyebabkan siswa belajar dalam mode virtual, sehingga menumbuhkan sebuah komunitas belajar adalah hal yang menantang. Penelitian-penelitian telah membuktikan bahwa di dalam sebuah lingkungan pembelajaran virtual, terdapat kemungkinan yang lebih besar untuk terjadinya kehilangan pembelajaran, termasuk kehilangan pembelajaran tentang dan melalui nilai-nilai interaksi dan hubungan. Dari perspektif Alkitabiah, hubungan di dalam komunitas belajar perlu dibangun, diperbaiki, dan dipelihara untuk membuat pembelajaran berbuah, konstruktif, dan bermakna bagi para siswa. Penelitian ini berfokus pada pengalaman tentang bagaimana komunitas belajar yang alkitabiah dikultivasi melalui sebuah proses berulang dalam pembelajaran berbasis proyek grup. Penelitian ini menggunakan metode kualitatif deskriptif pada mahasiswa-guru angkatan 2020 di Teachers College, Universitas Pelita Harapan. Data diperoleh dari observasi, rubrik performa, dan kuesioner. Hasil dari rubrik performa menunjukkan bahwa sekitar 65-66% dari keseluruhan siswa memiliki perhatian untuk perasaan dan kebutuhan belajar terhadap anggota lain dalam grupnya, juga mendorong siswa-siswa lain untuk berkontribusi dan 73-74% dari keseluruhan siswa menunjukkan kerja sama yang solid dalam grup. Selain itu, data dari observasi dan kuesioner mengindikasi bahwa beberapa siswa masih membutuhkan waktu untuk mengembangkan aspek-aspek yang disebutkan di atas.

Kata kunci: Komunitas pembelajaran Alkitabiah; pembelajaran online; guru Kristen; proses berulang; pembelajaran berbasis proyek kelompok.

Introduction

The world was created exquisitely, in which there is a shalom relationship between God and humans, among human beings, and between humans and other creations. As God spoke, all things entered a relationship with each other and were given a purpose (Graham, 2003). When God created man in the Garden of Eden, God gave man a cultural mandate to cultivate and manage creation. This is where education begins when humans with God-given talents begin to manage creation in the Garden of Eden. In carrying out cultural mandates, humans interact and relate to God, other human beings, and other creatures. The interaction that produces this relationship is referred to as a building community or what is known as a learning community. Therefore, the ideal picture of a true learning community is when there is a peaceful relationship between God and humans, among human beings, and between humans and other creations. This is called as shalom community.

The condition of the shalom community that God created did not last long due to the fall of man into sin. Sin results in the destruction of human relationships with God, other humans, and creations. Van Brummelen (2011) said that there is no perfect class due to disturbing sins. In other words, there has been no perfect learning community since the fall of man. However, God's story did not stop at the fall of man into sin. The atonement of Jesus Christ overcomes sin and enables humans to seek the presence of the shalom community. Humans who believe in Christ's redemptive work need to be actively involved in building relationships with God, other human beings, and creations that have been damaged. This cannot be separated from human identity as the image and likeness of God who was created to have a nature to relate with others. God created us to be in a relationship with Him and with others (Graham, 2003). God created humans to live in a relationship because the Trinity of God is also related to one another. As long as living in the world, humans continue to learn to be more like God by building relationships to create a shalom community.

School or class is a place for students to build a community that involves relationships. The classroom itself reflects such a community because students and teachers form a community of learners (Vryhof,

2011). Classes consist of unique and diverse teachers and students. No student is the same in a class because of students' environment and development influenced by family backgrounds, cultures, learning styles, genders, socioeconomics, and different learning needs. The diversity of individuals in the class becomes a challenge in building relationships, but at the same time, it can be an opportunity to grow holistically. Christian educators are given the privilege of using authority in the classroom to create a biblical learning community in a classroom full of diversity in all contexts.

In this era, the world is changing rapidly, and the condition of the COVID-19 pandemic has changed the context. The COVID-19 pandemic over 2 years has changed the learning system. Learning that used to take place face-to-face has turned into virtual learning with the help of technology. Learning becomes a challenge because most teachers and students were still limited in understanding the technology and virtual-based learning methods, as well as the limited facilities and infrastructure. In addition, there is no physical contact that occurs between teachers and students, and among students in virtual learning. This is similar to research which says that the obstacles that occur during virtual learning are the lack of interaction between teachers and students, many areas are limited in internet coverage, and the lack of mastery of computer language and ICT skills from both students and teachers (Rusli, Hermawan, and Supuwiningsih, 2020). This ultimately has an impact on inadequate learning quality such as lack of learning interaction in the classroom, lack of involvement of students, and lack of understanding of what is being learned. In this situation, pursuing a biblical learning community is more challenging for Christian educators to do.

The gap observed during virtual learning makes Christian educators look for strategies to continue to cultivate a biblical learning community. One of the appropriate learning strategies to develop a biblical learning community is collaborative learning. It is considered appropriate because in collaborative learning there are interactions that occur among students, between students and teachers, even between students and the knowledge. Collaborative learning correlates positively with student engagement, attitudes, persistence, and personal

development (Cross, Barkley, and Major, 2014). Group project-based learning is one of the collaborative learning strategies. Cooper and Murphy (2016), said that project-based learning is learning that requires communication and collaboration between individuals in the classroom, so building relationships is important in this strategy.

The problem raised in this study is how do Christian educators work in biblical learning communities in virtual learning environments through group project-based learning? This study focuses on the experiences of how the biblical learning community is cultivated through an iterative process in group project-based learning. The author observed the biblical learning community through human interaction that exists between teachers and students, and among students.

Biblical Learning Community

A learning community is an association that has the same learning goals, and each member participates in each other to achieve these learning goals (Sekar & Kamarubiani, 2020). Deeper than that, the Bible clearly states that God calls us to be a community where we all contribute according to our individual talents (Van Brummelen, 2011). The learning community needs to be considered by Christian educators because the learning community "shifts individual learning into social learning" (Tantomas, 2021).

Graham (2003) said that human beings were made in the image of God, so humans are called God's image bearer. In His triune, God has a relational nature. Consequently, humans are also relational. Moes and Tellinghuisen (2014), also said that we cannot be understood apart from our relationships. Humans are created in the likeness of God including in the personal character of God, therefore humans can have relationships that involve, know, love, and communicate with one another (Poythress, 2011). Also, our educational process must be designed to foster the development of this shared experience or fellowship (Graham, 2003). The learning community fulfills the needs of human nature as beings who are related and need relationships.

According to Vryhof (2011), a genuine biblical community is inclusive. It is a place of safety and nurture where uniqueness is celebrated, not ridiculed, and conflict is resolved without physical or emotional violence. Graham (2003), said that there are three elements in a biblical learning community, namely: love, merciful, and dependent. As humans, we already receive the mercy that we do not deserve, and we are dependent not only on God but also on our fellow human beings People in the community are allowed to be weak, to doubt, and to risk and fail without rejection. Such acceptance requires humility and vulnerability uncommon in society but very much present in the Body of Christ.

Since the fall into sin, there's no such a perfect community (Van Brummelen, 2011). Each community shows some faults, some scars, and some weaknesses. Communities may disregard the ways of the Lord and do things that do not honor Him. Even healthy communities or communities that seek to love and serve the Lord are affected by sin and may experience the consequences of evil, pain, and suffering. Communities may become dysfunctional, corrupt, exploitative, divisive, self-centered, and power-hungry (Dickens, K. et al., 2017).

At schools, students are encouraged to look for ways, in response to God's love, to bring hope, reconciliation, love, and justice in their communities as well as in all the other communities to which they belong. A community that reflects the love of God will practice the values and virtues that foster effective community life like honesty, integrity, care, compassion, kindness, gentleness, patience, and service to others (Dickens, K. et al., 2017). Van Brummelen (2011), noted that in the biblical learning community each member contributes according to their respective talents, accept, and use abilities related to self and others, work and pray together, respect others when working on collaborative learning assignments, get to know and accept friends, realize the strengths and special needs of friends in groups or classes. Christian school people cultivate biblical community through open communication, understanding, and acceptance (Vryhof, 2011).

Virtual Learning Environment

According to Pannen (1999) in Julaeha (2013), virtual learning is "the learning process that occurs in virtual classrooms that are in cyberspace through the internet network". Another definition also states virtual learning is "a learning system using a learning platform" (Santosa et al., 2021). Two main principles in a virtual learning environment are authority and collaboration. Authority means that students have the responsibility to choose their materials, access to learning, and their learning path. Collaborative means to be able to exercise this authority, students still have to communicate and interact with teachers or other students (Julaeha, 2013). Online learning implies that teachers give students more assignments to do than interact directly to discuss something (Santosa et al., 2021). The process of interaction between teachers and students is becoming less and less because in online learning, students and teachers have the freedom to access learning anytime and anywhere.

Some characteristics of virtual learning are as below: each learning activity is accessed individually by teachers and students in a virtual space, lack of interaction between teachers and students, many areas have limited internet coverage or difficulties in accessing the internet, also lack mastery of computer language and ICT skills both from students or teachers (Rusli et al., 2020). Referring to its name, the main feature of virtual learning is that it utilizes electronic and digital technology services (Codemi, 2019).

Moore (1989) in Keaton & Gilbert (2020), said that there are three types of interaction in distance education, such as learner-content, learner-instructor, and learner-learner. Learner-content interaction is when students have internal discussions about the information they encounter in the course or elsewhere. The characteristics that Moore included in the learner-instructor relationship, such as building caring relationships, understanding student backgrounds, and facilitating content interaction. The last type of interaction described by Moore is learner-learner interaction. This is essential for learning and is an important skill for students' future involvement in society (Moore, 1989), and while it is difficult in online education, it is important to incorporate.

Group Project-based Learning

Project-based learning (PjBL) is a social practice in which students are socialized through a series of group activities involving the simultaneous learning of language, content, and skills (Mali, 2016). It can be said that PjBL is a learning model that implements a scientific approach by focusing on core concepts and principles, facilitating students to analyze problem-solving ideas, and other meaningful tasks, being student oriented, and producing real products" (Silitonga, 2020; Winangun, 2021). That way, PjBL becomes a learning method that provides direct experience through sensing that builds meaning about something during project work (Silitonga, 2020).

There are 3 reasons of PjBL used as an effective method of learning according to (Fester, J., & Starkey, 2022), namely: 1) PjBL could link or collaborate with other different subjects (interdisciplinary/ transdisciplinary learning) so it can reduce the load of learning and assessment planning; 2) Learning becomes more transparent and responsive for students. Students could see direct progress from learning and knowledge they own obtained during project-based learning. Learning will be more active and not boring; students do more explorations and find the connection; 3) PjBL strengthens class culture and function. There is no more teacher-centered learning, all students will collaboratively work when every instruction and regulation is already understood at the beginning. Project-Based Learning certainly provides space for collaborative work because to produce a work or project requires collaboration with several other individuals. Thus, as mentioned by (Sunismi et al., 2022), PjBL provides space for students to work together, and learn collaboratively to produce a joint project.

In the application of Project-Based Learning, in general, there are 6 stages or activities within the class (Boss, Suzie. & Krauss, 2014). First, the teacher starts with big and essential questions that are challenging and relevant to the realities of students' lives to stimulate students to think critically about real problems and their solutions. Second, the teacher makes a project plan. Third, the teacher makes a schedule. The teacher determines the schedule for each project's progress from the

students to provide quality and useful feedback for the continuation of the project and the timeline of each project stage. Next, the fourth, the teacher monitors student work and projects being worked on, the discussion process, and student collaboration in groups. Fifth, the teacher assesses the results of the project stages so that the assessment process does not take up more time and this assessment can be an evaluation to improve student projects. Sixth, lastly, the implementation of evaluation and reflection so that teachers and students reflect on the process during project work and the impact that can be given through learning and the project.

PjBL is learning that requires communication and collaboration between individuals in the classroom, so building relationships with one another can be one of the factors that support PjBL to run more effectively (Cooper & Murphy, 2016). With the establishment of good relations between members in the class, the discussion process and project work will run more smoothly and effectively. Building a class culture or class habits to collaborate can also support PjBL learning because PjBL requires a lot of collaborative activities to produce a project. Another factor that affects the implementation of PjBL is when teachers must always connect learning content with the realities of students' lives so that the objectives of the projects made can also be seen clearly. Furthermore, throughout the PjBL learning process, teachers must also be ready to provide quality feedback on each student's progress or project stage.

Research Method

This study uses a descriptive qualitative research method. The research took place for one semester in the Science for Lower Grade Elementary School and PSAL Mathematics courses. The subjects in this study were cohort 2020 students of the Primary Education study program who taught both courses. The purpose of this descriptive qualitative research is to provide a factual and systematic description of the phenomena that occur during lectures related to the variable of the biblical learning community through project-based learning groups in virtual learning.

In the PSAL Primary School Mathematics course, the learning community begins through the process of unit mapping in groups. Each group member will also evaluate the work of other members in making lesson plans, learning media, and microteaching. The group evaluation is very useful and even decisive in revising student work in making lesson plans, learning media, and microteaching for the second phase as the end of semester exam (UAS). In the Science for Lower Grade Elementary course, students work in groups to make 2 projects, namely Science Worksheet and Online Games Design. Each student has a role to contribute to completing the projects. Each group will report the progress of the project made in class then lecturers and other groups will provide feedback in the form of comments, compliments, and suggestions to improve the quality of the projects.

The technique of collecting data in this research is by observing and evaluating self and colleagues. The research instruments are observation notes, assessment rubrics for evaluation, and questionnaires. The observation is conducted by the lecturer as the main researcher during the learning process with a total of 16 meetings, to obtain qualitative data related to biblical learning community indicators between lecturers and students. Self and peer evaluation using rubrics is carried out by students in groups to obtain quantitative data about the biblical learning community among students. The results of the open questionnaire were used to sharpen the analysis of the biblical learning community between lecturers and students as well as among students.

The following is a table explaining the indicators of a biblical learning community and research instruments used to observe the research variables.

Tabel 1. Indicator and Research Instrument of Biblical Learning Community

Indicator Biblical Learning Community	Research Instrument
Teacher creates a space where students felt cared for and connected	Lecturer observation

Teacher-Student Interaction	Teacher engages students in dialogue about their interests and needs, listens attentively, and expresses empathy Teacher creates a sense of trust and respect	notes, questionnaire
Student-Student Interaction	Students have consideration for the feelings and learning needs of other members in his/her group, and also encourage others to contribute Students show solid cooperation in the group	Assessment rubric, questionnaire, lecturer observation notes

The collected data were analyzed quantitatively and described qualitatively in descriptive form. Quantitative data analysis was carried out by calculating the percentage of the number of students who had met the biblical learning community indicators. Qualitative data analysis was carried out with the stages of data collection, data reduction, data presentation, and conclusion.

Result of Learning Community (Student-to-Student Interaction)

During 1 (one) semester, 16 meetings were held in 2 (two) subjects, Science for Lower Primary and PSAL Primary Mathematics with the following results:

Tabel 2. Peer Assessment - Learning Community

No	Criteria	PSAL Primary School Mathematics		Science for Lower Grade	
		Fulfilled (scale 3-4)	Un-fulfilled (scale 1-2)	Fulfilled (scale 3-4)	Un-fulfilled (scale 1-2)
1	Students have consideration for the feelings and learning needs of other members in his/her group, and also encourage others to contribute	65%	35%	66%	34%

2	Students show solid cooperation in the group	73%	27%	74%	26%

Table 2 shows that more than half of the students have had consideration for the feelings and learning needs of other members in his/her group, encourage others to contribute, and show solid cooperation in the group because other students in the group feel cared for and appreciated. Still, there is a small number of students who still need to improve collaboration skills and understand and care for each other's needs in the classroom.

Result of the Learning Community (Lecturer-Student Interaction and Student-to-Student Interaction)

In the Science for Lower Primary and PSAL Primary School Mathematics course, the obtained result from the questionnaire is that all students pay attention to other students and ensure that they are connected during the learning process, the lecturer engages students in a dialogue about their interests and needs, listens attentively, expresses empathy, and creates a sense of trust and respect. The following is the data from questionnaires regarding the learning community felt by students:

Table 3. Result of the Questionnaire in Science for Lower Grade & PSAL Primary School Mathematics

Indicator Biblical Learning Community		Concrete Actions Perceived by Students
Teacher-Student Interaction	Teacher creates a space where students felt cared for and connected	• The lecturer provides constructive feedback on students' work, questions, and opinions to encourage students to grow. • The lecturer asks questions during the lesson and asks students' opinions. • The lecturer always checks the presence and readiness of students, for example by asking students to turn on

		the camera during synchronous sessions and asking how they are.
		• The lecturer explains the flow, materials, and assignments clearly.
		• The lecturer calls the student's name and gives a room for students to ask questions and convey inconvenient things.
	Teacher engages students in dialogue about their interests and needs, listens attentively, and expresses empathy	• The lecturer always answers students' questions.
		• The lecturer always pays attention to the progress of students' work so that the given assignments are aligned with their interests and needs.
		• When there is a network problem, the lecturer allows students to turn off the camera and submit the assignment when the network is good.
		• The lecturer listens to students' feelings or complaints when they finished the assignment.
		• The lecturer explains patiently when students do not understand the materials and always makes sure that students understand.
		• The lecturer asks how the students feel and the difficulties during the learning process.

		• The lecturer prays for students who are not feeling well or sick.
		• The lecturer provides concrete solutions.
		• The lecturer provides input in easy-to-understand language.
		• The lecturer approaches students individually for the negligence done by the student.
	Teacher creates a sense of trust and respect	• The lecturer always gives clear directions and instructions, as well as step-by-step support.
		• The lecturer appreciates students learning outcomes and gives encouragement and motivation.
		• The lecturer builds open interaction and a sense of comfort in learning.
		• The lecturer always provides a space to discuss and respond to each other.
		• The lecturer initiates a slight casual conversation before the class begins.
Student-Student Interaction	Students have consideration for the feelings and learning needs of other members in his/her group, and also encourage others to contribute	• There is a small number of students who do not know their friends well because during virtual learning they can only communicate via the internet. Most students can recognize their group mates and know the needs of their friends.
		• Some students felt less appreciated when

		expressing opinions in groups, but most students felt heard and cared for in groups.
		• Some students contribute ideas and are responsible for each assignment.
		• Some students do not carry out the agreed responsibilities.
		• Students make contributions such as editing images and designing PPTs.
		• Students help other friends when experiencing problems in online learning.
		• Students give encouragement and support in groups
	Students show solid cooperation in the group	• Not all group members would want to discuss it together.
		• Some students are not responding actively.
		• Students help each other in making projects.
		• Students remind each other in groups, especially passive friends, often procrastinate, and are difficult to be contacted.
		• Some students are consistent with time and not selfish in the group.

Iterative Process in Group Project-Based Learning Cultivates Biblical Learning Community in Virtual Learning Environment

Virtual learning becomes a challenging condition for educators to build a biblical learning community. The characteristics of virtual and hybrid learning that make the lack of physical touch and direct interaction can indeed create a lack of interpersonal relationships in the classroom. However, the principle of truth that is the foundation of Christian education is the strength that the class must still function as a learning community that loves and cares for each other. As Graham (2003), said that we are meant to live in fellowship with God and others to share meaningful experiences. In increasingly rapid technological developments, teachers and students need to work together to build relationships that bring shalom to the classroom. An educator needs to plan strategies that can be done to build a learning community.

Based on the data obtained, educators seek to form a learning community through an iterative process in project-based learning groups. The principle of collaboration offered by project-based learning becomes a forum for teachers and students to form a biblical learning community. The formation of study groups is very necessary and trains students to relate to others. One student said that the group project required students to be able to develop relationships in the classroom, although the process was not easy. It is a beauty that each individual in the class is formed through group-project-based learning that is carried out.

In this study, in addition to group formation, educators design processes that occur in groups so that they are effective in forming relationships. The role of educators in assisting each group (collaborating, discussing, evaluating) in working on projects is also one of the most important, where educators become facilitators. The lecturer encourages students in groups to learn to provide objective input on the work of each group member. The relationship that occurs through giving each other objective input on the work that has been done is an important thing because it will help each student in doing their revision. Through group study, students learn to give each other input, students learn to know their friends, learn to evaluate objectively, and learn to listen and understand others.

The role of educators in a classroom during PjBL is very vital. First, lecturers need to convey clear goals about what will be achieved through project-based learning groups, including providing problems to work on.

Second, the lecturer makes project plans according to the RPS given at the beginning of the lecture. Third, the lecturer arranges a schedule every week for each group to share the progress of the project being carried out. Fourth, lecturers and students monitor the work and collaboration process of each group and provide feedback. Fifth, the lecturer assesses student projects and provides feedback. Students are also allowed to provide feedback on the results shared by other groups. Sixth, lecturers provide opportunities for students to reflect and fill out collaborative assessments based on the collaboration carried out in making projects.

As stated by Berkhof & Cornelius (2010), that educators have the authority to regulate classes and educators must create a sense of trust and respect in class to create a sense of belonging. In this study, educators set an example for students in terms of creating a space where students feel cared for and connected, engaging students in dialogue about their interests and needs, listening attentively, and expressing empathy. Students feel comfortable studying in a warm and mutually supportive classroom atmosphere as educators show love, mercy, and dependence on all students in the classroom. At the end of the semester, the lecturer also provides opportunities for each group to carry out self-evaluation and reconciliation. This is very important to develop students' abilities in self-analysis and confirming to group colleagues, as well as in resolving internal and external conflicts.

In this study, most of students responded well and could show indicators of a learning community when given a learning process in a project-based learning group. Based on existing data, students still need to practice communication skills to be able to communicate effectively with fellow friends in the group by learning to listen to the opinions of their friends and learn to respond well to the difficulties experienced by others. Also, some students look passive, so they feel less contributing to the group. This reality proves that students experience formation to learn to accept the strengths and weaknesses of others.

Conclusion

Based on the discussion, it can be concluded that building a biblical learning community in virtual learning can be done through an iterative

process in group project-based learning. All processes in the project-based learning group can support the build of a biblical learning community because it is based on the principles of love, mercy, and dependence. God's love in educators makes educators able to share that love with students and students can also share the love with fellow friends in groups/classes. Lecturers and students both realize that in a class there is indeed uniqueness and difference, and each person is placed to complement other individuals to achieve a goal. This principle can be a motivation for every individual in the class to build a biblical learning community that can bring shalom.

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TEACHER'S COMPETENCIES PROFILE IN DIGITAL TECHNOLOGY ERA: SPIRITUAL FORMATION AND BIBLICAL COMMUNITY

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ABSTRACT

Christian education aims to bring students to have relationships and growth based on Christian Faith. For building this relationship and growing faith, teacher's competencies are needed in implementing teaching and learning that is based on the Biblical Christian Worldview. During this digital technology era, Christian teachers are required to have competence for developing their Spiritual Formation and Biblical Community. This study aims to analyze the teacher's competencies to enhance spiritual formation and develop biblical community. The research was conducted by distributing a survey to 61 respondents at Christian private school Tangerang. Data from respondents was collected through an online questionnaire via Google form and analyzed data with descriptive qualitatively. The results on each aspect of Spiritual Formation (SF) and Biblical Community (BC) suggest that respondents have achieved an average score of 4.1 (good category) or has met the teacher competency profile criteria as expected. Nevertheless, there needs to be a relevant follow-up to improve teacher competence in the digital technology era in the aspect of Spiritual Formation and Biblical Community through professional development or similar training.

Keywords: Teacher; Competence; Spiritual formation; Biblical community

ABSTRAK

Natur pendidikan Kristen bertujuan untuk membawa peserta didik mengalami relasi dan pertumbuhan yang berlandaskan Iman Kristiani. Dalam membangun relasi dan pertumbuhan iman tersebut, dibutuhkan peran dan kompetensi guru Kristen dalam mengimplementasikan pengajaran yang sesuai dengan *Biblical Christian Worldview* (BCW). Pada era digital saat ini, guru Kristen dituntut untuk memiliki kompetensi dalam meningkatkan *Spiritual Formation* (pertumbuhan rohani peserta didik) dan *Biblical Community* (komunitas yang memiliki relasi dengan berwawasan Kristen Alkitabiah). Penelitian ini memiliki tujuan untuk menganalisis seberapa besar kompetensi guru dalam meningkatkan pertumbuhan rohani dan membangun komunitas yang berlandaskan prinsip Alkitabiah. Penelitian dilakukan dengan membagikan survei kepada guru di salah satu sekolah swasta Kristen Tangerang dengan responden sebanyak 61 orang. Data dari responden dikumpulkan melalui kuesioner online (google form) dan dianalisis secara deskriptif kualitatif. Hasil penelitian pada masing-masing aspek *Spiritual Formation* (SF) dan *Biblical Community* (BC), responden telah mencapai rata-rata angka 4,1 (kategori baik) atau telah memenuhi kriteria profil kompetensi guru sesuai yang diharapkan. Kendati demikian, perlu ada tindak lanjut yang relevan guna meningkatkan kompetensi guru di era digital dalam aspek *Spritual Formation* dan *Biblical Community* melalui pengembangan profesional ataupun pelatihan sejenis.

Kata Kunci: Guru; Kompetensi; Formasi spiritual; Komunitas Alkitab

Introduction

The rapid development of the times made humans become quick to adaptation. Technological advances also tend to increase rapidly along with the level of productivity of its users. The presence of technology does provide satisfaction and comfort because of its effectiveness. So, if there is a technologically 'blind', then he will be claimed as a person who is behind the times. This presents a new challenge for the world of education in improving the quality of education. This digital technology era also demands changes in the education system, so students must be

able to maximize the use of technology in their learning in the classroom (Wibawanta, Chrismastianto, & Mumu, 2021). Current learning is expected to be able to follow technological developments starting from aspects, infrastructure, as well as methods and strategies between teacher and student (Nurhayati & Ulfah, 2021). Especially in the current era of the COVID-19 pandemic, where the online learning system is being promoted by the government as an effort to prevent the spread of COVID-19. The quality of education needs to be given special attention by every aspect of society, especially in this digital technology era, so that the learning that students get is still truly rooted in them (Hakim, 2020).

In this regard, Christian education is also concerned with fulfilling learning objectives based on Bible truth. Christian teachers are expected to be able to use education to bring students back to introduction and union with God (Tarigan, 2019). This digital technology era can also be used as an important learning medium to facilitate students in glorifying God. It is intended that students can put Christ first and be actively involved in the learning designed by the teacher. Existing technology media can also be used to achieve holistic education (Nadeak & Hidayat, 2017). Therefore, the achievements that students want to achieve, especially in this digital technology era, must be carried out as much as possible by the teacher. The role of Christian teachers in this digital technology era is not only focused on student learning outcomes but also forms the character of Christ in students' personalities. The challenges in the digital technology era faced by teachers are certainly not easy. The convenience offered by technology often leads students on the wrong path that leads to sin. This is a big challenge for a teacher to continue to grow students' spirituality – in their relationship with God which has an impact on their relationships with others.

The application of the efforts that have been made by the teacher needs to be continuously improved to see how far the development and relationships of each student in experiencing spiritual growth based on Christian faith. Therefore, the authors conducted a study to see whether the competencies of teachers have been implemented effectively and efficiently to improve aspects of spiritual formation and biblical community in their school community. The problem scope in this study is the profile of teacher competence in the digital learning era. The purpose

of this research is to examine and analyze the competency profile of teachers in the digital learning era in the aspects of spiritual formation and biblical community. It is hoped that this research can be an effort to increase teacher competence in the digital learning era and improve the education quality in every school.

Literature review
The nature and scope of Christian education in digital technology era
Christian education should transmit the doctrine and ethics of the Christian faith to students (Opoku, Addai-Mensah, & Manu, 2014). In its implementation, teachers as authority holders in the classroom must also truly understand the nature and scope of Christian education. Robert W. Pazmino (in Tubulau, 2020) explains that Christian education is continuously a divine effort to provide knowledge, values, skills, and ethics of the Christian faith. That means Christian education strives to establish a teaching system based on god's righteousness.

Christian education is one of God's arms in the quest for redemption (Knight, 1980/2009). Knight (1980/2009) also explains that the focal point in the philosophy of Christian education is to redeem, restore, and reconcile the learners in the truth of God. For this reason, Christian education brings educators and learners to grow together in their knowledge of God. Especially in today's digital technology era, whose impact also greatly affects the learning process in the classroom. Although learners should indeed be viewed as imago Dei, teachers must also see them with their sinful nature. The digital technology age could easily plunge them into sin. So that in its implementation, teachers must take advantage of technological advances in this era for the glory of God's name (Flynn, 2013). Learners must be increasingly brought to their knowledge of God using existing technology.

This fact needs to be clearly understood so that the learning system follows existing goals. The scope of Christian education is formulated by considering students, educators, educational institutions, institutions, parents, churches, and communities (Tubulau, 2020). Each of these elements has an essential role in building the concept of proper Christian

education. The cooperation built must be close and hand in hand so that the goal of Christian education can be adequately achieved.

Teacher competence in digital technology era

Competence is defined as the ability that a person has in the form of knowledge and skills that he will implement to do everything. In this case, digital competence has more meaning than just the ability to use digital devices. There are 9 areas of competence in the digital technology era that a teacher, namely general competence, must own; using technology, developing digital teaching resources or materials, combining digital learning resources, communicating with learners, facilitating classroom learning, strategies in pedagogy, assessment in learning, and understanding student personal characteristics (Koskinen, 2015).   All these areas make teachers take a role in using digital technology and implement it to their students. The study entitled Competency Profile of the Digital and Online Teacher in Future Education states that digital teacher must be able to educate students in a virtual environment using emerging digital technologies (Ally, 2019).

The presence of the digital technology era also influences learning management and student characteristics. Learning in this era becomes imperative to integrate digital technology into student-centered learning. According to (Notanubun, 2019), the nature of digital technology era learning development, teachers need to change conventional learning patterns centered on teachers (teacher-centered) into student-centered learning (student-centered). The competence of this digital technology era can be integrated into the implementation of learning so that the selection of strategies, methods, media, and classroom management can improve the quality of learning. Every teacher also needs to improve their pedagogical ability to educate students in this digital technology era.

Spiritual formation

Spiritual formation is an important thing that every believer in Christ must-have. Spirituality will be useless if there is no growth in it. In Greek, growing is "auxanolauxo", this word appears 20 times in the New Testament (Mutak, 2020). It can also be seen in Paul's epistles, that this "growth" refers to the growth of the believer's faith (2 Corinthians 10:15), growing in the knowledge of God (Colossians 1:10), and growing in grace

(2 Peter 3:18), including the church as the body of Christ growing together towards full maturity (Ephesians 2:12; 4:15-16).

The main emphasis in spiritual formation is Christ. The believer's life must continually grow to resemble Christ, for imitation of Christ is a fundamental form in the growth of the Christian faith (Wilhoit & Howard, 2020). In this case, Christian teachers need to realize that spiritual formation is based on the word of God, which is the standard of morality in believers' lives. The answer to this spiritual formation is the work of God in the life of the believer, but the believer also needs to have a very obedient effort in the process of spiritual formation (Maiaweng, 2015). For this reason, Christian teachers are responsible for cultivating student spirituality under God's leadership.

Biblical community

A biblical community is a community that has interactive relationships and biblical Christian insights. The Christian community must always practice God's righteousness and realize that each member is a member of God's kingdom engaged in carrying out God's mission (Buchanan, 2021). It is this kind of community that a Christian teacher should strive for. The community formed in a school is a forum for character formation and spiritual growth of the entire school community. In this case, the role of Christian teachers must be able to utilize digital technology to build an interactive and biblical Christian relationship between teachers and learners in the learning process (implementation of Biblical Community using digital technology).

The Biblical community respects justice and freedom for all people regardless of ethnicity or gender (Gatumu, 2013). Through the biblical community formed, it is expected to have a significant impact and be a blessing to the community. Therefore, the community formed in a Christian school must be a community based on biblical principles. The Word of God in Ephesians 4:1-16, discusses the context of Paul's counsel to the Ephesians at that time regarding love in the unity of the Ephesians with different gifts. Paul's counsel is also very relevant and can be the basis for how biblical communities should be built on the love of Christ that unites everyone's differences in a community.

Research method

Research methods and subjects

This research survey is structured to investigate research topics and collect related data needed as the main source of information. The collected data is analyzed using several categories created to describe the topic. The study did not include statistical calculations but used the percentage of responses and the number of respondents. For the subject from this study are the teachers who teach at one *Christian private school*, Tangerang, which amounts to 80 people. The technique used in sampling is random probability. Through this technique, all members in the population have the same opportunity to be selected as a sample for the research. To avoid the researcher's bias toward the subject, questionnaire respondents were allowed not to write down their names. Competency question items regarding the competence of twenty-first-century teachers will be piloted by elementary and secondary school teachers.

Data analysis techniques

Reliability tests using Cronbach's alpha for show that the reliability of the measuring instrument is adequate. The study used a structured questionnaire form with rating scales or value scales. The value scale used is the Likert scale. The scale ranges from points 1 (never), 2 (rarely) to 3 (sometimes), 4 (almost always), and 5 (always). Data collected through the questionnaire will be analyzed in a qualitative descriptive manner. This analysis is done by interpreting the data obtained so that the results become accurate and valid (Widoyoko & Qudsy, 2009). Data collected with questionnaire research instruments will be processed using the average score of each question or statement divided by the number of respondents who answered the question or statement in the questionnaire. The collected results will describe the average score obtained from each statement or question. After the questionnaire data is processed using the above formula, the next step is to create a category of score results for each statement. The categories of scores obtained are as follows 4.5 - 5 = belongs to the category of excellent; 3.5 - 4.4 = belongs to the good category; 2.5 - 3.4 = belongs to the sufficient category; 1.5 - 2.4 = belongs to the less category; 0 - 1.4 = belongs to the category of very less.

Results and discussions
Spiritual formation
Spiritual formation is one of the teacher's competencies to helping students' spiritual growth. This spiritual growth is an important aspect that must be owned by teachers and students. Moreover, in the scope of Christian education, spiritual growth is a fundamental aspect that becomes the goal in every learning activity. This requires teachers to be creative in using and utilizing digital technology to help students' spiritual growth.

In the results that have been calculated using the Likert scale (presented in figure 1), the SF-1 item, namely the competence of teachers in using digital technology to find sources or references, has achieved 4.5 results with excellent categories. In the SF-2 item, namely the competence of teachers in using a variety of different learning strategies that allow learners to critically compare and elaborate information from different sources, but full of well-categorized meaning with the achievement of 4.3 results. In the SF-2 item, namely the teacher's competence in using various learning strategies to enable students elaborate any information is categorized as good with the achievement of 4.3 results. In the SF-3 item, the teacher's competence encourages students to use digital technology to help their spiritual growth has achieved a 4.1 result with a good category. In the SF-4 item, the teacher's competence encourages students to make planning and reminders (planning to read the Bible or spiritual books, reminders to pray, worship) using digital devices that they have categorized well with a result achievement of 4.0.

Furthermore, in the SF-5 item, the competence of teachers teaches students to be responsible in using digital technology so that they can become bright and salt through it is categorized well with the achievement of 4.4 results. In the SF-6 item, the competence of teachers encourages students to use digital technology to record the things they get from the sermons or devotionals they listen to are categorized well with the achievement of 4.0 results. In the SF-7 item, the competence of teachers leads students through digital technology to discover the truth of what they learned through sources on the internet, categorized well with the achievement of 4.1 results. In the SF-8 item, the competence of

teachers using digital technology to design activities that allow teachers and students to discuss to convey what they believe in from what they learn together is categorized well with the achievement of 4.1 results.

Based on the results of the achievements of the eight items above, the categories shown through the interpretation of the likert scale in the analysis of teacher competency profiles in the digital learning era and 21st century skills in the sub-aspects of building a spiritual formation using digital technology (SF) have accumulatively been achieved with good categories (with an average achievement of 4.1 results) or have been able to meet the criteria for teacher competency profile according to which is expected. The results of the teacher competency profile analysis in the aspect of spiritual formation using digital technology (SF) have accumulatively been achieved in a good category (with an average achievement of 4.1). This means that the teacher has been able to meet the competency profile criteria as expected. Most respondents already have good awareness and ability to utilize technology to increase students' spiritual growth. The results of tabulation of data and diagrams from sub aspects of building a spiritual formation using digital technology (SF) can be shown as follows:
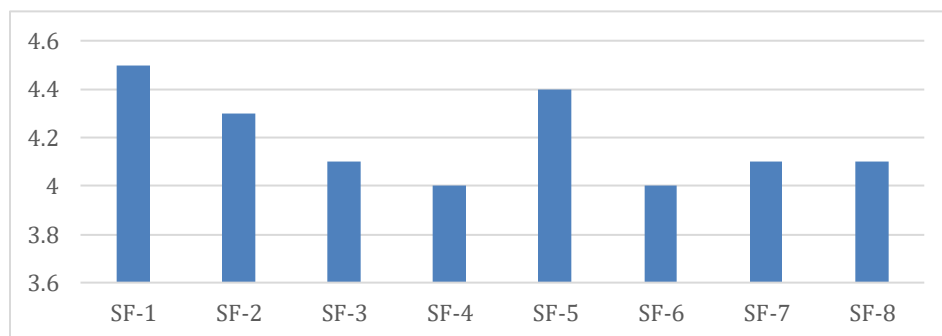

Figure 1 Data Tabulation Results Diagram of Building a Spiritual Formation Using Digital Technology (SF).

Biblical community

The Biblical Community needs to be formed in a Christian school as a forum to help students' spiritual growth. This community has an interactive and biblical Christian-minded relationship. In this case, the

role of Christian teachers must be able to utilize digital technology to build an interactive and biblical Christian relationship between teachers and learners in the learning process (implementation of Biblical Community using digital technology).

In the results that have been calculated using the Likert scale (presented on the figure 2), aspects of Implementation Biblical Community Using Digital Technology (BC), show that in BC-1 items, namely the competence of teachers in facilitating advanced interactive discussions outside the classroom with learners to discuss the integration of Biblical Christian insights with topics they learned in the classroom using digital technology devices categorized well with the achievement of 3.4 results. The results on the Implementation of Biblical Community Using Digital Technology (BC) aspects, show that in item BC-1, namely the competence of teachers in facilitating advanced interactive discussions for the integration of Biblical Christian insights with the topics they learn in class using digital technology tools, the results are categorized as good with the achievement of 3.4 results. In the BC-2 item, the teacher's competence in inviting students to discover the truth of God through materials learned in the classroom using the support of digital technology relevant to the topic studied is categorized well with the achievement of 3.6 results. In the BC-3 item, the teacher's competence opens an interactive discussion room if students have difficulty using well-categorized digital technology devices, with a result achievement of 3.8. In the BC-4 item, the competence of teachers directs students to access digital learning resources relevant to the topics they learn related to assignments that must be completed and categorized well with the achievement of 3.8 results. In the BC-5 item, the competence of teachers realizes that building interactive and biblical Christian-minded relationships, both face-to-face and virtual face-to-face using digital technology devices requires a high commitment and must be built based on trust, integrity, and benefit between educators and categorized learners both with the achievement of 3.9 results. In the BC-6 item, the teacher's competence facilitates interactive discussion spaces with learners through digital technology devices to discuss important matters related to academics (difficulty understanding learning topics, WKA integration, assignment) and non-academic (learning assistance, counseling, Bible study, extracurricular and so on) categorized well with

the achievement of 3.6 results. Furthermore, there is the competence of teachers to build interactive and biblical Christian-minded relationships both face-to-face and virtual by using digital technology devices. This competency is found in item BC-5 which is categorized as good with 3.9 results. Next, the competence of teachers in facilitating interactive discussion rooms with students through digital technology devices is contained in item BC-6. This competency is carried out by the teacher in discussing important matters related to academic (difficulty understanding learning topics, WKA integration, assignments) and non-academic (study assistance, counseling, Bible study, extracurricular and so on). Item BC-6 is categorized as good with 3.6 results.

Through the results of the above analysis, the competency profile of teachers in the digital technology era regarding Implementation of Biblical Community Using Digital Technology (BC) as a whole has reached a good category with an average result of 4.1) or has met the criteria for a teacher competency profile as expected. However, there need to be further efforts to improve teacher competence to all biblical community criteria through professional development or similar teacher training. The results of data tabulation and diagrams from the sub-aspects of Implementation Biblical Community Using Digital Technology (BC) can be shown as follows:
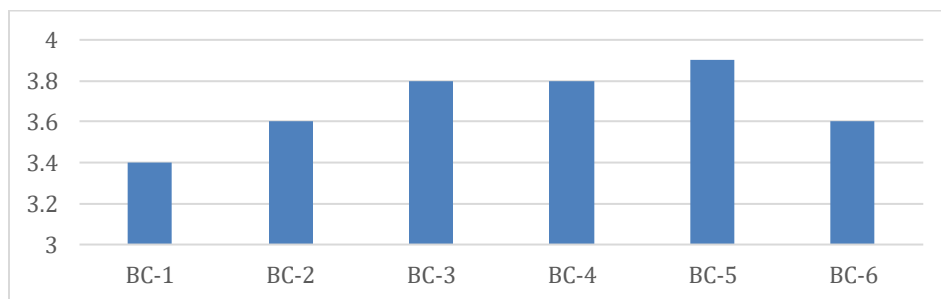

Figure 2. Tabulation Results Diagram of Biblical Community Using Digital Technology (BC) Sub-Aspects.

Conclusion

Looking at the results of tabulation and analysis of respondents' data using the interpretation of Likert scale categories, it can be concluded that the growing digital technology era provides a challenge for every

Christian teacher to have the right competence in using technology. The use of this technology is important in providing the best learning for students. For this reason, Christian teachers are increasingly required to cultivate spiritual formation areas and biblical communities for each student. Based on the results of research that the author has conducted at one of Tangerang's private Christian schools, teachers' ability in each area of spiritual formation and biblical community has reached the category both on a scale of 4.1. The results show that most respondents in today's digital technology have understood the importance of teacher competence in developing spiritual formation and biblical community areas in Christian education. However, it is also necessary to conduct a similar professional development so that Christian teachers can understand their role and develop their competence in this digital technology era. In addition, the development of spiritual formation and biblical community can be increased through Bible discussions in small groups every week.

Acknowledgments

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IMPLEMENTATION OF AN EDUCATIVE ASSESSMENT IN PHYSICS EDUCATION STUDY PROGRAM UPH DURING ONLINE LEARNING

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ABSTRACT

Assessment is the collection of information about student learning outcomes. Educative assessment should enable students to respond as images of God and challenge them to grow and learn more. The purpose of this study is to describe the implementation of educative assessment in the Physics Education Study Program during the 2020/2021 academic year at the University of Pelita Harapan. This study used descriptive qualitative research methods. The Implementation of educative assessments were carried out through interdisciplinary assessment in some courses, mid-term and final-term personal reflections in all physics courses, vlogs in material physics courses as mid-term assessments, and used Moodle for review and weekly quizzes. Based on students' feedback, it was known that the interdisciplinary assessment makes students understand the learning material deeper, more comprehensively, and integrated. The interdisciplinary assessment also makes the task load less overwhelming, especially during online learning. Vlogs as a mid-term assessment open space for students to be more creative and expressive to share knowledge in public, stimulate students' curiosity about learning material, and make students grow in their skills to find, summarize, and publish information digitally. At the end of the term, all of the students' learning outcomes resulted in good and excellent grades.

Keywords: Educative assessment; Online learning; Physics education

ABSTRAK

Penilaian adalah pengumpulan informasi tentang hasil belajar siswa. Penilaian Edukatif memampukan siswa untuk merespon sebagai gambar Tuhan dan menantang mereka untuk tumbuh dan belajar lebih giat. Penelitian ini bertujuan untuk mendeskripsikan pengimplementasian penilaian edukatif pada Program Studi Pendidikan Fisika selama tahun ajaran 2020/2021 di Universitas Pelita Harapan dengan menggunakan metode penelitian deskriptif kualitatif. Penilaian edukatif dilakukan melalui penilaian interdisipliner pada beberapa mata kuliah, pembuatan refleksi pribadi pada tengah dan akhir semester pada semua mata kuliah fisika, Pembuatan vlog pada mata kuliah fisika material sebagai penilaian tengah semester, dan penggunaan moodle untuk review dan kuis mingguan. Berdasarkan umpan balik mahasiswa, diketahui bahwa penilaian interdisipliner membuat mereka memahami materi pembelajaran lebih dalam, lebih komprehensif dan terintegrasi. Penilaian interdisipliner juga membuat beban tugas tidak terlalu berat, terutama selama pembelajaran online. Pembuatan vlog sebagai penilaian tengah semester membuka ruang bagi mahasiswa untuk lebih kreatif dan ekspresif untuk berbagi ilmu di depan umum, merangsang rasa ingin tahu terhadap materi pembelajaran, dan menumbuhkan keterampilan mahasiswa dalam menemukan, merangkum, dan mempublikasikan informasi secara digital. Pada akhir semester, semua mahasiswa lulus dengan nilai yang baik dan sangat baik.

Kata Kunci: Penilaian edukatif; Pembelajaran online; Pendidikan fisika

Introduction

The COVID-19 pandemic that hit many countries has changed the education system in the last two years. The learning process in Indonesia must be carried out remotely since March 2020 to avoid the spread of the coronavirus. In the 2020/2021 academic year, the learning process must be done completely online. This condition requires the academic community to think about the best practices that must be done so that the learning process remains optimal. The use of technology is also important in the learning process. At that time, various virtual media that could be used in learning began to appear, such as Zoom, Google Classroom, Google Meet,

Microsoft Teams, and others. The existence of these media helps the learning process can be done better because learning can synchronously and asynchronously as long as there is a good internet network. However, the problem is in the assessment process. Many educators feel overwhelmed by getting an objective assessment during a pandemic.

The assessment aims to obtain information about the progress of a student's learning process. Therefore, every educator must think of an appropriate assessment design in the distance learning period so that the assessment process still achieves its goals. In Christian education, the assessment process must be able to help students to respond as the image of God (Brummelen, 2009). Educative assessment is an appropriate assessment designed to address these challenges and problems. The educative assessment produces an authentic assessment (Wiggins, 1998). This helps the Teacher to see clearly the progress of student learning. The educative assessment also provides clear standards and criteria for the expectations of the work given. This makes both teachers and students aware of the expectations that are expected in carrying out their assignments. Clear criteria can help students see their learning material comprehensively and motivate them to improve their performance. Clear criteria and standards can also help teachers provide feedback on student work. Thus, students can realize their strengths and weaknesses in the learning process and a significant learning process will be created even in the distance learning process.

Teacher College is one of the faculties at Pelita Harapan University (UPH). The teacher college has ten study programs, one of which is a physics education study program. As a Christian education, the physics education study program, UPH, strives to develop a significant learning process and an appropriate assessment process during the pandemic. One of the efforts made is to implement educative assessment in core courses. Therefore, this paper aims to explain how the educative assessment will be implemented in the physics education study program, UPH, during online learning in the 2020/2021 academic year.

Educative assessment

Assessment is the collection of information about student learning outcomes. A good assessment not only helps students know about their actual abilities but also empowers them in the mode of being fully human (Nguyen & Phan, 2020). The most common types of assessment carried out in schools are formative assessment and summative assessment. Formative assessment is an assessment that observes student learning outcomes and their development in learning. A summative assessment is a student assessment at the end of the course or the end of the year. Learning assessment can help teachers evaluate the effectiveness of curriculum, teaching strategies, and teaching activities and help students be responsive in learning. Assessment in the Christian approach must enable students to respond to the image of God and challenge students to grow and learn more actively (Brummelen, 2009). Assessment should help students to know themselves more deeply by realizing their strengths and weaknesses. a Christian teacher should provide good feedback on student work to motivate students to learn from mistakes and strive to improve their potential in the future. This will enable students to respond to an assessment as an image of God. This assessment is in line with the objectives of the educative assessment.

Educational assessment is a procedure and feedback provided to improve the learning process and student performance (Wiggins, 1998). According to Buxton, Snider, Suriel, and Gabbitas (2013), educative assessment is an assessment design that promotes meaningful learning. Educational assessment is a general term that covers Assessment as learning (AaL), Assessment for Learning (AfL), and Assessment of Learning (AoL) (Schellekens, et al., 2021). Lonneke et al. said that educational assessment refers to three major themes: (1) Student-teacher roles and relationships within assessment; (2) Assessment learning environment; (3) Educational outcomes assessment. There are four components possessed by educative assessment. That is a forward-looking assessment, the opportunity to conduct a self-assessment, the existence of clear criteria and standards, and FIDeLity feedback (L. Dee Fink, 2003). Educative assessment is different from audit-ive type assessment, which is an assessment designed only to serve as a guide for teachers to provide grades. A comparison of these two types of assessment is shown in Figure 1.
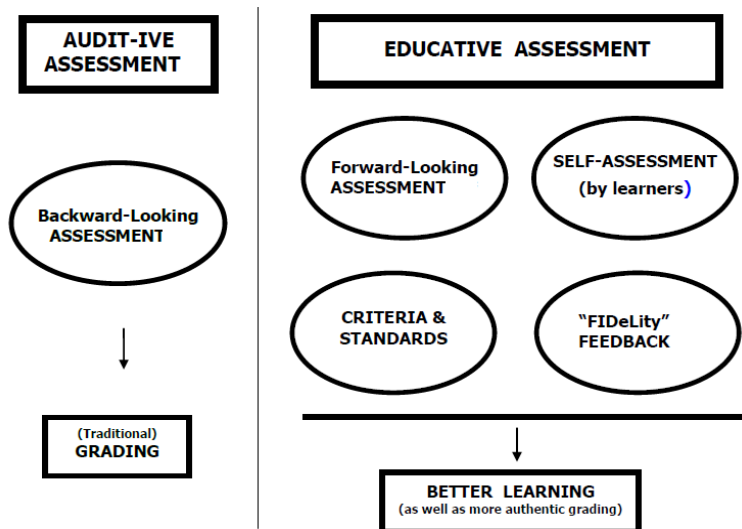
Figure 1. Comparison of audit-ive assessment with educative
assessment (L. Dee Fink, 2003)

One of the components of the educative assessment is the Forward-Looking assessment. A Forward-Looking assessment is an assessment carried out by considering when and in what situations students will use the knowledge gained in learning. Based on this, educators will include problems that exist in everyday life in the form of questions or assignments. The characteristics of this assessment are different from the backward-looking assessment principle applied in audit-ive assessment, where backward-looking assessment only focuses on providing an assessment of how well students absorb the material provided during lectures. The backward-looking assessment encourages students to memorize the material more than to apply their knowledge.

A forward-looking assessment will produce an authentic assessment. Authentic assessment is an assessment that emphasizes the learner's ability to demonstrate the knowledge he has in a real and meaningful way (Nurgiyantoro, 2008). Authentic assessment will encourage innovative teaching and learning and fair evaluation. Authentic assessment will encourage innovative teaching and learning and fair evaluation. With authentic assessment, teachers are encouraged to devote more time and energy to thinking about ways that enable their students to learn and grow (Nguyen & Phan, 2020). Some of the benefits of authentic assessment proposed by Nurgiyantoro (2008) are as follows:

1. Authentic assessment allows direct measurement of student performance as an indicator of competency achievement from learning outcomes.
2. An authentic assessment provides opportunities for learners to construct their learning outcomes.
3. Authentic assessment integrates teaching, learning, and assessment processes into one integrated package.
4. Authentic assessment encourages learners to display their best performance because they are given the space to display its according to their characteristics.

The second component of the educative assessment is self-assessment. Self-assessment is a learner's skill to evaluate himself by identifying the gap between what he currently has and what is expected. Self-assessment can increase students' motivation, engagement, and learning performance (Yang, Chen, Flanagan, & Ogata, 2022). Self-assessment is not an innate ability, but self-assessment is a skill that can be learned and improved with practice and feedback (Jönsson, 2008). The third component of the educative assessment is feedback. In general, there are two types of feedback: evaluative feedback and descriptive feedback (Jönsson, 2008). Feedback evaluation is the feedback that contains positive and negative things whose ultimate goal is to socialize. In the learning process, evaluative feedback has no impact on learning. Descriptive feedback is the feedback that is focused on achieving or improving actual performance. Descriptive feedback tends to have a positive impact on the learning process. In the educative assessment the feedback provided is FIDeLiTy, namely Frequent, Immediate, Discriminating, and Lovingly delivered (L. Dee Fink, 2003).

Educative assessment is an assessment based on criteria. Educators must characterize the quality of the best performance expected in a given assignment. The criteria and standards of assessment used to assess student performance must be explained and communicated to students from the start of giving assignments. The tool commonly used for measuring performance scores is a rubric. In the rubric, there are two main things that must be made, namely criteria and standards for achieving performance (Nurgiyantoro, 2008). The criteria describe the competencies to be achieved, while the performance achievement standards are how these competencies are measured and assessed. Achievement standards

are usually made on a numerical scale. The number scale commonly used is 1-4, where a larger number indicates a better performance.

Several research results related to educational assessment are described in this paragraph. Marlina et al's research shows that the application of Authentic Problem Based Learning (aPBL) has a positive effect on Mastery of Science Concepts for fourth graders (Marlina, Utaya, & Yuliati, 2017). Idawati et al proved that Inquiry-Based Authentic Learning in the STEM Program had a positive effect on students' scientific literacy abilities (Idawati, Muhardjito, & Yuliati, 2019). Mohammad Zaky et al found that there was an increase in students' understanding of concepts in static fluids by applying Phenomenon-Based Authentic Learning (Tatsar, Yuliati, & Wisodo, 2020). Widayan Widiana et al. proved that the learning model with project assessment had positive vibes on social studies learning outcomes and the nationalism attitude of elementary school students (widiana, wayan, Tegeh, & Artanayasa, 2021).

Research method

The research method used in this study is descriptive qualitative. Data were obtained through online surveys, student reflections and recapitulation of students' final grades. The research subjects were students of physics education cohort 2018 and cohort 2019 with a total of 32 students. The research was conducted on several core courses of the Physics Education study program in the 2020/2021 academic year. Data analysis was carried out based on the Miles and Huberman's model as shown in Figure 2.
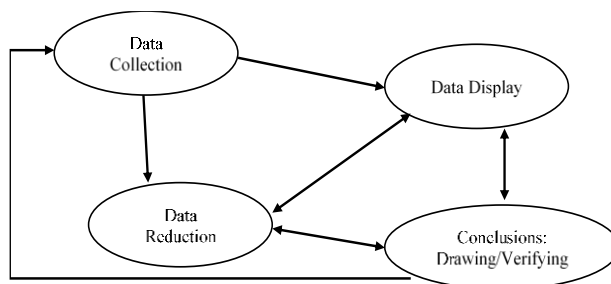

Figure 2. Data Analysis Miles and Huberman's Model (Sugiyono, 2021)

academic year. Implementation is carried out through several types of assessments planned by lecturers at the beginning of each term. The forms of assessments are students' reflections for all Physics content courses, interdisciplinary assessments for several courses, Vlogs as a mid-term assessment for material physics courses, and various weekly assessments through Moodle or Microsoft teams. Some courses also conduct peer assessments for group work. Assessment criteria and standards are detailed in a rubric and given to students at the beginning of the term.

The first form of assessment is the student's reflection. Reflection intends to provide opportunities for students to assess the learning process that has been going on and reflect on their learning experiences in each course. Reflection is done twice, namely in the middle and at the end of the term. An assessment rubric is given to students from the beginning of the lecture. There are four components obtained from student reflection sheets, namely:

1. Facts and personal responses of students to the learning process based on the educational theory they have learned before.
2. Detailed explanations of the parts of learning that help to know more about God and His creation.
3. Personal growth is through self-awareness and self-assessment of their strengths and weaknesses and an action plan for self-improvement.
4. Personal growth is through the ability to describe the achievement of targets and the efforts to achieve better in the next opportunity.

Reflection is one of the authentic assessments of students, where students can be themselves in assessing ongoing learning and assessing themselves. Criteria and standards for reflection assessment are communicated and given to students at the beginning of the term. Therefore, students are clear with the points and the expectations of the reflections made. Making reflections also trains students to be reflective individuals, which is the attitude they need when they become teachers. Lecturers will provide feedback to students a week after reflections are collected based on the criteria and standards listed in the rubric. Based on the explanation above, it can be concluded that reflection is the

implementation of educative assessment because it fulfills the four components of educative assessment.

The second form of implementation is interdisciplinary assessment in several courses. The courses that apply interdisciplinary assessment in the physics education study program are electronics with PSAL Physics, material physics with solid matter physics and nuclear physics, and wave optics with research methodology. Interdisciplinary is done by considering the characteristics and looking at the interrelationships between courses. The interdisciplinary assessment in electronics and PSAP Physics courses is carried out in microteaching. Electronics is a material that will be explored and taught by students in their teaching practice (microteaching) in the PSAP Physics course. Understanding the content will be an assessment for the electronics course, while the pedagogy ability will be an assessment for the PSAL course. Interdisciplinary assessment in these two courses encourages students to explore and understand electronic material more deeply and broadly than what is received in the classroom. Microteaching will train students to teach in a limited scope and classroom atmosphere. It will help them to prepare themselves to become teachers in the future. Every student who does microteaching will get feedback from the lecturer and also their peers directly. Thus, they can find out their strengths and weaknesses in teaching. The students are also allowed to evaluate themselves in preparation and during microteaching.

The interdisciplinary assessment of Wave Optics with a research methodology is to make a paper. The paper is based on class observations and data collection in the Wave Optics course. The result of the paper is a critical analysis of the learning process in the Wave Optics course, which produces ideas or inputs to improve the lecture process. The skills of researching, analyzing, and writing in the form of a paper become an assessment of the research methodology course. This assignment is an exercise for students' final project, where students will make a paper based on the results of observations and teaching experiences at school. The rubric is given to students at the beginning of the term.

Lecturers provide feedback during writing guidance and after papers are submitted. Interdisciplinary assessment is also carried out for material

physics, solid matter physics, and nuclear physics. The assignment is carried out in groups. Each group consists of two to three students. Each group must find and analyze a scientific article covering the three courses and then present it to the three lecturers. The atmosphere of the presentation is conditioned so similarly to the final task test. This assignment encourages students to look at various sciences in an integrated and their usefulness in life.

Based on the description of the forms of interdisciplinary assessment above, it can be concluded that interdisciplinary assessment is part of the implementation of educative assessment. Each form of interdisciplinary assessment carried out fulfills the four components of the educative assessment. All interdisciplinary assessments carried out train students to become teacher candidates. Each lecturer has created and provided an assessment rubric for students at the beginning of the term and immediately given feedback on student work.

Making a Vlog as a mid-term assessment in the Material Physics course is also categorized as an educative assessment implementation. Each student will make a Vlog related to the materials around them and upload it on the YouTube channel to provide information and educate the public. This assessment encourages students to use and utilize technology in the learning process. This activity is following the times and hobbies of students as the Z Generation who are very technology literate and appropriate to the conditions of distance learning. This assessment is also very authentic in describing the development of each student. Each student can construct the knowledge gained and present it according to their personality and creativity. Each student is also encouraged to assess the material presented by a classmate. Assessment rubrics are explained and given to students at the beginning of the semester. It is intended so that students can understand assignment expectations and can prepare themselves long before the midterm exam.

Apart from the assessments described above, each lecturer conducts weekly assessments through Moodle or Teams. Moodle and Microsoft provide features that can provide feedback in real-time and provide a column for feedback on their learning outcomes. This activity is by the

characteristics of educative assessment, namely FIDeLiTy Feedback. The FIDeLiTy Feedback can help students make continuous self-improvement in the learning process.

Student responses are to the assessment process in lectures

Student responses to each type of assessment are obtained through an evaluation form at the end of the academic year and through reflections written by students. Based on the survey results, it is to make reflections on the lectures that have taken place known that all students agree and feel it is important to do it continuously. Some of the students' reasons for the importance of reflection are summarized as follows:

1. Reflection can help students evaluate the learning process that has taken place and help to see their strengths and weaknesses in attending lectures.
2. Making Reflections gives space for students to provide opinions, input, what they get, and responses to learning.
3. Reflection can help students to realize self-development and personal growth during lectures.
4. Reflection can help students explore, recognize, and evaluate their achievements in learning and find solutions for follow-up.

Through the survey, it was known that students had a positive response and saw that interdisciplinary assessments for several courses were effective and efficient. It is effective because it can help students see the material in-depth and in an integrated manner, motivate students to see an application of their knowledge in everyday life and maximize students' training of competence as teachers. Interdisciplinary assessment is considered efficient because it can optimize the workload given to students. By doing one task, students have fulfilled assessments for several courses. Thus, interdisciplinary assessment is deemed appropriate, especially during the pandemic.

Making Vlogs as a mid-semester assessment in material physics courses is the activity most favored by students. It is known from the survey given at the end of the term and through the mid-semester reflection.

Students' comments and responses to the Vlog as a midterm assessment expressed through personal reflection are as follows:

1. Making Vlogs makes students more creative and expressive in conveying the knowledge that has been obtained from lectures.
2. Students become motivated to share knowledge with others
3. Making vlogs triggers students' curiosity about learning materials
4. Make students grow significantly in the skills of finding, summarizing, and attractively publishing information.
5. It trained to learn basic things to provide learning media.

Feedback given by lecturers either directly or through Moodle and Microsoft Teams helps students improve their performance in the next assignment.

Student learning outcomes

Student learning outcomes in subjects that apply interdisciplinary assessment are presented in Figures 3 and 4. Figure 3 shows the distribution of the cohort 2018 grades in Material Physics, Nuclear Physics, Solid-state Physics, and Optics and Wave courses while Figure 4 shows the distribution of the cohort 2019 grades in PSAL Physics and Electronics courses. Based on the two figures, it can be seen that almost all students graduated with good and excellent grades. This fact proves that the application of educative assessment not only helps students during the lecture process but also enables students to complete lectures well.
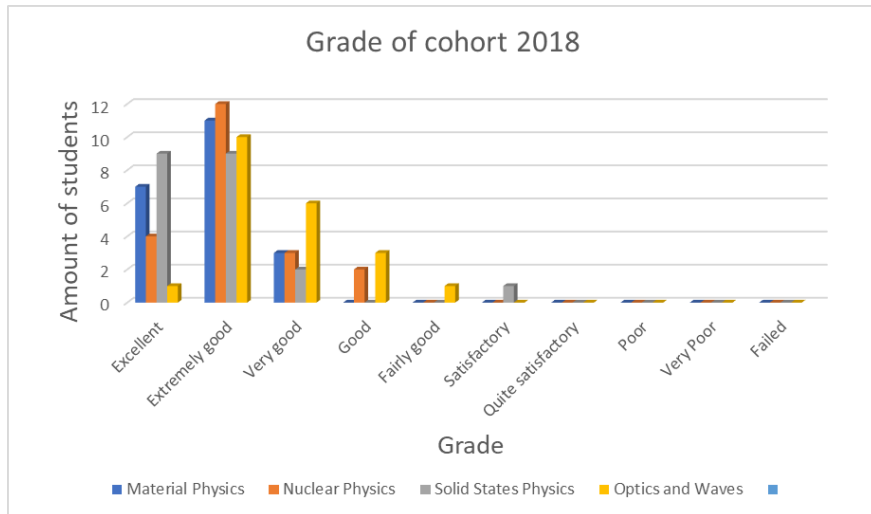
Figure 3. Grade of cohort 2018 in Material Physics, Nuclear Physics, Solid state Physics, Optics and Wave courses
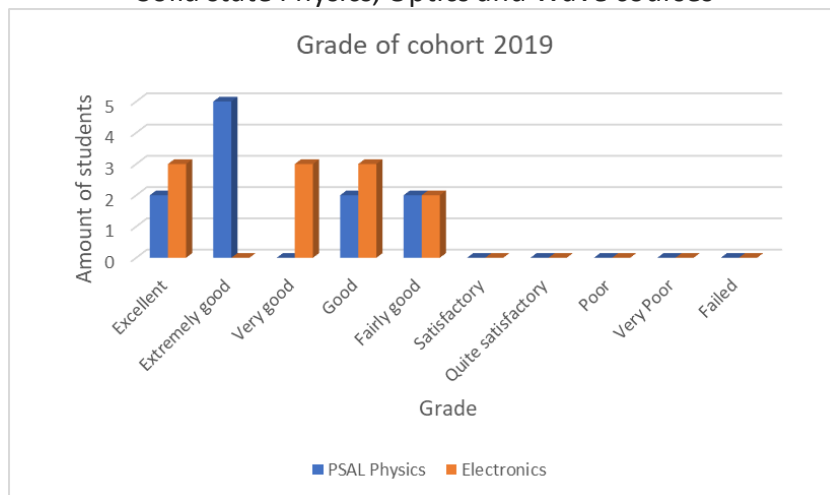

Figure 4. Grade of cohort 2019 in PSAL Physics and Electronics courses

Conclusion

Educative assessment implemented in the Physics Education study program, Universitas Pelita Harapan, in the 2020/2021 academic year. The implementations carried out are making student reflections for all content courses, implementing interdisciplinary assessments in several subjects, making Vlogs as mid-term assessments, and weekly

assignments through Moodle and Teams. These forms of assignment have succeeded in improving the student learning process. It can be seen from the recognition and responses of students found in surveys, student reflections, and student learning outcomes at the end of the semester. These assessments encourage students to improve their learning process and performance as prospective teachers. At the end of the term, it was found that almost all students graduated with good and excellent categories. These are the results and forms of implementation of the educative assessment in the physics education study program, UPH, for the 2020/2021 academic year.

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INVESTIGATION OF UBIQUITOUS-PHYSICS APP WITH LEARNING GUIDED MAP TO FACILITATE PHYSICS LEARNING IN AUTHENTIC CONTEXTS

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Abstract

Many studies have considered the use of mobile devices to support learning in different subjects such as English, math, and biology. However, there are not many studies which focus on facilitating physics learning with mobile device supports in authentic contexts. Taking this into account, we updated a mobile app called Ubiquitous-Physics (U-Physics) by adding a guide learning map (gMap) which helps students to explore inclined plane phenomena in authentic contexts. We aimed to investigate the effectiveness of U-Physics with gMap on students' learning achievements and to analyze students' perceptions based on interview results. Forty-five first-grade vocational high school students majoring in housekeeping management were participated in this quasi-experiment for seven weeks. The experimental group used U-Physics with gMap and the control group used U-Physics without gMap. Although there were no significant differences between the experimental group and the control group concerning learning achievements, we found that learning gain of both groups significantly improved. Additionally, students revealed that they enjoyed exploring and conducting physics experiments in authentic context environments such parks, playgrounds, and houses. These findings indicated that exploring and conducting physics phenomena in authentic contexts can enhance understanding of the physics phenomena and enriches experiential learning.

Keywords: Authentic contexts; guided learning Map (gMap); Ubiquitous-Physics (U-Physics).

Abstrak

Banyak penelitian telah mempertimbangkan penggunaan perangkat seluler untuk mendukung pembelajaran dalam berbagai mata pelajaran seperti bahasa Inggris, Matematika, dan Biologi. Namun, tidak banyak penelitian yang berfokus pada memfasilitasi pembelajaran Fisika dengan dukungan perangkat seluler dalam konteks otentik. Dengan mempertimbangkan hal ini, kami memperbarui aplikasi seluler bernama *Ubiquitous-Physics* (U-Physics) dengan menambahkan peta pembelajaran panduan (gMap) yang membantu siswa menjelajahi fenomena bidang miring dalam konteks otentik. Kami bertujuan untuk menyelidiki efektivitas U-Physics dengan gMap pada prestasi belajar siswa dan untuk menganalisis persepsi siswa berdasarkan hasil wawancara. Empat puluh lima siswa sekolah menengah kejuruan, kelas satu, jurusan manajemen rumah tangga berpartisipasi dalam percobaan semua ini selama tujuh minggu. Kelompok eksperimen menggunakan U-Physics dengan gMap dan kelompok kontrol menggunakan U-Physics tanpa gMap. Meskipun tidak ada perbedaan yang signifikan antara kelompok eksperimen dan kelompok kontrol mengenai prestasi belajar, kami menemukan bahwa perolehan pembelajaran kedua kelompok meningkat secara signifikan. Selain itu, siswa mengungkapkan bahwa mereka senang menjelajahi dan melakukan eksperimen Fisika di lingkungan konteks otentik seperti taman, taman bermain, dan rumah. Temuan ini menunjukkan bahwa mengeksplorasi dan melakukan fenomena Fisika dalam konteks otentik dapat meningkatkan pemahaman tentang fenomena Fisika dan memperkaya pembelajaran berdasarkan pengalaman.

Kata kunci: Konteks otentik; Peta pembelajaran terpandu (gMap); *Ubiquitous-Physics* (U-Physics).

Introduction

The lack of physics theories and concepts, lack of experiences in connecting physics knowledge to real-world (Hirschfeld, 2012) and a lack of adequately equipped laboratories (Kibirige & Hodi, 2013) could be reason why most of students perceived that physics is a challenging subject (Saleh, 2011). Because students are unable to realize and understand that physics

theories and concepts can be found easily in their daily life and surroundings, they usually believed that physics is an uninteresting, irrelevant to their daily lives, and an elite discipline which only suitable for people with unique talents and gifts (Erinosho, 2013). In fact, physics should link to daily phenomena. Teachers should involve students to do more authentic experiential activities that can help students construct their knowledge by using logical inquiry and psychomotor skills. The students were asked to learn by constructing meaning through interacting with and interpreting their environments (Jonassen et al., 1995), connecting and applying what they learned in school to daily life problems (Lombardi, 2007).

A number of studies had used mobile devices as virtual laboratories to tackle the physics learning difficulties (Carlos Castro-Palacio et al., 2013; Purba & Hwang, 2017a, 2017b, 2018; Purba et al., 2019). The studies aimed to collect experimental data through the acceleration sensors of the tablet, and bring measurements and experiments that usually could only be done in the laboratory using multimedia tools. For example, a study used the "Accelerometer Monitor" to measure the period and frequency of the simple pendulum (Carlos Castro-Palacio et al., 2013). The other study utilized an app called U-Physics, which used acceleration sensors to measure the period and acceleration of the simple pendulum (Purba & Hwang, 2018). The study showed that U-Physics was accepted and perceived useful by the students during the experiment. However, the studies, as mentioned earlier, had not considered authentic explorations such as finding physics phenomena outside of school (e.g., public parks and houses) in their activities.

With the development of technology, nowadays, Google maps not only offers students an opportunity to benefit by using the map as a study tool, but also provide them the ease to be able to relocate and review, at their convenience, in person or online. Relocating could help students to find more and more inclined plane phenomena in their surroundings and reviewing the content of marks on the map help them to tackle technical and pedagogical problems during physics phenomena investigations (Shen & Huang, 2006). Students can easily create and view what they have discovered during their physics investigations into the map. Therefore, we integrated Google Maps into our developed app and named it as a learning guided map (gMap). It allows students to seek any example and comparison

in solving physics phenomena. Providing an example for students during the learning process can build relevant knowledge and enhance students' problem-solving (Daluba, 2013). Students to check the details of the experimental result and the place of the experiment using gMap. The learning activities allowed students to use the tablets outside of school time, conduct physics experiments and access physics learning content anytime at anywhere. More specifically, the study addressed the following research questions.

1. What are the differences in learning achievements between students who use U-Physics app with gMap and those who use U-Physics app without gMap?
2. What are the differences in learning gains between students who use U-Physics app with gMap and those who use U-Physics app without gMap?
3. What are the students' perceptions of U-Physics with gMap?

Literature review

Physics Learning

In general, learning physics requires students to understand and solve related physics phenomena using experimental data, tables, graphs, pictures, and formulas. Learning physics is not only about memorizing formulas, but it is also about understanding the physics concepts being studied. When investigating physics phenomena, students are required to rely more on the ability to observe data and reason and to use their logical reasoning (Lee & Sulaiman, 2017). Ng and Nguyen (2006) said that teachers give students more opportunities to interact directly with the phenomena being studied and to evaluate their understanding by asking them to solve real-life problems. By doing so, the students can learn new concepts in the classroom and then use and apply new knowledge to solve real-life problems outside the classroom. Unfortunately, teachers often employ one-way teaching, where students sit, read, take notes and do homework (Ateş & Eryilmaz, 2011) because they lack experience in conducting physics experiments (Rauf et al., 2013), and some schools may not have the laboratories needed to conduct such experiments (Kibirige & Hodi, 2013). That is why only a few students choose physics as their major, why students

become passive during the learning (Josiah, 2013), and why few teachers use experiments in the physics classroom.

The Use of Real Experiments and Everyday Problem Solving in Physics Learning

Studying and solving everyday phenomena help students construct knowledge, enhance the logical, and explore the psychological sport skills (Hwang et al., 2017; Hwang et al., 2018; Hwang et al., 2019; Lee & Sulaiman, 2017; Purba & Hwang, 2017a, 2018). The use of real experiments and everyday problem-solving in physics learning can stimulate students' interest in the understanding of physics concepts (Purba & Hwang, 2017a, 2018), motivations, and achievements. It also helps students to gain more new experiences, excitements, a better understanding of physics, and cooperation with friends (Lee & Sulaiman, 2017).

Mobile devices such as smartphones are one of the solutions to eliminate buying expensive laboratory tools and difficulties of exploring physical phenomena in authentic environments. It supports learning in the classroom or outside the classroom (Golonka et al., 2014; Wang et al., 2015). In addition to being flexible and convenient, the use of mobile device-based sensors can collect a range of physics data more accurately than the naked eye and can immediately transform those data into graphs or tables. Some studies had explored the use of mobile devices to support student learning in various subjects that include science (Wang et al., 2015) and English as a foreign language (Golonka et al., 2014) and a few studies had used mobile device-based sensors to facilitate physics learning (Purba & Hwang, 2017a, 2017b, 2018). However, the studies generally tested the accuracy of the apps and only a few of them concerned about how to use the apps in authentic environments such as public parks and houses. Therefore, we integrated acceleration sensors, GPS, and Google Maps into our app and conducted experiments in both laboratory and authentic contexts (e.g., schools, house environments, and public parks).

Ubiquitous-Physics (U-Physics)

We designed and developed a mobile app called Ubiquitous-Physics (U-Physics) to facilitate physics learning inside and outside of classrooms. We activated the embedded acceleration sensor of smartphone to collect physical data when students slid the smartphone on a ramp. To access the

app, students inserted their student numbers and passwords into a login system. Once they logged in, U-Physics wall appeared (Figure 1). The main wall of U-Physics hosts some tabs such as recent posts, my posts, and popular posts. Clicking the top right corner of the wall will show more functions of U-Physics including angle measurement function, gMap function, experiment function, ranking function, and log out function. The angle measurement is to measure the angle of inclined plane and an essential step before they measure acceleration and velocity values of sliding smartphone on the inclined plane. The example of measuring angle of inclined plane is shown in Figure 2.

To activate and start experimental measurement of inclined plane, student need to click the experiment button. Once the students clicks the experiment button, a new interface will appear as shown in Figure 3 and U-Physics will automatically record the location of student using GPS. Figure 3 hosts several buttons such as start, stop, graph, table, and whiteboard.
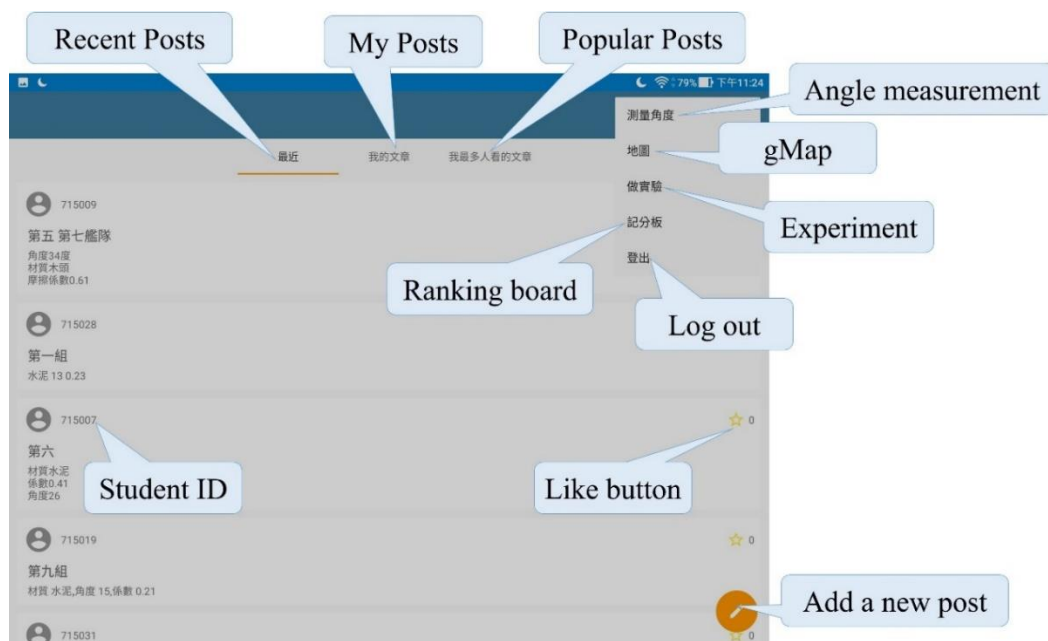

Figure 1. The interface of U-Physics discussion board.

Figure 2. Angle measurement of inclined plane.

The start button is to record acceleration, velocity, and time data of sliding smartphone on the inclined plane and the stop button is to end the recording. The graph button is used to display a graph and the table button is used to display table data.
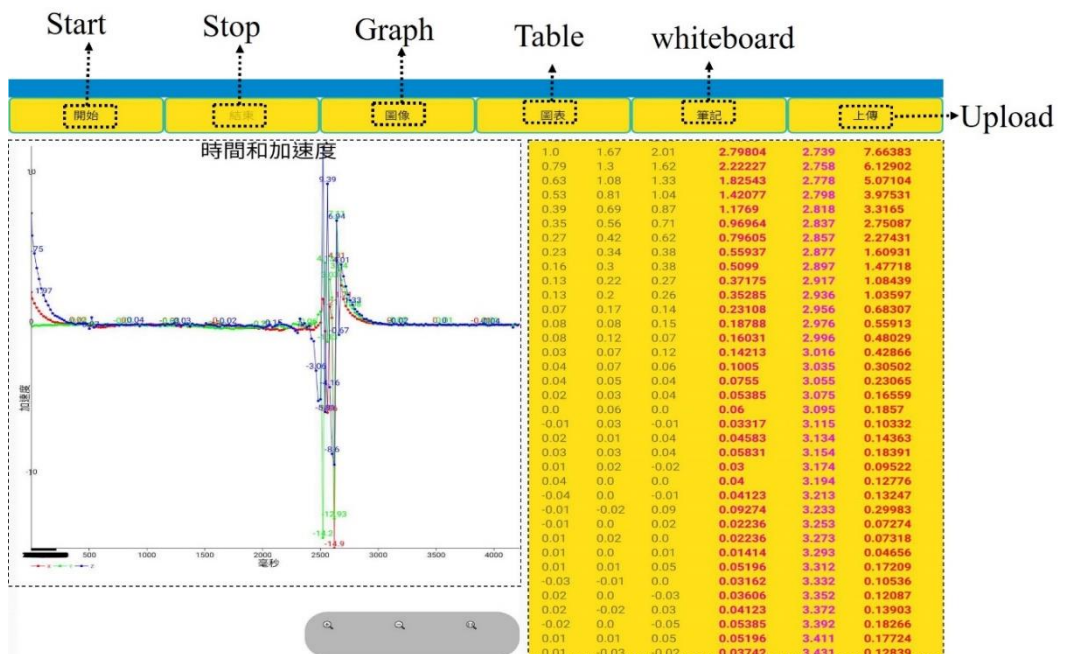

Figure 3. The interface of experiment button.

The student then marks the start time, the sliding period, and the stop time on the graphs using whiteboard button (Figure 4). The graphs and tables then were uploaded by the student to an online database using the upload button.
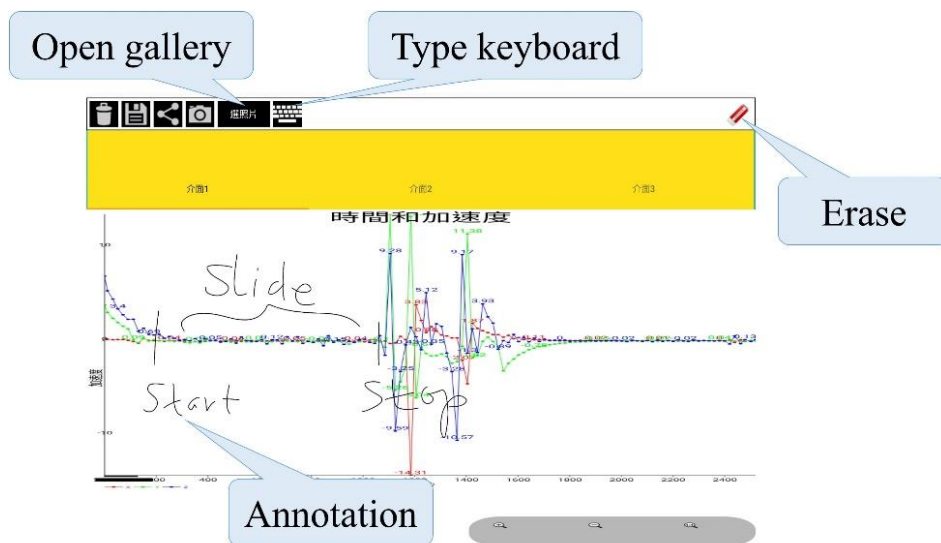

Figure 4. The interface of whiteboard button.

Each experiment done by the student is marked as a location on the gMap, allowing the student to access results by clicking the corresponding marker (Figure 5). The gMap is to help the student to find recommended places, based on other students' markers.

Figure 5. The interface of learning markers on gMap.

The student can check the total of complete activities and the ranks by clicking the ranking board (Figure 6). The student then can share the experimental findings with classmates by posting the experimental data on U-Physics wall (Figure 7). The classmates can give feedback such as comments and suggestions on the posts and the students can also respond to the feedback on the posts. The student needs to click the post to see the detail of someone post. The comments can be in the form of texts and pictures. The discussion threads are organized as threads similar to Facebook (Figure 7).
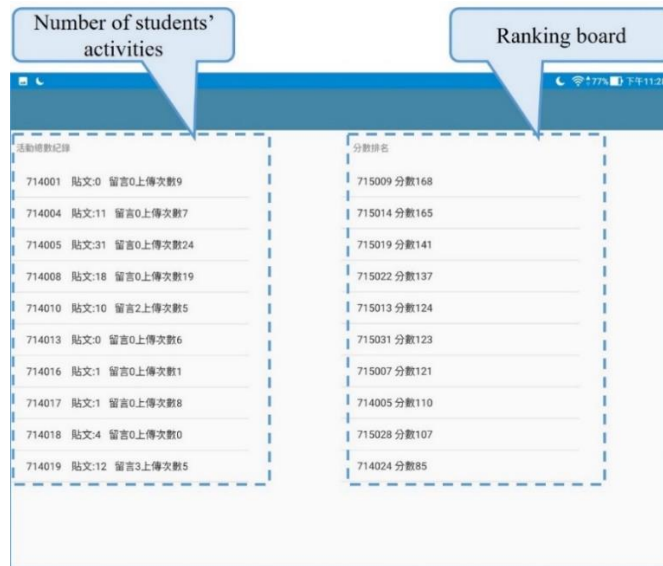
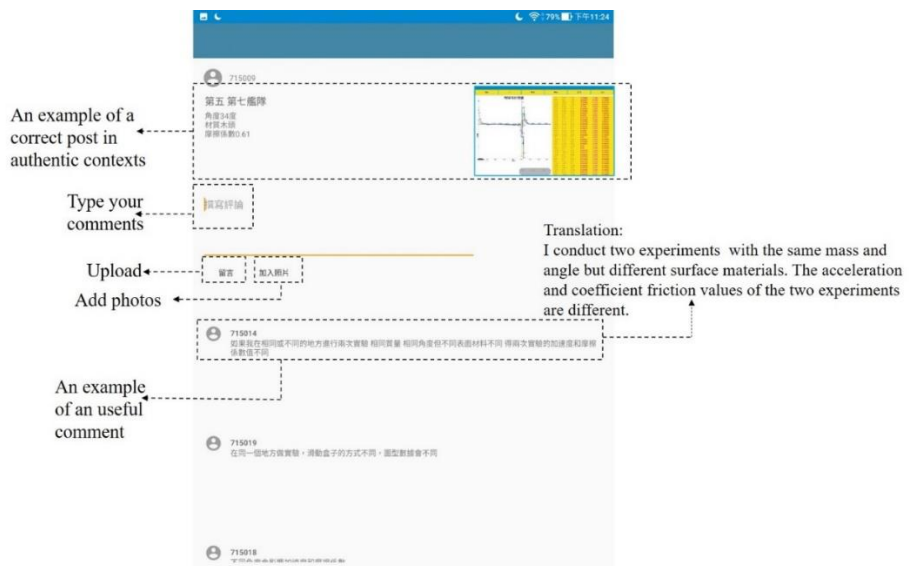**Figure 6.** The ranking board of student.

Figure 7. The interface of discussion threads.

Research Method

Research Participants

A total of forty-five first grade vocational senior high school students majoring in housekeeping management was volunteered and participated in this study quasi-experiment. They were divided into experimental group (EG; n = 20) and control group (CG; n = 25); each group was further divided into eleven and four-teen smaller groups, respectively. They were taught by an experienced teacher with the same learning materials and time. The EG students used the U-Physics app with gMap and the CG students used U-Physics without gMap.

This experiment conducted within seven weeks and each week has one session for one hour. The experimental procedure is shown in Figure 8. A pre-test was conducted to evaluate students' prior knowledge in the first session. At the same time, a physics teacher lectured and demonstrated an inclined plane experiment to the students in both groups. Both groups conducted inclined plane experiments in a classroom setting in the second week. This classroom activity was to familiarize students with U-Physics and to train them of how to conduct inclined phenomena. In the classroom activity, an inclined plane was made up and configured with boxes and boards. Most of the time, students had to follow teacher choices and instructions to conduct the experiments. In the next four weeks, the students then explored inclined plane phenomena surrounding their schools and a nearby park. These outdoor activities was to improve students' understanding by applying newly learned knowledge to the real world. The students needed to find and explore inclined plane phenomena such as sliders, disable ramps, and stairs with configuring the experimental setting in the outdoor activities. They must be more independent, empowered to learn on their own and discuss for themselves.

Each week, after the class session, the students were asked to complete homework by finding inclined phenomena and investigating the phenomena surrounding their house and nearby their house. To explore more physics phenomena and compare the experimental results, the EG students can click the markers on gMap. By doing so, the students can easily find more physics phenomena at different places.
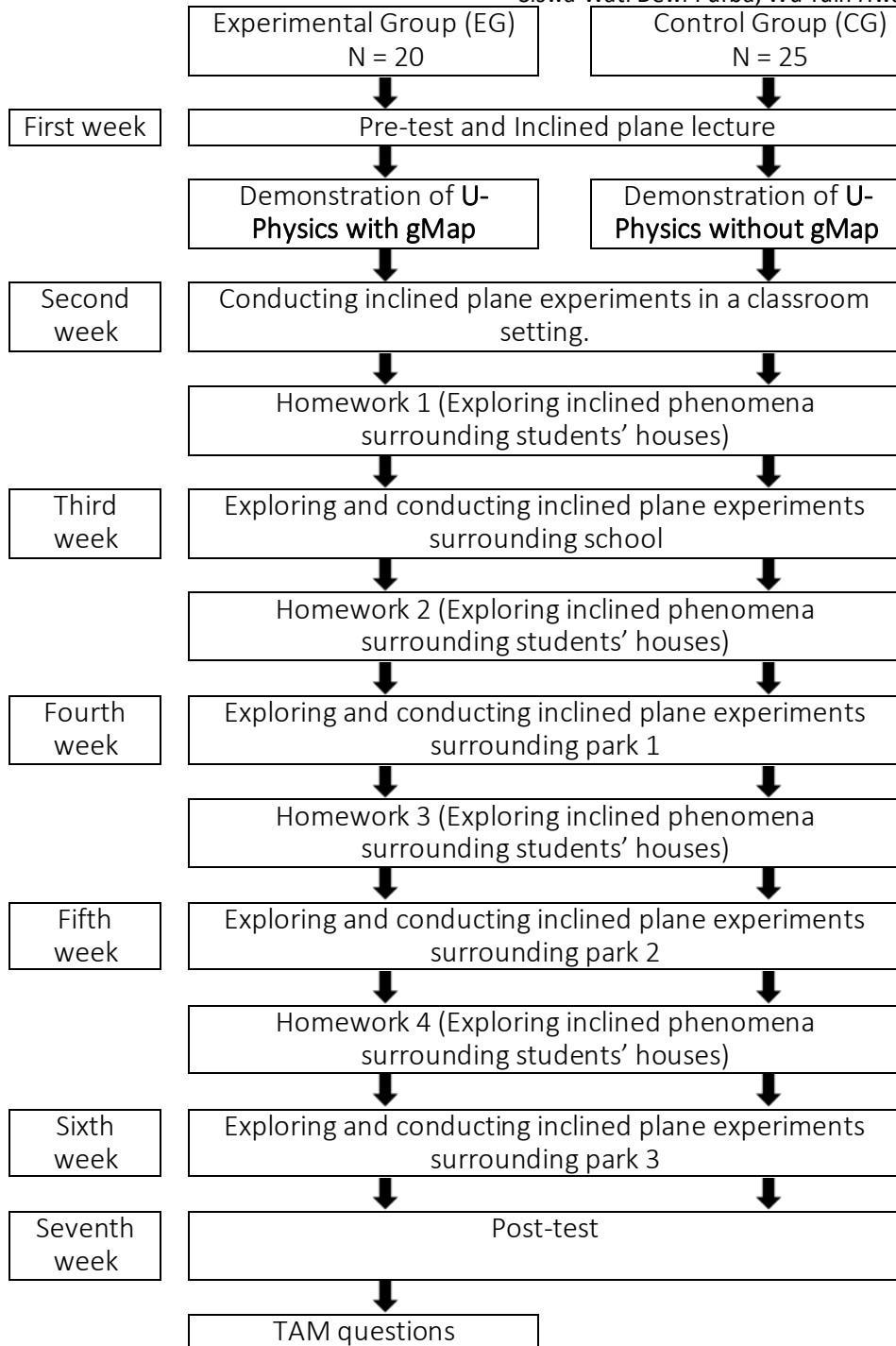
Experimental Group (EG) N = 20	Control Group (CG) N = 25

First week — Pre-test and Inclined plane lecture

Demonstration of U-Physics with gMap	Demonstration of U-Physics without gMap

Second week — Conducting inclined plane experiments in a classroom setting.

Homework 1 (Exploring inclined phenomena surrounding students' houses)

Third week — Exploring and conducting inclined plane experiments surrounding school

Homework 2 (Exploring inclined phenomena surrounding students' houses)

Fourth week — Exploring and conducting inclined plane experiments surrounding park 1

Homework 3 (Exploring inclined phenomena surrounding students' houses)

Fifth week — Exploring and conducting inclined plane experiments surrounding park 2

Homework 4 (Exploring inclined phenomena surrounding students' houses)

Sixth week — Exploring and conducting inclined plane experiments surrounding park 3

Seventh week — Post-test

TAM questions

Figure 8. Research procedure.

Meanwhile, the CG had to explore and find more physics phenomena by themselves without gMap. Finally, in the seventh week, we distributed a post-test for both groups; the EG students further completed TAM questionnaires.

Research Instruments and Tools

U-Physics app was used as a measurement tool of inclined plane experiments and a social platform to share and discuss the phenomena. Students were provided with boxes, boards, tablets and three different surface materials (wood, baking paper, and aluminum foil) for experimental physics settings. A total of ten multiple-choice questions in a pre-test and a total of ten multiple-choice questions in a post-test were adopted from (Purba et al., 2019). The reliability of the pre-test and post-test was 0.902 and 0.841, respectively. Researchers worked together with a physics teacher to design learning assignments such as homework assignments, classroom assignments, exploring school assignments and exploring park assignments. We then adopted TAM questionnaires from Davis et al. (1989) to collect students' perception of U-Physics during the experiment.

Data Collection and Analysis

Students' learning achievements were collected using pre-and post-tests and analyzed t- test analysis. Students' perceptions were further collected using a Google form and analyzed using descriptive analysis.

Results and Discussion

Analysis of Learning Achievements

Although the descriptive statistics of the pre-test shows that the EG (M = 6.25, SD = 2.35) scored higher than the CG (M = 5.72, SD = 1.64), Table 1 shows no significant difference between the groups (t =.886, p = .380) in terms of prior knowledge. It indicates that before receiving different learning treatments, the learning ability of students in both groups were not significantly different. After the learning treatments, similarly, the descriptive statistics of the post-test shows that the EG (M = 8.25, SD = 1.29) also scored higher than the CG (M = 7.84, SD = 2.01). However, Table 1 shows that both groups were not significantly different concerning the post-test scores (t = .789, p = .435). Although the EG students tried their best to engage themselves much in exploring and experimenting using U-

Physics with gMap in authentic contexts, their post-test scores were not significantly different with those of the CG. It might happen because a total of five hours within the five weeks of the experiment is insufficient to show positive effects on students' learning achievements. Therefore, the allocation of learning time to use U-Physics to explore physics phenomena should be extended to be a little bit longer. In addition, students are majoring in housekeeping management, and therefore they did not spend much time to focus on this activity.

Table 1. Analysis of pre-test and post-test.

	Control Group				Experiment Group			
	Mean	SD	t	Sig	Mean	SD	t	Sig
Pre-test	5.72	1.64	.886	.380	6.25	2.359	.886	.380
Post-test	7.84	2.01	.789	.435	8.25	1.293	.789	.435

Analysis of Learning Gains

Although no significant difference was found between the groups in the analysis of post-test scores, learning gain (post-test – pre-test) of both groups significantly improved within the five weeks (Table 2). More specifically, the EG significantly improved their learning (t = 3.62, p = .002) and the CG significantly enhanced their learning (t = 4.53, p = .000). The learning activities that allow students to explore and conduct physics phenomena outside of the classroom can enhance students' understanding of the physics phenomena. This kind of experience can enrich students' authentic experiential learning by connecting students' knowledge with daily life environments, enriching their scientific understanding, and stimulating their motivation to learn Physics anytime at anywhere. It leads students to be more independent in creating their own learning content, empowered to learn on their own and discuss for themselves with fewer teachers' interventions during the activity and the discussion process in the discussion board of U-Physics. Students can notice, remember, and recall

their physics learning when they connect with related phenomena in their surroundings.

Table 2. Analysis of paired t-test (post-test – pre-test) of groups.

	Paired t-test of control group				Paired t-test of experiment group			
	Mean	SD	t	Sig	Mean	SD	t	Sig
Pre-test	5.72	1.646	4.53	.000	6.25	2.359	3.62	.002
Post-test	7.84	2.014			8.25	1.293		

Analysis of TAM Questionnaires

According to Table 3, the mean values of TAM is considered highly reliable (Cronbach alpha = 0.881). Most of students perceived that U-Physics with gMap was useful and easy to use to help them in investigating physics phenomena surrounding their daily lives. This finding is consistent with the findings of Purba et al. (2019). In addition, most of students further said that the post and gMap functions were very useful when sharing, reviewing, and clarifying their own findings and peers' findings. The students felt that more and more reflections and feedbacks built among students because of the post and gMap functions. The conveniences to check the details of the experimental results and the experimental locations using gMap could motivate students to explore more physics phenomena and to create more experiment records, thereby sharpening students' authentic-experiential (Wilson & Miller, 2015). Therefore, they are willing to use the U-Physics with gMap in their future experiments. The interview results also showed that gMap has great potentials to help students in their learning investigations.

Interviewer: "How do you think about the U-Physics with gMap app in your learning?"

Student 01: "It was easy for me to check on my previous experiments using gMap feature."

Student 02: "U-Physics with gMap motivates me to explore more different experiments and places."

Student 03: "I appreciate the opportunity to use U-Physics with gMap in my class. Previously, I used to feel boring in my class and was very passive. However, when I am using U-Physics with gMap, I am interest and eager to know more about science by finding and conducting physics experiments in different places."

Table 3. Descriptive of TAM questionnaires.

Dimension	Item	Mean
	I found that it was very easy to operate U-Physics with gMap and to achieve the goals I want.	3.50
	I had a clear interaction with U-Physics with gMap.	3.50
	It is very simple to use U-Physics with gMap.	3.68
	It takes some time to work on U-Physics with gMap.	3.41
	Using the posts feature of U-Physics can help me to have a good impression on this experiment.	3.59
	Using the posts feature of U-Physics can help me to compare my results with others' results.	3.73
PEU	Using comment feature can help me to compare my results with others' results.	3.59
	I can get and give appropriate feedback to others groups using comment feature.	3.59
	It is easy to heck on my previous experiments using gMap.	3.95
	Using gMap makes me willing to explore different experimental places.	3.82
	Discussion board makes me be more competitive with others.	3.55
	Discussion board helped me know where others conducted experiments.	3.68

	U-Physics with gMap can help me to improve my confidence in physics learning.	3.14
PU	I used U-Physics with gMap to improve my performance in physics class.	3.27
	I used U-Physics with gMap to improve my efficiency in physics class.	3.27
	In physics class, I found that U-Physics with gMap was very useful.	3.32
	Using U-Physics with gMap in physics class can increase my efficiency.	3.41
IU	If I had U-Physics with gMap, I would like to use it.	3.23
	If the teacher gave me U-Physics with gMap, I would use it.	3.41
	Eventually, I am satisfied with the experiences of using U-Physics with gMap to learn physics.	3.36
	I am eager to use U-Physics with gMap when studying physics.	3.41
Attitude	Overall, it is a good idea to use U-Physics with gMap in my physics class	3.68
	Overall, it is very smart for me to use U-Physics with gMap in my physics class.	3.59
	I like the idea of U-Physics with gMap.	3.50
	It is a pleasure for me to use U-Physics with gMap.	3.05
PP	I like to use U-Physics with gMap to learn Physics around school and park.	3.59
	I found that U-Physics with gMap was very interesting	3.94
	Using U-Physics with gMap makes me feel the time flies so fast.	3.68

Conclusion

This study found that although the post-test score of the EG and the CG were not statically different, both EG and CG significantly improved in

terms of learning gains (post-test – pre-test). It might happen due to a short time of the experiment and the major of participants. Exploring and conducting physics phenomena outside of the classroom enhances students' understanding of the physics phenomena being studied and enrich their authentic experiences. The last but not the least, U-Physics is easy to use and useful for learning and the students showed positive attitudes to U-Physics and the learning activities. Since this study involved a small sample and a short learning activity, the results and their interpretation cannot be generalized.

Acknowledgments

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PERAN GURU, PERAN ORANG TUA, DAN MOTIVASI BELAJAR SISWA TERHADAP PRESTASI BELAJAR DI SD KARUNIA IMANUEL BANDAR LAMPUNG

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ABSTRACT

Various phenomena in the field of education highlight the importance of developing student achievement, especially in the aspects of the teacher's role, the role of parents, and student motivation towards students' learning achievement. Researchers argue that student learning needs will be fulfilled if there is optimal support from educators in schools and parents who guide at home and if there is motivation from within. This research was conducted quantitatively with multiple regression analysis. Data collection was carried out by distributing three questionnaires to respondents. The data obtained were processed by testing the reliability and validity, performing multiple regression analysis, and determining the contribution through the R-square value. The results of the study which included 30 students at SD Karunia Imanuel found that the teacher's role had an effect on student achievement, but both the role of parents and student motivation had no effect on student achievement. Nevertheless, based on the F-test these three variables affect student achievement.

Keywords: Teacher's role; Parents' role; Student's learning Motivation; Student's achievement; Relation

ABSTRAK

Berbagai fenomena bidang pendidikan banyak menyoroti tentang pentingnya perkembangan prestasi siswa yang terbentuk khususnya pada aspek peran guru, peranan orang tua, dan motivasi belajar siswa dalam proses belajar untuk menentukan prestasi belajar siswa tersebut. Peneliti melihat bahwa kebutuhan pembelajaran siswa akan terselenggara dengan baik dalam menunjang prestasi belajar anak jika adanya dukungan dari peran lingkungan yang baik dan optimal pula terutama dari pendidik di sekolah yaitu guru serta orang tua yang membimbing di rumah dan motivasi dari dalam diri siswa. Penelitian ini dilakukan secara kuantitatif dengan analisis regresi berganda. Pengumpulan data dilakukan dengan penyebaran tiga kuesioner terhadap responden yang adalah siswa. Data yang didapatkan diolah dengan menguji reliabilitas dan validitas, melakukan analisis regresi berganda dan menentukan kontribusi melalui nilai R-*square*. Hasil penelitian yang mengikutsertakan 30 orang siswa di SD Karunia Imanuel ditemukan secara parsial bahwa peran guru berpengaruh kuat terhadap prestasi siswa, peran orang tua tidak berpengaruh terhadap prestasi siswa, dan motivasi siswa tidak berpengaruh terhadap prestasi siswa dan berdasarkan uji-F ketiga variabel ini berpengaruh terhadap prestasi siswa.

Kata Kunci: Peran guru; peran orang tua; motivasi belajar siswa; Prestasi siswa; Pengaruh

Pendahuluan

Pandemi Covid-19 tidak hanya berdampak pada kesehatan, tetapi juga berdampak di berbagai dimensi kehidupan dalam masyarakat di dunia. Salah satu sektor yang mengalami perubahan di masa pandemi adalah dunia pendidikan. Sebuah sejarah baru dalam dunia pendidikan, satu generasi mengalami suatu distraksi dalam mengenyam pendidikannya. Usaha untuk menahan penyebaran Covid-19 melalui penggunaan intervensi non-farmakologis dan tindakan pencegahan seperti memberi jarak sosial dan isolasi diri telah menyebabkan penutupan sekolah dasar dan menengah di lebih dari 100 negara. Semua lembaga pendidikan di Indonesia telah ditutup

sementara untuk menahan penyebaran pandemi Covid-19. Pemerintah Indonesia telah menerapkan berbagai peraturan ketat di seluruh provinsi untuk meratakan kurva dan meredam Coronavirus. Fowler dkk (2020, 71) melaporkan bahwa penerapan pembatasan sosial efektif dalam membatasi penyebaran Covid-19, tetapi memiliki dampak besar pada ekonomi. Namun, Viner dkk (2020) melaporkan bahwa saat ini tidak ada model yang tersedia atau laporan berbasis empiris yang menunjukkan korelasi positif antara penutupan sekolah dan pembatasan penyebaran Covid-19.

Sebanyak 25,49 juta siswa tingkat Sekolah Dasar di Indonesia menjalankan pembelajaran jarak jauh selama masa pandemi (Kemendikbud, 2019). Hal ini menunjukkan ada lebih dari 56% jumlah peserta didik di Indonesia mengalami jenis pembelajaran yang benar-benar baru dan belum pernah diterapkan sepenuhnya selama adanya sistem pendidikan di Indonesia meskipun pembelajaran jarak jauh telah diatur oleh Permendikbud Nomor 119 Tahun 2014 dan panduan berkaitan dengan pembelajaran jarak jauh sudah diberikan dari Kementerian Pendidikan dan Kebudayaan lewat Surat Edaran Mendikbud Nomor 4 Tahun 2020. Aji (2020) menyatakan dengan terganggunya pembelajaran di era pandemi berdampak pada kesehatan mental siswa dan menurunkan kualitas belajar dan keterampilan siswa dalam proses belajar. Pandemi Covid-19 menjadi topik menarik dalam dunia pendidikan di Indonesia di berbagai provinsi dan kabupaten, khususnya di Provinsi Lampung. Suci Larasati (2021) dan Clara Fatimah dkk (2020) memaparkan kendala belajar siswa selama masa pandemi Covid-19 di sekolah masing-masing menyatakan banyaknya tantangan dan keterbatasan yang dihadapi siswa, guru dan orang tua dalam proses belajar mengajar di masa pandemi Covid-19, seperti rendahnya pengetahuan teknologi, kurangnya pembangunan infrastruktur, terbatasnya akses internet, masalah komunikasi dan interaksi antara siswa, guru, dan orang tua, jam kerja guru yang sudah melewati batas bagi guru karena mereka perlu berkoordinasi dan berkomunikasi dengan semua pihak termasuk guru lain, dan kepala sekolah

Berdasarkan pada latar belakang di atas, maka penelitian ini dilakukan untuk mengetahui:

Segala sesuatu yang siswa capai setelah pembelajaran sering disebut juga prestasi belajar. Berkenaan dengan itu, Arno F. Witting dalam Khoiriyah (2016) menyatakan bahwa belajar dapat didefinisikan tentang perubahan permanen dalam perilaku perilaku suatu makhluk hidup yang terjadi sebagai hasil dari pengalaman. Muhibbin dalam Siti (2016) penelitiannya mengemukakan ada beberapa aspek yang memengaruhi hasil diantaranya faktor eksternal, faktor internal, dan pendekatan dalam esensi belajar. Prestasi belajar merupakan sebuah pencapaian pembelajaran yang diperoleh ketika seorang siswa menyelesaikan tugas sekolah dan latihan soal di sekolah. Pengertian pemahaman dalam prestasi pada dasarnya didapatkan dari sudut pandang intelektual karena berkaitan dengan kemampuan pengetahuan kapasitas informasi atau memori siswa, pemahaman, penerapan, analisis, penggabungan dan penilaian. Hasil belajar dibuktikan dengan nilai atau skor evaluasi pendidik terhadap tugas-tugas siswa atau tes yang diambil (Djamarah & Zain, 2013).

Peran guru merupakan hal yang penting, Djamarah dan Zain (2013, 112) mengemukakan bahwa guru memiliki peran yang esensial dalam penguatan dan pembelajaran di sebuah negara yang tidak tergantikan oleh komponen apapun dalam kehidupan bernegara dari masa yang lampau. Fungsi guru dalam meningkatkan prestasi belajar siswa merupakan perilaku pendidik secara umum yang harus dilakukan. Peran guru dalam menyelesaikan kewajibannya dalam mendukung prestasi belajar siswa diambil dari Djamarah dalam Sari (2013) Terdapat 13 (tiga belas) indikator peran guru ini yaitu korektor, informator, pengelola kelas, organisator, inisiator, demonstrator, supervisor, evaluator inspirator, motivator, fasilitator, pembimbing, dan mediator.

Tulus Tu'u dalam Anggraini (2020) menganjurkan agar adanya orang tua juga berusaha mendorong prestasi belajar anak dengan memberikan dorongan, membimbing anak dalam belajar, mencontohkan teladan yang baik, berkomunikasi dengan harmonis antar orang tua dan anak, memperlengkapi anak sesuai dengan kebutuhan belajarnya, dan terus mengawasi cara belajar anak. Peran orang tua dalam pembelajaran anak merupakan fungsi yang harus dijalankan orang tua dalam memperkuat perannya untuk meningkatkan kemampuan belajar anak, selaras dengan Stainback dan Stainback

dalam Maryastuti (2015) membuat pengategorian bahwa terdapat tiga parameter peran orang tua yaitu pembimbing, motivator, dan fasilitator.

Dalam pandangan Sardiman (2012), motivasi ada pada semua individu dan terdapat 8 (delapan) indikator motivasi belajar, yaitu tekun dalam menghadapi pekerjaan, ulet menghadapi persoalan dan kerumitan, menunjukkan minat dan ketertarikan, lebih senang melakukan pekerjaan secara mandiri, mudah bosan dengan pekerjaan yang rutin, tidak dengan mudah untuk merubah keyakinan, dapat mempertahankan argumennya, suka menemukan dan memecahkan masalah dalam soal-soal. Jika dalam proses pembelajaran indikator-indikator tersebut timbul maka guru akan sangat tertolong dalam melaksanakan pembelajaran, sedangkan situasi berseberangan juga sangat sering dijumpai dalam kegiatan pembelajaran.

Hasil dan Pembahasan

Dalam penelitian ini dilakukan pengujian validitas instrumen kepada 30 responden menggunakan tingkat signifikansi 5% dan derajat kebebasan (df) n-2 yaitu 30-2=28, sehingga diperoleh nilai r-tabel sebesar 0,3610. Teknik *Cronbach Alpha* dilakukan melalui bantuan aplikasi SPSS yang biasa digunakan untuk menguji reliabilitas, dipakai dalam penelitian ini dengan jumlah sampel uji coba kuesioner sebanyak 30 responden.

Tabel 1. Hasil Uji Reliabilitas Instrumen Peran Guru, Peran Orang Tua,
dan Motivasi Belajar Siswa

Variabel	Cronbach Alpha	Keterangan
Peran Guru	0,917	Reliabel
Peran Orang Tua	0,692	Reliabel
Motivasi Belajar Siswa	0,890	Reliabel
Prestasi Belajar SIswa	0,964	Reliabel

Sumber : SPSS 23, Pengolahan Data (2021)

Ditemui setiap instrumen dalam penelitian ini valid dengan hasil R hitung > R tabel (0,361) dan hasil perhitungan *Cronbach Alpha* (α) bernilai lebih dari 0,6 yang menandakan bahwa instrumen Peran Guru, Peran Orang Tua, Motivasi Belajar Siswa dan Prestasi Siswa baik reliabilitasnya.

Tabel 2. Uji Normalitas Variabel Peran Guru, Peran Orang Tua,
Motivasi Belajar Siswa

	Kolmogorov-Smirnov Statistic	df	Sig.
Peran Guru	0,109	30	0,200
Peran Orang Tua	0,125	30	0,200
Motivasi Belajar Siswa	0,151	30	0,077
Prestasi Belajar Siswa	0,115	30	0,063

Sumber : SPSS 23, Pengolahan Data (2021)

Dari hasil pengolahan data menggunakan SPSS diketahui bahwa nilai variabel Peran Guru adalah 0,200, Peran Orang Tua adalah 0,200, Motivasi Belajar Siswa adalah 0,077 dan Prestasi Belajar Siswa adalah 0,063 menunjukkan nilai siginifikansi lebih dari > 0,05. Dengan demikian dapat diketahui bahwa data berdistribusi secara normal.

Uji Heteroskedastisitas bermaksud untuk memeriksa apakah dalam model regresi terjadi perbedaan varian dari residual satu observasi ke observasi yang lainnya. Jika varian dari residual satu observasi ke observasi yang lain tetap, maka terjadi homoskedastisitas dan jika

berbeda maka dikenali terjadi heteroskedastisitas. Untuk memastikan ada atau tidak heteroskedastisitas dapat melakukan uji Glejser. Dasar pengambilan keputusan dari pengujian ini adalah jika nilai signifikansi ≥ 0,05 maka tidak terjadi heteroskedastisitas, berlaku sebaliknya. Hasil pengujian heteroskedastisitas yang diperoleh sebagai berikut:

Tabel 3. Uji Heteroskedastisitas Variabel Peran Guru, Peran Orang Tua dan Motivasi Belajar siswa

Variabel	Nilai Sig.	Kesimpulan
Peran Guru	0.709	Tidak terjadi Heteroskedastisitas
Peran Orang Tua	0.967	Tidak terjadi Heteroskedastisitas
Motivasi Belajar Siswa	0.477	Tidak terjadi Heteroskedastisitas

Sumber : SPSS 23, Pengolahan Data (2021)

Dari hasil pengolahan data menggunakan SPSS diketahui bahwa nilai signifikasi dari variabel Variabel Peran Guru, Peran Orang Tua dan Motivasi Belajar siswa (masing-masing 0.70; 0,96 dan 0,47) > dari 0,05 Dengan demikian dapat diketahui bahwa tidak terjadi gejala heteroskedastisitas pada model regresi yang digunakan.

Untuk menentukan hasil akhir dari penelitian dengan menjawab hipotesis mengenai keterkaitan dan pengaruh dari variabel independen terhadap variabel dependen dilakukan uji regresi linear berganda tersebut adalah sebagai berikut:

Tabel 4. Tabel Regresi Linear Berganda.

Model	Unstandardized B	Std. Error	t	Sig.
(Constant)	74.099	9.190	8.063	0.000
Peran Guru	0.525	.141	3.722	0.001
Peran Orang Tua	0.288	.173	1.665	0.108
Motivasi belajar Siswa	-0.197	.124	-1.589	0.124

Sumber : SPSS 23, Pengolahan Data (2021)

Dengan tingkat signifikansi 95% jumlah observasi (n) 30, variabel bebas (k) = 3, sehingga df (n-k-1)= 26. Berdasarkan hasil perhitungan uji-t

diperoleh t statistik untuk variabel Peran Guru sebesar 3,722 > t-tabel 1,706 pada tingkat kepercayaan α=5%. Maka dapat diambil kesimpulan H_0 ditolak dan H_{A1} diterima. Artinya secara parsial ada pengaruh positif antara variabel peran guru terhadap variabel prestasi belajar. Apabila peran guru mengalami peningkatan sebesar 1 Poin, maka prestasi belajar akan mengalami peningkatan sebesar 0,525 poin, dengan asumsi variabel lain dalam keadaan konstan/tetap.

Dengan tingkat signifikansi 95% jumlah observasi (n) 30, variabel bebas (k) = 3, sehingga df (n-k-1) = 26. Berdasarkan hasil perhitungan uji-t didapatkan t-statistik untuk variabel Peran Orang tua senilai 1,665 < t-tabel yaitu 1,706 pada tingkat kepercayaan α=5%. Maka dapat diambil kesimpulan bahwa H_0 diterima dan H_{A2} ditolak. Artinya secara parsial ada tidak ada pengaruh antara variabel peran orang tua terhadap variabel prestasi belajar.

Dengan tingkat signifikansi 95% jumlah observasi (n) 30, variabel bebas (k) = 3, sehingga df (n-k-1)= 26. Berdasarkan hasil perhitungan uji-t diperoleh t statistik untuk variabel motivasi siswa sebesar 1.589 < t-tabel 1,706 pada tingkat kepercayaan α=5%. Maka dapat disimpulkan H_0 diterima dan H_{A3} ditolak. Artinya secara parsial tidak ada pengaruh antara variabel motivasi siswa terhadap prestasi belajar.

Uji F dipakai untuk mengetahui signifikansi pengaruh variabel bebas terhadap variabel terikat secara utuh. Bersumber dari analisis sebagaimana Tabel 5 diperoleh nilai signifikansi F sebesar 5,853 dengan tingkat kepercayaan α=5%, df1= k-1 (3-1=2), df2= (30-3) = 27 dengan kriteria pengujian untuk k adalah variabel n adalah jumlah observasi seperti pada table 5 di bawah:

Tabel 5. Pengujian Regresi Peran Guru, Peran Orang Tua dan motivasi belajar siswa dengan Prestasi Belajar

Model	Sum of Squares	df	F-Hitung	F-tabel	Sig.
Regression	218.160	3	5.853	3,35	.003[b]

Sumber : Pengolahan data (2021)

F-hitung didapat adalah sebesar 5.348 > 3,35 F-tabel, yang berarti H_0 ditolak. Berarti Terdapat pengaruh antara peran guru, peran orang tua dan motivasi belajar siswa secara bersama-sama terhadap prestasi

Belajar di SD Karunia Imanuel Bandar Lampung Tahun Pelajaran 2019/2020. *Adjusted R-Squared* atau koefisien determinasi dengan nilai 0,635. Nilai tersebut menunjukkan bahwa variabel Prestasi Belajar Siswa dapat dijelaskan oleh Peran Guru, Peran Orang Tua dan Motivasi Belajar sebesar 63,5 persen atau juga dengan kata lain Sebanyak 36,5 persen dipengaruhi oleh faktor lain di luar model regresi.

Hubungan Peran Guru dengan Prestasi Belajar Siswa

Berdasarkan hasil dari *Ordinary Least Square* (OLS) dapat dijelaskan bahwa variabel peran guru berpengaruh positif dan signifikan dengan nilai koefisien sebesar 0,525 terhadap Prestasi belajar, yang berarti apabila terjadi kenaikan sebesar 1 poin Peran guru, sehingga akan meningkatkan prestasi belajar sebesar 0,525 poin dengan asumsi variabel lain dalam keadaan konstan. Dapat dikatakan Variabel Peran Guru berkorelasi terhadap prestasi belajar siswa.

Hal ini sesuai dengan hipotesis penelitian bahwa terdapat pengaruh positif dan signifikan antara *peran guru* terhadap *prestasi* belajar. Dari hasil penelitian ini menunjukkan bahwa peran guru di SD Karunia Imanuel Bandar Lampung memiliki dampak terhadap prestasi belajar siswa di SD Karunia Imanuel Bandar Lampung.

Sepanjang tahun 2019-2020 data menunjukkan bahwa terdapat 18 siswa yang meraih prestasi dalam bidang akademik dan non akademik di SD Karunia Imanuel Bandar Lampung, tidak terlepas dari peran penting seorang guru dalam mendidik, mendukung serta mendorong siswa untuk mendapatkan prestasi.

Peran guru merupakan hal yang penting, Djamarah dan Zain (2013) mengemukakan bahwa guru memiliki peran yang esensial dalam penguatan dan pembelajaran di sebuah negara yang tak tergantikan oleh komponen apapun dalam kehidupan bernegara dari masa yang lampau. Dengan bertambahnya peran melalui kehadiran seorang guru dalam menjalankan tugas dan kewajibannya, semakin dapat diandalkan mereka untuk membuat dan menciptakan status diri bagi masa depan bangsa.

Banyak hal yang berperan serta dalam meningkatkan prestasi siswa, termasuk karakteristik diri siswa dan latar belakang keluarga serta lingkungan. Tetapi melalui penelitian ini ditunjukkan bahwa, peran guru yang menduduki posisi penting dari antara faktor-faktor

yang berhubungan prestasi siswa. Prey Katz dalam Sardiman (2012) menjelaskan peran guru sebagai komunikator, teman yang bisa mendukung dalam memberi nasehat, motivator yang memberi inspirasi dan penyemangat, pembimbing dalam masa berkembang siswa untuk perubahan sikap dan perilaku manusia dan peran yang mampu mengevaluasi pelajaran.

SD Karunia Imanuel Bandar Lampung memiliki guru-guru yang memiliki peran dalam mendidik siswa yaitu sebagai korektor, informator, pengelola kelas, organisator, inisiator, demonstrator, supervisor, evaluator inspirator, motivator, fasilitator, pembimbing, mediator yang menghasilkan siswa yang berprestasi secara individu. Cara yang lebih baik untuk menilai peran guru adalah dengan melihat kinerja mereka di tempat kerja, termasuk hal yang mereka lakukan di kelas dan seberapa banyak kemajuan yang dicapai siswa yang mereka ajar yang dapat terlihat melalui prestasi belajar siswa. Hal ini menyebabkan kebijakan yang mengharuskan evaluasi kinerja guru di tempat kerja, sebagian didasarkan pada bukti tentang pembelajaran siswa mereka.

Dalam hal prestasi siswa ketika tes membaca dan berhitung, Opper (2019) menyatakan guru diperkirakan memiliki pengaruh dua hingga tiga kali lipat dari faktor sekolah lainnya, termasuk layanan, fasilitas, dan bahkan kepemimpinan. Penelitian juga sependapat dengan pernyataan Suwardi (2018) bahwa dalam kegiatan belajar mengajar, interaksi antara guru dan anak didik merupakan kegiatan yang dominan Dengan penelitiannya, Suwardi menemukan bahwa ada hubungan antara peran guru dalam proses pembelajaran dengan prestasi siswa kelas IV SDN 34/1 Teratai.

Hubungan Peran Orang Tua dengan Prestasi Belajar Siswa

Berdasarkan hasil dari *Ordinary Least Square* (OLS) dapat dijelaskan bahwa variabel peran orang tua tidak berpengaruh dengan nilai t-hitung 1,665 < t-tabel 1,706 dengan tingkat signifikansi >0,05 yang berarti tidak ada pengaruh Peran Orang Tua terhadap Prestasi belajar dapat dikatakan Variabel Peran Orang Tua tidak berkorelasi terhadap prestasi belajar siswa.

Hal ini tidak sesuai dengan hipotesis penelitian bahwa terdapat pengaruh antara Peran orang tua terhadap Prestasi belajar. Dari hasil

penelitan ini memberitahukan bahwa Peran orang tua di SD Karunia Imanuel Bandar Lampung tidak memiliki pengaruh terhadap prestasi belajar di SD Karunia Imanuel Bandar Lampung. Berdasarkan hasil wawancara secara oral dengan beberapa orang tua di SD Karunia Imanuel Bandar Lampung menghasilkan temuan bahwa dalam masa pembelajaran jarak jauh, orang tua belum berhasil beradaptasi dalam menggunakan jenis pembelajaran jarak jauh ini, sehingga orang tua siswa belum maksimal menerapkan peranannya dalam meningkatkan prestasi belajar siswa baik dalam bentuk membimbing, menjadi motivator dan memberi pengaruh.

Stainback dan Stainback (1999) mengemukakan peran orang tua adalah sebagai fasilitator, motivator dan sebagai mentor atau pembimbing. Namun menurut temuan lain peran orang tua terus mengalami perubahan dari masa ke masa. Ini ditunjukkan pada temuan penelitian yang dilakukan oleh Winingsih (2020) menyatakan setidaknya ada empat peran orang tua semasa pembelajaran jarak jauh (PJJ), yaitu orang tua menjadi pengajar di rumah berkolaborasi dengan guru dalam memberi bimbingan pembelajaran anak, orang tua menjadi mediator, maksudnya orang tua menjadi bagian dalam menyalurkan ilmu pengetahuan lewat sarana belajar dari sekolah, orang tua menjadi sebagai motivator, maksudnya dalam pembelajaran di rumah orang tua secara khusus memberikan penghiburan dan dorongan penuh dalam pelaksanaan pembelajaran siswa, dan membuat proses belajar menjadi menyenangkan untuk mencapai hasil yang memuaskan dan yang terakhir orang tua sebagai pemberi pengaruh atau *influencer*.

Ada beberapa komponen yang berdampak pada prestasi belajar siswa di sekolah, mulai dari faktor di luar diri yaitu latar belakang keluarga, infrastruktur ruang belajar , lokasi dan fasilitas di sekolah, sikap belajar, motivasi, jaringan koneksi, guru dan ini semua dengan jelas menunjukkan bahwa prestasi belajar siswa tidak sekadar dipengaruhi oleh peran orang tua. Penelitian ini juga sejalan dengan pernyataan dari penelitian Badria et al (2018) yang menunjukkan bahwa tidak ditemukan adanya pengaruh peran orang tua terhadap prestasi belajar IPA siswa kelas VII SMPN 2 Saronggi.

Hubungan Motivasi belajar Siswa dengan Prestasi belajar

Berdasarkan hasil dari *Ordinary Least Square* (OLS) dapat dijelaskan bahwa variabel motivasi belajar siswa tua tidak berpengaruh terhadap Prestasi Belajar Siswa dengan nilai t-hitung 1,589 < t-tabel 1,706 dengan tingkat signifikansi >0,05 yang berarti tidak ada pengaruh Motivasi Belajar Siswa terhadap Prestasi belajar dapat dikatakan Variabel Motivasi belajar Siswa tidak berkorelasi terhadap prestasi belajar siswa.

Hal ini tidak sesuai dengan hipotesis penelitian bahwa terdapat pengaruh positif dan signifikan antara motivasi belajar siswa terhadap Prestasi belajar. Dari hasil perhitungan di dalam penelitan ini menunjukkan bahwa motivasi belajar siswa di SD Karunia Imanuel Bandar Lampung tidak memiliki pengaruh terhadap prestasi belajar di SD Karunia Imanuel Bandar Lampung. Motivasi belajar merupakan hal yang bernilai, namun dengan sistem pembelajaran yang saat ini berlangsung di SD Karunia Imanuel Bandar Lampung yaitu pembelajaran jarak jauh, motivasi belajar ternyata belum mampu memberikan dampak terhadap prestasi siswa baik dalam bentuk motivasi internal maupun eksternal yang bisa dibangun oleh orang tua dan guru serta keadaan belajar siswa di rumah maupun sekolah, sehingga prestasi siswa tidak mengalami peningkatan maupun penurunan. Karena dalam pembelajaran jarak jauh perlu juga memperhatikan lokasi dan lingkungan rumah tinggal siswa, ditinjau dari aspek kenyamanan, keamanan, ketersediaan kebutuhan dasar yang memadai. Kondisi mental dan emosi siswa selama pembelajaran juga menjadi perhatian apakah cemas atau takut, apakah mereka memiliki jaringan dukungan yang kuat di dalam rumah atau di komunitasnya. Kepemilikan akses ke teknologi untuk pembelajaran jarak jauh menjadi faktor penentu dalam pembelajaran jarak jauh, selain itu, perlu mengetahui orang tua siswa atau orang lain dalam rumah siswa yang berperan dalam situasi pembelajaran ini. Berbeda ketika di sekolah setiap murid mendapat fasilitas dan lingkungan yang memang di sesuaikan untuk suasana pembelajaran yang efektif.

Penelitian ini juga sejalan dengan pernyataan dari penelitian Inayah dkk (2013) yaitu tidak ada pengaruh yang signifikan antara motivasi belajar terhadap prestasi akademik mata Pelajaran Ekonomi

Pada Siswa XI IPS SMA Negeri 1 Lasem. Widyanto dan Wulaningrum (2017) juga melakukan penelitian serupa dan dalam penelitiannya membuktikan motivasi belajar baik secara simultan dan parsial tidak berpengaruh signifikan terhadap prestasi akademik mahasiswa Jurusan Akuntansi Politeknik Negeri Samarinda.

Hubungan Peran Guru, Peran Orang Tua dan Motivasi belajar Siswa dengan Prestasi Belajar

Hasil pengkajian melalui penelitian ini menunjukkan adanya pengaruh positif yang signifikan antara peran guru, peran orang tua dan motivasi belajar siswa dengan prestasi belajar. Hasil ini didukung F-hitung yang didapat adalah sebesar 5,853 > 3,35 F-tabel. Artinya bahwa adanya hubungan antara peran guru, peran orang tua dan motivasi belajar siswa dengan prestasi belajar di SD Karunia Imanuel Bandar Lampung 2019/2020. Hal ini sesuai dengan hipotesis dalam penelitian yang menduga adanya pengaruh antara peran guru, peran orang tua dan motivasi belajar siswa secara bersama-sama terhadap prestasi Belajar di SD Karunia Imanuel Bandar Lampung Tahun Pelajaran 2019/2020

Prestasi belajar dapat dicapai siswa akibat dari dua kategori yaitu unsur internal dan eksternal. Dalyono dan Fathurrohman (2012) menyatakan unsur-unsur yang mempengaruhi ketercapaian hasil belajar memang berasal dari Faktor intern (motivasi diri dan minat), faktor ekstern (orang tua, guru dan masyarakat). Temuan ini sejalan dengan penelitian yang pernah dijalankan oleh Ari Eka Astuti (2010, 110) yang menyatakan adanya hubungan antara peran orang tua dengan prestasi belajar, motivasi belajar dengan prestasi belajar dan peran orang tua dan motivasi belajar dengan prestasi belajar Aquami (2018) juga menyatakan dalam penelitiannya bahwa terdapat hubungan antara peran guru dan peran orang tua terhadap hasil belajar siswa MIN 2 Palembang.

Kesimpulan

Penelitian ini menemukan bahwa adanya pengaruh positif antara peran guru terhadap prestasi belajar siswa, sedangkan variabel peran orang tua dan motivasi siswa tidak berpengaruh terhadap

prestasi belajar siswa. Guru merupakan sosok penting yang memengaruhi prestasi siswa. Guru semakin dituntut untuk menjalankan fungsinya dengan memaksimalkan perannya dalam rangka meningkatkan prestasi belajar siswa khususnya pada pembelajaran jarak jauh.

Untuk lebih meningkatkan prestasi belajar siswa, manajemen sekolah harus dapat memberikan pendidikan dan pelatihan untuk memajukan dan terus meningkatkan kemampuan kinerja guru dalam peningkatan wawasan, keterampilan dan pengembangan metode pembelajaran yang akan diterapkan untuk meningkatkan prestasi belajar siswa. Manajemen sekolah juga perlu berupaya membangun komunikasi dengan orang tua siswa untuk meningkatkan perhatian terhadap berbagai kegiatan belajar siswa dalam rangka meningkatkan prestasi siswa, seperti mengadakan pertemuan rutin.

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MASUKAN SISWA SEBAGAI BAHAN PERBAIKAN KUALITAS KOMPETENSI PEDAGOGIS GURU

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Abstract

Pedagogic competence that affects learning needs to be continuously improved and this can be done through students' input which might be used as a source of learning. This study, in particular, aims to describe how students provide feedback to improve the quality of student teachers' pedagogical competence. As an image of God, students indeed have been gifted with the ability to provide input for student teachers which can improve the pedagogical competence if there is a follow-up from the student teachers. Student's feedback can indeed improve the quality of the teacher's pedagogic competence when the input is constructive, and teachers are aware of their limitations and are humble enough to receive feedback.

Keywords: Pedagogic Competence; Student Input; Teacher

Abstrak

Kompetensi pedagogis merupakan kompetensi penting yang memengaruhi pembelajaran, sehingga perlu diperbaiki. Masukan siswa menjadi salah satu sumber belajar mahasiswa guru untuk meningkatkan kompetensi pedagogisnya. Penelitian ini bertujuan menjelaskan cara siswa memberi masukan demi perbaikan kualitas kompetensi pedagogis mahasiswa guru. Siswa adalah ciptaan yang segambar dan serupa dengan Allah sehingga memiliki kemampuan menyampaikan masukan untuk perbaikan kompetensi pedagogis. Siswa dapat memberi masukan untuk perbaikan kualitas kompetensi pedagogis guru menggunakan potensi atau rasionya yang ditindaklanjuti guru secara bijak dengan pertolongan Roh Kudus. Masukan siswa dapat memberi perbaikan kualitas kompetensi pedagogis guru ketika guru menyadari keterbatasannya, memiliki kerendahan hati, dan masukan tersebut jujur dan membangun.

Kata Kunci: Kompetensi pedagogis; Masukan siswa; Guru

Pendahuluan

Kompetensi guru menjadi salah satu hal penting dan merupakan tuntutan yang harus dipenuhi di dalam pendidikan. Hal ini karena kompetensi guru memengaruhi tercapainya tujuan pembelajaran. Kompetensi guru menjadi salah satu faktor penentu adanya ketercapaian tujuan pembelajaran (Uno, Lamatenggo, & Solong, 2014). Kompetensi guru terdiri dari beberapa bagian, yaitu berdasarkan Undang-Undang Nomor 14 Tahun 2015 tentang Guru dan Dosen, pada pasal 10 ayat (1) menyatakan bahwa kompetensi guru pada pasal 8 meliputi kompetensi pedagogik, kompetensi kepribadian, kompetensi sosial, dan kompetensi profesional (Budiyanti, 2020, p. 102).

Penulisan karya tulis ini berfokus pada kompetensi pedagogis guru. Di dalam Pasal 28 ayat (3) Bagian I Bab VI Peraturan Pemerintah RI No. 19/2005 tentang Standar Nasional Pendidikan, "Kompetensi pedagogik guru adalah kemampuan mengelola pembelajaran peserta didik yang meliputi pemahaman terhadap peserta didik, perancangan, dan pelaksanaan pembelajaran, evaluasi hasil belajar, dan pengembangan peserta didik untuk mengaktualisasikan berbagai potensi yang dimilikinya." (Cahyani & Andriani, 2014, p. 80). Pengertian ini

memberikan arti bahwa kompetensi pedagogis berfokus pada kemampuan mengelola pembelajaran siswa. Kemampuan ini sudah seharusnya dimiliki dan menjadi ciri penting keberadaan seorang guru. Guru merupakan pribadi yang memiliki kemampuan merancang, menata, dan mengelola pembelajaran, baik dari pengelolaan program hingga penataan kelas agar siswa dapat mencapai kedewasaan sebagai hasil belajar (Suprihatiningrum, 2014). Penegasan mengenai kompetensi guru salah satunya adalah kompetensi pedagogis di dalam Undang-Undang ataupun Peraturan Pemerintah memperlihatkan bahwa kompetensi guru memiliki eksistensi berarti dalam pendidikan Indonesia. Oleh karena itu, kompetensi pedagogis guru harus baik adanya dalam meningkatkan mutu pendidikan di Indonesia.

Keresahan tentang kualitas kompetensi pedagogis guru dirasakan penulis sewaktu melakukan PPL 2 pada 12 Juli 2021 hingga 27 Agustus 2021 di salah satu SMA di Yogyakarta. Keresahan ini ada karena mahasiswa guru melakukan beberapa kesalahan yang menunjukkan kurangnya kualitas kompetensi pedagogis yang dimiliki. Kesalahan-kesalahan ini yaitu: pertama, mahasiswa guru terlambat mengirimkan materi dan panduan latihan terbimbing di Google Classroom. Kedua, mahasiswa guru terlalu cepat berbicara dalam menjelaskan materi. Ketiga, mahasiswa guru tidak berada di tempat yang memiliki kondisi jaringan yang baik sewaktu menjelaskan materi. Keempat, kurangnya variasi cara mengajar mahasiwa guru. Kesalahan ini dapat dikatakan wajar karena mahasiswa guru masih di dalam proses belajar yang rentan akan kesalahan dan membutuhkan masukan membangun. Kemungkinan kesalahan ini dikarenakan adanya keterampilan yang belum terlatihkan (Mukhid & Habibullah, 2020).

Kualitas kompetensi pedagogis seorang guru berkaitan erat dengan peran seorang guru. Secara filosofi, Ki Hadjar Dewantara menggambarkan peran guru dalam Trilogi Semboyan Pendidikan. Bunyi trilogi ini adalah, "Ing ngarso sung tulodo, ing madya mangun karso, tut wuri handayani" (Muthoifin & Jinan, 2015, p. 169). Berdasarkan semboyan ini, seorang guru memiliki koneksi batin dan perasaan dengan siswa sehingga guru akan mengupayakan semaksimal mungkin kompetensinya untuk kepentingan siswa, salah satunya kualitas kompetensi pedagogis (Hasba, 2019). Guru akan berusaha menyiapkan pembelajaran secara maksimal baik dari segi materi, cara berbicara, maupun kondisi jaringan ketika harus mengajar secara daring untuk

kepentingan siswa. Kompetensi Pedagogis, menurut Ki Hadjar Dewantara, seperti semboyannya tut wuri handayani, dari belakang seorang pendidik harus dapat memberikan dorongan dan arahan (Yanuarti, 2017, p. 251). Dorongan dan arahan guru membantu siswa memahami dan terarah dalam proses pembelajaran. Berbagai fakta ini menyulam kesimpulan bahwa filsafat pendidikan Ki Hadjar Dewantara tentang peran guru melalui Trilogi Semboyan Pendidikan erat kaitannya dengan kualitas kompetensi pedagogis guru.

Kualitas kompetensi pedagogis guru memperlihatkan seberapa bertanggung jawabnya seorang guru Kristen dalam mendidik siswa. Salah satu contoh guru Kristen yang memberikan teladan adalah guru yang bertanggung jawab dalam menjalankan tugasnya sebagai guru (Zendrato, Putra, Cendana, Susanti, & Munthe, 2019). Ketika seorang guru tidak melaksanakan tanggung jawabnya dengan baik seperti memiliki kualitas kompetensi pedagogis tidak maksimal, maka guru tersebut tidak menjadi guru Kristen yang memberi teladan. Karya Roh Kudus yang membuat guru Kristen dapat melakukan panggilannya dalam melayani Tuhan ketika mengajar dengan mempergunakan setiap kompetensi guru (Van Brummelen, 2015). Oleh karena itu, setiap tanggung jawab guru dalam menjalankan kompetensi pedagogis hanya dapat dilakukan seorang guru Kristen dengan bantuan Roh Kudus.

Seorang guru diharapkan dapat menjalankan perannya sesuai Trilogi Semboyan Pendidikan Ki Hadjar Dewantara dan bertanggung jawab sebagai seorang guru Kristen termasuk dalam melakukan kompetensi pedagogis. Harapan untuk guru dalam menjalankan semboyan pendidikan dan bertanggung jawab sebagai guru Kristen memiliki kesenjangan yang sangat terlihat ketika kualitas kompetensi pedagogis mahasiswa guru di PPL 2 tidak maksimal. Guru yang lupa akan tugasnya, kurang memahami siswanya, dan tidak maksimal memberikan pembelajaran yang lancar dan menyamankan siswa baik dari kesiapan jaringan maupun metode yang tidak variatif dapat dikatakan tidak memenuhi harapan ini. Oleh karena itu, mahasiswa guru harus mencari solusi untuk memperbaiki kualitas kemampuan pedagogisnya agar menjadi guru Kristen yang bertanggung jawab, dapat memberi teladan, dan menjalankan peran Trilogi Semboyan Pendidikan di dalam pembelajaran dengan tuntunan Roh Kudus.

Masukan siswa dapat menjadi solusi dalam memperbaiki kualitas kompetensi pedagogis mahasiswa guru. Siswa dapat menjadi sumber

mahasiswa guru mengevaluasi pembelajaran yang telah dilakukannya karena siswa yang merasakan langsung cara mahasiswa guru mengajar. Siswa juga yang menjadi pemelajar dan alasan guru memberikan dan mempersiapkan pengajaran, sehingga masukan siswa dapat menjadi saran yang baik untuk guru meningkatkan kualitas kompetensi pedagogisnya. Masukan siswa dapat dijadikan guru sebagai bahan reflektif untuk menjadi guru yang merdeka dan mau menerima masukan (Shibab, 2020). Ketika guru dan siswa dapat saling menerima masukan dan berbagi, maka pembelajaran yang menyenangkan akan tercipta. Salah satu hal yang dapat dilakukan guru untuk membuat pembelajaran yang menyenangkan adalah mengajak siswa saling berbagi (Salman, 2018). Saling berbagi ini dapat dilakukan guru dengan menanyakan apa kesulitan dan keinginan siswa serta guru juga dapat memberitahukan kepada siswa apa yang diinginkan atau diharapkan guru dalam proses pembelajaran.

Kesenjangan akan harapan dan kenyataan yang telah dipaparkan sebelumnya menjadi urgensi karena dapat berdampak kepada siswa sebagai pemelajar. Masukan siswa dapat menjadi solusi yang diperhitungkan karena siswa yang merasakan pembelajaran dan menjadi alasan guru mengajar. Penulisan karya tulis ini juga dibuat dengan tujuan untuk mengetahui cara siswa dapat memberi masukan perbaikan kualitas kompetensi pedagogis mahasiswa guru dan untuk mengetahui cara masukan siswa dapat memberi perbaikan kualitas kompetensi pedagogis mahasiswa guru. Penulisan karya tulis ini akan menggunakan metode deskripsi kualitatif.

Kompetensi Pedagogis Guru

Kompetensi pedagogis berkaitan erat dengan kemampuan guru mengatur pembelajaran. Kompetensi ini adalah kemampuan pengelolaan pembelajaran yang dilakukan oleh guru (Rifma, 2016). Kompetensi pedagogis juga merupakan kompetensi yang harus dimiliki guru sebagai bentuk pemahaman akan karakteristik siswa dalam berbagai aspek (Wijaya, 2018). Kompetensi pedagogis dapat disimpulkan sebagai kompetensi guru dalam mengelola pembelajaran yang didasarkan kepada pemahaman secara keseluruhan tentang siswa.

Kompetensi pedagogis memiliki ruang lingkup atau fokusnya tersendiri. Kompetensi ini mencakup kemampuan pemahaman terhadap

peserta didik, perancangan dan pelaksanaan pembelajaran, evaluasi hasil belajar, dan pengembangan peserta didik untuk mengaktualisasikan berbagai potensi yang dimilikinya (Yunanto, 2018, p. 12). Aspek-aspek kompetensi pedagogis juga terdiri dari aspek menguasai karakteristik peserta didik, pengembangan kurikulum atau silabus, kegiatan pembelajaran yang mendidik, pengembangan potensi peserta didik, komunikasi dengan peserta didik, penilaian dan evaluasi (Nur, 2014). Oleh karena itu, secara garis besar ruang lingkup atau aspek kompetensi pedagogis terdiri dari lima yaitu kemampuan memahami siswa, mengembangkan kurikulum atau silabus, merancang dan melaksanakan pembelajaran, pengembangan potensi siswa, penilaian dan evaluasi.

Berdasarkan pemaparan berbagai teori di atas dapat menghasilkan beberapa sintesis. Pertama, kompetensi pedagogis dapat disimpulkan sebagai kompetensi guru dalam mengelola pembelajaran yang didasarkan kepada pemahaman secara keseluruhan tentang siswa. Kedua, indikator penentu kualitas pedagogis seorang guru berdasar kepada aspek-aspek kompetensi pedagogis. Aspek-aspek ini terdiri dari kemampuan memahami siswa, mengembangkan kurikulum atau silabus, merancang dan melaksanakan pembelajaran, pengembangan potensi siswa, penilaian dan evaluasi.

Masukan Siswa

Salah satu arti dari kata masukan dalam KBBI Daring adalah sesuatu yang dipakai untuk mencapai maksud, sedangkan siswa adalah murid atau pelajar (KBBI, 2021). Berdasarkan pengertian KBBI ini, dapat disimpulkan masukan siswa adalah sesuatu yang dipakai dari murid atau pelajar untuk mencapai maksud. Pengertian ini memberikan arti bahwa siswa sebagai pelajar menjadi bagian dari proses pembelajaran. Pernyataan ini sejalan dengan Wiyani (2013) yang menjelaskan bahwa posisi siswa adalah sebagai subjek dalam proses pembelajaran. Oleh karena itu, masukan yang didapatkan dari siswa dapat memberikan manfaat untuk mencapai maksud dari pembelajaran.

Masukan dapat memberikan manfaat bagi pribadi atau sesuatu yang diberi atau menerima masukan. Pertama, masukan dapat menjadi bahan pertimbangan pengambilan suatu keputusan. Manfaat ini diungkapkan oleh Rahayahu, Suhardoyo, & Iwan (2019), dalam penelitiannya yang menjelaskan bahwa masukan dari karyawan yang

terlibat dalam proses produksi membantu manajemen mengambil keputusan yang tepat dan strategis agar stabilitas dan kualitas produk terjaga. Kedua, masukan bermanfaat untuk meningkatkan kualitas dari penerima masukan. Seperti yang disebutkan Warmansyah (2020), dalam penelitiannya menunjukkan manfaat masukan dapat meningkatkan kualitas proses pembelajaran yang diberikan guru kepada siswa.

Ketika siswa diberi kesempatan untuk memberikan masukan kepada guru membuat guru mengetahui apa yang diinginkan siswa. Mengetahui keinginan siswa dapat mewujudkan pembelajaran yang sesuai dengan angan-angan siswa (Nasrulloh & Amirudin, 2019). Pembelajaran yang sesuai dengan angan-angan siswa dapat menjadikan pembelajaran itu menjadi menyenangkan dan menggembirakan. Pembelajaran yang menggembirakan akan terwujud ketika guru dan siswa mengambil bagian untuk saling berpartisipasi dan tidak ada sekat ruang dan waktu antar guru dan siswa (Yamin, 2017). Tidak ada sekat yang dimaksudkan pada bagian ini adalah peran guru dalam memahami, bersahabat, dan bekerja sama dengan siswanya dalam pembelajaran. Peran ini dilakukan guru dengan tidak memandang siswa lebih rendah darinya karena perbedaan usia maupun pengalaman.

Ada beberapa metode untuk mendapatkan masukan. Putra (2018), menjelaskan salah satu cara mendapatkan masukan adalah dengan memintanya secara langsung. Penelitian Siberman (2004), memberikan langkah-langkah untuk mendapatkan masukan siswa yaitu membuat kesepakatan tentang waktu pemberian masukan, kemudian menggunakan pertanyaan panduan seperti: apa yang bermanfaat, bagian yang belum jelas, cara agar lebih memahami materi, kesiapan mempelajari materi baru, apa yang ingin dilakukan di pembelajaran berikut, apa yang tidak disukai dan perlu untuk dipertahankan dalam pembelajaran.

Masukan siswa dapat juga diperoleh guru dengan menggunakan Google Forms. Google Forms adalah aplikasi untuk membuat *form* berbasis *web* dan mengumpulkan jawaban secara *online* (Amalia, 2019, p. 320). Google Forms ini juga dapat digunakan secara mandiri maupun bersama dalam pemerolehan informasi (Wulandari, Maswani, & Khotimah, 2019).

Oleh karena itu, dapat ditarik beberapa kesimpulan tentang masukan berdasarkan teori yang telah dipaparkan. Pertama, masukan

siswa adalah sesuatu yang dipakai dari pelajar sebagai subjek pembelajaran yang dapat memberikan manfaat untuk mencapai maksud dari pembelajaran. Kedua, masukan siswa bermanfaat untuk menjadi bahan pertimbangan pengambilan suatu keputusan dan meningkatkan kualitas dari penerima masukan. Ketiga, memberikan kesempatan siswa memberi masukan akan menciptakan pembelajaran yang menyenangkan karena sesuai dengan harapan siswa. Harapan yang dimaksud seperti harapan adanya permainan, penjelasan materi dapat diulang, penggunaan metode bercerita, tanya jawab, atau hal lainnya yang diinginkan siswa agar dapat belajar dengan bahagia. Keempat, metode yang dapat dilakukan untuk mendapatkan masukan siswa adalah dengan menentukan waktu kapan siswa dapat memberi masukan, kemudian meminta masukan secara langsung kepada siswa, setelah itu menggunakan beberapa pertanyaan penuntun untuk siswa memberi masukan, dan terakhir mengunakan atau memilih media penyampaian masukan siswa seperti Google Forms.

Masukan Siswa Memperbaiki Kompetensi Pedagogis Guru

Masukan siswa dapat menjadi salah satu cara yang dapat digunakan guru untuk meningkatkan kualitas pedagogisnya. Perbaikan kualitas dan kompetensi guru dapat dilakukan dengan beberapa cara seperti mengadakan pelatihan, pengembangan kompetensi guru dengan cara mengikutsertakan guru mengikuti seminar, atau mengadakan diskusi antara guru dan siswa (Cahyani & Andriani, 2014, p. 86). Masukan ini dapat diperoleh dalam diskusi antara guru dan siswa. Wiles (1961) di dalam (Indrafachrudi, 2006) menjelaskan beberapa teknik yang membantu guru menilai pekerjaannya salah satunya penilaian yang dipusatkan pada situasi belajar sehingga siswa diberi kesempatan memberikan penilaian kepada guru yang akan berfungsi untuk meningkatkan kompetensi dari guru tersebut. Masukan siswa dapat menjadi sumber belajar guru dalam meningkatkan kompetensi pedagogis. Siswa dapat menjadi sumber belajar ketika guru dan siswa sama-sama berperan sebagai subjek belajar (Urbayatun, Maryani, Suyatno, Bhakti, & Sulisworo, 2018, p. 10).

Oleh karena itu, masukan siswa dapat digunakan dalam memperbaiki kompetensi pedagogis guru melalui diskusi dan penilaian ketika siswa dan guru sama-sama menjadi sumber belajar. Siswa dapat

memberikan masukan membangun untuk memperbaiki kompetensi pedagogis guru seperti pemberian masukan terhadap media pembelajaran, modul, penilaian, dan hal lainnya yang berhubungan dengan pembelajaran.

Pembahasan

Kualitas kompetensi pedagogis seorang guru menentukan keberhasilan suatu pembelajaran. Masukan siswa dapat menjadi sumber atau bahan refleksi maupun evaluasi dalam memperbaiki kompetensi pedagogis guru. Menjadikan masukan siswa sebagai bahan pertimbangan memperbaiki kualitas kompetensi pedagogis guru didasarkan pada beberapa pemahaman.

Pertama, pemahaman tentang siswa. Siswa merupakan pribadi yang memiliki potensi, sehingga mampu memberi masukan yang membangun. Siswa sebagai gambar dan rupa Allah diciptakan mempunyai rasio, pemikiran, dan kemungkinan mengerti kebenaran (Tong, 2015). Pendapat ini juga sejalan dengan pemahaman Ki Hadjar Dewantara dalam filosofi pendidikan among yang memercayai bahwa siswa secara kodratnya memiliki potensi (Sesfao, 2020). Potensi yang dimiliki siswa membuat siswa mampu membedakan mana perilaku yang baik dan buruk.

Siswa sebagai pemelajar merasakan langsung pembelajaran yang dilakukan guru, sehingga dengan menggunakan rasio maupun potensinya siswa mampu memberi masukan yang membangun untuk memperbaiki kompetensi pedagogis guru. Seperti halnya yang dialami mahasiswa guru dalam pelaksanaan PPL 2 ketika memberikan ruang kepada siswa untuk memberi masukan melalui *form* evaluasi pembelajaran. Mahasiswa guru mendapat masukan dari siswa untuk mematikan kamera ketika mengajar agar kondisi jaringan dapat lebih baik. Masukan siswa ini adalah masukan yang membangun karena tidak hanya mengevaluasi kesiapan jaringan mahasiswa guru, tetapi siswa juga memberi solusi yang memungkinkan dilakukan mahasiswa guru. Masukan siswa juga membantu mahasiswa guru merefleksikan kesalahan yang telah dilakukan. Refleksi ini terjadi ketika mahasiswa guru diingatkan melalui masukan siswa untuk tidak terlambat lagi mengirim materi dan latihan sesuai waktu yang telah ditentukan. Masukan ini memberikan kesadaran bahwa kesalahan yang dilakukan mahasiswa guru memengaruhi pembelajaran siswa.

Siswa secara kodrati memang mampu memberi masukan membangun untuk guru, tetapi tidak menutup kemungkinan masukan tersebut kurang sesuai dengan proses pembelajaran yang ingin dicapai. Ketidaksesuaian dimungkinkan terjadi karena siswa sebagai manusia telah jatuh ke dalam dosa. Graham (2003) dalam (van Brummelen, 2015) menyatakan bahwa karakter-karakter ataupun kemampuan yang dimiliki manusia sebagai gambar dan rupa Allah cacat karena efek dosa. Menyadari akan hal ini, guru juga harus memiliki kebijaksanaan dalam menindaklanjuti masukan siswa. Dalam pelaksanaan PPL 2, masukan siswa yang meminta mahasiswa guru memberikan tambahan poin bagi siswa yang menjawab pertanyaan tidak ditindaklanjuti. Masukan ini tidak ditindaklanjuti karena mahasiswa guru menganggap pemberian apresiasi dalam bentuk satu tepukan dan ucapan terima kasih serta kata-kata positif sudah cukup menjadi apresiasi bagi siswa yang aktif. Kesadaran dan pengalaman ini memberikan gambaran bahwa dibutuhkan kebijaksanaan dalam memutuskan tindak lanjut masukan siswa. Kebijaksanaan ini hanya dapat dilakukan guru dengan pertolongan Roh Kudus. Pertolongan Roh Kudus yang memberikan kepekaan kepada guru dalam bertindak dan mengambil keputusan melalui hikmat dan tuntunan Roh Kudus. Guru Kristen harus selalu bergantung pada pimpinan Roh Kudus di dalam mengajar (Zendrato, Putra, Cendana, Susanti, & Munthe, 2019, p. 127).

Kedua, pemahaman tentang guru. Guru sebagai ciptaan diciptakan sebagai manusia yang terbatas karena diciptakan oleh Allah sebagai manusia yang terbatas (Tong, 2015). Keterbatasan ini menuntut adanya ketergantungan manusia dengan manusia lain, begitu juga seorang guru membutuhkan orang lain. Sebagai bagian natur fisik yang diberikan Allah, manusia secara penuh bergantung pada kasih dan perhatian orang lain (Stott, 2018). Keterbatasan guru sebagai manusia membuat guru tidak dapat mengetahui sepenuhnya cara mengajarnya. Dalam praktik pendidikan, guru bisa saja merasa pembelajaran yang dilakukannya sudah baik dan dipahami siswa, tetapi bisa saja berbanding terbalik. Seperti ketika mahasiswa guru melakukan praktik mengajar di PPL 2. Mahasiswa guru merasa pembelajaran yang dilakukannya tidak terlalu cepat, tetapi pada kenyataannya berdasarkan masukan siswa di *form* evaluasi pembelajaran meminta mahasiswa guru untuk tidak terlalu cepat menjelaskan materi. Siswa dapat menjadi sumber belajar guru ketika guru mau merefleksikan dan menerima masukan siswa. Masukan

siswa membuat guru melihat kekurangan yang perlu guru perbaiki di pembelajaran berikut agar dapat dipahami siswa dengan lebih baik.

Menerima masukan siswa dan bergantung kepada siswa tidak akan membuat guru kehilangan martabatnya. Bergantung pada orang lain juga dilakukan Kristus sewaktu menjadi manusia, tetapi tidak membuat-Nya kehilangan martabat. Kebergantungan yang dimaksudkan terjadi dalam natur Kristus sebagai manusia. Seperti ketika Ia bergantung kepada ibu-Nya sewaktu bayi dalam hal memberi makan, merawat, menjaga, dan hal lainnya yang berhubungan dengan natur manusia-Nya. "Itulah sebabnya di dalam pribadi Kristus kita belajar bahwa kebergantungan tidaklah dapat membuat seseorang kehilangan martabat mereka, kehilangan nilai diri mereka yang tinggi." (Stott, 2018, p. 98).

Guru yang menerima masukan siswa adalah guru yang rendah hati. Guru Kristen harus memiliki kerendahan hati untuk menyadari pemahaman dari pengalaman yang siswa punya dengan menggunakan pertanyaan pemandu dalam merumuskan pembelajaran yang lebih terfokus (Van Brummelen, 2015). Menjadi guru yang rendah hati dapat membuat guru memahami siswa-siswanya. Ing madya mangun karsa sebagai salah satu semboyan dalam Trilogi Semboyan Pendidikan Ki Hadjar Dewantara memiliki arti bahwa guru di tengah-tengah menjadi sahabat dan teman yang baik untuk siswa yang berarti guru tidak membatasi diri dan menganggap siswa lebih rendah dari dirinya (Susilo, 2018, p. 35). Menerima masukan siswa ini membuat guru memahami apa yang diingini siswa. Mahasiswa guru dalam praktik mengajar di PPL 2 memahami apa yang diingini siswa melalui masukan siswa di *form* evaluasi pembelajaran. Melalui itu mahasiswa guru menjadi tahu bahwa siswa menginginkan *games* dan interaksi yang lebih banyak dalam pembelajaran. Ini menjadi pola pendekatan yang baik untuk menciptakan pembelajaran yang menyenangkan dan memerdekakan di mata siswa (Sesfao, 2020).

Ketiga, pemahaman tentang atmosfer kelas. Masukan siswa dapat menjadi bahan pertimbangan ketika atmosfer kelas yang tercipta mendukung penerimaan masukan tersebut. Atmosfer ini terbentuk melalui respon guru dalam menerima masukan. Guru harus menyadari bahwa guru juga dapat belajar menjadi lebih baik dari sebelumnya melalui masukan atau pendapat siswa (Thaariq, Wijanarko, & Kuswandi, 2021). Guru sebagai pemimpin dalam pembelajaran memiliki kecenderungan untuk gagal jika mempunyai respons negatif dalam

menerima masukan. Salah satu area yang dapat menggagalkan seorang pemimpin adalah sikap emosional seperti cepat membantah ketika dikritik, marah ketika ditantang, atau mengelak ketika diperlihatkan kelemahannya (Senjaya, 2021). Guru harus memandang masukan siswa sebagai bentuk anugerah Tuhan dalam mewujudkan pertumbuhan guru. "Bila Allah mengoreksi kita melalui suatu keadaan, maka hal itu Ia maksudkan untuk mendidik kita dan untuk pertumbuhan kita!" (Ryle, 2017, p. 55).

Menerima masukan sejalan dengan Filosofi Konsep Tiga Dinding Ruang Kelas Ki Hadjar Dewantara. Konsep ini diterapkan Ki Hadjar Dewantara ketika mendirikan Taman Siswa dengan membangun ruang kelas yang hanya memiliki tiga dinding (Badawi & Qaddafi, 2015). Satu sisi yang terbuka dari ruang kelas memiliki filosofi yang menegaskan tidak adanya batasan atau jarak antara dalam kelas dengan realitas di luar (Sugiarta, Mardana, Adiarta, & Artanayasa, 2019). Ini memperlihatkan adanya keterbukaan dalam proses pembelajaran sehingga memungkinkan pembelajaran atau pelaksanaan proses di dalam kelas terbuka akan masukan yang sesuai dengan realita. "Prinsip 'kelas tiga dinding' yaitu bentuk, isi, dan irama pendidikan bisa diubah sesuai perkembangan zaman, hakikat pendidikan harus dipertahankan." (Kartodihardjo, 2021). Membentuk atmosfer kelas yang menerima masukan tetap harus mempertahankan hakikat dari pembelajaran yang sejalan dengan prinsip pendidikan Kristen yang berdasar pada Alkitab dan berfokus pada Kristus.

Mahasiswa guru menciptakan atmosfer kelas dengan memberikan *form* evaluasi pembelajaran kepada siswa dan menindaklanjuti masukan-masukan siswa yang membangun. Sikap ini adalah wujud respons positif guru agar siswa mau memberi masukan yang jujur dan membangun. Masukan yang jujur membentuk adanya komunikasi sesungguhnya dan dapat membawa pertumbuhan untuk guru (Tong, 2015). Mahasiswa guru menindaklanjuti masukan-masukan siswa seperti membuat *note* atau catatan pengingat agar mahasiswa guru tidak terlupa dan terlambat lagi mengirimkan materi dan latihan sesuai waktu yang telah disepakati. Tindakan ini menunjukkan kesadaran mahasiswa guru yang melihat masukan siswa dapat membawa pertumbuhan dalam memperbaiki kualitas kompetensi pedagogis mahasiswa guru. Masukan siswa dapat berdampak untuk perbaikan kompetensi pedagogis guru jika bersifat membangun dan jujur.

Kesimpulan

Siswa dapat memberi masukan perbaikan untuk kualitas pedagogis guru dengan menggunakan potensi atau rasionya. Namun, masukan tersebut juga harus ditanggapi guru dengan bijak melalui tuntunan Roh Kudus karena siswa memiliki natur dosa. Siswa dapat memberi masukan ketika atmosfer kelas diciptakan guru melalui respons positif dengan menerima, mempertimbangkan, dan menindaklanjuti masukan siswa.

Masukan siswa dapat menjadi pertimbangan dalam memperbaiki kualitas pedagogis guru ketika guru menyadari keterbatasannya dan memiliki kerendahan hati dalam menerima masukan. Keterbatasan dan kerendahan hati memungkinkan masukan tersebut diterima dan ditindaklanjuti sehingga memberi perbaikan untuk kualitas kompetensi pedagogis guru. Masukan siswa ini juga akan dapat berpengaruh ketika masukan tersebut disampaikan dengan jujur.

Saran

Berdasarkan penelitian ini, penulis menyarankan kepada setiap mahasiswa guru maupun guru sebagai seorang pendidik untuk memiliki kerendahan hati dan mau menerima masukan siswa. Libatkan siswa dalam proses pembelajaran termasuk dalam perbaikan kompetensi pedagogis agar pembelajaran yang berlangsung dapat sesuai dengan harapan siswa maupun guru.

Penulis juga memberikan tiga saran bagi peneliti yang akan mengambil topik penelitian yang sama. Pertama, dalam penggunaan *form* evaluasi pembelajaran, guru perlu memberikan waktu dan pengawasan khusus untuk siswa mengisinya, agar seluruh siswa dapat terlibat memberikan evaluasi. Pengawasan ini dilakukan dengan memastikan seluruh siswa yang hadir telah mengisi *form* evaluasi melalui jumlah responden yang terdapat pada keterangan *form* evaluasi. Kedua, masukan siswa yang tidak ditindaklanjuti sebaiknya dikomunikasikan kepada siswa dengan memberikan penjelasan alasan masukan tersebut tidak ditindaklanjuti. Ketiga, sebaiknya penelitian dilakukan tidak hanya terhadap mahasiswa guru, tetapi juga terhadap guru agar dapat berdampak kepada setiap pendidik.

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