

Research Article

Digital transformation through information technology: the dynamics of the role of teachers in implementing online-based learning

Talizaro Tafonao* & Agiana Her Visnhu Ditakristi

Master's Program in Christian Religious Education, Real Theological Seminary, Batam, Indonesia

talizarotaf@sttrealbatam.ac.id; agianaditakristi@gmail.com

*Corresponding Author: talizarotaf@sttrealbatam.ac.id | Phone Number: +6285228423107

ABSTRACT

The application of technology-based education really requires innovation from teachers. The aim of writing this article is to describe the efforts of teachers in dealing with the dynamics in the digital-based learning process. This article describes the various challenges faced by teachers in maximizing learning in accordance with the demands of the government in mastering technology in learning. But in reality, there are still teachers who have not mastered online platforms. The method used in this study is descriptive qualitative. The results obtained in this study are that teachers are required to have technological knowledge, have the ability (skills) to apply technology, transform with the digital world, and have high creativity in utilizing various existing tools. All the dynamics experienced by teachers so far can be resolved by attending various trainings and workshops to support the ability to teach.

Keywords: dynamics; teacher; implementation; learning; online;

1. INTRODUCTION

Teachers have obligations and responsibilities, that is education, teaching and training. In addition to these duties and responsibilities, teachers are also required to develop science and technology as well as life values to students. This is stated in Law number. 20 of 2003 that the purpose of national education is to develop abilities and shape the character and civilization of a dignified nation in order to educate the nation's life, with the aim of developing the potential of students to become human beings who have faith and piety in God Almighty, good character, healthy, knowledgeable, capable, creative, independent, and become democratic and responsible citizens. By meeting these expectations, several things must exist, which is curriculum, teachers, students, facilities and infrastructure (Intarti, 2016). Basically, all teachers understand these principles, but in the process of developing technological science, not many teachers apply the principles of online or technological learning, so many students have difficulty in understanding the lessons of the teacher (Ma, 2021). The application of technology-based education during the Covid-19 pandemic requires innovation from educators (Ichsan et al., 2021). This is very important and worthy of every teacher's implementation and attention, but in fact since the government issued a policy on the implementation of online learning, many teachers have experienced problems in online learning. One of the challenges faced by teachers in implementing online learning after Covid-19 is (1) the difficulty of teachers in operating laptops, (2) unequal availability of internet access, (3) decreased commitment, motivation and discipline from students, (4) not yet maximum support from parents, (5) fewer hours of teaching (Haryati et al., 2021). According to Aldulaimi's analysis, et al revealed that not all teachers understand the use of online platforms in supporting online learning activities, so teachers rely on old methods such as lectures (Aldulaimi et al., 2021). In addition to the aforementioned problems, another problem that arises is that most students do not have Smartphone or laptop, so that teachers have difficulty in applying the right learning strategies and methods to teach to learners (Ma, 2021).

The authors sees that what happened above is a condition where this gap is increasingly visible in the era of technological progress. But on the other hand, the Covid-19 pandemic has succeeded in forcing educators and students to transform quickly in mastering technology. According to research conducted by Dhawan, it is explained that online learning activities can be a means of supporting the teaching and learning process to students who are more innovative, creative and flexible (Dhawan, 2020). Even at the same time, it also raises various crucial issues as previously explained. By seeing this, teachers are encouraged to improve their abilities (skills) as a condition in facing technological developments or excellence in competition (Retnaningsih, 2019). The results of Van Laar's research, etc. show that there is a strong need if a person (teacher) has special abilities in mastering technology or digital, because this is what builds creativity and critical thinking about what is being studied (van Laar et al., 2020). Teachers who have the ability to use technology are very helpful in creating an interactive learning atmosphere (Kiriana, 2021). In a study conducted by Rapanta, et al said that in overcoming these various problems, it requires the readiness of teachers related to experience in teaching online. He observed that one of the main problems so far is that teachers are still not up to date on post digital

design (Rapanta et al., 2020).

Based on this explanation, teachers need attempt to in transforming with the digital world. In research conducted by Biantoro, it is emphasized that teachers are an important element in implementing education by adjusting curriculum, methods, strategies and media and so on (Biantoro, 2019). According to researchers, challenges like this are one of the moments when teachers improve professionalism as teachers as mandated in Law number 14 of 2005 concerning Teachers and Lecturers that they must be able to educate the nation's life and improve the quality of Indonesian people who have faith, piety and noble character, and master science, technology, and art to realize an advanced society, fair, prosperous and civilized based on Pancasila and the 1945 Constitution of the Republic of Indonesia (Mulyani, 2015). Furthermore, in chapter 1 paragraph 1, it states that teachers are professional educators with the main task of educating, teaching, guiding, directing, training, assessing, and evaluating students in early childhood education, formal education, basic education, and secondary education (Abdul Syukur, 2014). Means that teachers have no reason not to improve their competence in facing various challenges following various developments so that the learning process runs well and optimally (Sutisna & Widodo, 2020). Competence is a person's abilities, skills, knowledge, talents, attitudes and actions. Teacher competence is a principle or principle of teachers in realizing quality education.

The competence of a teacher refers to the ability and skills of the teacher as well as the attitudes and actions of the teacher in managing learning in order to smoothen the course of learning optimally and the ability to understand, grow and increase the interest in learning of students. Teachers are formal educators in schools who are in charge of teaching their students so as to acquire a variety of knowledge, skills, values and attitudes that are increasingly perfect, or their personal maturity. There are several researches that have been carried out previously including Denizulaiha with the title "The Role of Elementary School Teachers in Learning in the Era of Digital Technology". In this research, it was found that there are 3 important elements that must be known by teachers, namely (1) learning that emphasizes the construction of search and discovery, (2) teachers in digital era learning are teachers as learning resources, facilitators, managers, demonstrators and mentors, (3) teachers become bridges for revolution in learning (Denizulaiha, 2018). Another research was conducted by Shalahudin Ismail, et al with the title "Competence of Today's Teachers in Facing Challenges in the Era of the Industrial Revolution 4.0". In this research, it emphasized that teachers must have adequate educational competence and competence in mastering technology (Ismail, 2020) Furthermore, research conducted by Imelda Wahyuni with the title "Digital Transformation through Information Technology: Adaptation of the Role of Elementary School Female Teachers during the Pandem Period". The research found that female teachers are very limited in utilizing digital media in carrying out the learning process.

The three writings above both discuss the importance of teachers mastering technology as a medium in the learning process, but researchers have not seen what are the dynamics experienced by teachers in implementing a technology-based learning process. This is the reason for the author to raise the title to complement previous researchers. With this explanation, the formulation of the problem in this study is to describe the dynamics of the role of teachers in implementing online-based learning in the digital era. Meanwhile, the objective of writing this article is to see what are the dynamics of the role of teachers in implementing online-based learning in the digital era.

2. RESEARCH METHODS

The method used in the study is a descriptive skin research method with a literature review approach. According to Junaidi, qualitative research puts more emphasis on quality. The most important thing in question is the meaning behind an event, phenomenon, and social symptom that can be used as valuable learning for the development of theoretical concepts (Basar, 2020). Researchers obtain data through literature studies, empirical data and trace the previous scientific work of researchers that have been published related to the theme of the study. Using literature, researchers collected data through the study of journal articles, books and scientific works that can be trusted. Then the researcher analyzes the data and describes it through data analysis techniques with several stages, that is reducing data, classifying and verifying data and validating data in order to find facts and research results. After that, the researcher describes and draws a reliable and accountable conclusion related to the study of this article. More can be seen in the illustration in **Figure 1**.

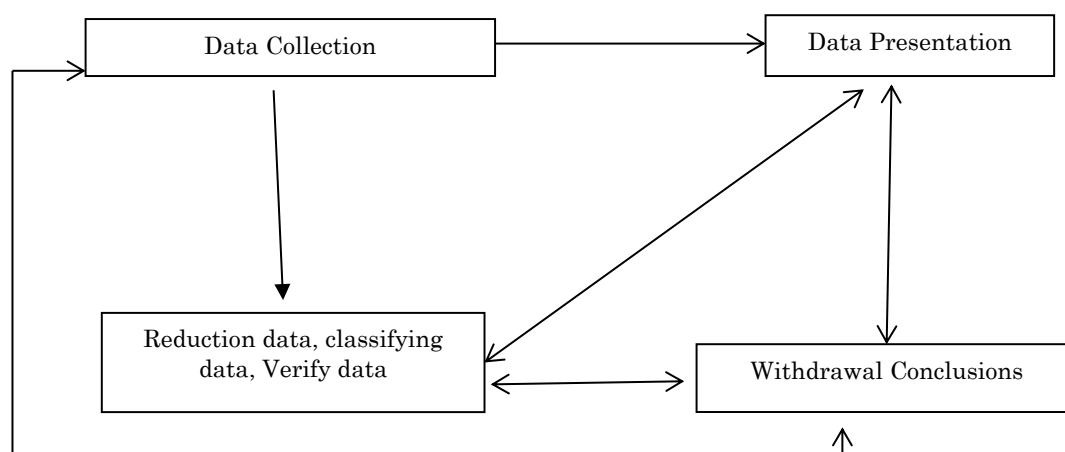


Figure 1. Research Design (Miles & Huberman, 1992)

3. RESULTS AND DISCUSSION

3.1 Teachers and Technology

The authors see that the dynamics faced by teachers in teaching online should not be ignored, but there are efforts that every education teacher must make. One of the important things that teachers must do in dealing with these dynamics is to use technology with the right strategy as a support in the online learning process. According to research conducted by Marsela, et al. 97% of students agree to use technology media in learning (Marsela & Suhendi, 2021). What Marsela reviewed above, Andrini and Yusro added that when teachers use technology in learning, they have overcome various difficulties experienced by students when learning online (Andrini & Yusro, 2021). That is, there is no other option for teachers not to prepare for learning using technology. Technology is one of the supports in streamlining the learning process. With technology, teachers are more flexible in preparing for online learning. But there needs to be a strategy that must be prepared by teachers in teaching online so that the problems above can be resolved properly.

Based on the explanations of the researchers above, there is a strategy proposed by Onyemaechiede to teachers, specifically teachers not only master technology in learning but the most important thing is that teachers understand the character of educator participants during online learning (Onyemaechiede, 2022) So what are the characteristics of students that need to be understood by teachers during online learning: (1) students have independence in learning, (2) students have the ability to use technology, (3) students have the mentality as learners in all situations, (4) students have responsibility in learning, (5) students have high motivation to learn, (6) students have high interactive, (7) students are creative and innovative. Although this strategy does not fully solve the problem, it can at least help children who are experiencing difficulties in the online learning process. But what is more interesting is the study of Maseko and Fakudze which says that teachers must meet all the needs of students (learners) as proof of responsibility and commitment in the task (Maseko & Fakudze, 2014). Not only that, in a study conducted by Hali, et al explained that educational technology used by teachers in the classroom can improve students' collaborative experiences (Hali et al., 2021). To achieve this purpose, teachers (educators) need to understand what are the advantages and disadvantages of technology-based learning (computers). To make it easier to understand about the advantages and disadvantages caused in technology-based learning, then it can be seen in **Table 1**.

Table 1. Advantages and Disadvantages of Technology-Based Learning (Computer)

Advantages	Disadvantages
1. Students can solve problems individually	1. Students experiencing limited internet access
2. Students can present interesting material through animation	2. Students lack direct interaction with the teacher
3. Students can improve the development of understanding of the material presented by the teacher	3. Students do not understand the material presented by the teacher
4. Students stimulate to study vigorously	4. Students cannot be controlled while studying.
5. Students get experiences of a concrete nature, student retention increases	5. Teachers lack confidence in mastering technology.
6. Students can determine for themselves the pace of learning	6. Teachers lack competence in integrating technology in learning practices (Sawitri et al., 2019).
7. 7. Students can do a self-evaluation (Hamdanah & Hasanuddin, 2016).	

The authors noticed that when referring to the advantages shown in the table above, teachers should be able to use technology optimally in motivating students in learning. Increased learning motivation in students is an effective and efficient indicator. Therefore, the development of technology-based learning in learning is very important and must be done by teachers. By looking at these requests and arguments, there are three main roles of teachers that must be considered together, which is teachers as lecturers, educators, and coaches. Teachers as educators have the task of preparing a learning implementation plan, holding learning programs, and conducting evaluations. The teaching and learning process are at the core of the overall educational process with the teacher as the main holder. Teacher is a profession that requires special skills. Because this work cannot be done by just anyone without having expertise and or education specifically/is prepared as a teacher (Suriansyah, 2015) Thus, teachers must have an effort in achieving a predetermined goal with a little expenditure, energy, time and costs (Asmani & Makmur, 2011).

3.2 Teachers and Creativity

Almost all teachers admit that online learning is not as effective as face-to-face learning activities, because teachers see that the learning that is being explained to students through online is not necessarily understandable to all students. So that, it is not surprising that teachers give many independent tasks to students, because there is no other way to go. By looking at this problem, the teacher must try to create a creative learning model to attract students' attention, so that the learning does not watch. According to Nurmaliah, et al creativity is a benchmark in the learning process. Furthermore, according to him, creativity not only creates something in learning but the most important thing is how to combine the current idea with the previous idea (Nurmaliah et al., 2020) In addition to the above, according to Yetti, creativity always involves movement, so that every child does not experience burnout while studying (Yetti, 2018) According to Razali, et al the most appropriate method in helping children learn more creatively is the inquiry method. The inquiry method emphasizes several things, namely the process of finding information, students understand concepts and improve skills, and students are no longer objects but become subjects of learning (Razali et al., 2020) The aim is to invite students to be able to discuss, share experiences, curiosity from students can be achieved, so that finally students' interest in learning can increase (Suryawati & Osman, 2018) According to Sanjaya, the inquiry learning process emphasizes the process of thinking both critically and analytically to obtain and find answers to a problem that is being questioned (Sanjaya, 2016) In order for this to be understood by everyone about the process of learning inquiry, it can be seen in figure or **Table 2**.

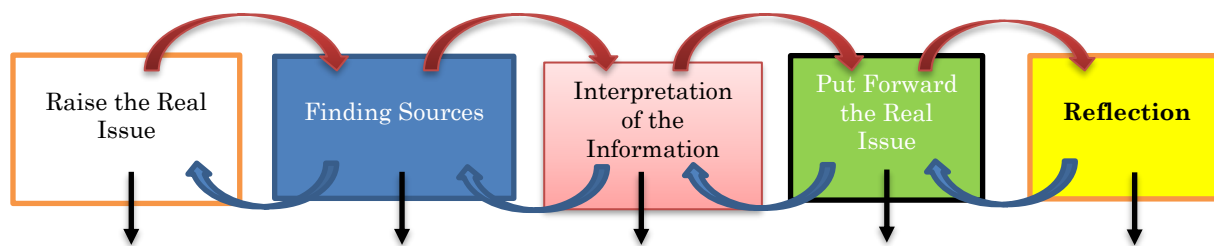


Table 2. Process of Learning Inquiry

What do I want to know?	What sources can help?	Is there any relevant data?	What are my main points?	What have I wanted to learn?
What do I already know?	Where can it be found?	How to support the answer?	Who is my audience?	What has it done?
How do I know?	Is the proclamation valid?	How is that not supporting?	What else is important?	Is what I'm doing right?
What is the answer?	Is there any other information?	Has anything created a new problem?	How do I communicate a report?	Are the backups and expressions correct?

This inquiry strategy emphasizes more on student activities to the maximum, so that students try to find and find what is being done and assigned by the teacher. This means that students are directed to search and find for themselves what is questioned. Through this inquiry approach, it is hoped that it can foster a confident attitude to each student. According to Abadin, the *Inquiry* learning model is a learning process that directly involves students to think, ask questions, and explore and experiment so that students are able to present logical and scientific solutions or ideas (Abidin, 2018). In addition, according to Hanafiah and Suhana, the inquiry learning model is a learning method that requires students to be able to find their own knowledge, attitudes, and skills as a form of behavior change (Hanafiah & Suhana, 2010). The purpose is to develop cognitive, affective, psychomotor, social and spiritual abilities and foster the ability to collaborate between students and other students.

3.3 Teachers and Their Competencies

A teachers must have a commitment to vocation as a profession he has chosen. When viewed in terms of income, being a teacher is not promising, so not all become a teacher. Therefore, a teacher must have a firm commitment to his profession. According to Novauli, if a teacher understands his profession as a educators, it is not just about making students know and understand teaching materials, but the most important thing is to make students as educated human beings and understand their role in society (Novauli, 2015). The competence of a teacher is very important to be maintained for the continuity of the professional learning process. In this context, teachers are expected to know and understand and be able to apply continuity both in the classroom and outside classroom (Hatta, 2018). The competencies that a teacher must have are as follows:

a. Good Social Competence

Social competence is the teacher's ability in society, such as how to communicate and get along with students and the community. Communication largely determines the direction of achieving learning objectives. By marking several characteristics, that is behaving and acting objectively; adapt to the environment (school environment, community environment); creating and maintaining effective communication; and behave politely and politely in communicating. Not only that, according to Mohammad Nurul Huda said that one of the keys to teacher success in the learning process is determined by the teacher's social competence. The teacher's competence can be seen through his ability to master subjects, the ability to interact socially both with fellow students and with fellow teachers and principals, because the teacher is a leader who is able to develop his ability to master every learning material and strategy (Huda, 2018). Therefore, teachers must understand their important task, which is that teachers prepare every student to enter the world of work. The mean is that students must be trained to be able to have social competence, have the ability to communicate, influence others, convince others to be able to do things according to what they believe in, including the ability to accept social, ethnic, religious, racial and cultural diversity. All of that must be trained from the moment the student is in school through the learning process. What is explained is supported by Novauli's research saying teacher competence is one of the factors influencing the achievement of learning and education in schools (Novauli, 2015). With this explanation, it can be concluded that teacher competence can be interpreted as the roundness of knowledge, skills and attitudes displayed in the form of intelligent and responsible behavior that a teacher has in carrying out his profession.

b. Good Personality Competence

Personality Competence is the ability possessed by a teacher in adjusting to be initiated by a social stimulus so that the teacher can show his personality abilities to others. Through this competence, the teacher can show/describe that he is an enviable and exemplary figure/Character/personage. What are the main characteristics of teachers who have good personal competence, honestly, have noble character and be exemplary; mature, stable and authoritative; have a work ethic, responsibility, and confidence. In addition to the personality competence, there are five things expressed by Liakopoulou related to the teacher's personality competence in carrying out tasks, which is: First, having a professional characteristic, including commitment to work, self-confidence, being trustworthy and respecting others. Second, having a thinking system, including analytical skills and always thinking conceptionally. Third, having the nature of expectations, namely that they can be expected and relied on by always being able to show very high results in achieving goals, having a

comprehensive understanding of students, about tasks and about the educational program as a whole, and always having the initiative to carry out tasks well. Fourth, it has the nature of leadership, that is flexibility, accountability, and a strong desire to learn. Fifth, have relationships with others to support the performance process and develop expertise in comprehensive education (Liakopoulou, 2011) In addition to these elements, Rosyada also added that the teacher must be a management, a parent of the student and a teacher who guides the student to produce intelligent students (Rosyada, 2004). So, to become a teacher with a good personality, you must have managerial traits and flexibility in dealing with students in the classroom. He must have expertise in class planning, organize classes from the first day he is on duty, quickly start classes, go through the transition period well, have the ability to cope with two or more class activities at the same time. Then he must also be able to maintain work time and use it efficiently and consistently, be able to minimize distractions, be able to accept the noisy classroom atmosphere with learning activities, have techniques to control the class, can maintain a calm atmosphere in learning, and still be able to keep students learning towards success. And everything he does must be accountable to the principal and the school committee, so that no one party feels disadvantaged by the services of professional teachers, and even all rights are satisfied with the learning services provided by the teachers. With efforts like this according to Siti Zulaikha, the learning process will run well (Zulaikha, 2011).

c. Good Pedagogic competence

Pedagogic competence is the ability possessed by teachers in managing student learning properly and correctly. Pedagogic abilities possessed by teachers include, which is the material, theory, and principles of learning; mastering the characteristics of students; develop curriculum and create Learning Plans; determining and conducting method carried out in the learning process; providing educational learning guidance for students; helping self-development and the potential possessed by students; doing/giving evaluations to students. However, what is described above has not been seen in the activities of teachers in schools. This is evident in a study conducted by Wulandari and Hendriani said that the pedagogic a that teachers have in schools today is still relatively low, due to several factors, namely different educational backgrounds of teachers, teachers do not understand the characteristics of students, teachers have difficulty in evaluating the learning process of students (Wulandari (Wulandari & Hendriani, 2021). Why does it happen? According to research conducted by Balqis, et al. there are three main factors so that the teacher's pedagogic competence cannot be seen, (1) the teacher has not been optimal in making a draft Learning Process Plan/Semester Learning Plan, (2) the teacher has not explored and strengthened the direction of the learning material taught to students, (3) the teacher has not actively involve students in using information and communication technology facilities in the achievement of learning objectives (Balqis et al., 2014) So what is the solution so that the teacher's pedagogics can improve? One of the solutions proposed by Tyagita is to hold a Subject Teacher Deliberation, educational courses, symposia, workshops, supervision and school meetings and so on (Tyagita & Iriani, 2018). Activities like this according to research conducted by Suhaemi and Aedi said it can improve the competence of teachers/lecturers (Suhaemi & Aedi, 2015). If this has been applied in learning activities, the results will be seen from quality graduates with high student achievement indexes.

d. Good Spiritual Competence.

Spiritual competence is a spiritual ability that includes daily behavior (lifestyle). Teachers must build good relationships with God, have compassion for others, guide students until they experience significant changes. According to Simatupang, Spiritual competence is the ability of an educator given by God to live in association with students, fellow educators, education staff and parents/guardians of students (Simatupang, 2020). In a study conducted by Tyagita and Iriani one of the efforts to deal with the immoral behavior of students today is to instill spiritual intelligence among students. Spiritual teaching is a learning approach that involves spiritual elements. The goal is to make it easier for students to understand the meaning of value in their lives (Tyagita & Iriani, 2018) To achieve this purpose, teachers must apply truth values through interactions between individuals and other individuals. Through these interactions one will imitate the views, lifestyles and spirituality of other colleagues (Lase & Hulu, 2020). Based on this explanation, there are three important indicators that teachers must know in developing their spiritual competence in today's digital era, that is (1) teachers who think clearly, which include perseverance, honesty, gratitude; (2) the teacher must be wise in carrying out duties, including: humility, forgiving, a sense of responsibility, and patience in carrying out duties; (3) teachers are tolerant, including giving appreciation to others, opening up to the beliefs of others, not hurting others, and loving peace (Timpal & Mokalu, 2022). In addition to the things mentioned above, there are several strategies in applying the intelligence spiritual to students in school, which is (1) the teacher being an example; (2) the teacher becomes a guide to the learners; (3) the teacher becomes a parent; (4) teachers become mentors; (5) the teacher invites students to always care about others (Tafonao, 2019). These values of spirituality are only found in each of one's beliefs. Everyone has beliefs (religions) and basically every religion teaches the values of goodness (Arwani, 2013).

4. CONCLUSION

Based on the studies in this paper, the author noticed that all the dynamics experienced by teachers in the learning process so far are nothing that cannot be solved, but one thing that needs to be known together as the study in this paper that problems can be overcome, what if teachers have efforts to increase their potential in accordance with the demands of technological developments. This means that the teacher has no more reason not to learn. Teachers must master technology as a tool in transferring knowledge to students regardless of the circumstances and conditions. If so, far teachers have complained a lot about the limitations in mastering technology, then today teachers should abandon this incompetence, but should be replaced with optimism as a manifestation of responsibility and service to society, the state and God. This paper is a contribution of new thoughts to teachers in carrying out their duties as professional teachers. In addition, this paper is also a recent reference to subsequent researchers in analyzing various learning problems in the technological era.

ACKNOWLEDGEMENTS

The author would like to thank all parties who have been involved in this research both morally and materially, so that the implementation of this research can be completed properly.

AUTHOR'S CONTRIONS

The author has full contribution and is responsible for writing this study from the initial stages of writing to the completion of this study.

CONFLICT OF INTEREST

It is stated that there is no conflict of interest in this research.

REFERENCES

- Abdul Syukur, I. (2014). Profesionalisme Guru dalam Mengimplementasikan Teknologi Informasi dan Komunikasi di Kabupaten Nganjuk. *Jurnal Pendidikan Dan Kebudayaan*, 20(2), 200–210. <https://doi.org/10.24832/jpnk.v20i2.138>
- Abidin, C. (2018). *Pembelajaran Multi Literasi*. Refika Aditama.
- Aldulaimi, S. H., Abdeldayem, M. M., Keir, M. Y. A., & Al-Sanjary, O. I. (2021). E-Learning in Higher Education and Covid-19 Outbreak: Challenges and Opportunities. *Psychology and Education Journal*, 58(2), 38–43. <https://doi.org/10.17762/pae.v58i2.1054>
- Andrini, V. S., & Yusro, A. C. (2021). Blended Learning Model in a Distance Learning System to Increase 4C Competence (Creativity , Critical Thinking , Collaboration , and Communication). *Journal of Educational Science and Technology*, 7(2), 236–244.
- Arwani, A. (2013). Peran Spiritualitas Dan Religiusitas Bagi Guru Dalam Lembaga Pendidikan. *Forum Tarbiyah*, 11(9), 80–94.
- Asmani, & Makmur, J. (2011). *Pembelajaran Aktif, Kreatif, Efektif, dan Menyenangkan*. Nusa Media.
- Balqis, P., Usman, N., & Ibrahim, S. (2014). Kompetensi Pedagogik Guru dalam Meningkatkan MOTivasi Belajar siswa pada SMPN 3 Ingin Jaya Kabupaten Aceh Besar. *Jurnal Administrasi Pendidikan*, 14(1), 25–38.
- Basar, A. M. (2020). Problematika Pembelajaran Jarak Jauh Pada Masa Pandemi Covid-19. *Edunesia : Jurnal Ilmiah Pendidikan*, 2(1), 207–219. <https://doi.org/10.51276/edu.v2i1.112>
- Biantoro, O. F. (2019). Urgency of Islamic Religious Education Teachers in Character Building for Students in Junior High Schools. *Al-Hayat: Journal of Islamic Education (AJIE)*, 3(2), 178–199.
- Denizulaiha. (2018). Peran Guru Sekolah Dasar Dalam Pembelajaran Di Era Teknologi Digital. *Prosiding Seminar Nasional 21 Universitas Pgrri Palembang 05 Mei 2018*, 274–282.
- Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>
- Hali, A. U., Zhang, B., Al-Qadri, A. H., & Aslam, S. (2021). A collaborative teacher training approach in different cultures in the era of technology. *International Journal of Instruction*, 14(4), 21–32. <https://doi.org/10.29333/iji.2021.1442a>
- Hamdanah, & Hasanuddin, I. (2016). *Media Pembelajaran Berbasis Ict Pengaruh Penggunaan Media Pembelajaran Berbasis ICT terhadap Hasil Belajar Mahasiswa* (Vol. 15, Issue 2). Iain Parepare Nusantara Press.
- Hanafiah, & Suhana. (2010). *Konsep Strategi Pembelajaran*. PT Refika Aditama.
- Haryati, S., Sukarno, S., & Purwanto, S. (2021). Implementation of Online Education During the Global Covid-19 Pandemic: Prospects and Challenges. *Cakrawala Pendidikan*, 40(3), 604–612. <https://doi.org/10.21831/cp.v40i3.42646>
- Hatta, M. (2018). *Empat Komptensi Untuk Membangun Profesionalisme Guru*. Nizamia Learning Center.
- Huda, M. N. (2018). Peran Kompetensi Sosial Guru dalam pendidikan. *Ta'dibi : Jurnal Prodi Manajemen Pendidikan Islam*, 2(2), 42–62. <https://doi.org/10.1088/1751-8113/44/8/085201>
- Ichsan, I. Z., Purwanto, A., & Rahmayanti, H. (2021). E-learning in new normal covid-19 era: Measure hots and pro-environmental behavior about environmental pollution. *International Journal of Evaluation and Research in Education*, 10(3), 790–797. <https://doi.org/10.11591/ijere.v10i3.21382>
- Intarti, E. R. (2016). Peran Guru Pendidikan Agama Kristen Sebagai Motivator. *Regula Fidi: Jurnal Pendidikan Agama Kristen*, 01(02), 260–272.
- Ismail, S. (2020). Kompetensi Guru Zaman Now Dalam Menghadapi Tantangan di Era Revolusi Industri 4.0. *Att hulab: Islamic Religion Teaching & Learning Journal*, 5(2), 198–209. <https://doi.org/10.24127/att.v4i02.1229>
- Lase, D., & Hulu, E. D. (2020). Dimensi Spritualitas dalam Kompetensi Kepribadian Guru Pendidikan Agama Kristen. *Sundermann: Jurnal Ilmiah Teologi, Pendidikan, Sains, Humaniora Dan Kebudayaan*, 13(1), 13–25. <https://doi.org/10.36588/sundermann.v13i1.24>
- Liakopoulou, M. (2011). The Professional Competence of Teachers : Which qualities , attitudes , skills and knowledge contribute to a teacher ' s effectiveness ? *International Journal of Humanities and Social Science*, 1(21), 66–78.
- Ma, R. (2021). Stimulating students' learning motivation: A case study of music education and pedagogy course based on flipped classroom. *Psychology and Education Journal*, 58(2), 109–114. <https://doi.org/10.17762/pae.v58i2.1059>

- Marsela, V., & Suhendi, D. (2021). Learners and Teacher Toward The Problem-Solving Based Learning Media. *Journal of Education Technology*, 5(4), 556–562. <https://doi.org/10.23887/jet.v5i4.3>
- Maseko, N. D., & Fakudze, S. S. (2014). Supporting teachers to implement inclusive education in the Kwaluseni District, Swaziland. *Mediterranean Journal of Social Sciences*, 5(27), 513–521. <https://doi.org/10.5901/mjss.2014.v5n27p513>
- Miles, B. M., & Huberman, M. (1992). *Analisis Data Kualitatif Buku Sumber Tentang Metode-metode Baru*. UIP.
- Mulyani, F. (2015). Konsep Kompetensi Guru dalam Undang-Undang Nomor 14 Tahun 2005 Tentang Guru Dan Dosen (Kajian Ilmu Pendidikan Islam). *Jurna Pendidikan Universitas Garut*, 3(1), 1–8.
- Novauli, F. (2015). Kompetensi Guru Dalam Peningkatan Prestasi Belajar Pada SMP Negeri Dalam Kota Banda Aceh. *Jurnal Administrasi Pendidikan*, 3(1), 45–67. <https://doi.org/10.17977/hum0330v4i1p1-8>
- Nurmaliah, C., Syukriah, Abdullah, Khairil, Safrida, Artika, W., & Huda, I. (2020). Enhancing student's creativity by implementing Project-based Learning (PjBL) in biodiversity concept. *Journal of Physics: Conference Series*, 1460(1), 1–6. <https://doi.org/10.1088/1742-6596/1460/1/012065>
- Onyemaechiede, M. (2022). Teachers implementation of inclusive education in Eswatini : Problems and Implications for Policy and Inclusive Counselling. *ISSN: 0974-5823 Vol. 7 No. 1 January, 2022 International Journal of Mechanical Engineering Teachers*, 7(1), 1701–1707.
- Rapanta, C., Botturi, L., Goodyear, P., Guàrdia, L., & Koole, M. (2020). Online University Teaching During and After the Covid-19 Crisis: Refocusing Teacher Presence and Learning Activity. *Postdigital Science and Education*, 2(3), 923–945. <https://doi.org/10.1007/s42438-020-00155-y>
- Razali, Halim, A., Haji, A. G., & Nurfadilla, E. (2020). Effect of inquiry learning methods on generic science skills based on creativity level. *Journal of Physics: Conference Series*, 1460(1), 1–10. <https://doi.org/10.1088/1742-6596/1460/1/012118>
- Retnaningsih, D. (2019). Tantangan dan Strategi Guru di Era Revolusi Industri 4.0 dalam Meningkatkan Kualitas Pendidikan. *Prosiding Seminar Nasional: Kebijakan Dan Pengembangan Pendidikan Di Era Revolusi Industri 4.0.*, 23–30.
- Rosyada, D. (2004). *Paradigma Pendidikan Demokratis, Sebuah Model pelibatan Masyarakat dalam penyelenggaraan Pendidikan*, Prenada Media. Prenada Media.
- Sanjaya, W. (2016). *Strategi pembelajaran berorientasi standar proses pendidikan* (Edisi 1 Ce). Prenadamedia.
- Simatupang, H. (2020). *Pengantar Pendidikan Agama Kristen*. ANDI.
- Suhaemi, M. E., & Aedi, N. (2015). A Management Strategy for the Improvement of Private Universities Lecturers' Professional Competences. *International Education Studies*, 8(12), 241. <https://doi.org/10.5539/ies.v8n12p241>
- Suriansyah, A. (2015). *Profesi Kependidikan Perspektif Guru Profesional*. Rajawali Pers.
- Suryawati, E., & Osman, K. (2018). Contextual learning: Innovative approach towards the development of students' scientific attitude and natural science performance. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(1), 61–76. <https://doi.org/10.12973/ejmste/79329>
- Sutisna, D., & Widodo, A. (2020). Peran Kompetensi Guru Sekolah Dasar Dalam Meningkatkan Efektivitas Pembelajaran Daring. *Jurnal Bahana Manajemen Pendidikan*, 9(2), 58–64.
- Tafonao, T. (2019). Kepribadian Guru Kristen dalam Perspektif 1 Timotius 4:11-16. *Evangelikal: Jurnal Teologi Injili Dan Pembinaan Warga Jemaat*, 3(1), 62–81. <https://journal.sttsimpson.ac.id/index.php/EJTI/article/view/115>
- Timpal, J. D. F., & Mokal, V. R. (2022). Pengaruh Kompetensi Spiritual, Pedagogik, dan Sosial Guru Pendidikan Agama Kristen terhadap Kualitas Belajar Mengajar Siswa. *DUNAMIS: Jurnal Teologi Dan Pendidikan Kristiani*, 6(2), 708–722. <https://doi.org/10.30648/dun.v6i2.676>
- Tyagita, B. P. A., & Iriani, A. (2018). Strategi Peningkatan Kompetensi Pedagogik Guru Untuk Meningkatkan Mutu Sekolah. *Seminar Nasional Hasil Penelitian: Penguatan Riset, Inovasi, Dan Kreativitas Peneliti Di Era Pandemi Covid-19*, 5(2), 165–176. <https://doi.org/10.24246/j.jk.2018.v5.i2.p165-176>
- van Laar, E., van Deursen, A. J. A. M., van Dijk, J. A. G. M., & de Haan, J. (2020). Determinants of 21st-Century Skills and 21st-Century Digital Skills for Workers: A Systematic Literature Review. *SAGE Open*, 10(1). <https://doi.org/10.1177/2158244019900176>
- Wulandari, R. S., & Hendriani, W. (2021). Kompetensi Pedagogik Guru Sekolah Inklusi di Indonesia (Suatu Pendekatan Systematic Review). *Jurnal Kependidikan: Jurnal Hasil Penelitian Dan Kajian Kepustakaan Di Bidang Pendidikan, Pengajaran Dan Pembelajaran*, 7(1), 143–157. <https://doi.org/10.33394/jk.v7i1.3152>
- Yetti, E. (2018). A creative dance learning model: Improving interpersonal intelligence of early childhood. *International Journal of Engineering and Technology(UAE)*, 7(3), 268–270. <https://doi.org/10.14419/ijet.v7i3.25.17560>
- Zulaikha, S. (2011). Peningkatan Kemampuan Manajerial Guru Melalui Optimalisasi Pengelolaan Kelas. *Perspektif Ilmu Pendidikan*, 24(XV), 174–187.