

Developing teacher professionalism independently through the utilization of information technology media

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Abstract

This study aims to describe the development of teacher professionalism at SMP Muhammadiyah 3 Balikpapan, carried out independently using information technology media. This study used a qualitative approach. Data collection methods included interviews and documentation. The analysis results consisted of five categories with various underlying indicators. The five categories were intrinsic motivation, extrinsic motivation, platforms followed, programs participated in, and training outcomes. The indicator of intrinsic motivation is the teacher as an educator, and the teacher must learn. The needles found in extrinsic motivation were upgrading knowledge, growing teaching abilities, increasing knowledge, and improving skills. For platforms followed, the indicators uncovered included Literacy Platform, Extensive Reading, Smart Teacher, E-Guru ID, E-Guru Digital, Chrome Book, Canva for Education, Asus for Education, and Merdeka Mengajar Platform. In addition, the indicators of the programs participated in revealed were making learning videos, learning media, teaching strategies, learning assessment applications, and learning administration. Finally, the needles from the training outcomes are missed teachers, interactive learning, fun lessons, exciting learning, and easy-to-understand lessons. In conclusion, the insights obtained from this study can inform teachers in maximizing teacher professionalism, which requires strong motivation from within the teacher who is aware that as educators, they must continue to learn to produce interactive, fun, and exciting learning so that the students in the classroom always await their presence. Teacher professionalism can be developed through various efforts, i.e., by participating in multiple trainings and webinars using information technology, which can be done online because they can better manage their time and choose the program/content they want to study.

Keywords: *independent, information technology media, development of teacher professionalism*

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INTRODUCTION

A professional teacher is a profession that engages explicitly teachers in teaching with competence, teaching techniques, a high commitment to self-development, the ability to find problem-solving solutions for challenges and problems faced in class, a visionary personality, and a sense of responsibility towards their profession (Hanafi et al., 2019). Professional teachers must possess four mandatory competencies: pedagogical, educational, social, and personality

(Wulandari & Nurhaliza, 2023).

Teachers play a central role in education and are appointed according to existing government regulations. The professionalization process does not end with appointment; it requires continuous efforts to enhance knowledge and skills aligned with curriculum standards and technological advances. Activities to increase professionalization can be performed regarding the institutional initiatives, such as education and training, workshops, internships and comparative studies which are very important (Danim, 2011).

However, only a small percentage of Indonesian teachers participate in institutional professional development each year. For Indonesia, statistical data shows that every year only around 5 percent of teachers have the opportunity to take part in various institutionalized development programs such as upgrading or training at training institutions. This means that in around 20 years, each teacher will only have the opportunity to take part in one institutionalized professional development program, and not on their own initiative (Jawahir, 2023).

In fact, numerous teachers do not have access to participate in educational program, training, and Improvement through the institution. Facing this reality, if the teachers want to keep exist in this professional field with degree of professionalism, there is no other chance, teachers must do the professionalization by themselves. Teachers must work for improvement in order to be able to do their role and contribute significantly on enhancing the human resource quality for the benefit of developing an advanced and moral nation in accordance with the goals of education (Mustofa, 2012).

Nevertheless, the issue of realizing professional teachers in Indonesia is still faced with the problem of low teacher competence. In Indonesia, its illustration is evidenced by UKG (Teacher Competency Test) scores throughout Indonesia, which only achieved a national average score of 53.02 or below the set minimum proficiency standard of 55. Only seven provinces had achievements above UKG scores: DKI Jakarta, Bali, Bangka Belitung Islands, Yogyakarta Special Region, West Java, and East Java. The low results of teacher competency tests reflect the low professionalism of Indonesian teachers (Fadillah, 2022). Apart from that, some teachers still do not have an undergraduate/D4 qualification, and recruiting new teachers still prioritizes kinship. Hence, it undermines teacher qualifications and prevents the requirement for professional teachers (Husma et al., 2023).

The government has taken strategic steps to maximize teacher professionalism through workshops, improving teacher skills, training, and comparative studies, but the quality of education has not increased significantly (Owan et al., 2022). Obstacles in the field revealed that teachers had difficulty planning lessons, carrying out lessons, and conducting assessments. Several teachers still have difficulty making teaching modules and using technology. The times are increasingly advanced, using technology in learning (Zyuro & Komalasari, 2020).

Low teacher professionalism can affect the quality of student knowledge, with one indicator of the directly affected quality of student knowledge being student learning outcomes. Student learning outcomes can describe students' skills in class. Student proficiency is directly influenced by the quality of teacher teaching. Another impact of the low professionalism of teachers can be on learning outcomes and the quality of education. It is because one of the determining factors in improving the quality of human resources through education is the teacher's professionalism, practiced at the micro level (Jamil, 2022).

Professional development is an essential resource for improving teacher teaching skills, innovating teaching methods, and ultimately enhancing the quality of student learning outcomes (González & Skultety, 2018). On the other hand, with the rapid development of information technology, the mode of teacher professional development, learning content, learning resources, and the environment are changing (Barnes et al., 2018). Teacher professional development has changed from face-to-face to mixed mode, combining online learning and classroom teaching practice (Jonker et al., 2018). Further, online learning has penetrated the boundaries of space and time, and teachers can access online learning activities anytime and

anywhere, effectively resolving conflicts between teacher work and learning (Ching & Hursh, 2014). Establishing online professional learning communities also encourages collaboration and communication between teachers and experts (Macià & García, 2016). Despite the potential benefits of online learning, several studies have found that teachers in online professional learning communities have an unequal distribution of behavior, less interaction, and poor learning continuity (Prenger et al., 2017).

Because times are increasingly advanced, utilizing technology in learning is crucial (Zyuro & Komalasari, 2020). The increasingly advanced and rapid digital era facilitates access to information. It makes it easier for teachers to utilize information technology. Steps that can be taken to maximize teacher professionalism include utilizing information technology and media. The existence of information technology will further enhance teacher professionalism. Information technology can be used to provide training and professional development for teachers. Teachers can also access online training, seminars, and self-development programs offered by educational institutions or other organizations. Information technology can also provide remote mentoring and consultation for teachers who need additional assistance or support. In addition, information technology is consistent with the demands of science and technology-based education in the 21st century, so teachers must be proficient in using technology and utilizing information technology independently to support teacher professionalism (Hilir, 2021).

Effective use of information technology can increase teacher professionalism and be aligned with the technology adoption model (TAM). In other words, the higher the individual teacher's professionalism, the higher the effectiveness, productivity, and quality of personal service. Teachers active in various independent training programs are more innovative, use new methods, and develop preferences for teaching styles (Helate et al., 2023). In addition, the times are increasingly advanced, making using technology in the learning process vital (Zyuro & Komalasari, 2020).

Teacher participation in various independent trainings can maximize teacher professionalism. It must be done based on high curiosity, awareness of the responsibilities of a teacher, and a high level of moral obligation to the profession (Demir, 2020). To maximize teacher professionalism, it is necessary to be inclusive, adaptive, and reflective in increasing teacher involvement and accountability for their profession (Ganjali et al., 2020). Teachers with a high sense of individual responsibility for choosing independent paths in self-development can maximize their professionalism (Potolea & Toma, 2015).

Moreover, for a nation that wants to move forward, the first factor that should be of concern is increasing teacher professionalism, which shows the output of educational outcomes. Teachers are the basic foundation for improving social order. A reflection of the quality of a school's graduates will be based on the competence, seriousness, professionalism, and responsibility of teachers in carrying out their profession (Indrawan, 2019). Consequently, teacher training independently through information technology media is essential for the professional identity of teachers in carrying out their mandate in education and teaching (Martínez-de-la-Hidalga & Villardón-Gallego, 2016).

Since important and strategic factors in determining the success of the quality of education cannot be separated from the teacher's figure, his role and responsibility in realizing educational goals at the school and national scale become a reference and benchmark for low- or high-quality education. A good school can be seen in its professionalism. For this reason, teacher performance must be considered carefully because teacher professionalism determines the success or failure of a school in achieving its mission, vision, and goals. To produce the best human resources in the school environment, the presence of a teacher is needed to carry out their duties effectively. The achievement of quality education depends on teacher quality, which can be measured by teacher performance (Huistra & Paul, 2021). One indicator of the success of teaching quality in schools is increasing attention to teacher

performance.

In this case, SMP Muhammadiyah 3 Balikpapan is a good school to use as an example of teacher professionalism because it is one of the best boarding schools in Balikpapan City and has even become a national reference school, the Adiwiyata School, and an accredited A school with great grades. The students' accomplishments also show how great this school is. For example, they won first place in the 2022 National Youth Pledge Olympiad, first place in the National Student Olympiad in the Field of Social Sciences, first place in the National Storytelling Olympiad, first place in the Mathematics National Science Olympiad, and many other competitions. This school is one of the best private schools in Balikpapan City when it comes to the number of classes and students, as well as academic excellence and achievement. This school has 23 classes for the 2023–2024 school year. There are 12 classes for girls and 11 classes for boys, and there are 680 students. It shows that people have a lot of faith in the teachers at this school to follow the school's mission, vision, and goals and raise a better generation.

The researchers are interested in studying "Developing Teacher Professionalism Independently Through Utilization of Information Technology Media for SMP Muhammadiyah 3 Balikpapan Teacher" based on the statements above. This research aims to investigate how teachers at Muhammadiyah 3 Balikpapan Middle School cultivate professionalism autonomously. What challenges arise in fostering teacher professionalism autonomously? What can be done to fix this?

METHODS

This study utilized a qualitative approach employing a descriptive methodology, conducted at SMP Muhammadiyah 3 Balikpapan, located at Jl. KM 10 Pondok Pesantren Al Mujahidin Balikpapan. The data analysis followed Miles and Huberman's model, characterized by an interactive process that continued until data saturation was achieved. The main steps in this analysis included data reduction, data display, and conclusion/verification. The research focused on descriptive qualitative analysis, emphasizing textual data over numerical analysis.

Data collection involved various methods, such as interviews, documents, and recordings of interviews, processed through a systematic four-step procedure: data collection, data reduction, data presentation, and conclusion drawing based on logical reasoning. To ensure the robustness of the findings, the researchers implemented data validity triangulation. This involved source triangulation, where data were analyzed, compared, and verified across different temporal contexts and methodologies, enhancing the trustworthiness of the qualitative information gathered throughout the research process.

RESULTS AND DISCUSSION

Results

This section outlines the results of the field data collection conducted at SMP Muhammadiyah 3 Balikpapan, which included interviews and documentation. The data was collected objectively using ATLAS.ti 9 software, emphasizing a factual presentation without theoretical interpretation. The detailed discussion in subsequent sections aims to enhance understanding of how teacher professionalism is developed independently through the use of information technology media. Teacher professionalism is characterized by mastery of four competencies: pedagogical, educational, social, and emotional. Given the pivotal role teachers play in executing educational and instructional activities within the classroom, it is crucial to focus on enhancing their professionalism.



Figure 1. Research Results

Based on the findings of the research results/concept maps produced, this study has a novelty consisting of five essential components in maximizing teacher professionalism independently through the utilization of information technology media in the digital age: intrinsic motivation, extrinsic motivation, platforms followed, programs participated in, and training outcomes:

Intrinsic motivation: The indicators found in intrinsic motivation consisted of teachers having to learn and teachers as educators.

Extrinsic motivation: Indicators found from extrinsic motivation covered upgrading knowledge, growing teaching abilities, and increasing knowledge.

Platforms followed: The indicators included Literacy Platform, Extensive Reading, Smart Teacher, E-Guru ID, E-Guru Digital, Chrome Book, Canva for Education, Asus for Education, and Merdeka Mengajar Platform.

Programs participated in: Indicators found from programs followed: making learning videos, learning media, teaching strategies, learning assessment applications, and learning administration.

Training outcomes: Indicators from training outcomes: missed teachers, interactive learning, fun, engaging, and easy-to-understand lessons.

These findings are relevant to theoretical studies (Varas et al., 2023), showing that, in facing a world with increasingly rapid changes and swiftly developing technology, the education system must equip students with the skills they need to face the challenges of the times successfully. International data have shown essential differences in the way teachers used tools and resources when they taught. For this reason, professional teachers are needed to educate and teach students (Dupriez et al., 2016).

The evidence suggests that a multifaceted interplay of internal and external factors shapes teachers' ability to integrate transformative technology within educational settings. Internal factors that contribute to this integration include teachers' beliefs regarding technology's role in teaching and learning (Kanaya et al., 2005; Windschitl & Sahl, 2002), knowledge of technology (Mishra & Koehler, 2006), and self-efficacy with technology (Ertmer & Ottenbreit-Leftwich, 2010). Furthermore, access to high-quality technological resources plays a crucial role in facilitating effective technology integration. It is evident that the knowledge and expertise of teachers alone cannot ensure the implementation of transformative technologies in classrooms; adequate foundational knowledge is essential for delivering engaging and interactive teaching experiences.

Independent development of teacher professionalism enables educators to acquire new knowledge, foster creativity, engage in collaboration with colleagues, and enhance the quality of their performance. However, Muhammadiyah 3 Middle School teachers face several challenges in enhancing their professionalism, including low motivation for self-improvement, difficulties in balancing teaching responsibilities with personal development, and the demands of family obligations at home. Additionally, some teachers prefer not to work extensively with screens. Teachers have been stuck in the idea for a long time that there is no difference between those who do self-development and those who don't when it comes to bonuses, the influence of coworkers and the environment. Because of this, they don't use their time well or make the most of different online platforms to improve their skills.

The study concludes by underscoring the vital connection between fostering teacher professionalism and achieving educational success within the classroom. This integration is instrumental in fulfilling the overarching objectives of schools, namely producing qualified graduates who can positively contribute to society and the nation.

Discussion

The researchers offer a thorough analysis in the discussion, connecting each category to multiple theoretical sources to reinforce the research findings.

Intrinsic motivation

The main and most important motivation is the teacher's strong desire to be as professional as possible in their teaching. A strong understanding that teachers need to keep learning is what drives them. The results of this study align with prior research, indicating that to retain qualified teachers in the profession and ensure exemplary performance, educators must possess high levels of motivation and commitment to their vocation. So, teachers need both intrinsic and extrinsic motivation, which are important in research because they are thought to be things that make teachers more professional at work if they are used to make the work better. Motivation is also seen as a psychological characteristic that will help people increase their level of commitment and act as a driving force for the need and desire to achieve something (Nain & Shukri, 2002).

Several studies have explored motivations for participating in various types of training on digital platforms (Lampe et al., 2010; Nov et al., 2010; Sun et al., 2012). Motivational factors can generally be grouped into extrinsic, intrinsic, and societal factors (Wang et al., 2019).

Extrinsic motivation

Motivation that comes from outside the teacher is another way to encourage teachers to be as professional as possible. These findings are relevant to theoretical studies (Varas et al., 2023), indicating that in a world characterized by swift changes and rapidly advancing technology, the education system must prepare students with the requisite skills to effectively confront contemporary challenges. International data also reveal significant differences in how teachers use tools and resources when teaching. For this reason, professional teachers are needed to educate and teach students (Dupriez et al., 2016). It is possible if the teacher is highly motivated both internally and externally.

Platform followed

A lot of access can be a place for teachers to improve their professionalism. Some teachers like to do training online instead of in person. Teachers can better manage their time, adapt to the school's teaching schedule, and choose which content or programs they want to take part in when they train online. These can later become the teacher's achievements.

A digital platform is a digital learning platform where students develop commitment and professional engagement to interact with peers through chat rooms, email lists, postings, or other online synchronous/asynchronous two-way communication (Leask & Younie, 2001). This active learning environment provides opportunities to exchange knowledge, reflect on their practice, share resources, and find emotional support and guidance (Duncan-Howell, 2010; Macià & García, 2016).

It has been demonstrated that all available platforms as learning communities promote social interaction to enhance pedagogical understanding and other types of professional knowledge, including content-specific knowledge and the exploration of new technologies pertinent to teachers' needs (Lantz-Andersson et al., 2018).

Programs participated

Experience alone may not be enough to teach teachers how to teach well, including how to use different teaching methods, strategies, techniques, and communication skills in the classroom. Teachers need to learn more and understand more so that they can make their lessons more interesting and fun for their students. It needs to be worked on all the time and made as accessible as possible through a wide range of digital programs, both free and paid.

In general, I make, edit, review, or use teaching materials. More and more platforms support teacher professionalism and try to meet the needs of both individual and group teachers in different fields, like learning design (Maina et al., 2013), learning designers (Laurillard et al., 2018), and an integrated learning design environment, or ILDE (Hernández-Leo et al., 2018). Other platforms focusing on specific instructional design methodologies include inquiry-based learning (Rodríguez-Triana et al., 2020).

The findings of this study support the assertion (Chua & Jamil, 2012) that the application and integration of technology in the digital era are necessary for the teaching and learning process, which demands teacher professionalism. Teachers must be skilled in using information technology to make the most of their time in the classroom.

Training outcomes

These are the things that teachers can learn from their work in different online and offline training programs. These results can lead to more teachers who are absent and learning that is more interactive, fun, interesting, and easy to understand.

The findings of this study confirm earlier research (Clarke & Hollingsworth, 2002), which stated that professional knowledge is the knowledge required to perform specific types of work. Teachers, like people in other jobs, need to be professional when they do their jobs. So, teachers

need a range of skills, like teaching, learning, social, and personality skills. Also, these four skills need to be pushed to their limits and improved.

Additionally, the importance of teaching professionalism is always on the rise because science needs teachers who are mentally, emotionally, and physically ready. The quality of the teacher is also very important for good teaching. To create professional teachers, the standards of the teaching profession must be raised in the right way. In this case, teachers are an essential and critical target group for taking on this challenge (Noordin, 2003). It also shows that the teacher is the only thing that can help make education great. So, teachers need to be responsible for teaching students, and they need to be good at all kinds of skills, like how to talk to people, how to control a classroom, how to teach, and how to use communication skills well. Moreover, good teaching techniques can attract students' attention to teaching and learning (Mohn, 2002).

Teacher professional development comes from more than just government-run programs. What matters more is that teachers are personally and independently committed to improving their professional skills, not just doing a few activities here and there. Teacher professional development must be ongoing and perpetual for the duration of the teacher's career.

Teachers are the ones who make sure that education happens at the school level. The better the teachers, the better the students will be. Teachers need to always work on improving their skills so they can do their main job as teachers better. When teachers do not have the same chances at a school, they must be self-motivated and take the lead in their own development. There are a lot of online platforms that the government offers right now, like the *Merdeka Mengajar* Platform. Teachers can change their class schedule to fit their training or webinar schedule. In addition to government-run platforms, there are also paid digital platforms that teachers can use as examples to become more professional.

Some teachers at Muhammadiyah Middle School 3 Balikpapan try to use digital platforms, both free and paid, as a way to improve their skills as professionals. Some of the indicators are Literacy Platform, Extensive Reading, Smart Teacher, E-Guru ID, E-Guru Digital, Chrome Book, Canva for Education, Asus for Education, and *Merdeka Mengajar* Platform. Some teachers still can't use these platforms, though, because they don't have enough time, aren't motivated to improve their teaching quality because they don't have to like lecturers, aren't given enough motivation by their leaders, and aren't given enough pressure by PGRI as a professional organization to improve their professionalism.

CONCLUSION

The research indicates that teachers at SMP Muhammadiyah 3 Balikpapan can enhance their professionalism autonomously through the utilization of information technology media in the digital era. The research findings elucidate essential indicators that enhance teachers' professionalism in the digital era of information technology, specifically intrinsic and extrinsic motivation. Not all teachers are aware of their profession. Teachers need to be motivated to keep improving their professionalism, and principals need to encourage and motivate teachers to keep learning. Schools also need to plan seminars, workshops, and IHT for teachers together. On the other hand, PGRI and MGMP, as professional teacher organizations, should be able to put pressure on their members to improve their professionalism in doing their jobs.

The study also found that there are a lot of free and paid digital platforms available from both the public and private sectors. So, teachers can get to them and join them to improve their professionalism in the classroom.

Furthermore, teachers cannot acquire proficiency in their profession solely through experience; it necessitates engagement in diverse training programs to enhance knowledge, insights, and skills, thereby elevating their professionalism. The results also show how determined the teachers are. Motivation serves as the foundation for educators to intentionally and autonomously employ information technology to enhance their professionalism. This study

underscores the necessity for educators to strive for the enhancement of their professionalism in teaching. Teachers who actively use information technology media in their training have greater diversity of teaching styles, strategies, and techniques.

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