

Teacher Professional Development: Strategies for Developing Human Resources in the South Papua Region

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Abstract. This study aims to describe the problems faced and strategies that must be carried out by the PD study program at Universitas Musamus to improve the professionalism of teachers in the South Papua region. This research is a type of descriptive qualitative research. The validity of this data was obtained through method triangulation and source triangulation. Data analysis used internal factor data analysis, external factor data analysis and SWOT. The results of the study indicate that the Unmus PD Study Program as a superior human development house in South Papua through the implementation of Teacher Professional Education seeks to maintain the quality of implementation and respond to the demands of accelerating human resource development for sustainable development in the South Papua region. In realizing this vision, there are still major obstacles in human resources and the quality assurance system. Based on the results of the SWOT analysis, the formulation of a strategy for developing the PD Unmus study program was obtained using a growth-oriented strategy model. This is a very favorable situation. PD Study Program can use its strengths to take advantage of existing opportunities. The strategy that must be applied in this condition is to support aggressive development policies.

Keywords: Teacher, Professional Development, Strategies

1 Introduction

The Teacher Professional Development (PD) is a program launched directly by the Indonesian government in order to prepare teachers or prospective teachers who have qualifications of alumnus undergraduate educational and non-educational to become teacher figures who have complete competence in accordance with national standards. The basis for the Indonesian government to open teacher Professional Development programs in various universities, one of which is Law No. 14 of 2005 which contains a description of a teacher or educator. In the Act it is explained that a teacher is a professional educator who has the main task of carrying out the process of education, teaching, mentoring, directing, training, assessing, and evaluating students, starting from early childhood education, basic education, secondary education, to higher education. The implications of the description of Law No. 14 of 2005, is then to become a professional teacher, a teacher or prospective teacher must undergo a certification process with the aim of measuring the level of professionalism of the teacher or candidate. One of the certification processes currently being implemented by the Indonesian government is to require teachers or prospective teachers to follow the teacher Professional Development process.

In the development of education, the quality of teachers has a chain effect on other components of education, so improving the quality of teachers nationally is a very strategic program. Along with teacher quality improvement programs that are carried out on an ongoing basis, among others, through teacher certification, competency tests, training, and teacher performance assessments [1]. Teacher Professional Development is one of the most appropriate strategies to produce qualified and professional teachers. The need for teacher Professional Development is part of the solution to overcome educational problems in Indonesia, especially related to the problems faced by teachers. At this time, there are various problems that are very urgent, especially related to the condition of human resources and the availability of facilities and infrastructure.

This is as stated by Aswandi that the presence of more than 400 Institutions of teachers and education personnel is currently considered unable to solve the problems of teachers in Indonesia. Some of these complex problems include the shortage of teachers in special areas, disproportionate distribution, mismatches between educational background and the tasks being carried out, academic qualifications and teacher competencies are partially below standard and teacher welfare is not evenly distributed [2]. Every year the

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government examines a large sum of money for the continuous training of teachers. However, the literature suggests that many of the PD offered to teachers are ineffective and have little or no impact on classroom practice and/or student learning [3].

A teacher as a professional is proven by an educator certificate. Educator certificates can be obtained through professional education programs or Teacher Professional Development (PD). The PD program that was followed provided a lot of new knowledge in the scope of pedagogic and professional competencies [4]. Through PD, teachers can improve their ability to select and master teaching materials, plan, develop, and actualize productive teaching and learning processes [5].

The presence of the Teacher Professional Development (PD) at Universitas Musamus (Unmus) can solve the problem of the lack of professional educators in accordance with national education standards, especially in the southern Papua region. It is hoped that the competence and professionalism of educators are indeed more guaranteed by undergoing a period of education for two semesters or one year. This professional program can not only be followed by educational graduates but also non-educational graduates can join the program when interested in becoming a teacher [6]. To optimize the role of teacher Professional Development at Unmus in carrying out its roles and functions, it is necessary to conduct a study to find out the problems faced and what strategies are carried out by teacher Professional Development to improve teacher professionalism in South Papua.

2 Research Methods

This proposed research is a type of descriptive qualitative research, which allows revealing the reality that describes the situation comprehensively with the actual context [7]. This research focuses on the description of the teaching profession program at Unmus, the obstacles faced and the model/strategy of teacher professional development at Unmus in increasing professional educator resources. Research subjects are the Teacher Professional Development management team, lecturers, and students, teachers, and the Education Office.

Collecting data using interview methods, Focus Group Discussion (FGD), and secondary data analysis. The researcher is the main instrument while the supporting instruments are in the form of interview sheets and FGD guides. The validity of this data was obtained through method triangulation and source triangulation. The triangulation method uses the interview method which is compared to the FGD method and the study of secondary data. Likewise, source triangulation uses data sources from teachers and the education office.

Data analysis uses internal factor data analysis known as IFAS, external factor data analysis known as EFAS, and SWOT data (strengths, weaknesses, opportunities, and threats) [8]. The SWOT matrix shows four possible strategic alternatives based on the results

of an audit of the internal and external environment. After the data is collected, it is then analyzed using a grand strategy model.

The stages in data analysis, namely (1) data reduction, namely reducing data means sorting out the parts that are considered important, determining patterns and themes, and leaving unnecessary parts, (2) data display, displaying data, namely presenting data with text that is narrative, graphs, and tables, and (3) conclusion drawings, namely the data on teacher competencies that have been presented and then analyzed to make a conclusion.

3 Results and Discussions

3.1 Teacher Professional Development

This research is focused on the assessment aspect of the accreditation of the PD study Program. Components include (1) vision, mission, goals, and objectives, as well as achievement strategies, (2) governance, leadership, management systems, and quality assurance, (3) students and graduates (4) Human Resources, (5) Curriculum, Learning, and Academic Atmosphere, (6) Financing, Facilities, Infrastructure, and Information Systems, and (7) Research Community Service, and Cooperation.

Fulfilling the first component, PD study program Unmus has carried out the preparation of Vision, Mission, Goals, and Targets, as well as Achievement Strategies by involving stakeholders such as the Education Office, Teachers, Lecturers, and Students by attention to aspects of clarity, reality, and conformity with the objectives of the program implementation. The formulation of the vision is consistent with the vision of the institution. The mission statement is derived from the mission of the institution. The formulation of the objectives refers to the goals of the institution and is a derivative of its mission. The formulation of the PD study program targets that are relevant to its mission.

PD study program vision is to become a home for superior human development in Papua through the implementation of Teacher Professional Education. Formulation of Vision and Mission, Goals and Targets, as well as Strategy for Achievement by involving stakeholders such as the Education Office, Teachers, Lecturers and students by attention to aspects of clarity, reality and conformity with the objectives of the PD study program implementation. After that, it was socialized through activities: student orientation, coordination meetings with partner schools, installation of banners and uploaded on the website <https://unmus.ac.id/ppg>. Based on the results of the socialization, problems were found in the form of a lack of public participation in providing input from external parties such as the education office, teachers, alumnus and the general public. The lack of participatory involvement is feared that the vision and mission documents that have been made do not accommodate various interests and educational needs in the regions, especially south Papua.

The second component is related to the governance of PD study program which focuses on governance, leadership, management systems, and quality assurance. The governance system (input, process, output and outcome as well as the external environment that ensures the implementation of good governance) must be formulated, socialized, implemented, monitored and evaluated with clear rules and procedures. On the other hand, there is also an emphasis on existing quality assurance, such as quality policies, quality assurance tools, implementation of quality assurance, as well as monitoring and evaluation.

The problem faced in the implementation of PD study program is that there is no proper governance and organizational structure from the university level to the PD study program. Whereas governance ensures the realization of the vision, the implementation of the mission, the achievement of goals, and the success of the strategies used in a credible, transparent, accountable, responsible, and fair manner. In addition, documents that contain the main tasks and functions of each organ in the organizational structure are not yet available. There needs to be technical guidance related to governance and quality assurance in PD study program so that the effectiveness and efficiency in the governance process go well so as to ensure the realization of the vision, the implementation of the mission, the achievement of goals, the success of the strategies used in a credible, transparent, accountable, responsible, and fair manner.

The third component is students and graduates. This component pays attention to new student admissions strategies and policies. This standard also wants to look at the quality of service to students and achievement. On the other hand, alumni are seen as a concern, through the availability of alumni associations and alumni contributions to institutional development. The problem faced by the PD study program is that there is no new student admission document and the consistency of its implementation. There is no new student admission document because the registration process is carried out online through the <https://ppg.simpkb.id/> site that has been provided by Kemdikbudristek. Even though the PD registration procedure is online, there are still many teachers, especially from remote, outermost and disadvantaged areas who are still confused about how to register for PD held by Kemdikbudristek.

Component fourth emphasizes the management of existing resources. Based on this, standard fourth contains a human resource management system, a monitoring and evaluation system, lecturers, and education staff, as well as measuring the level of service provided by both lecturers and education staff. The problem faced is that there is no complete guideline for the system of recruitment, placement, development, retention, and dismissal of lecturers and education staff to ensure the quality of implementation. This is because the number of lecturers and teaching staff is limited so the recruitment model for lecturers and staff uses a recruitment system originating from the physics education, chemistry education and mathematics education study programs that have met the requirements.

Currently, the number of human resources, especially lecturers who meet the requirements as lecturers in the PD study program is still small. There are eight teaching lecturers from the Teacher and trainer faculty and to meet the needs of teaching lecturers, the manager of the PD study program also uses agricultural study program lecturers who are relevant to the field of science in the Chemistry study program. There needs to be a policy from the Unmus leadership to seek to increase qualified human resources so that the implementation of the PD program can be carried out optimally.

The fifth component is related to the curriculum, so this emphasizes the standards and competencies of graduates, as well as policies developed within the framework of curriculum development. The PD In office curriculum structure consists of their groups of subjects, namely (1) deepening of pedagogic material and fields of study, (2) development of learning tools and new peer-teaching models, and (3) field experience practice. The deepening of pedagogic materials and fields of study to facilitate students to strengthen their understanding of professionalism, pedagogy, and field of study materials by utilizing information and communication technology in online and independent learning through Learning Management System and other sources.

The teacher profession needs to be supported by a deep understanding of learning theory, educational psychology, socio-cultural, social construction, and diversity. The deepening of pedagogical material includes planning, implementing, and evaluating educational learning. The deepening of the field of study material includes essential materials including advanced materials in the field of study that can explain the "what" (content), "why" (philosophy), and "how" (application) aspects in everyday life. The deepening of the material in this field of study is also directed at developing higher-order thinking skills (HOTS). This online learning starts one month before the learning tool development workshop, is carried out under the guidance of online lecturers/instructors and continues as long as the PD program takes place independently.

Learning today requires digital skills from an educator, teaching resources, and methods that can build interaction between educators and students and are relevant to the current context [9]. Problems related to learning are during the student learning process. Changes to the rules for implementing PD in 2020 are carried out with a hybrid learning scheme that combines an online system and a face-to-face system with the consideration that PD participants in this case are teachers, and do not stay away from school for too long. However, the implementation of PD 2021, will be carried out with a full online scheme to minimize the spread of Covid-19. Of course, implementation with this full online scheme is an obstacle for PD participants who come from remote, outermost and disadvantaged areas who have limited network connections, data usage, and facilities for internet access. In addition, the participants' low skills in using communication and information technology media also affect the effectiveness of implementing PD with a full online scheme. Many

technology-based assignments fail to achieve meaningful learning for students due to inadequate teacher training. An Information and Communication Technology (ICT) training model is needed to improve this situation that focuses on knowledge of technological competencies, beliefs about ICT use, and attitudes towards ICT [10].

Another problem is the low knowledge of teachers on pedagogic and professional aspects. This can be seen from the results of the competency test. Of the 60 students, there are still nine who have not graduated. There needs to be an effort to increase knowledge related to teacher competence, especially in the pedagogic and professional aspects.

Component six refers to the measurement of the availability of financing, infrastructure, and utilization of information technology through information systems. This is related to the role of the study program in planning, receiving, allocating, reporting, auditing, monitoring and evaluating, and accountable for the use of funds to stakeholders. Therefore, it is also emphasized on the planning of PD for the study program in developing funding sources for the study program. Regarding infrastructure facilities, this relates to policies for developing and recording, as well as determining the use and maintenance of infrastructure facilities. More than that, related to information systems, it is related to the technology services available to meet the needs of existing stakeholders.

The ideal condition related to financing is that the funds received by the PD study program can come from students, own businesses, central/regional government/foundations, or other sources. However, currently, the funds managed only come from the central government. Institutional efforts are needed in addressing the current funding conditions and efforts to overcome them if there are shortages. There is a need for bailout funds from the campus to anticipate delays in disbursing central funds so that the rundown of PD activities can run according to schedule.

The availability and completeness of educational facilities in the PD study program, it is still limited, especially in classrooms for offline learning, micro-teaching laboratories and unstable network conditions in the Papua region. In addition, there are also limitations of the ICT team who master communication and information technology as well as the development of the implementation of online learning (asynchronous online courses, synchronous online courses, and hybrid courses).

The seventh component is a standard that emphasizes research, community service and cooperation. The ideal conditions related to this component are (1) The existence of research activities related to the implementation and development of PD study programs, whether carried out independently, funding by institutions, central government, regional governments, or private parties, (2) community service related to the downstream of research results that can be utilized by the community, (3) The existence of cooperation with local governments that support the implementation of the PD study program mission. The lack of cooperation between Unmus and the education

office, both provincial and district/city, is an obstacle in preparing teachers who meet the requirements for PD. Currently, there are still many teachers who do not have undergraduate qualifications, especially in elementary schools. For this reason, it is necessary for Unmus to collaborate with related parties to encourage the acceleration of increasing educational qualifications for undergraduate and related to strategic issues of PD development.

3.2 Strategy Teacher Professional Development

Develop a strategy for the development of the PD study program using SWOT analysis, which stands for strengths, weaknesses, opportunities, and threats, namely an inter-component analysis by utilizing the SWOT description of each component, to formulate problem-solving strategies, as well as developing and or improving the quality of PD on an ongoing basis. Strengths and weaknesses are internal factors that need to be identified in the PD study program organization, while opportunities and threats are external factors that must be identified in the organization's external environment. The external environment can be in the form of government, the wider community, industry, graduates, the job market, internal and external stakeholders, and competitors.

The SWOT analysis model used in this study is the Grand Strategy model with EFAS (External Factors Analysis Summary) matrix analysis, IFAS (Internal Factors Analysis Summary) matrix analysis, and SWOT matrix analysis (strengths, weaknesses, opportunities, and threats). The EFAS matrix for the development of PD study programs from the analysis of strengths and weaknesses is presented in the following table.

Table 1. The EFAS matrix

External Factors	Score (S)	Rating (R)	S x R
Strengths (S)			
1. Legality of PD Study Program	0.2	5	1
2. There is support from institutional leaders	0.2	4	0.8
3. Institutions and Study Programs accredited B	0.15	3	0.45
4. Government support for financing is very good	0.15	3	0.45
5. The age of the lecturers is relatively young	0.1	2	0.2
6. Curriculum and academic atmosphere	0.1	2	0.2
7. Facilities and infrastructure	0.1	2	0.45
Total	1.00	21	3.55
Weaknesses (S)			
1. The absence of a quality assurance system as an internal quality evaluation controller	0.25	5	0.15
2. The low number of lecturers who meet the	0.2	4	0.3

External Factors	Score (S)	Rating (R)	S x R
requirements as managers of PD study programs			
3. The low number of lecturers who meet the requirements as supporting lecturers	0.2	4	0.4
4. Weak adaptability of PD study program managers to policies issued by the government	0.1	3	0.3
5. Financial management is not optimal	0.05	2	0.3
6. There is no implementation of service to schools as beneficiaries of PD	0.1	2	0.3
7. The micro-teaching laboratory is not yet available	0.1	1	0.3
Total	1.00	21	2.05
Total S-W			1.5

The results of the EFAS matrix data analysis, it can be seen that the strength of the PD study program is that it has legality for its implementation, as evidenced by Ministry of Education and Culture Decree No. 693/KPT/I/2019. This factor is considered the main factor with a weight of 0.2 and a score of 5. Another strength is the support from the central government regarding the operational funding of the PD study program and the support of institutional leaders in this regard. The Chancellor of Unmus related to leadership policies that made the implementation of the PD study program run well. In addition, the accreditation status of institutions and study programs that have been accredited B is an advantage in proposing additional fields of study in the PD study program. Support for infrastructure, curriculum, and relatively young lecturers can create an active, creative and innovative academic atmosphere that becomes a strength in the learning aspect.

EFAS matrix analysis on things that could be weaknesses in the development of the PD study program, namely the absence of a quality assurance system as an internal quality evaluation controller, contributing a fairly high weight and score, namely 0.25 and 5. Likewise, the number of lecturers who meet the requirements as the manager of the PD study program and teaching lecturers is classified as low. The requirements for managing the PD study program and supporting lecturers are doctoral or master's education with a minimum functional position of lector and having an educator certificate. Other weaknesses are the unavailability of a micro-teaching laboratory, the lack of adaptability of PD study program managers in anticipating PD policies that are always changing, financial management has not been maximized, the implementation of the Tridharma of higher education related to PD products has not been maximized by the community, especially schools as beneficiaries.

The results of the IFAS matrix data analysis, the development of the PD study program in this case the addition of new fields of study such as Departmen of Pre-School and Elementary School Education, Early Childhood Teacher Education, and Physical Education and Recreation is an urgent need as an effort to accelerate development in order to face the formation of the province of South Papua. This factor is considered major with a weight of 0.35 and a score of 5. Furthermore, the support of the Regional Government, especially the four districts in the South Papua region, for the PD study program is very high, as well as support from schools as partners in implementing field practice, research and community service. Another opportunity is that graduates of the PD study program have the potential to be easily absorbed by the local government, especially the needs of teachers in remote, outermost and underdeveloped areas, considering that the South Papua region is very short of professional teachers.

Table 2. The IFAS matrix

Internal Factors	Score (S)	Rating (R)	S x R
Opportunity (O)			
1. The urgency of accelerating development in order to meet the formation of the province of South Papua	0.35	5	1.75
2. Market segmentation in the South Papua region	0.2	4	0.8
3. Local government support for PD study program is very high	0.2	3	0.6
4. School support as a partner for the implementation of field practice, research and community service	0.15	2	0.3
5. High graduate absorption	0.1	2	0.2
Total	1	16	3.65
Threat (T)			
1. Low accessibility in South Papua	0.3	4	1.2
2. High competition between PD study programs	0.25	3	0.75
3. The high cost of participating in PD	0.2	3	0.6
4. Pedagogic abilities and professionalism of prospective PD students are low	0.15	2	0.3
5. Public pressure on passing practice and competency tests is very high	0.1	1	0.1
Total	1	13	2.95
Total O-T			0.7

IFAS matrix analysis on things that could be a threat to the development of the PD study program, namely the low accessibility in South Papua, contributing scores of

0.3 and 4. In addition, the pedagogic ability and professionalism of prospective PD students are low. This can be seen from the low scores of competency tests that focus on pedagogic and professional elements. On the other hand, the community's pressure, in this case, teachers, to pass practical exams and competency exams is very high, but it is not accompanied by efforts to improve the competence of teachers.

Based on the results of the analysis in the EFAS matrix, namely the factors of strength and weakness (S-W) the final score was 1.5, while for the IFAS matrix, namely the factors of opportunity and threat (O-T), the final score was 0.7. The results of this analysis indicate that the strategy is in quadrant one or Growth Oriented Strategy. This is a very favorable situation. The PD study program can use its strengths to take advantage of existing opportunities. The strategy that must be applied in this condition is to support an aggressive development policy.

The development of the PD study program can use a Growth Oriented Strategy, namely by using strengths to take advantage of existing opportunities. The presence of the PD study program at Unmus which already has legality in its implementation can certainly be a solution related to the acceleration of human resource development in order to face the formation of the province of South Papua, especially related to the acceleration of teachers who have not been certified. Moreover, the South Papua region (Merauke, Asmat, Mappi and Boven Digoel regencies) still needs many teachers, especially for remote, underdeveloped and outermost areas, so there is no concern that PD graduates will not be absorbed as teachers in the region. The SWOT matrix based on the results of the analysis is described as follows:

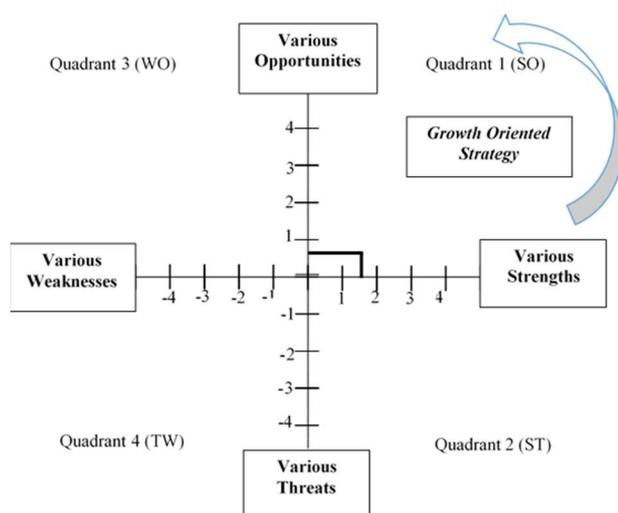


Fig. 1. SWOT Matrix

The PD Unmus Study Program has managers, relatively young lecturers, curriculum, learning and academic atmosphere that supports the implementation of the PD program. In addition, the availability of adequate facilities and infrastructure is certainly expected to prepare qualified PD graduate candidates and answer educational challenges, especially in the South Papua region. The existence of support from the

central government and the leadership of Unmus related to funding and policy-making certainly affects the quality of the implementation of the PD program. In addition, local government support is very high, for example in preparing scholarships, providing tutors and school teachers as field practice implementation partners, research and community service. The growth-oriented strategy model can be implemented if the PD Unmus study program has proposed accreditation and there are additional new fields of study such as Department of Pre-School and Elementary School Education, Early Childhood Teacher Education, and Physical Education and Recreation. Accreditation rating is an indicator of measuring the quality of service and quality of study programs in a university.

4 Conclusion

The vision of the Unmus PD Study Program as a home for superior human development in South Papua through the implementation of Teacher Professional Education seeks to maintain the quality of implementation and respond to demands for accelerated human resource development for sustainable development in the South Papua region. In realizing this vision, there are still main obstacles in human resources and the quality assurance system. Based on the results of the SWOT analysis, the formulation of a strategy for developing the PD Unmus study program was obtained using the growth-oriented strategy model. This is a very favorable situation. The PD study program can use its strengths to take advantage of existing opportunities. The strategy that must be applied in this condition is to support an aggressive development policy.

References

- [1] R. R. Pangestika and F. Alfarisa, "Pendidikan Profesi Guru (PPG): Strategi Pengembangan Profesionalitas Guru Dan Peningkatan Mutu Pendidikan Indonesia," *Pros. Semin. Nas.*, no. 1995, pp. 671–683, (2015).
- [2] Lissari, "Analisis Program Pendidikan Profesi Guru Sebagai Upaya Meningkatkan Profesionalisme Guru Di Universitas Muhammadiyah Malang," Universitas Muhammadiyah Malang, (2019).
- [3] A. Bautista and R. Ortega-Ruiz, "Teacher professional development: International perspectives and approaches," *Psychol. Soc. Educ.*, vol. 7, no. 3, pp. 343–355, 2015, doi: 10.25115/psye.v7i3.514.
- [4] H. Zulfitri, N. P. Setiawati, and Ismaini, "Pendidikan Profesi Guru (PPG) sebagai Upaya Meningkatkan Profesionalisme Guru," *LINGUA, J. Bhs. Sastra*, vol. 19, no. 2, pp. 130–136, (2019).
- [5] A. Galih and C. Iriani, "Persepsi Mahasiswa Program Pendidikan Profesi Guru (PPG) Pendidikan Sejarah Terhadap Program PPG," *J. Pendidik. Sej.*, vol. 7, no. 1, pp. 66–83, (2018), doi: 10.21009/jps.071.05.

- [6] P. S. Aithal and S. Aithal, "Analysis of Higher Education in Indian National Education Policy Proposal 2019 and Its Implementation Challenges," *SSRN Electron. J.*, no. 95157, (2019), doi: 10.2139/ssrn.3417517.
- [7] S. Crowe, K. Cresswell, A. Robertson, G. Huby, A. Avery, and A. Sheikh, "The case study approach," *BMC Med. Res. Methodol.*, vol. **11**, no. 1, p. 100, (2011), doi: 10.1186/1471-2288-11-100.
- [8] F. Rangkuti, *SWOT Balanced Scorecard: Teknik Menyusun Strategi Korporat yang Efektif Plus Cara Mengelola Kinerja dan Resiko*. Jakarta: PT Gramedia, (2019).
- [9] S. Tejedor, L. Cervi, A. Pérez-Escoda, and F. T. Jumbo, "Digital literacy and higher education during COVID-19 lockdown: Spain, Italy, and Ecuador," *Publications*, vol. **8**, no. 4, pp. 1–17, (2020), doi: 10.3390/publications8040048.
- [10] F. G. Becker *et al.*, "Digital competences for teacher professional development. Systematic review," *Syria Stud.*, vol. **7**, no. 1, pp. 37–72, (2015), [Online]. Available: https://www.researchgate.net/publication/269107473_What_is_governance/link/548173090cf22525dcb61443/download%0Ahttp://www.econ.upf.edu/~reynal/Civilwars_12December2010.pdf%0Ahttps://think-asia.org/handle/11540/8282%0Ahttps://www.jstor.org/stable/41857625.