Analyzing Pre-Service English Teacher Needs in Developing Social Competence in 21st Century

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Article Info

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Abstract

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This research was conducted to analyze the needs of pre-service teachers in entering the field of education as a provision so that pre-service teachers can better prepare themselves and can find out how to become successful teachers. The researchers applied a qualitative case study approach. Data for analysis were collected from critical literature reviews and interviews. The focus mentioned in previous studies was not specifically directed at the needs of pre-service teachers. In this study, it is explained how to become a successful teacher in the 21st century and know the needs of social competence in the 21st century. The result shows that there are six indicators of social competence in the 21st and the needs for pre-service teachers are able to have every indicator of social competence. They are: (1) Reflecting inclusivity, objectivity and fairness, (2) Understanding how to communicating effeciently and effectively, (3) Having cultural sensitivity and knowing how to deal with diversity, (4) Contributing to the educational of development in schools, (5) Mastering ICT in order to increase educational quality, and (6) Having positive attitudes, behaviors, and ethics, as well as a clear sense of how to dress and speak the language.

INTRODUCTION

Social competence is very important and must be possessed by a pre-service teacher in addition to the other 4 competencies, namely pedagogical competence, professional competence, personality. This competency is considered very important and must be possessed by a pre-service teacher because the teacher itself is a part of society where the community is a consumer of education so that whether teachers or schools must be

able to communicate well and effectively with the community, if not then schools or teachers who cannot communicate well with the community tend to be left behind, considering that educational institutions and teachers as a forum to be able to prepare a student as a good member of society and be able to face future problems. Social competence affects the performance and success of teachers in learning and teaching process in their class (Chu, Lee, Notari, Reynolds & Tavares, 2017, p.110).

A good 21st century teacher is conscious of the career prospects that will be in the coming years for their students, and are always advocating for forward thinking and preparation to ensure all students will not be left behind. In the preceding age, teachers have recently faced even greater challenges. English teachers should be conscious in this century that they can effectively lead their students to master high English standards so that they can make the best use of ICT to optimize their contribution to humanity and other creatures in the universe's wellbeing, peace , and prosperity (Suherdi, 2012, p. 4).

Bedir (2019) concluded that education in the 21st century shows more importance in advancing pivotal skills. He also stated that such skills are necessary for learning and maintaining learning that does not meet the needs of contemporary students on the ground that the program was not originally intended to meet the requirements of societies. In addition, 21st century education should concisely provide students with compulsory skills with which they can work to succeed in the globalized world. Levine believed that the most important point of getting professional teachers is pre-service teacher preparation. Essentially, teacher preparation systems are forced to include resources and set a clear situation for prospective (pre-service) teachers in which they can train pedagogically and get used to potential demands for preparation (Bedir, 2019).

However, the focus that mentioned in the previous research not specifically directed to pre-service teacher needs. Those researcher did not focus on identifying the need for pre-service teachers in the 21st century to develop social competence. Several researches also did not explain how the development of past and present social competences. As a result, researcher must find out what was not included in previous research The factors that influence successful pre-service teacher in the 21st century also were missing from those researches. Identifying the need for pre-service teachers in the 21st century to develop social competence is to be able to overcome the challenges and to pursue the goals in the 21st century education, it is therefore fundamental to prepare the future teachers to master some sorts of skills. With regard to this idea, (Bedir, 2019) claimed that pre-service teacher education is the most crucial point of having skillfully qualified teachers. Essentially, the teacher education programs are compelled to provide opportunities and to set the future (pre-service) teachers into a particular situation in which they can pedagogically practice to get used to the future education needs.

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In this research, there are some clusters related to previous studies including: Pre-service Teacher (Fajriyandi 2018, Azhar 2016, Nurfaidah 2016), Social competence (Nadia 2020, Sundari 2012) The previous research related to this study described and discussed in this part. There are a variety of researcher in various clusters. The first previous study is conducted to observe by Fajriyandi (2018) from Department Of English Education Faculty Of Language And Literature Education Universitas Pendidikan Indonesia Bandung. The objective of the research are : 1) Examining the opinions of pre-service teachers on EFL learning Tactics, 2) To analyze the instructional methods of Pre-service teachers' EFL learning strategies. The results of this recent study offer some implications to the course Yeah. Designers. First of all, for two reasons, the idea of language learning strategies should be introduced into the English curriculum: 1) The strategies are believed to make the acquisition of English simpler, more effective, and more competitive. 2) The use of language learning strategies will facilitate students' learning autonomy, like being able to assess learning goals, to identify the contents and their development, to choose methods and techniques, and to evaluate the procedures of acquisition. Therefore, this research focuses on the pre-service teacher perception and the research doesn't mention the pre-service needs analysis itself.

The second previous study is conducted to observe by Azhar (2016). The aim of this study was to find out about the teachers' competencies in MA Madani Alauddin, Pao-Pao, which is only divided into pedagogical and professional skills. The findings also indicated that the professional competence of teachers affected SBM implementation. Furthermore, this research only focuses on profesional competence even though the title says teacher competence is not only professional competence, and does not mention other competencies such as social competence.

The third previous study is conducted to observe by Nurfaidah (2016). The research aims of this research, there are : 1) to examine the elements of reflection that are realized during field teaching practice by EFL Pre-service teachers, 2) to find the levels of reflection of the pre-service teachers of the EFL as Revealed during field teaching practice in their reflections, 3) to recognize the issues relating to the expertise of teachers that prompt EFL pre-service teachers to reflect during the practice of field teaching; and, 4) To reveal how the problems of EFL pre-service teachers in reflection are elements of In the light of reflection, reflection and degrees of reflection are interconnected Contexts for training. The results of the study are intended to contribute to both the theory and application of reflective teaching studies with respect to the teaching practices of EFL pre-service teachers in Indonesian classroom environments. Therefore, this research focuses on pre-service, doesn't mention 21st century.

The fourth previous study is conducted to observe by Nadia (2020). The research aims to analyze the pedagogical competence of teachers in teaching English with the following research objectives in order to examine the extent to which teachers are competent in pedagogical competence, personality competence, social competence and professional competence in SMAIT Iqra' Kota Bengkulu. In addition, their need professional teachers who have good competency qualifications for the results of the analysis of the competencies held by the teacher and proven on student learning results. Therefore, this research focuses on to investigate the extent to which teachers and the research doesn't mention what the teacher needs to complete their competence.

The fifth previous study is conducted to observe by Sundari (2012). This research aims to explain how teachers in Public Senior High School 2 Kebumen has mastered the competence of pedagogy, social competence, and Career competence. Furthemore, Research findings indicate that most teachers at State Senior High School 2 Kebumen have mastered pedagogical skills, social skills and technical skills. Therefore, this research focuses on only knowing whether they already have the 4 competencies or not, doesn't mention how to developing competence itself.

The sixth previous study is conducted to observe by Vail (2010). The aim of this study is to identify the characteristics of teachers in their teaching and professional practice that enable them to implement change and adopt the 21st century skills framework. Furthemore, The result is the ever-changing strain of the economy and the labor force The curriculum, transparency, and educational support structures in American schools and schools The abilities required for success in the 21st century must be reflected. Therefore, this research focuses on Teaching in the 21st Century, doesn't mention teachers need for developing Competence.

This research has similarities and differences on the basis of previous studies. In describing the teacher competency framework, and using the descriptive form Qualitative, previous research is also similar. The distinction lies in the analytical object. The growth of their competence was not addressed in previous research, this study would use a need analysis, this study focuses only on the needs of pre-service teachers in the development of social competence in the 21st century.

METHOD

The researcher uses a case-study qualitative methode, the qualitative research method explains social phenomenon by using qualitative data, such as interviews, documents and observation. Creswell (2012) stated that qualitative research is best suited to address a problem of study in which the variable is not known and needs to be explored. The data for analysis was collected from questionnaire and interview. The steps in the current research are adapted from Lodico, Spaulding, Voegtle (2006) and Nashruddin and

Mustaqimah (2020), there are two stages in the research that are stage 1 that answer research question number one including the identification of a research topic or focus and literature review, while phase 2 that answers research question number 2 includes the selection of participants, the writing of foreshadowings and literature review.

The sources of data are from journal, books, English teachers in SMK Wahidin and students in the 8th semester in IAIN Syekh Nurjati. For collecting the data, the researcher read some journals, books and doing the interview. Furthermore, for analysing the data, the researcher uses several steps from Nashrudin & mustaqimah, (2020) and Creswell (2012).

RESULTS AND DISCUSSIONS

This section present the finding and discussion of the research. The researchers find out there are six indicators of social competence in 21st century obtained from journals, and the needs for pre-service teacher to have every indicator obtained in interview to techer and pre-service teachers.

REFLECTING INCLUSIVITY, OBJECTIVITY AND FAIRNESS

In relation to reflecting in the literature review it was found that a pre-service teacher must reflect inclusivity, objectivity and fairness. According (Rafli, 2017; Ulfa, 2018; Ahmad, 2019) The teacher must have an inclusive attitude, that does not differentiate between students based on their abilities and limitations, meaning that they are open to the differences that other people have in their interactions. Teachers must be able to interact and mingle with students or peers, or even members of society with different backgrounds in terms of gender, religion, ethnicity, race, social status, economy, and so on.

the researcher conducted that so far the prospective teachers have not felt any obstacles in being objective, fair and inclusive. However, if there is a problem, the solution (example: disability) is that prospective teachers must learn many things about students with special needs, provide more intense treatment so that students can follow lessons well, such as starting with learning methods or strategies that are in accordance with the abilities and needs of that students. From the result of the research above it can be said that what is needed by pre-service teachers to have an inclusive, objective and fairness attitude is open minded, frendly, non-discriminatory, an exemplary attitude, and requires regular coaching to improve the ability of teachers both in emotional intelligence.

UNDERSTANDING HOW TO COMMUNICATING EFFECIENTLY AND EFFECTIVELY.

In relation to reflecting in the literature review it was found that a pre-service teacher must understanding how to communicating effeciently and effectively. According (Husain, 2016; Rafli, 2017; Menrisal, 2018) Teachers can communicate well in a polite, empathetic and effective manner both orally and in writing. Effective communication requires teachers in communicating with others to pay attention to their basic needs,

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tendencies, interests and aspirations, as well as the values they hold. Communicating empathically means communication that supports the communicator to feel what the recipient of the message must feel. Teachers can communicate empathically with others and they can explore and try to feel what other people feel or experience what they feel. Empathic and polite attitudes can be applied in this way of criticizing, reprimanding, and giving advice.

The researcher concluded that so far these prospective teachers have tried to be able to communicate well and effectively with students through the implementation of a communicative language learning approach. what suits the student's situation. and conducting questions and answers are expected to help streamline the learning process. However, sometimes the location of understanding lies in the students themselves are different. However, prospective teachers have not implemented communication with parents because they have not experienced it. This attitude is considered important because the activity of explaining a material or communicating with students is a substantial matter in the learning process because in this process it is related to the process of transferring knowledge from teachers to students and to support effective learning. Thus, teachers must have their own character and way of communicating with students so that students can easily remember them. Meanwhile, what is needed by pre-service teachers to have the ability to understand how to communicate efficiently and

effectively includes speaking skills, how to communicate well, and broad insight.

HAVING CULTURAL SENSITIVITY AND KNOWING HOW TO DEAL WITH DIVERSITY

In relation to reflecting in the literature review it was found that a pre-service teacher must having cultural sensitivity and knowing how to deal with diversity. According (Faizah, 2016; Rafli, 2017; Ahmad, 2019) Cultural sensitivity is increasingly valued and identified in terms of differences and sensitivity to students' cultural values (Brown, 2001, p. 430). This to cross cultural context is suppurtel by the Minister cif Natismal Education Regulationn No. 16 year 2007, which elucidated that having cultural sensativity and dealing with diversity requires teachers to be inclusive, behave critically, and not discriminate on the basis of gender, ethnicity, physical appearance, family background, and socioeconomic status.

Meanwhile, distributing book packages and online meetings with the Ministry of Religion. It could be like learning the local language where the school is located. This attitude is important and needs to be learned to make it easier for us who teach at the school, and understand the environment. In addition, because adaptation to the new environment is necessary anywhere, anytime in order to adapt to people in the new environment. When they are able to adapt, they can propose or run programs to improve the quality of education in accordance with the environment. There are several obstacles including: when adapting to school residents (teachers, principals, security

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guards, etc.) who incidentally have different environmental backgrounds and experiences from ours, other obstacles experienced starting from the local language, and understanding the habits of the new environment. The solution is to first understand the environment, social culture and programs at the institution. After understanding and studying the character of culture or the use of language in the school environment, after that learn to adapt to the environment by blending in and understanding them. Meanwhile, what is needed by pre-service teachers to have the ability to have cultural sensitivity and knowing how to deal with diversity is a sense of wanting to blend in with all the people at school, willing to adapt to the workplace environment, and also requiring great self-confidence skills so that they can easily adapt to a new work environment.

CONTRIBUTING TO THE EDUCATIONAL OF DEVELOPMENT IN SCHOOLS

In relation to reflecting in the literature review it was found that a pre-service teacher must contributing to the educational of development in schools (Fauzi., Arianto & Solihatin, 2013; Mahanal ,2014; Kirom, 2017) One form of educational development is character development. character is a characteristic of a person that is manifest in attitudes, feelings, thoughts and his deeds. Characters are formed through the results of observation, imitation, identification of individuals in the family, the immediate social environment and the wider social environment including the ethnic community. The teacher is the key to preparing Indonesian students in the 21st

century. The teacher's contribution lies in strengthening the character education of students to be responsive to all challenges. A teacher becomes a role model of character education, moral education, and cooperation. Teachers do not only act as educators, but also as facilitators, catalysts, and motivators for students.

The problem is that sometimes the situation and environmental conditions around the school are contrary to the contribution that this teacher gives, or it could be because our time is met with different situations from before, namely online based learning so it is not far from the problem of internet connection and short time or sometimes children still don't care about the little things that have been mentioned earlier. When consulting with other teachers, sometimes they don't understand and don't dare to ask again. The solution, after all, the teacher should be able to work around how to develop student character in a pandemic situation. Maybe by working with parents at home to always be willing to guide children during this pandemic. or it could be by continuing to tell and remind students of good things until the student's character can develop. On the other hand, what is needed by pre-service teachers to have the ability to contribute to the educational of development in schools by enriching the knowledge of pre-service teachers themselves, there is inspiration about the development that is carried out, for example creating an English speaking community in schools. And the most important thing is the need for great awareness for every pre-service teacher to

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want to have a sense of contributing to the school, finally by honing teacher skills.

MASTERING ICT IN ORDER TO INCREASE EDUCATIONAL QUALITY

In relation to reflecting in the literature review it was found that a pre-service teacher must mstering ICT in order to increase educational quality. According (Husain, 2016; Tekege, 2017; Astini, 2019) Teachers are required to mastering ICT in order to keep up with the current era and be able to improve the quality of education. In the world of education, ICT also plays an important role for the success of the teaching and learning process, ICT can open wide access to knowledge with a wide range of information dissemination, quickly, effectively and efficiently.

The results from the interviews that the researcher conducted, it can be concluded that they have not yet mastered it, but have been able to utilize ICT during the learning process. Utilization by using video & PPT for material delivery, video call/google meet for speaking practice and google form for assignments. Mastering ICT is considered important, because as prospective teachers or teachers, they must be able to adapt to technological advances and learning methods in each era. So as not to be a boring teacher. And also because today is sophisticated. Whatever it is, it must be related to technology that can make things easier if used properly. However, the use of ICT has obstacles such as access or the network is sometimes unstable and students complain about internet quotas, another obstacle when the distance learning process is distance learning, students pay less attention so they do not understand the material presented. This can be overcome with a solution, namely for teachers to facilitate wifi in schools in order to facilitate the learning process via online, then for students free quotas are facilitated. Furthermore, what is needed by pre-service teachers to have the ability to master ICT in order to increase educational quality is to diligently learn to operate technology, for example when they want to create an online class, pre-service teachers must have their own initiative to host and operate it themselves.

HAVING POSITIVE ATTITUDES, BEHAVIORS, AND ETHICS, AS WELL AS A CLEAR SENSE OF HOW TO DRESS AND SPEAK THE LANGUAGE.

In relation to reflecting in the literature review it was found that a pre-service teacher must having positive attitudes, behaviors, and ethics, as well as a clear sense of how to dress and speak the language. According (Tekege, 2017; Hermansyah, 2019; Sulfemi, 2019) The teacher is an example for students, students will assess and see what behavioral characteristics are shown by the teacher. The teacher's appearance is a form of self-image that emanates from the teacher so that it becomes a good means of communication between the teacher and students during the teaching and learning process. the teacher can be a driving force for students 'enthusiasm for learning or vice versa can become one that weakens students' enthusiasm for learning. This depends on how the teacher looks to his students, both inside and outside the classroom.

Before becoming a full-fledged teacher, pre-service teacher should already have quality standards that are in accordance with the competencies that must be possessed by teachers that have been conveyed by the government. For example, when at school pre-service teacher must strive to display and provide appropriate behavior for a teacher, so that students can imitate and also follow a good example. This attitude is important because the teacher is a reflection or model for his students. Therefore, teachers must have good personal qualities so that they can be examples and role models for students. And also regarding the responsibilities and code of ethics of a pre-service teacher. However, it has obstacles, the constraint is in terms of discipline, choosing and applying the right learning method. Because often the teacher is not consistent in delivering every material being taught so that students have difficulty understanding the material. The solution is to manage time well, continue to upgrpak kus yourself, share a lot or take part in workshops with prospective teachers and teachers out there. What pre-service teachers need is to always be up to date, especially with institutions or certifications regarding computer skills, computer use. Finally, what is needed by pre-service teachers to have the ability to have positive attitudes, behaviors, and ethics, as well as a clear sense of how to dress and speak the language is self-awareness, self-motivation as a good teacher, and also pre-service teachers must be able to control one's own emotions.

CONCLUSION

Based on this research, it can be concluded that social competence in the 21st century have six indicators including: (1) Reflecting inclusivity, objectivity and fairness, (2) Understanding how to communicating effeciently and effectively, (3) Having cultural sensitivity and knowing how to deal with diversity, (4) Contributing to the educational of development in schools, (5) Mastering ICT in order to increase educational quality, (6) Having positive attitudes, behaviors, and ethics, as well as a clear sense of how to dress and speak the language.

Pre-service teachers need to developing social competence, it can be said that what is needed by pre-service teachers to have an inclusive, objective and fairness attitude is open minded, frendly, non-discriminatory, an exemplary attitude, and requires regular coaching to improve the ability of teachers both in emotional intelligence. Meanwhile, what is needed by pre-service teachers to have the ability to understand how to communicate efficiently and effectively includes speaking skills, how to communicate well, and broad insight. Meanwhile, what is needed by pre-service teachers to have the ability to have cultural sensitivity and knowing how to deal with diversity is a sense of wanting to blend in with all the people at school, willing to adapt to the workplace environment, and also requiring great self-confidence skills so that they can easily adapt to a new work environment.

On the other hand, what is needed by pre-service teachers to have the ability to contribute to the educational of development in schools by enriching the

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knowledge of pre-service teachers themselves, there is inspiration about the development that is carried out, and the most important thing is the need for great awareness for every pre-service teacher to want to have a sense of contributing to the school, finally by honing teacher skills. Furthermore, what is needed by pre-service teachers to have the ability to master ICT in order to increase educational quality is to diligently learn to operate technology, for example when they want to create an online class, pre-service teachers must have their own initiative to host and operate it themselves. What pre-service teachers need is to always be up to date, especially with institutions or certifications regarding computer skills, computer use. Finally, what is needed by pre-service teachers to have the ability to have positive attitudes, behaviors, and ethics, as well as a clear sense of how to dress and speak the language is self-awareness, self-motivation as a good teacher, and also pre-service teachers must be able to control one's own emotions.

REFERENCES

Ahmad, M. A. (2019). Komunikasi sebagai wujud kompetensi sosial guru di sekolah.

Astini, N. K. S. (2019, August). Pentingnya literasi teknologi informasi dan komunikasi bagi guru sekolah dasar untuk menyiapkan generasi milenial. *In Prosiding Seminar Nasional Dharma Acarya* (Vol. 1, No. 1).

Azhar, N. (2016). The English Teachers Competencies in the English as a Foreign Language (EFL) Learning at MA Madani Alauddin Pao-Pao, South Sulawesi. *(Doctoral dissertation, Universitas Islam Negeri Alauddin Makassar).*

Bedir, H. (2019). Preservice ELT teachers' beliefs and perception on 21st-century learning and innovation skills (4Cs). *Journal of Language and Linguistic Studies, 15*(1), pp, 231-246.

Chu, S. K. W., Reynolds, R. B., Tavares, N. J., Notari, M., Lee, C. W. Y. (2017). 21st century skills development through inquiry-based learning: From theory to practice. *Singapore: Springer Nature.*

Creswell, J.W., (2012). Qualitative inquiry and research design: Choosing among five approaches (2nd ed.). *Sage Publications, Thousand Oaks. CA, USA*

Faizah, M. S. (2016). Kompetensi Sosial Guru Rumpun Pendidikan Agama Islam Di Mts Ma'arif Nu 02 Karang Klesem Kecamatan Kutasari Kabupaten Purbalingga Tahun Pelajaran 2015/2016 *(Doctoral Dissertation, Iain Purwokerto).*

Fajriyandi, E. (2018). Pre-service teachers'perceptions and instructional practices of efl learning strategies *(Doctoral dissertation, Universitas Pendidikan Indonesia).*

Fauzi, F. Y., Arianto, I., & Solihatin, E. (2013). Peran guru Pendidikan Pancasila dan Kewarganegaraan dalam upaya pembentukan karakter

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peserta didik. *Jurnal PPKn UNJ Online*, *1*(2), 1-15.

Hermawansyah, H. (2019). Etika Guru sebagai Pendidikan yang Mendasar bagi Siswa. *Fitrah: Jurnal Studi Pendidikan*, *10*(2), 19-37.

Husain, R. (2016). Guru di abad 1. Prosiding, 13.

Kirom, A. (2017). Peran guru dan peserta didik dalam proses pembelajaran berbasis multikultural. *AlMurabbi*, *3*(1),69-80.

Mahanal, S. (2014, September). Peran Guru dalam Melahirkan Generasi Emas dengan Keterampilan Abad 21. In *Seminar Nasional Pendidikan HMPS Pendidikan Biologi FKIP Universitas Halu Oleo* (Vol. 20, pp. 1-16).

Menrisal, M. (2018). Hubungan Persepsi Siswa Tentang Kompetensi Pedagogik Dan Kompetensi Sosial Guru Plk Terhadap Minat Belajar Siswa. Jurnal Pti (Pendidikan Dan Teknologi Informasi). *Fakultas Keguruan Ilmu Pendidikan Universita Putra Indonesia" Yptk" Padang*, 5(1).\

Nadia, A. (2020). An Analysis of Teacher Competence on Teaching Learning Process of English at Smait Iqra'kota Bengkulu (*Doctoral dissertation, IAIN BENGKULU)*

Nashruddin, W. & Mustaqimah, H A. Z. (2020). Critical literature review in TEFL research: Towards interdisciplinary study. *ELT Echo Journal, 5(2)*

Nurfaidah, S. (2016). Efl pre-service teachers'reflection: a case study in an Indonesian instructional context (*Doctoral dissertation, Universitas Pendidikan Indonesia).*

Rafli, M. F. (2017, May). Pengaruh kompetensi sosial guru terhadap prestasi belajar matematika. *In Prosiding Seminar Nasional Tahunan Fakultas Ilmu Sosial Universitas Negeri Medan* (pp. 131-135).

Suherdi, D. (2012). Towards the 21st century English teacher education: An Indonesian perspective.

Sulfemi, W. B. (2019). Kemampuan pedagogik guru.

Sundari, R. (2012). Development Of Teacher Competence (A Site Study at State Senior High School 2 Kebumen) (Doctoral dissertation, Universitas Muhammadiyah Surakarta).

Tekege, M. (2017). Pemanfaatan Teknologi Informasi dan Komunikasi dalam Pembelajaran SMA YPPGI Nabire. *Jurnal FATEKSA: Jurnal Teknologi Dan Rekayasa,* 2(1).

Ulfa, S. W. (2018). Mentradisikan Sikap Ilmiah dalam Pembelajaran Biologi. *Jurnal Biolokus: Jurnal Penelitian Pendidikan Biologi dan Biologi*, *1*(1), 1-7.