Exploring Teachers' Difficulties and Efforts in Developing Self-Competence Towards Professional Teachers: A Survey

Eliterius Sennen¹, Maximus Tamur²

{eliterius63@gmail.com¹, maximustamur@unikastpaulus.ac.id²}

1.2Program Pendidikan Profesi Guru Universitas Katolik Indonesia Santu Paulus Ruteng, Jl Jend A. Yani No 10 Ruteng, Indonesia

Abstract. A teacher must have four minimum competencies, namely: pedagogical competency, professional competency, social competency, and personal competency. In addition, teachers are expected to be able to plan and manage resources under their responsibility, be able to solve problems of science, technology, and/or art in their field of science, and conduct research. However, in the literature there are not many studies that specifically explore the difficulties and efforts of teachers to develop the required competencies. This study involved 128 teachers as respondents with a margin of error of 0.06. The instrument was distributed via google form to alumni of PPG in office in 2023 periods 2 and 3. The instrument explores the difficulties and various efforts made by teachers in developing minimum competencies. The results of the analysis show the development of teachers' self-competence towards becoming professional teachers, through the following activities: conducting classroom action research, conducting selfreflection activities on learning activities, participating in training and workshops, continuing education, developing technological competence, joining a professional community, developing soft skills, and collaborating with colleagues. Various obstacles and gaps are discussed as basic ideas in developing teacher competence.

Keywords: Teachers' Difficulties; Teachers' Competence; Professional teachers

1 Introduction

Education is one of the important aspects in the development of the nation and state that must be developed and improved in quality [1]. Improving the quality of education is the responsibility of every component of the nation coordinated by the government. In this case, teachers as educators play a very important role in the education process [2]. Therefore, teachers must have adequate competence to be able to carry out their duties effectively [3], [4]. The competencies that teachers must have include mastering basic literacy, media, and technology [5].

In this regard, teacher professional development is an important aspect in improving the quality of education [6]. Teachers as educators play a very important role in the education process, because they are responsible for developing students' abilities and knowledge [7], [8]. However, in recent years, many difficulties have been found that teachers face in developing their profession. Major problems for teachers include the lack of opportunities to develop

abilities and knowledge, lack of support from schools and the government, and changes in the educational paradigm that require teachers to be more creative and innovative [9], [10].

Teacher professional development is very important because it can improve the quality of education. Teachers who have better skills and knowledge can be more effective in developing students' skills and knowledge. Therefore, teacher professional development must be a priority in improving the quality of education. However, in recent years, many difficulties have been found that teachers face in developing self-competence [11], [12]. Some of these difficulties include limited resources, lack of support and training, and the demands of a continuously evolving curriculum.

The increasingly complex tasks of teachers, namely improving the quality of learning, improving teaching skills, motivation and job satisfaction, and satisfaction for students, allow teachers to have to master the necessary competencies [13], [14]. In addition, considering the development of students who live in the digital era where technology becomes their environment, teachers must be able to adapt so that they can provide the best service for students [15]–[21]. By considering these aspects, teachers can develop relevant and effective competencies in improving the quality of education.

Therefore, research is needed to explore the difficulties and efforts of teachers in developing self-competence towards professional teachers. This study aims to identify the difficulties faced by teachers in developing self-competence, as well as the efforts made by teachers to overcome these difficulties. In this case, the study answers two problem formulations, namely what competencies teachers must have and the difficulties in achieving them. Second, what efforts are made by teachers in achieving their level of professionalism, so that they can contribute to the development of better education.

2 Method

As an effort to achieve the research objectives as previously formulated, a review was conducted [22] with the aim of analyzing teacher professional competence and competency development efforts carried out. This type of review allows to identify and determine the most frequently discussed thematic dimensions in the empirical studies developed, and provides direction for an overview of the most relevant findings. This is done with the aim of providing a new direction to explore and improve teacher professional education in both regular and inservice. The research problem to be answered is: what thematic dimensions have been discussed in empirical research developed in future teacher professional education.

This study began with the formulation of the problem and research objectives, then continued with a search for data in the form of articles or research results and also reviews related to teacher professional development in online literature.

The limitation of the study is the exclusion of online databases from books and book chapters. It was decided to only include empirical articles on teacher professional education that could be identified from Google Scholar, Wos, and Scopus. Teacher professional education is a broad field. This allows for exploring various perspectives even though it is difficult to analyze.

3 Results and Discussion

The main objective of this study is to reveal and analyze the difficulties faced by teachers in terms of the competencies they must have and also the efforts made to develop the teaching profession.

3.1 Competencies that Teachers Must Have

As a profession, becoming a teacher must have the ability or competence in carrying out the work of being a teacher. Competence is an attribute to place human resources who have good and superior quality [14]. These attributes include skills, knowledge, and expertise or certain characteristics. This is intended to emphasize that not everyone can freely carry out the task of being a teacher, but must have a certain label or attribute to carry out the task of educating, teaching, training, and forming human resources that are useful through educational activities. The Law emphasizes that a teacher must have four minimum competencies, namely: pedagogical competence, professional competence, social competence, and personal competence. The four minimum competencies that must be possessed by a teacher are described further below.

First, pedagogical competence. Pedagogical competence is a teacher's ability to understand students, design and implement learning activities, assist student development, and evaluate student learning outcomes to actualize their potential. A teacher should understand students as deeply as possible. In line with this, [3]-[5] explains that a teacher must understand students by: (1) utilizing the principles of personality, cognitive development, and identifying provisions for teaching students, (2) designing learning. Teachers must understand the foundations of education for learning purposes, such as applying learning and teaching theories, understanding the foundations of education, determining learning strategies based on student characteristics, teaching materials, competencies to be achieved, and compiling learning plans. (3) Implementing learning. A teacher must be able to organize the learning background and implement learning in a conducive manner, (4) designing and evaluating learning. Teachers must be able to design and evaluate the learning process and results of students continuously by using methods, conducting evaluation analysis of the learning process and results in order to determine the level of student learning completion, and utilizing the assessment results to improve learning programs, and (5) developing students as actualizations of various student potentials. A teacher must be able to provide facilities for students so that they can develop their academic and non-academic potential.

Second, professional competence. Professional competence is the teacher's ability to master learning materials more broadly and deeply. Includes mastery of subject curriculum materials and scientific substances that cover learning materials and mastery of the structure and methodology of science. Related to this, [4] further states that professional competence is more interpreted as: (1) mastery of material, concepts, structures and scientific thought patterns that can support the learning that is mastered, (2) mastery of competency standards and basic competencies for each subject or field that is mastered, (3) developing learning materials that are mastered creatively, (4) developing professionalism continuously by taking reflective actions, and (5) using technology in communicating and developing oneself.

Third, social competence. Social competence is the ability possessed by a teacher to communicate and socialize with educational staff, students, parents of students, and the community around the school. Social competence is demonstrated by the teacher's ability to: (1) have an inclusive attitude, act objectively, and not discriminate against religion, gender,

physical condition, race, family background, and social status, (2) be able to communicate politely, empathetically, and effectively with fellow teachers, educational staff, parents, and the surrounding community, (3) adapt to the place of duty in various regions of Indonesia with diverse cultures, and (4) be able to communicate verbally and in writing. [4].

Fourth, personality competence. Personality competence is the personal ability of a teacher that can reflect the personality of a person who is mature, wise and authoritative, steady, stable, has noble morals, and can be a good role model for students. In relation to personality competence or personal competence of teachers, [4] details that teachers must be able to display: (1) a stable and solid personality. A teacher must act in accordance with social norms that apply in society, be proud to be a teacher, and be consistent in acting in accordance with applicable norms, (2) a mature personality. A teacher must display an independent nature in carrying out actions as an educator and have a high work ethic as a teacher, (3) a wise personality. An educator must display actions based on benefits for students, schools and also society and show openness in thinking and taking action, (4) an authoritative personality. A teacher must have behavior that can provide a positive influence and be respected by students, (5) a personality that has noble morals and is a role model. A teacher must act in accordance with applicable norms (faith and piety, honesty, sincerity, helpfulness) and can be emulated by students.

In addition to having the four minimum competencies as described above, a teacher must have more competencies. This is emphasized in the Indonesian National Qualification Framework [23], which requires that a professional be included in the expert position level that has a qualification level equivalent to level 7 with the minimum competencies that must be possessed are: (1) able to plan and manage resources under his/her responsibility, and comprehensively evaluate his/her work by utilizing science, technology, and/or art to produce strategic organizational development steps, (2) able to solve problems of science, technology, and/or art in his/her scientific field through a monodisciplinary approach, and (3) able to conduct research and make strategic decisions with full accountability and responsibility for all aspects that fall under the responsibility of his/her field of expertise.

3.2 Efforts to Develop Teacher Competence

Efforts to develop self-competence in order to continue to develop and improve professionalism in carrying out duties and responsibilities as an educator, then a teacher certainly needs to adapt to the demands of the world of work and the development of science and technology. To develop self-competence towards a professional teacher, a teacher can do various efforts or activities. First, by conducting Classroom Action Research. Teachers need to conduct classroom action research to improve the quality of learning and find solutions to problems faced in the teaching process [7], [8]. Second, by conducting Self-Reflection. Teachers must reflect on the teaching practices that have been carried out to identify their weaknesses and strengths, and find ways to continue to improve themselves. Third, through participation in Training and Workshops [4], [22]. Teachers need to attend training, seminars, or workshops related to education and teaching. Involvement in various activities can help teachers update and develop their knowledge and skills [3], [5].

In addition, teachers also need to continue their education to a higher level, such as taking a master's or doctoral program in education. This is done so that the role of teachers is not only to fulfill educational and learning services but also to share good practices for other teachers [24]. Then teachers also need to develop media and technological competencies. This is done to improve the learning process, such as the use of e-learning, educational applications, and digital teaching aids [3], [8], [12], [13].

In other literature, it is also stated regarding the competencies that must be developed by teachers and the demands that are suggested to be met. First, teachers are advised to join a Professional Community, for example the Mathematics Teachers Association or the Republic of Indonesia Teachers Association to share experiences, knowledge, and support each other. Teachers are also required to develop Soft Skills to hone communication skills, classroom management, leadership, and the ability to adapt to various changes [4]. And finally, in carrying out their professional duties, teachers are also expected to collaborate with colleagues. Teachers must work together with fellow teachers to design and implement effective learning strategies and provide feedback to each other.

Furthermore, to improve the competence of educators or teachers, the Ministry of Education, Culture, Research, and Technology has developed a platform that is prepared to help teachers to make the teaching and learning process easier through various features, namely the Merdeka Mengajar Platform. A policy based on conducting research to find the real problems of education in Indonesia. "The Merdeka Mengajar platform is one of the technology platforms developed to accelerate the transformation of teacher competency in Indonesia. There are five products or features available on PMM, namely: (1) the inspirational video feature, which contains a collection of inspirational videos made by the Ministry of Education, Culture, Research and Technology and experts, as a reference for educators/teachers to improve their professional and personal competencies, (2) the independent training feature, which contains various training materials that are made short, so that they can carry out training independently, anytime and anywhere, (3) the proof of my work feature, which functions as a place for documenting work to describe the performance, competency, and achievements achieved during the teaching and principal profession, as well as a place to share good practices and get feedback from colleagues, (4) the PMM feature in teaching and learning activities, including student assessments, which are part of the Merdeka Mengajar platform, consisting of a collection of question packages that have been mapped based on certain phases and subjects, to help teachers get information from the process and results of student learning. The assessment collection can help teachers conduct diagnostic analysis of literacy and numeracy quickly so that they can implement learning that is in accordance with the achievement and development stages of students, and (5) teaching device features, which contain various teaching materials to support teaching and learning activities, such as teaching materials, teaching modules, project modules, or textbooks and other materials used by educators in an effort to achieve the Pancasila Student Profile and learning outcomes.

Furthermore, the most important thing is that efforts to improve teacher competence actually lie in the willingness and ability of the teachers themselves to develop themselves, when they have held teaching positions. Whatever the solution offered to improve the self-competence that is already owned, if it is not followed by the willingness and ability to adapt to developments and demands of the world of work to develop existing competence, then of course this is a challenge in itself. In other words, efforts to develop or improve the competence that teachers already have lie in efforts to build the capacity of the teachers themselves.

4 Conclusion

Teachers who have adequate competence are the teacher figures that every educational unit dreams of. Carrying out the work of being a teacher professionally must be marked by the

longing of students for their presence in the classroom, who are always present to share knowledge and technology, creative and innovative in designing and implementing learning activities; present to be a model and example in words, attitudes, and actions; and present to bring joy and peace in creating a climate and learning environment, not harassing and injuring students, acting as parents and friends to students.

Thus, becoming a professional teacher is certainly not a teacher who is born or the result of instant production but through a long and continuous process, continue to learn to enrich and develop the quality of yourself through various activities, such as training and publication activities; conducting reflection, evaluation, and follow-up on learning activities; seeking information; adapting to progress and demands of the world of work; working creatively and innovatively; and contributing to community life. Becoming a professional teacher must carry out the work of being a teacher as a calling to serve and help meet the needs of students.

Acknowledgments. We acknowledge the technical assistance provided by the Institute for Research and Community Service of the Catholic University of Indonesia, St. Paul, Ruteng in making this research a success.

References

- [1] T. Kaczorowski, S. Angela, A. Hashey, and J. Kaczorowski, "Early Adopters: Navigating AI Integration in Special Education Teacher Preparation," *J. Spec. Educ. Prep.*, vol. 4, no. 2, pp. 18–29, 2024, doi: 10.33043/9ca46254.
- [2] K. A. Kirkic and O. Yahsi, "The Relationship Between Teachers' Attitudes to Distance Education and Their Life Satisfaction," *Malaysian Online J. Educ. Sci.*, vol. 9, no. 2, pp. 53–65, 2021.
- [3] M. Marnita, D. Nurdin, and E. Prihatin, "The Effectiveness of Elementary Teacher Digital Literacy Competence on Teacher Learning Management," *J. Innov. Educ. Cult. Res.*, vol. 4, no. 1, pp. 35–43, 2023, doi: 10.46843/jiecr.v4i1.444.
- [4] J. T. Zamora and J. J. M. Zamora, "21st Century Teaching Skills and Teaching Standards Competence Level of Teacher," *Int. J. Learn. Teach. Educ. Res.*, vol. 21, no. 5, pp. 220–238, 2022, doi: 10.26803/ijlter.21.5.12.
- [5] C. Sánchez-Cruzado, R. Santiago Campión, and M. T. Sánchez-Compaña, "Teacher digital literacy: The indisputable challenge after covid-19," *Sustain.*, vol. 13, no. 4, pp. 1–29, 2021, doi: 10.3390/su13041858.
- [6] X. Yang and Y. C. Chang, "The effects of perceived distributed leadership on teacher professional development among primary school teachers: The mediating role of teacher professional learning community," *J. Pedagog. Res.*, vol. 8, no. 4, pp. 163–177, 2024, doi: 10.33902/JPR.202429304.
- [7] Y. Azovide, Y. Bouchamma, and M. Basque, "Impact of Teachers' Professional Development on the Reading Achievement of Canadian Allophone Students," *Can. J. Educ. Adm. Policy*, no. 204, pp. 55–69, 2024, doi: 10.7202/1111525ar.
- [8] T. Boz, "Teacher Professional Development for STEM Integration in Elementary/

- Primary Schools: A Systematic Review," *Int. Electron. J. Elem. Educ.*, vol. 15, no. 5, pp. 371–382, 2023, doi: 10.26822/iejee.2023.306.
- [9] A. Majir, M. Tamur, and E. Sennen, "Writing scientific papers: exploring the difficulties of madrasah teachers in indonesia," *Turkish Int. J. Spec. Educ. Guid. Couns.*, vol. 10, no. 2, pp. 141–151, 2021.
- [10] M. Tamur, S. Ndiung, V. S. Kurnila, E. Sennen, and K. Mandur, "Computer-based Mathematics Learning Studies in the Scopus Database Between 2010-2023: A Bibliometric Review," *J. honai math*, vol. 6, no. 2, 2023, doi: 10.30862/jhm.v6i2.408.
- [11] A. A. Bada, "Effectiveness of Brain-based Teaching Strategy on Students' Achievement and Score Levels in Heat Energy," *J. Innov. Educ. Cult. Res.*, vol. 3, no. 1, pp. 20–29, 2022, doi: 10.46843/jiecr.v3i1.45.
- [12] A. J. D. Agayon, A. K. R. Agayon, and J. T. Pentang, "Teachers in The New Normal: Challenges and Coping Mechanisms in Secondary Schools," *J. Humanit. Educ. Dev.*, vol. 4, no. 1, pp. 67–75, 2022, doi: 10.22161/jhed.4.1.8.
- [13] Å. Meling, "Digital Teacher Competence Dimensions: Experiences of Norwegian Preservice Teachers," *Eur. J. Educ. Stud.*, vol. 9, no. 8, pp. 141–153, 2022, doi: 10.46827/ejes.v9i8.4409.
- [14] W. Widodo, I. Gustari, and C. Chandrawaty, "Adversity Quotient Promotes Teachers' Professional Competence More Strongly Than Emotional Intelligence: Evidence from Indonesia," *J. Intell.*, vol. 10, no. 3, 2022, doi: 10.3390/jintelligence10030044.
- [15] Y. Huang, J. Tang, J. Pereira, C. Jihe, M. Tamur, and H. Neni, "Students' Attitudes Towards Implementation of Hawgent Dynamic Mathematics Software on Curved Surface," *Inomatika*, vol. 3, no. 2, pp. 71–85, 2021, doi: 10.35438/inomatika.v3i2.257.
- [16] M. Tamur, F. E. Men, K. E. Ermi, A. M. Muhut, R. Nunang, and O. A. Lay, "Penggunaan ICT dan Pengaruhnya terhadap Kemampuan Penalaran Matematis Siswa: Sebuah Analisis Bibliometrik," *Juring (Journal Res. Math. Learn.*, vol. 5, no. 4, p. 261, 2022, doi: 10.24014/juring.v5i4.19991.
- [17] M. Tamur, D. Juandi, and Subaryo, "A meta-analysis of the implementation of the gamification approach of the last decade," *AIP Conf. Proc.*, vol. 090002, no. 1, pp. 1–7, 2023, doi: 10.1063/5.0155519.
- [18] D. Juandi, Y. S. Kusumah, M. Tamur, K. S. Perbowo, and T. T. Wijaya, "A meta-analysis of Geogebra software decade of assisted mathematics learning: what to learn and where to go?," *Heliyon*, vol. 7, no. 5, p. e06953, 2021, doi: 10.1016/j.heliyon.2021.e06953.
- [19] N. Hermita *et al.*, "The Hungry Ant: Development of Video-Based Learning on Polyhedron," *Int. J. Interact. Mob. Technol.*, vol. 15, no. 17, pp. 18–32, 2021, doi: 10.3991/ijim.v15i17.23099 Neni.
- [20] M. Tamur *et al.*, "PKM Pendampingan Guru Matematika SMP di Kota Ruteng Manggarai NTT untuk Perancangan dan Pengembangan Bahan Ajar Berbasis Augmented Reality," *J. Masy. Mandiri*, vol. 8, no. 6, pp. 6700–6710, 2024, doi:

- 10.31764/jmm.v8i6.27583.
- [21] M. Tamur, "A Meta-Analysis of the Past Decade of Mathematics Learning Based on the Computer Algebra System (CAS)," *Journal of Physics: Conference Series*, vol. 1882, no. 1. 2021. doi: 10.1088/1742-6596/1882/1/012060.
- [22] N. Pérez-Rodríguez, E. Navarro-Medina, and N. De-Alba-fernández, "Citizenship education in teacher training: A systematic review," *J. Soc. Sci. Educ.*, vol. 23, no. 3, pp. 1–20, 2024, doi: 10.11576/jsse-6945.
- [23] M. Faisal, T. Za, R. Siswanto, Hayati, and J. Darojat, "the Integration of Kkni, Snpt, and the Integration-Interconnection Paradigm in Curriculum Development At Ptki," *J. Ilm. Peuradeun*, vol. 9, no. 2, pp. 309–328, 2021, doi: 10.26811/peuradeun.v9i2.528.
- [24] D. L. Ross, L. L. Lamb, and J. F. Johnson, "Using Affirming Learning Walks to Build Capacity," *J. Sch. Adm. Res. Dev.*, vol. 8, no. 1, pp. 47–54, 2023, doi: 10.32674/jsard.v8i1.4783.