Received: October 2023 Accepted: December 2023 DOI: https://doi.org/10.58262/ks.v12i1.077

Exploring Factors Affecting Teachers' Readiness to Adopt the Merdeka Belajar Model in the Contextof Teacher Development Planning

Viktory N.J. Rotty¹*, Rinny M. Tinangon²

Abstract

Technological advances have a major influence on the world of education. One of them is the application of e-learning, which previously the learning process in Indonesia was carried out face-to-face. But in reality, e-learning and face-to-face learning have some weaknesses. As a response, the concept of independent learning has gained traction as an alternative pedagogical approach, aiming to address the shortcomings of these established models. The purpose of this study was to determine the readiness of teachers in implementing the independent learning model. Employing a quantitative approach, the study utilizes the E-Learning Readiness (ELR) model, leveraging a comprehensive questionnaire. By applying advanced data analysis techniques through the SmartPLS software, the study was conducted within high schools situated in Bitung city. The findings reveal a favorable inclination among teachers towards embracing independent learning methodologies. Nonetheless, the analysis identifies a specific area that necessitates attention and enhancement namely, the aspect of self-development. In essence, this study sheds light on the evolving educational landscape, underlining the significance of independent learning as a prospective solution. The research underscores the readiness of educators to embrace this model, albeit with a call for targeted improvements, notably in the realm of self-development.

Keywords: Development, Learning Process, Planning, Professional, Teacher.

Introduction

Teachers play an important role in the education system. They help students to understand the material and form positive attitudes and values. Therefore, teachers must have good competencies and skills to perform their duties well. Teacher development planning is a process that helps teachers to improve their competencies and acquire new skills in performing their duties. Teacher development planning involves identifying needs, setting goals and objectives, selecting programs and activities, considering resources, and evaluating and measuring results (Saidah & Imron, 2022). It helps teachers to meet professional standards and provide quality learning for students. Thus, teacher development planning should be conducted regularly and continuously to ensure that teachers have the necessary skills to provide quality learning for students (Evans, 2002).

In Indonesia, there are several issues that hinder effective teacher development planning. Some of these are: Lack of financial support: In some cases, the government does not provide enough financial support to conduct effective teacher development planning. This makes it difficult for some schools to provide quality teacher development programs and activities. Lack of teacher participation: Some teachers are not interested in participating in teacher development planning programs because they feel they don't have enough time or lack support from the school or government (Merliza, 2022). Lack of evaluation and measurement of results: Some teacher development planning programs are not regularly evaluated

¹ Universitas Negeri Manado, Indonesia. Email: viktoryrotty@unima.ac.id

² Universitas Negeri Manado, Indonesia. Email: tinangon.rinny@yahoo.co.id

and measured. This makes it difficult to know how effective the program is in improving teachers' competencies. Lack of professional standards: In Indonesia, there are no clear professional standards for teachers. This makes it difficult to determine the goals and objectives of teacher development planning. Limited resources: Some schools have limited resources, such as facilities, teaching materials and technological devices. This makes it difficult to conduct effective teacher development planning. To ensure effective teacher development planning, these problems must be given appropriate solutions and appropriate actions taken to solve the problems (Syafitri et al., 2021).

Merdeka Belajar Program is a program that provides learning assistance for underprivileged students in Indonesia. However, although this program aims to improve education, there are several problems that hinder teacher development planning in this program. Some of them are: Lack of government support: Some local governments do not provide sufficient support to conduct effective teacher development planning. This makes *Merdeka Belajar* program less effective. Lack of resources: Resources such as facilities, equipment, and teaching materials needed for teacher development planning programs in *Merdeka Belajar* program are often inadequate (Kustini, 2022). Lack of teacher participation: Some teachers are not interested in participating in teacher development planning programs because they feel they lack time or lack support from the school or government. Lack of evaluation and measurement of results: Some teacher development planning programs in *Merdeka Belajar* program do not carry out regular evaluation and measurement of results (Hidayati et al., 2022). This makes it difficult to know how effective the program is in improving teacher competence. To ensure effective teacher development planning in *Merdeka Belajar* program, these problems must be given appropriate solutions and appropriate actions must be taken to solve the problem.

Based on the studies that have been conducted, several solutions have been found to solve the problem of teacher development planning in the *Merdeka Belajar* program in Indonesia. Some of them are: Government support: The government must provide sufficient support and prioritize the teacher development planning program in *Merdeka Belajar* program (Falloon, 2020). Increased resources: Resources such as facilities, equipment, and teaching materials must be increased to ensure effective teacher development planning (Stronge, 2007). Teacher participation: Teachers should be incentivized and supported to participate in teacher development planning programs (Voogt et al., 2016). Evaluation and outcome measurement: Teacher development planning programs should be evaluated and measured regularly to ensure they are effective in improving teachers' competencies (Handelzalts, 2019; Voogt et al., 2016). Teacher quality through continuous training and coaching (Elbaz, 2018). Cooperation with schools and educational institutions: The government and schools must work together to ensure the quality of the teacher development planning program in *Merdeka Belajar* program. By paying attention to these solutions, it is hoped that teacher development planning in *Merdeka Belajar* program will be more effective and achieve its goals of improving education in Indonesia.

Although much research has been done on teacher development planning in Indonesia, there are still some research gaps that need to be focused on. Some of these are: Lack of data and information: There is a lack of data and information on the situation and condition of teachers in Indonesia, making it difficult to conduct effective teacher development planning (R. Richards et al., 2018). Lack of effective evaluation: Several studies show that evaluations of teacher development planning have not been conducted effectively, making it difficult to determine the success of the program. Focus on quantity rather than quality: Many teacher development planning programs only focus on the number of teachers who participate in the program without paying attention to the quality and effectiveness of the program. Lack of support and incentives for teachers: Some teachers feel that they do not receive enough support and incentives in participating in teacher development planning programs, which reduces their

motivation (Darling-Hammond, 2017). Ineffective collaboration: Some research suggests that cooperation between the government, schools and education institutions is ineffective, affecting the success of teacher development planning programs. With these research gaps in mind, it is hoped that future studies will focus on these issues and come up with solutions that are more effective and beneficial for teacher development planning in Indonesia.

Teacher development planning is important in improving the quality of education in Indonesia. Therefore, several studies have been conducted to address the problems faced in this regard. Teacher Development Planning Models: Several studies have developed teacher development planning models that suit the situation and conditions of teachers in Indonesia. These models cover aspects such as motivation, support, incentives and training (Mathew et al., 2017). Case Studies: Research was also conducted by conducting case studies of existing teacher development planning programs. These case studies include analyzing the situation and conditions of teachers, evaluating the program, and identifying the problems faced (Gibbons & Cobb, 2017). Surveys: Some studies also use surveys to collect data and information on the situation and condition of teachers. These surveys cover aspects such as motivation, support, incentives and training (Dolev & Leshem, 2017). Collaboration: Some studies also cooperate with governments, schools, and educational institutions to address teacher development planning issues. This cooperation includes aspects such as support, incentives and training. System analysis: Some studies also conducted a systems analysis to identify problems in teacher development planning. This analysis covers aspects such as regulations, procedures and socio-culture. From these studies, it can be seen that teacher development planning in Indonesia still faces several problems that require better solutions and efforts. Therefore, further research is needed to address these issues.

Novelty in research on teacher development planning in Indonesia is an important part of distinguishing between this research and other research that has been done before. Novelty can take the form of new approaches, different research results, or innovative solutions to problems encountered in teacher development planning. Novelty that can be found in research on teacher development planning in Indonesia is as follows: Novel Approaches: Research that uses a new approach, such as a systems approach or a participatory approach, can be said to have high novelty. Different Results: Research that produces findings that are different from previous research, such as finding new factors that influence teacher development planning, is highly novel. Innovative Solutions: Research that offers new and innovative solutions to teacher development planning problems, such as integrating technology in teacher development planning, has high novelty. Thus, it is important to find the right novelty in research on teacher development planning in Indonesia so that the research has added value and is different from other studies. The purpose of this study is to determine the readiness of teachers in implementing the independent learning model.

Research Methods

This research employed a quantitative approach, as it utilized data collected in numerical values that were processed using statistical methods. The research technique utilized in this study was a survey, specifically a quantitative approach based on the E-Learning Readiness (ELR) model, employing a questionnaire.

For this study, the researcher developed items based on the literature regarding the development of DITI. The item composition drew from several commonly used scales, including the Likert Scale. The scale employed to measure teacher development supports the independent learning model and is scored using a five-point Likert scale. The items to measure the construct were adapted to align with the operational definition of resilience in this study, which refers to teachers' ability to effectively manage themselves in the face of various situations and unfavorable circumstances within the school context. The questionnaire underwent refinement to enhance content validity and reliability, involving testing on 163 school teachers.

The study's sample comprised 163 senior high school teachers in Bitung City. Data collection for this study involved administering a survey questionnaire to senior high school teachers in Bitung City. A total of 242 questionnaires were distributed to respondents; however, only 380 were successfully retrieved and deemed valid for analysis.

Upon data collection, processing and analysis became necessary. The data analysis technique employed in this study was descriptive statistical analysis, utilizing SmartPLS software based on Partial Least Squares Structural Equation Modeling (PLS-SEM), which was executed using a computer. After data collection, analysis was conducted using the Aydin & Tasci ELR model. The assessment sheet employed scores of 5, 4, 3, 2, and 1 for each question. Following respondent completion of the assessment sheet, total scores were computed. The average score for each statement, the average score for statements within the same factor, and the overall average score for all questions were calculated based on the readiness measurement scale of the Aydin & Tasci ELR model, employing a four-category rating scale format.

Research Findings

Instrument Reliability

Reliability testing serves as a tool to assess the dependability of an instrument or questionnaire, determining its suitability for yielding credible research outcomes. A variable is considered reliable if the composite reliability value exceeds 0.7 [59]. Based on the outcomes of the aforementioned reliability testing, it is evident that all variables examined within this study can be deemed trustworthy, as they exhibit composite reliability values > 0.7.

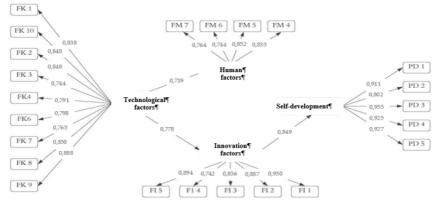
Variable	Composite Reability	R Square
Human	0.876	-
Technology	0.949	0.517
Innovation	0.936	0.606
Self-Development	0.966	0.722

Table 1: Reliability Test Result.

The assessment of the structural model employing the R-squared value (R2) aims to elucidate the influence of a latent variable, along with its corresponding indicators, on other latent variables encompassing distinct indicators (Ghozali, 2011). The derived R-squared values indicate that the technology variable demonstrates an R-squared value of 0.517, innovation exhibits an R-squared value of 0.606, and the self-development variable showcases an R-squared value of 0.722.

Confirmatory Factor Analysis

Figure 1: Confirmatory Factor Analysis Result.



The subsequent phase of the validity assessment involved the incorporation of the 23 items, distributed across the three dimensions identified in the preceding Exploratory Factor Analysis (EFA), to substantiate the structure of the measurement model. Confirmatory Factor Analysis (CFA) not only showcases the item loadings for the constructs within teacher development but also facilitates an evaluation of the instrument's composite reliability, discriminant validity, and convergent validity (Hair Jr et al., 2021; Henseler et al., 2009). Figure 1 illustrates the outcomes of the CFA, revealing robust loading values for all dimensions onto the resilience construct, as well as substantial loadings for all items onto the sub-constructs, ranging from 0.719 to 0.950. These findings substantiate convergent validity; simultaneously, with loading values exceeding 0.70, discriminant validity is also affirmed. Items FM 1, FM 2, FM 3, FM 8, and FT 5 were excluded from the analysis due to inadequate loadings (0.40). Figure 1 succinctly summarizes the final items that adhere to the teacher resilience factor structure, based on data gleaned from teachers in Bitung City.

Variable	Indicator	Item
Human	Online learning model experience	I master online learning techniques (FM 4)
		I prefer online meetings (FM 5)
		I like online learning (FM 6)
	Information Technology/online interaction experience	I had a pleasant experience during online (FM 7)
	Ability to use Information Technology	I am able to operate a computer well (FT 1)
	Ability to use the internet	I can utilize the internet well (FT 2)
	Positive attitude towards the use of technology	I utilize information technology in teaching (FT 3)
		I utilize information technology in teaching (FT 3)
		I utilize information technology in teaching (FT 3)
		The use of information technology can improve my
		performance in the learning process (FT 4)
Technology	Infrastructure	The speed of internet access at school supports the
recimology		independent learning model (FT 6)
		The speed of internet access at home supports the independent learning model (FT 7)
	Ability to understand independent learning	Overall, I understand the independent learning model (FT 8)
		I am able to apply the independent learning technique in the
		learning process (FT 9)
		Student learning outcomes improve using the independent learning model (FT 10)
Innovation	Innovation to embrace renewal	I can make learning media based on Information Technology (FI 1)

Table 2: Final Item List Based on CFA.

Kurdish Studies

		I like independent learning (FI 2)
	Openness to innovation	I use IT-based learning media in offline learning (FI 3)
		I use Information Technology-based learning media in online
		learning (FI 4)
	Ability to adapt to change/innovation	I can adapt easily to changes/innovations in learning independence policies (FI 5)
Self-development	Teacher self-development	I am ready to apply the independent learning model (PD 1)
	Confidence in self-development	The learning independence model encourages me to make more effective lesson plans (PD 2)
		I am motivated to prepare myself for learning the learning independence model (PD 3)
		I take the time to learn the learning independence model (PD 4)
	Ability to manage time	Learning independent learning makes me able to manage my time well (PD 5)

Theoretically, it is understood that human resources encompass individuals within an organization who contribute their thoughts and engage in various types of work to accomplish organizational goals (García-Peñalvo, 2021). This contribution pertains to the ideas and efforts they invest in diverse activities within the company. Concerning human resources, the scope includes not only experts, educational personnel, or experienced staff, but also encompasses the entire workforce utilized to achieve the organization's objectives (Mulang, 2021).

The depiction of humans as resources underscores their unique and intricate nature. Within a corporate environment, it is imperative to ensure they experience a high quality of work life, fostering effective, efficient, productive, and high-quality performance. This encompasses offering opportunities for career development, equitable conflict resolution procedures, honest and objective supervision, fair remuneration, and other considerations.

Education and training constitute an inseparable continuum within the human resource development system, encompassing processes of planning, placement, and human resource advancement. In this developmental journey, concerted efforts are made to empower human resources optimally, aligning with the overarching aim of fulfilling human life needs. Distinguishing between education and training is not straightforward, as both involve learning activities that convey knowledge and skills from the source to the recipient. Nonetheless, their divergence becomes apparent in the objectives pursued through these endeavors.

Digital technologies in the classroom hold the potential to enhance learning through novel representations, actions, and pedagogies (Ball et al., 2018; Hegedus et al., 2017). Nevertheless, despite significant strides in the evolution of instructional concepts and theoretical perspectives, the utilization of digital technologies in educational settings remains limited and often fails to fully harness the potential indicated by research and policy (Bretscher, 2014; Drijvers et al., 2018). In addition to factors like school culture, departmental support, curriculum design, and national policies, it has become evident that the pivotal factor is the teacher, who must systematically orchestrate technology use and oversee diverse creative processes within the classroom (Drijvers et al., 2018; Hegedus et al., 2017).

Recognizing this, it is acknowledged that educators need specific competencies to effectively integrate digital tools. For instance, the "pedagogical technological knowledge" framework (Thomas & Palmer, 2014) emphasizes that teachers must possess not only specialized technological implementation skills but also underlying beliefs that significantly shape, guide, and influence situations, actions, and intentions (Fives & Buehl, 2012; Thomas & Palmer, 2014).

Professional development initiatives that directly target teacher competencies are deemed crucial for fostering www.KurdishStudies.net the growth of knowledge, beliefs, and practices (Clark-Wilson et al., 2014; Hegedus et al., 2017; Sztajn et al., 2017). While the need for professional development programs extends beyond basic technology usage instruction, there remains limited understanding regarding the efficacy of technology-focused professional development programs, particularly for mathematics educators (Drijvers et al., 2018; Grugeon et al., 2010; Hegedus et al., 2017). Previous research on professional development programs aimed at technology-integrated teaching has often taken a qualitative approach or focused on the evolution of teachers' practices during participation in such programs (Clark-Wilson & Hoyles, 2019).

Learning innovation holds significant importance for both current and aspiring educators, guiding them towards becoming adept at utilizing the latest educational technologies. This capacity for learning innovation should be cultivated as a fundamental skill for both pre-service and in-service teachers, enabling them to tailor their instructional approaches to match the developmental levels of their students. Diverse innovations have been introduced in the realm of education. Generally, these innovations are aimed at enhancing the effectiveness and efficiency of learning processes, facilitating easier access to learning resources that transcend spatial and temporal constraints, motivating active student engagement to enhance learning outcomes, and leaving a lasting impression on students (Purba et al., 2019; Situmorang et al., 2022).

Information technology has predominantly shaped learning innovation, encompassing the utilization of media and multimedia, e-learning platforms, self-directed learning, and other modalities based on available software tools that aid students in their learning journey (Abdulrahaman et al., 2020; Alammary, 2019; Purba et al., 2019; Regmi & Jones, 2020; Situmorang et al., 2022). The effectiveness of these learning innovations has been empirically demonstrated in equipping students with the desired competencies (Alammary, 2019; Phillips et al., 2013; Situmorang et al., 2018). Thus, the application of these learning innovations is highly suitable for enhancing the competence of both prospective and practicing educators.

Collaborative programs within secondary education institutions have evolved into indispensable elements, serving as bridges between schools and their stakeholder partners to advance institutional progress and productivity (Anwar et al., 2021; Zhou et al., 2016). Such collaborations are mutually advantageous, established to promote shared interests and necessitating strategies that align the goals of each institution with collective objectives (Hillerbrand & Werker, 2019). Effective collaboration stands as a pivotal factor in generating innovative outcomes, and collaborative endeavors have shown remarkable efficacy in enhancing the overall quality of education, including teacher development (Sorensen et al., 2014). Factors such as external influences, partnerships, institutional excellence, community relationships, and a commitment to service significantly influence the success of collaborative efforts. Sustaining these factors is imperative to optimize the achievement of set goals.

The collaboration program forged between schools and local governments has demonstrated remarkable efficacy in enhancing teacher competencies through professional education initiatives. Survey findings indicate a high level of satisfaction among collaboration partners with the services rendered during the implementation of professional education efforts. Local governments have reported that educators who returned to teach in schools displayed notable improvements in their command of subject matter and classroom teaching strategies. This revitalization of knowledge has effectively inspired these teachers to serve as exemplary professionals within the educational setting, fostering positive interactions among their peers. This dynamic has facilitated the transfer of knowledge and pedagogical experiences across educators (Bahous et al., 2016).

The presence of accomplished educators has generated a positive influence on the overall school environment, encompassing both teaching and learning activities as well as school management practices

(Banjarnahor et al., 2018). The autonomy vested in local governments to select teachers for professional education endeavors has proven instrumental in equitably distributing skilled educators across various regions without disrupting the academic processes within schools. Schools are entrusted solely with the task of educating teachers, without the added responsibility of student selection.

Evaluation of the collaboration's implementation has been systematically undertaken to ensure the realization of improved educational quality in alignment with the collaboration program's objectives (Shernoff et al., 2017). Collaborative partners, including administrators, have provided highly favorable assessments of the professional teacher education initiatives executed within schools. These partners have exerted diligent efforts in delivering top-notch services to bolster collaboration activities, effectively translating the articulated goals within the collaboration agreement into tangible achievements. The provision of capable human resources and well-equipped school facilities has optimized the implementation of these activities.

Sustained collaboration is anticipated in the future, aiming to empower all educators with the requisite knowledge and skills for effective teaching and learning in the classroom. This ongoing partnership seeks to facilitate the holistic development of teachers, enabling them to serve students within the classroom with competence and dedication.

A literature review analyzing innovative approaches to teacher development planning and their implementation in Indonesia might yield the following information: The definition and concept of innovative approaches in teacher development planning, which includes new methodologies and strategies to improve the quality of teachers and their professionalism. The advantages and benefits of innovative approaches, such as facilitating more effective and efficient learning, improving digital skills and facilitating teachers' career development. Case studies of the implementation of innovative approaches in several countries, including Indonesia, showing the success rate and challenges faced. Analysis of factors affecting the implementation of innovative approaches, such as policymaker support, resources, and resistance from teachers (Van der Klink et al., 2017). Recommendations for improving the implementation of innovative approaches in Indonesia include increasing support and participation from policy makers, strengthening technological infrastructure, and addressing other barriers that may be encountered. This literature review can provide useful insights and perspectives for policymakers, education authorities and other stakeholders with an interest in teacher development in Indonesia. The definition and concept of teacher development planning, which includes efforts to improve the quality and professionalism of teachers through training and career development. An overview of the teacher development planning system in Indonesia, including the regulations, procedures and programs available (Kraft & Gilmour, 2016). Case studies of the implementation of teacher development planning in several regions in Indonesia, showing the success rates and challenges faced. Analysis of the factors that influence the effectiveness of teacher development planning, such as policymaker support, resources and teacher participation. Recommendations for improving the effectiveness of teacher development planning in Indonesia, such as increasing support and participation from policy makers, strengthening technology infrastructure, and addressing other barriers that may be encountered (Sedova et al., 2016). This literature review can provide useful insights and insights for policymakers, education authorities, and other stakeholders with an interest in teacher development in Indonesia.

Some innovative approaches to teacher development planning in Indonesia include: Merdeka Belajar. Combining online and face-to-face learning to provide flexibility and accessibility for teachers in participating in development programs. Merdeka Belajar is a learning approach that combines online and face-to-face learning to provide flexibility and accessibility for teachers. In the context of teacher development in Indonesia, Merdeka Belajar can be used to provide opportunities for teachers to follow www.KurdishStudies.net development programs efficiently and effectively, despite their busy schedules. *Merdeka Belajar* can also increase the effectiveness of teacher development by utilizing technology and digital media to provide learning materials, assignments, and evaluations online, thus making learning more interactive and enjoyable (Rinke et al., 2016). In Indonesia, *Merdeka Belajar* has been widely applied in teacher development programs, both by the government and private institutions. This shows that *Merdeka Belajar* is considered as one of the innovative approaches in teacher development planning in Indonesia.

Collaborative learning: Developing a development program based on cooperation and discussion among teachers to build professional skills and better understanding. Collaborative learning is an approach to learning that is based on cooperation and discussion between teachers (Voogt et al., 2016). In the context of teacher development in Indonesia, collaboration-based learning can help improve teachers' professional skills and better understanding. By collaborating, teachers can share experiences and knowledge, solve problems together and build innovative solutions. Collaborative learning can also help teachers to learn from each other and build a solid community of shared goals (Datnow & Hubbard, 2016). Collaborative learning can be face-to-face or online, and can use various tools such as online discussions, forums and discussion groups. In Indonesia's teacher development planning, collaborative learning can be an innovative approach that helps improve the quality of learning and overall teacher quality.

Case-based approach: Using real cases and situations as the basis for building practical skills and solutions to problems faced by teachers. A case-based approach is a learning approach that uses real cases and situations as the basis for building practical skills and solutions to problems faced by teachers. In the context of teacher development in Indonesia, a case-based approach can help improve the quality of learning and prepare teachers to address complex and challenging situations in the classroom. By using a case-based approach, teachers can learn from real situations and build practical problem-solving skills. This approach can also help teachers to think critically and solve problems creatively (Girvan et al., 2016). The case-based approach can be done through group discussions, individual assignments. Case-based approach is a learning approach that uses real cases and situations as the basis for building practical skills and solutions to problems encountered (Darrow, 2016). In the context of teacher development in Indonesia, a case-based approach can help teachers understand concepts and theories in a more contextualized way and help them solve problems they face in learning. With a case-based approach, teachers can apply the knowledge and skills they learn to relevant situations, thus helping them understand how concepts and theories can be used in real situations. The case-based approach can be done with various methods, such as group discussions, role-playing and simulations. In Indonesia's teacher development planning, the case-based approach can be an innovative approach that helps improve the quality of learning and strengthen teachers' skills (Whitworth & Chiu, 2015).

Technology-based approach: Integrating technology and tools in the development program to help teachers understand and apply technology in learning. A technology-based approach is a learning approach that utilizes technology and digital media to improve the effectiveness and efficiency of learning (Hasselbring et al., 2000). In the context of teacher development in Indonesia, a technology-based approach can help teachers to improve their skills in using technology and digital media as tools in learning. By utilizing technology and digital media, teachers can provide more interactive and enjoyable learning materials for students, make assignments and evaluations easier, and help overcome geographical and time barriers to learning (Jacob & McGovern, 2015). Technology- based approaches can include the use of various tools such as learning software, mobile applications, and virtual reality. In Indonesia's teacher development planning, technology- based approaches can be an innovative approach that helps improve the effectiveness and efficiency of learning and prepares teachers to utilize technology and digital media in learning (Althauser, 2015).

Holistic approach: Combining various aspects of teacher development, such as competency, professional, and personal aspects, to improve the quality of learning and overall teacher quality (Niemi, 2015). A holistic approach is a learning approach that emphasizes the balance between physical, mental, emotional, and spiritual aspects of learning (Cordingley et al., 2015). In the context of teacher development in Indonesia, the holistic approach can help teachers to understand their role as learning facilitators who pay attention to the overall needs of students. With a holistic approach, teachers can help students to develop skills and capacities as balanced and harmonious individuals, helping them to learn and develop optimally (Tam, 2015). A holistic approach can include the use of various methods, such as outdoor learning, meditation, and physical activities. In Indonesia's teacher development planning, the holistic approach can be an innovative approach that helps improve the quality of learning and strengthen teachers' overall well-being and balance.

Teacher Development Planning is a process that helps teachers to improve their competencies and acquire new skills needed to perform their duties better. It also helps teachers to improve the quality of student learning and meet professional standards (Patton et al., 2015). Here are some things to consider in teacher development planning: Identifying Needs: The first step in teacher development planning is to identify needs. This can be done through performance evaluations, surveys or interviews with teachers, and data analysis (Lai & Cheung, 2015). Goals and Objectives: Once the needs are identified, the next step is to set goals and objectives for teacher development. Goals should be specific, measurable, and in line with professional standards. Selection of Programs and Activities: The selection of teacher development programs and activities should be based on the set goals and objectives. This should include training, workshops, courses, and other activities that help teachers to acquire new skills (Hoffman et al., 2015). Resources: Teacher development planning should take into account available resources, such as time, money and human resources. It should ensure that teacher development programs and activities can be implemented properly. Evaluation and Measurement of Results: The final step is to evaluate and measure the results of teacher development (Darling-Hammond et al., 2011). This helps to determine whether goals and objectives are achieved and evaluate the effectiveness of teacher development programs and activities.

Teacher development planning is a process that helps determine the actions needed to improve the quality of education through enhancing teachers' skills and competencies. In this planning, various factors such as goals, resources and outcomes must be considered to ensure that the actions taken are effective and efficient. Some actions that can be taken in teacher development planning to improve the quality of education in Indonesia include: Training and continuing education: Ensuring that teachers have the necessary skills and knowledge to meet the demands of the times and ensuring that they stay up-to-date with the latest developments in education. Use of technology and digital media: Encouraging teachers to utilize technology and digital media in learning as tools to improve learning effectiveness and efficiency. Collaboration and cooperation: Encourage teachers to work together and share experiences and knowledge to ensure more effective and efficient learning. Evaluation and feedback: Ensure that learning outcomes and teacher actions are regularly evaluated and given feedback to ensure continuity and improvement.

Teacher development planning must be designed and implemented effectively and efficiently to ensure that the quality of education continues to improve (Evans, 2002). This planning should involve various parties, such as teachers, government and communities, to ensure that all needs and challenges in education are covered and addressed. Teacher development planning is an important part of efforts to improve education quality. It helps teachers to improve their competencies and skills, which will help

students to learn better (Stiggins & Bridgeford, 1985). Therefore, teacher development planning should be conducted regularly and continuously to ensure that teachers have the necessary skills to meet professional standards and provide quality learning for students.

Conclusion

This study can conclude that teacher development planning is important and greatly influences the quality of education. It must consider factors such as goals, resources and outcomes to ensure that the actions taken are effective and efficient. Some actions that can be taken in teacher development planning include training and continuing education, use of technology and digital media, collaboration and cooperation, and evaluation and feedback. Teacher development planning should be conducted regularly and involve various parties to ensure that the quality of education continues to improve. Therefore, the government and the community should prioritize this planning as part of their efforts to improve the quality of education in Indonesia.

References

- Abdulrahaman, M. D., Faruk, N., Oloyede, A. A., Surajudeen-Bakinde, N. T., Olawoyin, L. A., Mejabi, O. V, Imam-Fulani, Y. O., Fahm, A. O., & Azeez, A. L. (2020). Multimedia tools in the teaching and learning processes: A systematic review. Heliyon, 6(11), e05312. https://doi.org/10.1016/j.heliyon.2020.e05312
- Alammary, A. (2019). Blended learning models for introductory programming courses: A systematic review. PloS One, 14(9), e0221765.
- Althauser, K. (2015). Job-embedded professional development: its impact on teacher self-efficacy and student performance. Teacher Development, 19(2). https://doi.org/10.1080/13664530.2015.1011346
- Anwar, K., Asari, S., Husniah, R., & Asmara, C. H. (2021). Students' Perceptions of Collaborative Team Teaching and Student Achievement Motivation. International Journal of Instruction, 14(1), 325–344.
- Bahous, R., Busher, H., & Nabhani, M. (2016). Teachers' views of professional learning and collaboration in four urban Lebanese primary schools. Teacher Development, 20(2), 197–212.
- Ball, L., Drijvers, P., Ladel, S., Siller, H. S., Tabach, M., & Vale, C. (2018). Uses of technology in primary and secondary mathematics education. Springer.
- Banjarnahor, H., Hutabarat, W., Sibuea, A. M., & Situmorang, M. (2018). Job Satisfaction as a Mediator between Directive and Participatory Leadership Styles toward Organizational Commitment. International Journal of Instruction, 11(4), 869–888.
- Bretscher, N. (2014). Exploring the quantitative and qualitative gap between expectation and implementation: A survey of English mathematics teachers' uses of ICT. The Mathematics Teacher in the Digital Era: An International Perspective on Technology Focused Professional Development, 43–70.
- Clark-Wilson, A., & Hoyles, C. (2019). From curriculum design to enactment in technology enhanced mathematics instruction—Mind the gap! International Journal of Educational Research, 94, 66–76.
- Clark-Wilson, A., Robutti, O., & Sinclair, N. (2014). The mathematics teacher in the digital era. AMC, 10, 12.
- Cordingley, P., Higgins, S., Greany, T., Buckler, N., Coles-Jordan, D., Crisp, B., Saunders, L., & Coe, R. (2015). Developing great teaching: lessons from the international reviews into effective professional development. In Teacher Development Trust.
- Darling-Hammond, L. (2017). Teacher education around the world: What can we learn from international practice? European Journal of Teacher Education, 40(3).

https://doi.org/10.1080/02619768.2017.1315399

- Darling-Hammond, L., Amrein-Beardsley, A., Haertel, E. H., Rothstein, J., Education, N. A. of, & (AERA), A. E. R. A. (2011). Getting Teacher Evaluation Right: A Background Paper for Policy Makers. National Academy of Education, 2008.
- Darrow, A.-A. (2016). The Every Student Succeeds Act (ESSA): What it means for students with disabilities and music educators. General Music Today, 30(1).
- Datnow, A., & Hubbard, L. (2016). Teacher capacity for and beliefs about data-driven decision making: A literature review of international research. Journal of Educational Change, 17(1). https://doi.org/10.1007/s10833-015-9264-2
- Dolev, N., & Leshem, S. (2017). Developing emotional intelligence competence among teachers. Teacher Development, 21(1). https://doi.org/10.1080/13664530.2016.1207093
- Drijvers, P., Tabach, M., & Vale, C. (2018). Uses of technology in K–12 mathematics education: Concluding remarks. Uses of Technology in Primary and Secondary Mathematics Education: Tools, Topics and Trends, 421–435.
- Elbaz, F. (2018). Teacher thinking: A study of practical knowledge. In Teacher Thinking: A Study of Practical Knowledge (Vol. 6). https://doi.org/10.4324/9780429454615
- Evans, L. (2002). What is teacher development? In Oxford Review of Education (Vol. 28, Issue 1). https://doi.org/10.1080/03054980120113670
- Falloon, G. (2020). From digital literacy to digital competence: the teacher digital competency (TDC) framework. Educational Technology Research and Development, 68(5). https://doi.org/10.1007/s11423-020-09767-4
- Fives, H., & Buehl, M. M. (2012). Spring cleaning for the "messy" construct of teachers' beliefs: What are they? Which have been examined? What can they tell us?
- García-Peñalvo, F. J. (2021). Avoiding the dark side of digital transformation in teaching. An institutional reference framework for eLearning in higher education. Sustainability, 13(4), 2023.
- Ghozali, I. (2011). Multivariate Analysis Application With SPSS Program. Diponegoro University Publishing Agency.
- Gibbons, L. K., & Cobb, P. (2017). Focusing on Teacher Learning Opportunities to Identify Potentially Productive Coaching Activities. Journal of Teacher Education, 68(4). https://doi.org/10.1177/0022487117702579
- Girvan, C., Conneely, C., & Tangney, B. (2016). Extending experiential learning in teacher professional development. Teaching and Teacher Education, 58. https://doi.org/10.1016/j.tate.2016.04.009
- Grugeon, B., Lagrange, J.-B., Jarvis, D., Alagic, M., Das, M., & Hunscheidt, D. (2010). Teacher education courses in mathematics and technology: Analyzing views and options. Mathematics Education and Technology-Rethinking the Terrain: The 17th ICMI Study, 329–345.
- Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). Partial least squares structural equation modeling (PLS-SEM) using R: A workbook. Springer Nature.
- Handelzalts, A. (2019). Collaborative curriculum development in teacher design teams. In Collaborative Curriculum Design for Sustainable Innovation and Teacher Learning. https://doi.org/10.1007/978-3-030-20062-6_9
- Hasselbring, T. S., Smith, L., Glaser, C. W., Barron, L., Risko, V. J., Snyder, C., Rakestraw, J., & Campbell, M. (2000). Literature Review: Technology To Support Teacher Development.
- Hegedus, S., Laborde, C., Brady, C., Dalton, S., Siller, H.-S., Tabach, M., Trgalova, J., & Moreno-Armella, L. (2017). Uses of technology in upper secondary mathematics education. Springer Nature.
- Henseler, J., Ringle, C. M., & Sinkovics, R. R. (2009). The use of partial least squares path modeling in international marketing. In New challenges to international marketing. Emerald Group Publishing Limited.

- Hidayati, N., Hidayati, D., Hani Saputro, Z., & Lestari, T. (2022). Implementasi Pembelajaran Projek pada Sekolah Penggerak di Era Digital. Journal of Education and Teaching (JET), 4(1). https://doi.org/10.51454/jet.v4i1.200
- Hillerbrand, R., & Werker, C. (2019). Values in university-industry collaborations: The case of academics working at universities of technology. Science and Engineering Ethics, 25, 1633–1656.
- Hoffman, J. V., Wetzel, M. M., Maloch, B., Greeter, E., Taylor, L., DeJulio, S., & Vlach, S. K. (2015). What can we learn from studying the coaching interactions between cooperating teachers and preservice teachers? A literature review. In Teaching and Teacher Education (Vol. 52). https://doi.org/10.1016/j.tate.2015.09.004
- Jacob, A., & McGovern, K. (2015). The Mirage: Confronting the Hard Truth about Our Quest for Teacher Development. TNTP.
- Kraft, M. A., & Gilmour, A. F. (2016). Can Principals Promote Teacher Development as Evaluators? A Case Study of Principals' Views and Experiences. Educational Administration Quarterly, 52(5). https://doi.org/10.1177/0013161X16653445
- Kustini, A. (2022). PENGEMBANGAN KURIKULUM PAI SMP DI SEKOLAH PENGGERAK. Sign.
- Lai, E., & Cheung, D. (2015). Enacting teacher leadership:The role of teachers in bringing about change.EducationalManagementAdministration&https://doi.org/10.1177/1741143214535742
- Mathew, P., Mathew, P., & Peechattu, J. (2017). Reflective Practices: a Means To Teacher Development. Asia Pacific Journal of Contemporary Education and Communication Technology, ISSN(3).
- Merliza, P. (2022). Pelatihan Materi Kurikulum Operasional Satuan Pendidikan Bagian 1 Bagi Komite Pembelajaran Sekolah Penggerak Angkatan 2. Journal of Social Sciences and Technology for Community Service (JSSTCS), 3(2). https://doi.org/10.33365/jsstcs.v3i2.2168
- Mulang, H. (2021). The effect of competences, work motivation, learning environment on human resource performance. Golden Ratio of Human Resource Management, 1(2), 84–93.
- Niemi, H. (2015). Teacher professional development in Finland: Towards a more holistic approach. Psychology, Society and Education, 7(3). https://doi.org/10.25115/psye.v7i3.519
- Patton, K., Parker, M., & Tannehill, D. (2015). Helping teachers help themselves: Professional development that makes a difference. NASSP Bulletin, 99(1), 26–42. https://doi.org/https://doi.org/10.1177/0192636515576040
- Phillips, D., Forbes, H., & Duke, M. (2013). Teaching and learning innovations for postgraduate education in nursing. Collegian, 20(3), 145–151.
- Purba, J., Situmorang, M., & Silaban, R. (2019). The development and implementation of innovative learning resource with guided projects for the teaching of carboxylic acid topic. Indian Journal of Pharmaceutical Education and Research, 53(4), 603–612.
- R. Richards, K. A., Hemphill, M. A., & Templin, T. J. (2018). Personal and contextual factors related to teachers' experience with stress and burnout. Teachers and Teaching: Theory and Practice, 24(7). https://doi.org/10.1080/13540602.2018.1476337
- Regmi, K., & Jones, L. (2020). A systematic review of the factors-enablers and barriers-affecting elearning in health sciences education. BMC Medical Education, 20(1), 1–18.
- Rinke, C. R., Gladstone-Brown, W., Kinlaw, C. R., & Cappiello, J. (2016). Characterizing STEM Teacher Education: Affordances and Constraints of Explicit STEM Preparation for Elementary Teachers. School Science and Mathematics, 116(6). https://doi.org/10.1111/ssm.12185

Saidah, K., & Imron, I. F. (2022). Implementation of The Operational Curriculum of Sekolah Penggerak Program at Elementary Schools. Pedagogik: Jurnal Pendidikan, 9(1). https://doi.org/10.33650/pjp.v9i1.3557

Sedova, K., Sedlacek, M., & Svaricek, R. (2016). Teacher professional development as a means of

transforming student classroom talk. Teaching and Teacher Education, 57. https://doi.org/10.1016/j.tate.2016.03.005

- Shernoff, D. J., Sinha, S., Bressler, D. M., & Ginsburg, L. (2017). Assessing teacher education and professional development needs for the implementation of integrated approaches to STEM education. International Journal of STEM Education, 4, 1–16.
- Situmorang, M., Gultom, S., Mansyur, A., Gultom, S., & Ritonga, W. (2022). Implementation of Learning Innovations to Improve Teacher Competence in Professional Certificate Programs for In-Service Teacher. International Journal of Instruction, 15(2), 675–696.
- Situmorang, M., Sinaga, M., Purba, J., Daulay, S. I., Simorangkir, M., Sitorus, M., & Sudrajat, A. (2018). Implementation of innovative chemistry learning material with guided tasks to improve students' competence. Journal of Baltic Science Education, 17(4), 535.
- Sorensen, P., Twidle, J., & Childs, A. (2014). Collaborative approaches in initial teacher education: lessons from approaches to developing student teachers' use of the Internet in science teaching. Teacher Development, 18(1), 107–123.
- Stiggins, R. J., & Bridgeford, N. J. (1985). Performance Assessment for Teacher Development. Educational Evaluation and Policy Analysis, 7(1). https://doi.org/10.3102/01623737007001085
- Stronge, J. H. (2007). Qualities of Effective Teachers 2nd Edition. In SAGE Open (Vol. 5, Issue 3).
- Syafitri, L., Asmawati, Hendarmin, R., & Hartati, L. (2021). Metode Belajar Online Terhadap Tingkat Kecerdasan Anak Sd Era Pademi Covid-19. PRIMA: Portal Riset Dan Inovasi Pengabdian Masyarakat, 1(1), 57–68. https://doi.org/https://doi.org/10.55047/prima.v1i1.31
- Sztajn, P., Borko, H., & Smith, T. (2017). Research on mathematics professional development. Compendium for Research in Mathematics Education, 793–823.
- Tam, A. C. F. (2015). The role of a professional learning community in teacher change: A perspective from beliefs and practices. In Teachers and Teaching: Theory and Practice (Vol. 21, Issue 1). https://doi.org/10.1080/13540602.2014.928122
- Thomas, M. O. J., & Palmer, J. M. (2014). Teaching with digital technology: Obstacles and opportunities. The Mathematics Teacher in the Digital Era: An International Perspective on Technology Focused Professional Development, 71–89.
- Van der Klink, M., Kools, Q., Avissar, G., White, S., & Sakata, T. (2017). Professional development of teacher educators: what do they do? Findings from an explorative international study. Professional Development in Education, 43(2). https://doi.org/10.1080/19415257.2015.1114506
- Voogt, J. M., Pieters, J. M., & Handelzalts, A. (2016). Teacher collaboration in curriculum design teams: effects, mechanisms, and conditions. Educational Research and Evaluation, 22(3–4). https://doi.org/10.1080/13803611.2016.1247725
- Whitworth, B. A., & Chiu, J. L. (2015). Professional Development and Teacher Change: The Missing Leadership Link. Journal of Science Teacher Education, 26(2). https://doi.org/10.1007/s10972-014-9411-2
- Zhou, P., Tijssen, R., & Leydesdorff, L. (2016). University-industry collaboration in China and the USA: A bibliometric comparison. PloS One, 11(11), e0165277.