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Christian Education in Digital Technology Era: Challenges and Opportunities

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**Christian Education in
Digital Technology Era:
Challenges and
Opportunities**

June 4th, 2022



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UNIVERSITAS PELITA HARAPAN

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Christian Education in Digital Technology Era: Challenges and Opportunities

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Welcome from the Rector of Universitas Pelita Harapan



Shalom and gratitude be to our Lord Jesus Christ! It is because of His love and mercy; we can gather together here in this event.

We are now in the end of the pandemic, where more than two years unprecedentedly we were forced to move to virtual education and embrace digital technology. Out of the millions of educators in Indonesia, both in primary, secondary, and higher education, quickly must learn and implement online teaching and learning. Every educator is required to adapt to various digital learning media, suddenly digital technology is not only a tool but the environment where we are living and interacting with one another.

Not only do the schools have to provide the system to support virtual learning, but educators also have to be equipped to design instructions that fit with the virtual setting. This need eventually triggers various parties to adapt, move, and innovate. Educators use a variety of media as a virtual meeting bridge with students. Not satisfied with just meeting virtual, educators also make some innovations by using other features and exploring any applications that will help provide creative materials and teaching materials.

However, despite of all the improvements and innovations in delivering teaching and learning in digital technology setting, there are many obstacles and challenges. The question remains, are students learning effectively? Especially for Christian educators, we need to keep asking the question, whether we have faithfully and effectively carried the mission of Christ-centered education, facilitating holistic transformational education in this digital technology era?

Christian education must consciously be aware of the current educational challenges while embracing the opportunities through the rapid development of digital technology. We should continuously ponder how to be faithful to our calling as Christian educators in this era of disruption. We should strive to be an exemplary institution in presenting Christian education during the fast-changed of digital technology. We believe that every technological progress is the fruit of cultural mandate to advance humans' life, fostering life given by God. On the other hand, Christians are also aware with our fallen nature, that there is a possibility of missing the point in any good effort that we are trying to do. Further as human beings, are we going to develop holistically if education is reduced by totally virtual learning? These are some questions that we need to keep thinking and discussing.

UPH, especially Teachers College, is grateful that we can host the first International Conference of Christian Education, especially inviting best panelist speakers to inspire us. We hope that through the ICCE event, there will be a forum for us, educators and practitioners of Christian education, to discuss the opportunity and challenges of doing our mission in the midst of such rapid technological advances. We also hope that this event will encourage us that amid various challenges that exist, God is faithful in sustaining us thus giving us hope to embrace the opportunities that are wide open to further our service to provide a quality, holistic, and transformational education.

Finally, enjoy the conference, Lord Jesus bless you.

Dr. (Hon.) Jonathan L. Parapak, M.Eng.Sc.

Welcome from the Dean of Faculty of Education, UPH



Today what is happening in the classroom is different from practices before the pandemic. Changes will continue to occur, especially with the advancement of digital technology, which will become increasingly sophisticated. The interaction of education with technology is inevitable. As Christian educators, we embrace digital technology development. We believe students as the Image of God, and the purpose of educating them is to see them flourish with creativity and innovation for the development of human civilization. However, every technological development that brings about good changes may unwittingly change something essential. For example, now we cannot escape

from digital technology. It is ubiquitous; from communication, working, shopping, and many more, all are on the digital platform. It has changed the way we interact with one another. To what extent has it changed us? How can Christian education embrace but also be aware of these?

That is the background of the International Conference on Christian Education with the theme, Christian Education in Digital Technology Era: Challenges and Opportunities. Christian educators must continue discussing this topic to carry out our mission faithfully. Continuously we need to learn and relearn to prepare our students well and be ready to embrace their future as disciples of Christ.

UPH Teachers College is very grateful for the cooperation with various parties, ACSI Indonesia and Australia, and Bandung Theological College, which made this first international conference possible. Likewise, we are blessed with the plenary speakers who are experts in their fields and will share their research and insights. We hope that all the presenters and participants will benefit most from this event. The committee has worked very hard to prepare for this event and we hope that by the end of the conference, the conversation will not stop. Let us continue strengthening Christian education in Indonesia through this forum, and we will meet again at the following conferences.

In the end, as our God has led all the preparation for this conference to take place, let His wisdom guide our conversation! All praise and glory be to God alone!
God bless.

Oh Yen Nie, S.E., M.Ed.

Welcome from the Head of Bandung Theological Seminary



The ever-evolving world is a part of the Cultural Mandate or the Creation Mandate, which is revealed in Genesis 1:28. Therefore, we should respond to the development of digital technology critically and positively for Christian education in various contexts.

We are grateful for the first International Conference on Christian Education (ICCE) today, June 4, 2022, as the result of the collaboration between the Faculty of Education UPH, ACSI Indonesia, ACSI Australia, Indonesian Christian Education Council, and Bandung Theological Seminary (STTB), to study the opportunities and the challenges of Christian education in digital era, by involving the experts from within and outside the country as the speakers.

Thank you, especially for the willingness of Mr. David Smith (from Calvin University, US), Mr. Darren Iselin (from ACSI Australia), and Mr. Agus Susanto (from ACSI Indonesia), as the speakers, and for all the committee from the Faculty of Education UPH who has been working hard to prepare this conference.

Hopefully, all the opportunities and the challenges in Christian education in the digital era that are studied through this conference will equip fellow educators with more comprehensive and sharper insights from the biblical point of view, so that the purpose of Christian education which is to produce Christian leaders who have a good spirituality, high competence, and strong dedication, can be more realized through this conference.

Welcome to this conference. God bless you!

Sutrisna Harjanto, Ph.D.

Welcome from the ACSI Indonesia National Director



Dear ICCE presenters and participants.

The development of digital technology is rapidly changing the order of human life—which is also developing so swiftly as well. There are those who agree and follow the speed of development, accept it for granted, and even get involved in the development. Still, not a few are also indifferent to it, disagree and refuse to use digital technology for all kinds of reasons that are indeed or are made in accordance with their choice of decision. In addition, there are those who try to be neutral ("wise"), by looking at digital technology such as a double-edged sword or fire which can be used either for good or evil purposes. We have already seen practical examples of these two possible uses of digital technology everywhere.

What about us as Christians? Specifically Christian educators? The term of Christian educator, this can be viewed narrowly or broadly. In a narrow sense, some categorize Christian educators as those who work as teachers or lecturers. But we can also see it from a broad sense, that Christian educators are anyone who has the responsibility to educate, direct, and give vision to other people or the surrounding community. And this means that all Christians are actually educators, because Christians are followers of Christ, and Christ has assigned a role to us, Christians, as salt and light of the world. This means that we as Christians must be a flavor for the world and be a statement of God's truth to the world as well.

I represent Christian schools and Christian educators who are members of the ACSI Indonesia organization. I herewith also welcome all the speakers and participants of 2022 International Conference on Christian Education. This conference is organized by Universitas Pelita Harapan in collaboration with several Christian education organizations including ACSI. I hope that this conference can continue in the future and there will be more Christian educational organizations including churches, and synods, to be able to collaborate, like what is stated by ACSI's motto: Stronger Together, for us to be strong together, as one body of Christ. Let's salt the world more and bring light to the world. I hope that through this ICCE more and more people who work as Christian educators will grow and more Christians in general will be more aware of their calling and will realize that we are all educators, tasters, and proclaimers of God's truth, who need to be equipped and strengthened at all times. Especially through the theme of the 2022 ICCE: "Challenges and Opportunities for Christian Education in Digital Technology Era."

Finally, congratulations to UPH for initiating the first ICCE in 2022. Let us be those who wait on the Lord so that we may gain new strength, like an eagle that soars with the power of its wings, we run and do not become listless, we walk and do not grow weary (Isaiah 40:31).

Thank you, God bless us all.

Agus Susanto, Ph.D.

Welcome from the Chairman of the 1st ICCE UPH 2022 Committee



Shalom Aleichem, gratitude be to our Lord Jesus Christ, because of His love and favor, we can gather in this conference. It is such an honor for me to welcome you to the 1st International Conference on Christian Education (ICCE) UPH 2022, with the main topic, “Christian Education in Digital Technology Era: Challenges and Opportunities.”

The rapid development of science and technology in today’s digital technology era encourages the emergence of various educational innovations based on learning technology, making it easier for educators and students to access multiple educational contents. This is marked by the ease of obtaining access to information and internet connection speeds. The Covid-19 pandemic has increasingly encouraged the emergence of various forms of digital learning media globally. This unavoidable pandemic requires school administrators’, education providers, educators, and students to be able to adapt to changes in learning patterns from face-to-face learning to online learning. An education system that combines digital technology with the learning process will open opportunities and challenges as real implications of the transformation and paradigm shift of education in the digital technology era, including Christian education in it. Therefore, the 1st ICCE UPH 2022 aims to 1) Explain the implementation of digital technology in learning and its implications for students' faith formation; 2) Discuss digital technology development in learning and its implications and influence on the way we communicate and relate to others in Christian educational context an excellent, holistic, and transformational; 3) Enrich understanding to Christian educators regarding the calling response to teach in digital technology era by looking at the opportunities and challenges.

For organizing the 1st ICCE UPH 2022, allow me, as the chairman of the organizing committee, to express my deep gratitude and appreciation to the Keynoted Speakers, Mr. David I. Smith, Ph.D. (Professor from Calvin University, USA), Mr. Darren Iselin, Ph.D. (Director of Research and Innovation Christians School Australia), and Mr. Agus Susanto, Ph.D. (ACSI Indonesia Director) for each conference material presented. We also express our gratitude and most profound appreciation to the Advisory Boards and the organizing partner, Mr. Dr. (Hon). Jonathan L. Parapak, M.Eng.Sc. (UPH Rector), Mr. Sutrisna Harjanto, S.Si., M.Div., Ph.D. (Chairman of Bandung Theological Seminary), Mr. Agus Susanto, Ph.D. (Director of ACSI Indonesia), Mrs. Sandra Scott (Executive Officer of International Partnerships and Service Christian Schools Australia) and Mr. Marks Spencer (Director of Public Policy Christian Schools Australia). Likewise, we would like to express our gratitude and most profound appreciation to the Supervisory Board, Mrs. Oh Yen Nie, S.E., M.Ed. (Dean of the Faculty of Education, UPH) and Mrs. Sarinah Lo, Ph.D. (Senior lecturer of Bandung Theological Seminary) and to the Steering Committee Mr. Dr. Budi Wibawanta, S.Sos., M.Si. (Vice Dean of the Faculty of Education, UPH) and Prof. Dr. Niko Sudibjo, S.Psi., M.A. (Department Chair of Educational Technology, Faculty of Education, UPH). Expressions of gratitude and highest appreciation are

conveyed to the entire organizing committee team, who have worked tirelessly to prepare for this conference so that it can be organized successfully. We also express our gratitude and appreciation to the presenters who have shared articles and published works in the form of proceedings and the participants who have involved in this conference.

Finally, we hope through the organizing of the 1st ICCE UPH 2022, as educators and leaders of Christian educational institutions, we can collaborate to do concrete works in the area where God has entrusted us in responding to the opportunities and challenges in the digital technology. We will appreciate constructive suggestions and criticisms to improve the quality of future conferences. To God be the Glory.

For we are his workmanship, created in Christ Jesus for good works, which God prepared beforehand, that we should walk in them. - Ephesians 2:10 (ESV)

Immanuel Adhitya Wulanata Chrismastianto, S.E., M.Pd.

Addressing Collaboration Needs In The Middle Isolation of the Digital Era Based On a Christian Perspective

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Abstract

In globalization and Industry 4.0, collaboration is an essential skill in an institution. Collaboration is possible these days. However, collaboration is not fully applied because of isolation. Collaboration is not mere cooperation. Collaboration involves shared learning and shared responsibility in the diversity of the team. Collaboration makes people make a decision effectively and efficiently. The goal of collaboration itself is to achieve collective goals. In the beginning, the Bible reveals that humans cannot live in isolation. God created Adam on the sixth day. It was good. Yet, God knows Adam needs a helper to achieve the cultural mandate. Therefore, we learn that the collaboration paradigm is from God to accomplish God's mission. Furthermore, the benefit of collaboration is not only for the common good but also to fulfill God's plan in the world. Through literature study, some efforts can be made to create collaboration in the digital era. First, Infrastructure must support so that collaboration is possible to happen in a team. Second, collaboration can only occur if team members have the same vision and imagination. Third, all the members need to be involved in decision-making so that there will be agreement. The agreement will help the team to achieve its goals.

Keywords: Collaboration, Digital Era, Isolation, Christian Perspective

1. Introduction

In globalization and industry 4.0, the needs in society become variant, specific, and developed. Every institution has particular needs different from last year. For example, we know that there was no development in the 19th century. Nowadays, there are so many job vacancies in institutions. Not only that, working place has been shifted because of conditions. Before Covid 19, some offices allow employers to work at home.

Every year, there is always a new major in university. Furthermore, new university majors trying to answer society's needs are increasing. The varieties and specifications of requirements are developed.

During the current condition, schools need to adapt to these changes collaboratively and be inclusive (Johnson, 2019). Leaders and teachers need to discuss changes that happen. It starts from the purpose of transformations and its perspectives to the evaluation of agreement. Both need to involve actively giving ideas, sharing their perspectives, and

even compromising something to achieve more significant goals without violating the school's vision and mission. By doing these things, schools can adapt to changes.

In the 21st century, technology holds many essential aspects, including education. Technology affects many things in school, such as learning, collaboration, curriculum, etc. (Smith, Sevensma, Terpstra, & McMullen, 2020). Nowadays, technology can help students understand and experience more about learning. They can observe conditions in their environment by searching for data, interviewing interviewees, etc. They can connect with people around the world by sharing and learning together.

Furthermore, technology helps students increase their understanding of the topic (Engeness, 2019). Not only with students, but technology can also help people to cooperate and even collaborate. Using apps allows teachers to meet and discuss many things, especially during pandemics. The conclusion is technology holds many essential aspects of education.

Although changes happen rapidly, the obstacles to collaboration still exist and are real. In the digital era, we have many applications that help us collaborate. However, it doesn't mean that teachers are ready to collaborate. Teachers tend to respond individually rather than collaboratively (Nameghi & Sheikahmadi, 2016). Not only that but teachers are also burdened with making a difference in their classrooms. This paradigm makes teacher tends to change individually in isolation. Therefore, we can conclude that obstacles to collaboration exist and are real.

Based on the phenomena, two questions need to be answered. First, what makes collaboration truly collaboration in schools? As we know, collaboration correlates with cooperation. What is the difference between collaboration and cooperation among teachers? On the other hand, both are different concepts. Therefore, what is the correlation between isolation and collaboration among teachers? The questions will be answered as the first research questions. Second, how can digital technologies influence and develop collaboration among teachers? A teacher has so many applications that can help teachers. What kind of application can help teachers to collaborate? How can technology make a difference among teachers in collaboration? The way tools can help teachers to develop collaboration will be answered in this question.

2. Research Method

To answer research questions, the researcher uses a literature review. Literature review methodology means the researcher use literature such as books, previous research, and other documents not only to build foundational theory in a study but also to collect data and answer research questions (Zed, 2004). In this methodology, the researcher doesn't observe the field. The researcher gathers data and finds findings based on books, previous research, and other documents. After collecting data, researchers will conclude by answering research questions. This is how the researcher will answer the research question using literature review methods.

This research consists of several steps. According to Paula (2010), they were selecting

the topic, considering the research period, narrowing your case, identifying sub-questions, further narrowing issues, and selecting literature documents. After these steps, the researcher will present the data and findings. Literature review methods steps are focused on literature and researcher. To make research stay focused, the researcher will select topics and consider research periods (Zed, 2004). After that, the researcher will narrow the topic to answer research questions. It must be done because a case consists of many facts, ideas, and concepts that can answer many questions. If the researcher wants to answer the research question, the researcher needs to choose useful facts, ideas, and concepts. Based on the findings, the researcher needs to decide on sub-questions as a result literature review. Afterward, the researcher will narrow the topics and select documents to answer them (Paula, 2010).

The topic of research is about addressing collaboration needs in the digital era. It means that there is a need for collaboration in institutions. It happens when technology development grows rapidly. However, there is isolation in institutions. It happens because of several reasons. Therefore, this research topic is about collaboration needs in the digital era; also, isolation occurs simultaneously. This topic will be also discussed from a Christian perspective. It means the researcher uses Christian worldview to address the needs. Based on the topic, this research will be done in two weeks.

This research will be focused on three core topics. There are collaboration, digital technology, and isolation. These three subjects correlate with each other—the correlation between collaboration and isolation contradicts while digital technology is a tool to help people achieve something. The researcher decides to focus research only on education, especially schools. Therefore, this research will focus on digital technologies used in schools.

Furthermore, collaboration and isolation are discussed in education, especially in schools. The researcher also decides that the subject of research is teachers. Based on that decision, the topic of digital technologies, collaboration, and isolation will be related to teachers. The conclusions are there will be three core topics, the focus of research is education, especially schools, and the subject is teachers.

From narrowing topics, some sub-questions arise. These sub-questions occur because of narrowing issues of research. For the first research question, there are two sub-questions. There are what is the correlation between isolation and collaboration among teachers? And what is the difference between collaboration and cooperation among teachers? For the second research question, there are two sub-questions. There are What kind of applications that can help teachers? And how can tools make a difference among teachers in collaboration? These sub-questions will lead this research when the researcher does a literature review.

After the researcher raises sub-questions based on narrowing topics, this research is limited by some conditions. First, this research is limited to time; the research focus is only

on this period, which is the 21st century. Therefore, this research will not present data or findings on the history of collaboration, isolation, and technology development. Second, this research is limited to educational perspectives. Therefore, this research will only present data or findings based on academic perspectives. Other perspectives such as socio-economic, race, or gender will be excluded. The last limitation in this research involves Christian perspectives as direction. Therefore, different perspectives will not be presented in this research.

3. Results and Discussions

Isolation in the middle of the digital era

This psychological state of a teacher describes the isolation they face in the workplace. "no one knew my failures, no one knew my triumphs" is the first sentence from a teacher facing isolation when the researcher reads a journal article. That opinion describes one of the conditions of isolation in schools (Sindberg, 2014). Isolation is real in the workplace, including in schools. Feelings no one pays attention to and less recognition in workplaces still happen now. Neither one asks to involve in discussions nor hears their opinion describing the isolation. These feelings and conditions explain what isolation is in school.

Isolation is about psychology state of the teacher, not based on physical condition (Nameghi & Sheikahmadi, 2016). The teacher can feel connected with others although alone in the classroom. Teachers can sense someone cares about their opinion, although the teacher is not in the middle of a discussion. Teacher isolation can happen in the middle of a conversation. For example, teacher isolation can happen during professional development discussions (Johnson, Reinhorn, & Simon, 2018). Therefore, it is not about physical condition, but psychology states which isolation happens.

Based on this condition, teacher isolation means teachers do not feel involved in or recognized for their actions or opinions (Reeve & Partridge, 2017). Like Reeve and Partridge, Alfredo, Ann, and Flavia (2021) think that teacher isolation is a condition in which teachers are disconnected from others professionally because of some situations. It can happen because of physical conditions, unfamiliar topic discussions, less interaction with other teachers, struggling to meet the demands of schools, etc. when this happens to teachers, teachers tend to feel isolated.

In the digital era, the condition of isolation doesn't improve because of the nature of isolation itself. Isolation is related to the perception of teachers in collegial interaction. Teacher isolation depends more on how teachers perceive and experience collegial interaction than on the absolute amount of interaction in which they are involved (Nameghi & Sheikahmadi, 2016). Therefore, isolation is not related to technology. Technology can help teachers increase interaction but not change their perception of collegial interactions in schools. Technology is only a tool to help achieve something, not change conditions automatically. That's why the condition of isolation still exists in the digital era.

Decreasing isolation through collaboration

Isolation in school can be decreased by creating a collaborative culture in school (Bautista, Stanley, & Candusco, 2021). Collaboration makes teachers connect. Through collaboration, teachers discuss and involve others to contribute ideas and opinions about specific topics. Every teacher must give a thought or idea. It is because collaboration reminds team members that every opinion is appreciated and values the discussion or process of making a product. In decision-making, collaboration demand agreement from each other member of teachers (DuFour, DuFour, Eaker, Many, & Mattos, 2016). Each member agrees to do what they decide. Therefore, every teacher keeps their accountability together in the spirit of the agreement and full consciousness. In this way, collaboration shall decrease the isolation culture in school.

There is a difference between cooperation and collaboration (Smith, Sevensma, Terpstra, & McMullen, 2020). Cooperation exists in the middle of collaboration. However, cooperation doesn't mean collaboration is lived. Cooperation does not decrease isolation due to its nature. Teachers can cooperate without collaborating. For example, a project idea has been done by one teacher in the working group. Then, another teacher gives an opinion and delegates work in the group. It is still cooperation. A teacher may be interactive in discussion with each other. Teachers may finish their work. However, the collaboration did not happen because there was no involvement, especially in the teacher's perception. Without touching teacher perception, isolation still existed in the teacher's mind (Nameghi & Sheikhahmadi, 2016). Cooperation and collaboration are different things.

Elements of Collaboration

Collaboration starts with the unity of points of view about needs (Parks, 2009). Collaboration always ties other members because of the agreement of points of view. It starts with teachers giving an opinion about a topic. In the end, teachers have agreed on the point of view. There is a shared vision in collaboration. Everyone understands the goal and purpose of the agreement. It happens because every teacher is involved (DuFour, DuFour, Eaker, Many, & Mattos, 2016). Therefore, unity of points of view about needs is the beginning of collaboration.

In collaboration, compromise happens during this step (Smith, Sevensma, Terpstra, & McMullen, 2020). It is because every teacher has their own needs. If teachers try to decide on one point of view, the conflict will appear in a team (Rondfelt, Farmer, McQueen, & Grissom, 2015). Although this is a challenging process, it is a good sign of collaboration. At this moment, team members need to decide the purpose and things that need to be improved or done. It involves all teachers in discussions and understanding. After discussion, a compromise must be made in this step.

After making the decision, teachers start to discuss or make products together. In this

process, teachers respect and work effectively in diversity to achieve something (Smith, Sevensma, Terpstra, & McMullen, 2020). This collegial relationship helps the teacher to collaborate. At this point, the teacher starts opening themselves and working cooperatively because of the unity of point of view about needs (Tallman, 2021). Although not all ideas or opinions can be accepted, teachers are touched by others' perceptions about a topic. Every teacher values individual contribution. Teachers participate in the working process and feel involved in something.

The last element of collaboration founded is shared responsibility for collaborative work. Teachers hold the agreement by doing an action to achieve the goal (DuFour, DuFour, Eaker, Many, & Mattos, 2016). However, sometimes not all teachers holds agreement with the same degree. Some teachers have a sense of ownership (Voogt, Pieters, & Handelzats, 2016). It happens because of the unity of points of view about needs. Directed by goals, this kind of teacher will do the agreement autonomously. Another type of teacher has less sense of ownership. Yet, when collaboration happens, the teacher with a sense of ownership will affect another teacher (Nguyen & Dang, 2021). This process is called exercising relational agency. Therefore, collaboration makes teachers become a community. They are not alone in doing something in school. It can happen if there is shared responsibility for collaborative work.

The Collaboration Nature of Human

Humans are designed as God's representation in the world's beginning of creation (Hoekema, 2000). It means humans reflect God just like the reflection of the image in still water. The illustration describes humans have characteristics of God. Humans never become God. Instead, humans reflect God by showing love, justice, cooperation, compassion, collaboration, etc. Those values and traits are imprinted on us. Although sin makes humans rebel against God and create disintegration of all creation (Keller, 2017), humans still reflect those traits and values. By redemption and restoration of Christ, human is directed to reflect God in a good relationship with God. It is just like the beginning of creation in the sense of direction. Therefore, human is designed as God's representation in the world.

Human, as the image of God, has communal nature. The communal nature of God is represented in Trinity (Keller, 2017). In the creation of humans, each Person of Trinity discusses, decides, and makes an agreement. Furthermore, the work of salvation is a masterpiece of Trinity God. Therefore, since God's way operate, humans have the same characteristic. In the early church, Paul urges Philippians believers to have one mind, thoughts, and feelings in Christ. Therefore, just like Trinity God, human has communal nature which relates to collaboration.

When God gives a cultural mandate, God wants humans to do it (Pratt, 1993). God wants humans in communal nature to steward the earth. It can't be done in isolation. Like the church, each member must have one mind, thoughts, and feeling in Christ. Church in

the unity spirit must spread the gospel in the world. Therefore, they can't do it in isolation. Like Christian schools and their members, the learning process and faith development must be done in collaboration by teachers, parents, and the leader board. God gives a cultural mandate, and human needs to work it collaboratively.

Choosing Right Technology

After finishing the literature review, there are at least two factors that help increase teacher collaboration. There are roles of technology in collaboration and teacher understanding about collaboration. To understand the shaping process, humans must understand what technology is and how they use it, including collaboration. Technology is the application of knowledge and effort to create tools, means, and processes that help us achieve specific ends (Smith, Sevensma, Terpstra, & McMullen, 2020). Technology is used to achieve something. If the future of technology creates collaboration, teachers need to choose an application and shape collaboration. By selecting an application, the teacher will be helped to shape collaboration. Therefore, the shaping process will happen when the teacher asks what technology will be used and how it will shape collaboration.

Technology can make a difference in a teacher's collaboration only if the teacher understands collaboration. Without a correct paradigm for collaboration, technology can't help teachers to collaborate. The way we use technology is influenced by the right paradigm, including collaboration (Smith, Sevensma, Terpstra, & McMullen, 2020). The teacher's point of view relates to how the teacher uses technology, including increasing collaboration (Blazieko & Squires, 2018). Teachers need to understand elements of collaboration such as shared vision, agreement, etc. If the teacher doesn't understand collaboration, technology can't help the teacher achieve collaboration.

After the teacher understands collaboration, the teacher needs to search applications according to the elements of collaboration. Teachers need to use applications that can help them communicate. Communication can help them to have the same perspective or point of view about their needs (DuFour, DuFour, Eaker, Many, & Mattos, 2016). Communication helps them to build relationships while sharing ideas and opinions. Using an application that can have two-way communication while showing their thoughts or products is an excellent way to grow collaboration collaboratively (Munoz, Vourikari, Costa, Hippe, & Kamylyis, 2021). A network learning community (NLC) can also help teachers collaborate. Discussing, agreeing on NLC, and evaluating it will help teachers collaborate with other teachers (Blazieko & Squires, 2018). Applications that support elements of collaboration are an excellent tool to increase teacher collaboration.

Humans shape technology and life (Smith, Sevensma, Terpstra, & McMullen, 2020). There are so many improvements in life because of technology. Also, humans use technology to solve problems. One of the problems is making connections (Johnson,

Reinhorn, & Simon, 2018). There are a lot of social media and applications that can help humans make a connection. They are designed to allow humans to connect even though distance separates them. In the meantime, nowadays, humans using social media has become trending wildly due to Covid 19. Human doesn't realize that they are also shaped by technology while they make technology to solve problems.

4. Conclusion

This research has some conclusions about addressing collaboration needs in the digital era. First, to decrease isolation in schools, teachers need to collaborate with each other. Second, Cooperation is different from collaboration. Collaboration is not only about cooperation but also unite points of view, having discussions about it, making agreement, and sharing responsibility with each other. These elements make a true collaboration not only cooperation. Third, any application will help teachers to collaborate with each other if it can fulfill elements of collaboration. Last, technology can make difference including creating collaboration among teachers. NLC is one of example that can help teachers to collaborate.

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