

## BRIDGING TECHNOLOGICAL GAP AMONG ENGLISH TEACHERS THROUGH DIGITAL SQUAD PROJECT

**Nia Kurniawati**

*English Education Study Program, Faculty of Teacher Training and Education, Suryakancana  
University, Indonesia*

E-mail: [nia@unsur.ac.id](mailto:nia@unsur.ac.id)

APA Citation: Kurniawati, N. (2018). Bridging the technological gap among English teachers through digital squad project. *English Review: Journal of English Education*, 7(1), 41-50. doi: 10.25134/erjee.v7i1.1494.

Received: 07-08-2018

Accepted: 13-10-2018

Published: 01-12-2018

**Abstract:** The technology advancement has forced the teachers ignoring their generation to migrate from off line into digital platform since the use of technology in education has changed the face of education massively. This project tried to capture an effort in bridging the technology gap among teachers across generation by forming a digital squad to provide digital teaching media assistance to teachers. It consists of several English education pre-service students in a private university who have high interest and skill on technology. This study explored the facts on the squad activities, the teacher participants' responses to the events organized by digital squad, and the obstacles in conducting the project. The results showed that the workshops organized by the squad gained positive feedback from the teacher participants. However, the classic problems frequently appear during the activities involving technology are the internet connection and the various technological competence among the participants. Finally, it is suggested to employ younger generation to bridge the technology gap among language teachers across generation in education setting, since the younger generation is usually techno savvy and the older generation should be willing to embrace the technology development in order to survive in millennial classroom.

**Keywords:** *digital squad; workshop; language teachers; generation; technology; teaching media.*

### INTRODUCTION

Undoubtedly, technology has impacted the lives of everyone more or less. In recent years, advancement and ease of using technology has made everyone wonder how technology can improve the way they do things. The key is awareness and to determine how technology can add value. The impact of technology on education has been tremendous recently and teachers have no choice that to follow the currents and familiarize themselves with technology used in the classroom.

Further, technology has always been at the forefront of human education. From the days of carving figures on rock walls to today, when most students are equipped with several portable technological devices at any given time, technology continues to push educational capabilities to new levels. In looking at where educational methods and

tools have come from to where they are going in the future, technology's importance in the classroom is evident now more than ever.

As technology advances, an educator's abilities will grow by leaps and bounds, and without the knowledge of these changes and capabilities, an instructor has a good chance of being left behind.

Due to ICT's importance in society as well as in the future of education, identifying the possible challenges to integrating these technologies in schools would be an important step in improving the quality of teaching and learning although teachers appear to acknowledge the value of ICT in schools, they continue encountering obstacles during the processes of adopting these technologies into their teaching and learning (Ghavifekr, 2016).

A career in education requires hard work and dedication, but, for the diligent educator, can prove very rewarding (Kennedy, 2016). For those who are serious about success in the education field, staying well-informed of current and changing technologies is imperative. As the world of technology evolves, the learning environment, both on-campus and online, will equally progress, and the need for teachers who are educated in technology and design will continue to grow.

In line with the technological development, teaching media also changed. If previously most of teachers use conventional teaching media such as book, magazine, newspaper, picture, flashcard, etc. in their class, now some of them move to technology-based teaching media. Technology-based teaching media is a media that integrated with computer and internet. For examples, social media, mobile application, software, etc.

Globalization has made both teaching and learning intricate and the transformation in part has been driven by technological innovation (Lam, 2010). With internet technology, people have access to available information quickly. Together with this technological revolution is the emergence of one of the most viable technological reforms in education, the use of Information and Communication Technology (Rosa, 2016). ICT become a potential tool to increase learner's motivation and engagement in classroom learning, for example ICT in English class. Both English and ICT have become essential literacy skills for a growing number of non-native speakers of English to ensure full participation in the information society (Tanang, Djajadi, Abu, & Mokhtar, 2014).

In the present scenario, there is an easy access to information with technology. The teacher here takes on the role of facilitator and guide so as to facilitate students with the right approach of managing abundant information to their optimum benefit and in taking right decisions in this technologically complex world (Jan, 2017). In the techno-

savvy society, teachers' role becomes very essential as they make students learn how to evaluate the abundant information available critically, to identify facts from propaganda, to understand the real ethical, legal and moral issues with respect to the access and use of information, and to create meaning from data. All these questions view education in the larger context of today's society and thus, it makes students capable of solving the real world current problems and prepare for a future of unknowns.

The information bloom and the subsequent knowledge explosion have led to tremendous changes in the life of the individuals today and its effect is also witnessed in the field of education. With global connectivity facilitated by ICT, searching for any information today has become a child's play. In this digital era, the coming generations are quite adept at handling, managing and working with technology. Even the younger kids and toddlers, probably by way of their genetic inheritance are able to operate the smartphones and other modern gadgets. Thus, these gadgets have been embedded with the daily routine of the modern lives.

Taylor (2017) in her article explains five generations from 1900 until now. The first generation is the Traditionalist/Veteran, who was born between the years of 1900 to 1945. The second is the Baby Boomers, this generation was born between 1946 and 1964. The third generation is individuals born between the years of 1965 and 1980 called Generation X or also known as Gen X-er. X-er is a generation that witnessed the miracles of technological advancement and the horrors of man-made disasters. They obsessed with email, they like to communicate concisely.

The next generation is the Millennials, they were born between 1981 and 2000. The rapid diffusion of the internet as a technological innovation occurred in this generation's youth, allowing them to experience this exciting new medium's explosion at about same time the front wave of this generation was learning to read. The

last generation is Generation Z, born after 2000. The characteristics of this generation are almost the same as millennial generation, but generation Z has a multi-tasking skill. They can apply all activities that integrated with technology at the same time (Kraus, 2008).

Most of the teachers are still digital migrants that are born after 19th century whereas the young learners are the digital natives who are born after 19th century when the technological revolution came. That is why using technology comes so naturally and easily to them.

There are numerous challenges faced by teachers in using ICT. Society demands a higher level and different set of skills than schools were ever designed to teach. ICT brings with various challenges that teachers need to face. First of all, there is a need for adequate availability of technology in the schools which includes huge costs incurred on acquiring, installing, operating, maintaining, and replacing ICT's. The basic infrastructural requirements suited for making adequate provision of ICT are required. Secondly, it is imperative to make all teachers ICT literate and effective in handling ICT tools for teaching-learning processes (Ekberg, 2017). Another challenge is that the teachers need to develop their own capacity so as to efficiently make use of the different ICTs in different situations. They need not be apprehensive that ICTs would replace teachers. Another challenge faced by teachers is that English being the prominent language associated with modern technology. This causes problems as in many states people are not comfortable with English. The very electronic devices that have become an extension of our children are an enigma to many of us in the older generation. Technology has brought some sort of alleviation for the teachers from one another which we call as 'Digital Divide' (Onye, 2016). Teachers are not comfortable in handling these modern gadgets and technological devices. Rather than having students use computers, say, to better understand a math equation through a virtual

hands-on activity, teachers may limit the use of that tool to word processing, in the similar manner as the typewriter was used a generation ago. The challenge for educators is not to dismiss or keep up with students' latest technological know-how, but to create meaningful learning experiences in which students are taught how to apply their knowledge to solve real-world problems (Wissiak, 2013).

The reality is in our country, the English teachers varied from different generations. Some of them are baby boomers, some of them are digital immigrant, and small amount of them are millennials with their own characteristics. Those different generation teachers however, deal with the same generation in their classroom, that is generation Z. It is certainly problematic when some teachers cannot answer the demand from the students who were born with technology and are used to live with technology (Cilliers, 2017).

The problem becomes bigger when teachers, who have willingness to improve their professional development, in this case upgrading their ICT skill, face the reality that there is rarely chance to have workshop, let alone the teachers who work in rural area (Rahman, 2016).

This issue has triggered the author to form a group of millennials who would serve the teachers in ICT workshops for free. Therefore, the goals of this study are:

1. To investigate how the digital squad project is initiated and implemented.
2. To find out the teacher-participants' responses to the project.
3. To get deeper understanding on the response from the Digital Squad members in joining the project to bridge the tecno-gap among English teachers.

## **METHOD**

The case study design was employed for this research. A case study is a variation of an ethnography in that the researcher provides an in-depth exploration of a bounded system (e.g., an activity, an event, a process, or an individual) based on extensive data

collection (Cresswell, 2009). This design allows the researcher to concentrate on a single group of subjects and the use of multi-method data collection strategies to identify the implementation of digital squad project in bridging the technology gap among teachers. Secondly, it is to find out the teachers' response to the project, and to investigate the obstacles during conducting the project. This design is an appropriate way to illustrate those phenomena which are not very well understood and need to be examined very closely and also has the potential to provide an in-depth understanding of process rather than outcome (Creswell, 2009).

To ensure the internal validity in the research design, several methods of data collection should be used for triangulation purposes (Yin, 2009). In this research, some instruments were used to collect the data, i.e., observation, questionnaire, and interviews.

The research was conducted in English Education Study Program of Suryakencana University. In a qualitative inquiry, the intent is not to generalize the findings, but to develop an in-depth exploration of a central phenomenon. Thus, to best understand the phenomenon, the researcher purposefully or intentionally selects individuals and site. Cresswell (2009) states that the research term used for qualitative sampling is purposeful sampling. In purposeful sampling a researcher intentionally selects individuals and sites to learn or understand the central phenomenon. The standard used in choosing participants and sites is whether they are information rich. The participants in this study are 10 students of English Education of Suryakencana University and Senior High School English teachers who join MGMP of English lesson in Cianjur regency.

Qualitative data analysis is done primarily by using the data collected through observation, questionnaire, and interview. These will be analyzed qualitatively where a case study is emphasized. Analyzing case study evidence is especially difficult because the strategies and technique have not been

well defined (Yin, 2009). Moreover, Yin (2009) also suggested that the main point of data analysis in a case study is defining priorities for what to analyze and why. In a qualitative study, a researcher needs to analyze the data to form answers to the research questions. This process involves examining the data in detail to describe what the researcher learned and developing themes or broad categories of ideas from the data (Cresswell, 2009). Describing and developing themes from the data consists of answering the major research questions and forming an in-depth understanding of the central phenomenon through description and thematic development (Cresswell, 2009).

## **RESULTS AND DISCUSSION**

This part presents the findings in the current study, followed by the discussion on three issues. The issues are about the implementation of the digital squad project, the teacher participants' response to the Digital Squad project, and the response from the Digital Squad members in implementing the project in bridging the tecno-gap among English teachers.

### **The implementation of digital squad project**

The idea of forming digital squad was actually rooted from the reality that many teachers are unable to keep up with technology advancement to be applied in the classroom. It becomes one of the concern in our study program as the institution dealing with future teachers' education. This concern has lead the study program to organize some events to enhance the teachers with ICT skills to be applied in the classroom. However, this kind of event is very costly and a bit difficult since the experts on ICT on education field are not always available. This has triggered the idea of "cloning the expert" and using the clones to train the teachers with the ICT skills that have been absorbed by the clones.

The clones are called Digital Squad. They are university students who have high interest on ICT as well as self-confidence to

share their skills to others. In a nutshell, there are six steps in implementing the digital squad project as it is displayed in Figure 1. It covers the needs analysis, the recruitment, the training with the experts, maintaining and strengthening, teachers workshop, and evaluation.



Figure 1. *Steps in implementing digital squad project*

The first step conducted in forming the DS squad is doing needs analysis. The needs analysis is an effort in recognizing the real situation in this case the situation in English classrooms with the teachers who handle them. As it is acknowledged that nowadays technology has been part of human life in every aspect, including in education. Teachers are demanded to follow the advancement of technology and applied it within classroom. This is because the students that the teachers deal with come from different generation that technology has been in their DNA, therefore the way they live, and learn of course so much different from their teachers' era. The students who are mostly come from generation Z expect their teachers to involve technology in the teaching.

However, the students' expectation is not answered by the teachers. From the prior study to analyze the way the teachers deal with media in the classroom, most teachers (70%) are observed still rely on paper and pencil, and 30% of them have started to apply technology-based media in their teaching, as it can be seen in Figure 2.

This data was gained from a prior study conducted involving English teachers of Senior High School in Cianjur who join MGMP. They were given questionnaire to evaluate the media and techniques they use in their English classroom. After they

returned the questionnaire, their classes were then observed to crosscheck their answer to the questionnaire.

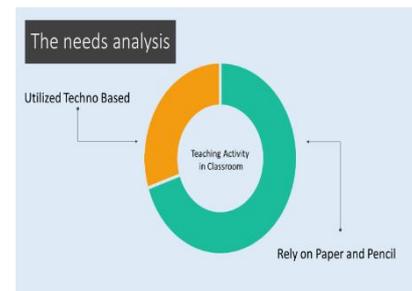


Figure 2. *The needs analysis*

From the prior study, it was found out that the teachers mostly still rely on paper and pencil in their English classroom. They prefer to stick to their comfort zone rather than challenge themselves with ICT use in their classroom. They ignore the demand from their students to involve technology-based media in the teaching.

However, there are still some teachers who come from younger generation and have involved more advanced media and willing to improve themselves, but the chance for professional development is still scarce. The teachers should spend much to attend workshop in other cities. It is of course discouraged them to continue their professional development.

Those two issues, the teachers' lack of skill in ICT and the scarce chance of professional development for teachers in town, have inspired the author to form media for teachers' professional development especially in ICT. The media would be forum or coaching sessions for teachers that would improve their skill on ICT use in the classroom with reasonable or even free of charge.

After recognizing the teachers' need that is forum or coaching clinic to improve their ability on ICT in education but with achievable cost, the next step is recruiting the digital squad members that would be involved in workshop project with the teachers.

The members of digital squad would be assigned to share their knowledge and skills

of ICT on education to the teachers. They would assist the teachers during and after the workshop.

Regarding the tasks that would be given to the members of DS, there are at least three categories of prospective DS members. It includes the age and the skills. For age factor, it is decided to choose members from generation Y. They are usually university college students at the moments. They are chosen, since Y generation or millennial are more skillful in technology and have more intense experience with technology than generation X.

The other qualifications are the DS prospective members should have strong interests on technology and also have good presentation skill. It is because they are going to share their ICT skill to the teachers who are much older than them. Therefore, they have to be good at presenting and elaborating the technology use to the teachers who are commonly in their comfort zone and do not want to move on.

The next step after selecting the prospective members of Digital Squad is providing them with the knowledge and skills needed to be used later in the workshop. In order to equip them with the proper skills, experts on ICT in English teaching were invited to give the members of DS some trainings.

The trainings were conducted several times to make sure that the members of DS comprehend the targeted skills. In this case, the DS got the opportunity to be trained by famous ICT trainers from two prominent universities. They shared many applications that can be used in English classroom. At least, fifteen applications were introduced and practiced to the members of DS. Those applications are Padlet, Kahoot, Lyrics training, Schoology, Powtoon, Screen Cast O'Matic, Canva, Breakingnews.com, Ello, Cartoon Story Maker, AR, VR, and many more.

The training with the expert gave the opportunity to the DS members to improve their knowledge and skills on ICT. By the end of the training, the DS members have

enough skills to be the coach in the workshop with the teachers.

It is true that the DS members who come from generation Y have better technology skill. However, to make sure that they are qualified to be the coach at teacher workshop, their skills should be maintained and strengthened. Therefore, after the training with the expert, they were given some assignments to summarize the applications they were practicing during the training in focus group discussion regular meeting. The meeting is held weekly and the members should share the application they learnt to the other members.

When the DS members are ready to share their ICT skills to the teachers, then some workshops were organized. Collaborating with local English teachers' organization, the members of DS were assigned to be the tutors during the teachers' workshops. The DS members assisted the teachers in using the applications introduced at the workshop.

The first workshop was conducted on December 2017. The participants were English teachers of senior high school in Cianjur. There were 40 participants who joined the workshop. The applications introduced at the workshop were LyricsTraining, Padlet, and Quizlet.

The second workshop was conducted in the university. The participants were language lecturers. The applications introduced were EdPuzzle, Powtoon, and Padlet. The third workshop was conducted for English teachers of junior high school. The applications introduced were Padlet, Quizlet, and Canva.

In order to see the possibility of the continuity of the digital squad program, the evaluation was conducted. In the evaluation, the program is examined thoroughly. Whether it has possibility to be continued, what are the strengths and the weaknesses of the program. It was conducted by discussing the matter with the DS members after each workshop.

### The teacher-participants' response to the digital squad project

The second issue of the current study is to find out the teacher participants response to the project. They were given questionnaire after the workshop. The questionnaire consists of seven items related to the use of ICT in the teacher classroom, and their response to the workshop assisted by the DS members. The issues asked in the questionnaires are as follow:

- a. The use of media in the classroom before the workshop.
- b. Media they prefer to use in teaching
- c. Response to the project
- d. The benefits of the workshop

- e. The applications they use in the classroom after the workshop
- f. Obstacles in applying the applications.

From the questionnaire, it was found that the teachers have used media in their teaching. However, the media they utilize is still conventional that relies on paper and pencil. Even some of them have also used a bit modern media such as PPT or video, but the use of them is still quite rare. At the workshop, the teachers were introduced to different kinds of application that can be used in EFL classroom, such as Kahoot, Padlet, Powtoon, LyricsTraining, etc.

Table 1. *The response from the teachers to the DS project*

No.	Categories	Responses
1.	The use of media in the classroom before the workshop.	Often
2.	Common media they prefer to use in teaching	Ppt, video, pencil and paper
3.	The most interesting apps in the workshop	Kahoot, padlet, powtoon
4.	Response to join the project	Very beneficial
5.	The benefits of the workshop	New media to be applied in the classroom
6.	The application they use in the classroom after the workshop	Padlet, Kahoot, Powtoon
7.	Obstacles in applying the apps	Internet connection

The response from the teacher-participants is very promising. Before the workshop held by DS members, they often rely on paper and pencil media, even some of them have used PPT occasionally. During the workshop, they are introduced to many applications to be used in their English classrooms such as Kahoot, Padlet, Canva, Schoology, Ello, etc., and they even have their favorite apps, in this case Kahoot, Padlet, and Powtoon, since they consider these three apps are easier and more interactive to be used with their students. They view the DS project that involves students who come from Y generation as very beneficial project because most of the DS members are still very young, yet resourceful and helpful in handling their questions during the workshop.

However, the teachers face classic problem when they want to apply the apps they learned from the workshop at school.

Not many schools have provided good internet connection. So, the teachers should spend more budgets to provide themselves with modem and pay for the internet connection.

It has been very common, that there are numerous challenges faced by teachers in using ICT. In one side, the teachers are demanded to equip the students with a higher level and different set of skills, but the school do not provide them with adequate facilities. It has to be admitted that ICT brings various challenges that teachers need to face. One of them is the need for adequate availability of technology in the schools that covers high costs incurred on acquiring, installing, operating, maintaining and replacing ICT's.

**The response from the Digital Squad members to the project**

At the beginning, this project is unintentionally initiated. Yet, after the members of the projects were involved in the workshop, the members of DS share their responses toward the project. In digging the data on the members of DS members, an interview was conducted. From the interview, there are some interesting facts uncovered. Most of them were satisfied to be involved in the project because they think that by joining the project, they learn new things earlier than others. They also learn how to work as a team. Their favorite applications are Padlet, Kahoot, Lyrics Training, Canva, and Quizlet. Since they are generation Y, they do not need much time to comprehend an application, most of them only need 1 hour up to 1 day to fully understand an application since most of them are interested in using technology in classroom. They are used to utilize laptop, mobile phone, and application to assist them in learning at daily basis.

However, they also find some problems in joining the project. The biggest issues are time allotment and internet connection. The DS members mentioned that the time allotment for the workshop needs to be added, since many teachers they were training could not absorb their explanation quickly. In one session, the teachers can comprehend one app, while the workshop usually offered more than one app. Besides, the issue of internet connection again becomes one of the obstacles in integrating ICT in the classroom. The workshop often did not run as it is planned for the internet connection was not available for every participants. Even, it has been anticipated by asking all the participants to bring their own modem, but sometimes it takes time to connect and set the modem to the computer, since many teachers even do not know how to use the modem. In brief, the response from the members of DS are summarized in following table.

Table 2. *The response from DS members to the project*

No.	Categories	Responses
1.	Interest to technology used in the classroom	All students within the project are highly motivated in using technology in the classroom
2	Familiarities with the apps introduces in the project	Some apps are new and they just know them in the training session.
3	Common media they prefer to use in learning	laptop, mobile phone, application,
4	Time to learn each apps	1 hour to 1 hour
5	The most interesting apps	Padlet, Kahoot, Lyric training, canva, quizlet
6	Response to join the project	Positive
7	Benefits	The benefits in joining this project are: learning digital teaching media earlier; learning how to work as a team; exploring more than one applications; getting more information about another application by sharing each other.
8	Obstacles	Time and internet connection

**CONCLUSION**

From this study, there are some important points to be concluded. Regarding the first issue of the current research about how to implement Digital Squad project in bridging the techno-gap among English teachers, there are six steps within. The six steps include the needs analysis, recruitment, training, maintaining, workshop, and

evaluation. From this project, it was found out that most teachers still rely on paper and pencil and avoid technology use in their classroom since not many chances of professional development for teachers available in small cities. University students who are mostly generation Y are very suitable to be involved in this kind of project, since they are more adept with

technology. Therefore, they can learn quickly from the expert on applications that can be utilized in English classroom. There are lots of free applications that can be introduced to the teachers to be used in the classroom, such as Kahoot, Quizlet, Powtoon, etc. Small scale workshop that involves teachers and the Digital Squad as the coach is a possible effort to upgrade the teachers' ICT skill.

For the second issue, the teachers respond very positively to the Digital Squad project, since they can learn many applications to be used in the classroom by the help of young generation in the squad. They also started applying some application in their classroom, such as Padlet, and Kahoot. Yet, they face classic problem in applying them, i.e. internet connection, since not all school provide proper internet connection.

As the third issue, the students who joined the Digital Squad projects get lots of advantages; they can learn many new apps for studying, they also build team work in this project. They basically face significant problem in learning the apps that would be shared in the workshop. They only need 1 hour to 1 day to learn the apps. However, as the problem faced by the teachers who followed the workshop is the internet connection, it also becomes one of the problems faced by the students.

This is only small-scale project that only touch the English teachers in Cianjur. However, this small project has gained positive feedback both from the teachers who became the workshop participants, as well as positive response from the students who joined the project. They mentioned that they are very excited to join the project, since it gives them many benefits. Therefore, it is suggested to form bigger squad that could spread the digital virus to English teaching more massively.

#### ACKNOWLEDGEMENT

This study was funded by my institution. Therefore, I would thank the faculty of education and teacher training of

Suryakencana University for the support. My appreciation also goes to the Digital Squad members who willingly join the project and do whatever they are assigned.

#### REFERENCES

- Cilliers, E. J. (2017). The challenge of teaching generation z. *PEOPLE: International Journal of Social Sciences*, 3(1), 188 - 198. doi: 10.20319/pijss.2017.31.188198.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (2<sup>nd</sup> ed.). California: Sage Publication.
- Ekberg, S. G. (2017). Understanding challenges of using ICT in secondary schools in Sweden from teachers' perspective. *The International Journal of Information and Learning Technology*, 35(1), 43-55. doi: 10.1108/IJILT-01-2017-0007.
- Ghavifekr, S. T. K. (2016). Teaching and learning with ICT tools: Issues and challenges from teachers'. *Malaysian Online Journal of Educational Technology*, 4.
- Jan, H. (2017). Teacher of 21st Century: Characteristics and development. *Research on Humanities and Social Sciences*, 7. Retrieved October 22, 2018, from <https://www.iiste.org/category/www-iiste-org-academic-journal-news/>.
- Kennedy, M. M. (2016). How does professional development. *Review of Educational Research*, XX, 1-36. doi: 10.3102/0034654315626800.
- Kraus, S. S. (2008). Teaching for the millennial generation: Student and teacher perceptions of community building and individual pedagogical techniques. *The Journal of Effective Teaching*, 8(2). Retrieved October 20, 2018, from [https://www.uncw.edu/jet/articles/Vol8\\_2/index.htm](https://www.uncw.edu/jet/articles/Vol8_2/index.htm).
- Lam, Y. Y. (2010). Impact of globalization on higher education: an empirical study of education policy & planning of design education in Hong Kong. *International Education Studies*, 3, 73-85. Retrieved October 23, 2018, from [www.ccsenet.org/ies](http://www.ccsenet.org/ies).
- Rahman, A. (2016). Teacher professional development in Indonesia: The influences of learning activities, teacher characteristics and school conditions. *University of Wollongong Thesis Collection 1954-2016*.
- Wissiak, K. S. (2013). Bridging the gap between educational research and school practice through cooperation of university and primary school teachers. *4th International Conference on New Horizons in Education*. Ljubljana: Elsevier.
- Yin, R. K. (2009). *Case study research: Design and methods* (4<sup>th</sup> ed.). Thousand Oaks, CA: Sage.

**Nia Kurniawati**

*Bridging technological gap among English teachers through digital squad project*