Exploring the Relationship between Teacher Professional Development and Student Learning Outcomes

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Abstract

Teacher professional development is a key factor in improving education quality and student learning outcomes. This study aims to explore the relationship between teacher professional development and student learning outcomes and identify factors that influence the effectiveness of professional development programs. The method used in this research is a literature review that includes analyzing various studies related to teacher professional development and its impact on student learning outcomes. This study collected data from relevant articles, journals and research reports. The results of the review show that teacher professional development contributes significantly to improving student learning outcomes through improving pedagogical competence, technology utilization and classroom management. However, there are obstacles such as a lack of teacher motivation that affects the effectiveness of the program. This study provides important implications for stakeholders, showing the need for collaboration between the government, educational institutions and teachers in creating a sustainable professional development system. With adequate support, it is expected that professional development can effectively improve the quality of education and student learning outcomes, as well as create a learning environment that is more inclusive and responsive to students' needs..

Keywords: *Pedagogical Competence; Student Learning Outcomes; Teacher Professional Development*

Introduction

Education plays a fundamental role in the development of quality human resources, where teachers as the spearhead of education have a great responsibility to ensure the quality of learning received by students (Sukmara, 2024; Mira, 2024). The responsibility is not only the delivery of material, but also the development of character and skills that are relevant to the demands of the times. In the era of globalization and rapid technological advances, challenges in education are becoming increasingly complex, ranging from the application of technology in learning to adaptation to the diverse individual needs of students (Catacutan, 2023; Ali, 2024). This requires teachers to continue to develop their competence through various comprehensive and sustainable efforts. One important aspect of improving teacher quality is through professional development programs designed to update, improve and deepen teachers' abilities and knowledge in the learning process (Fernandes, 2023; Bergmark, 2023). Teacher professional programs include training, seminars and workshops that focus on mastering

innovative learning methods, utilizing educational technology and effective classroom management (Ekantiningsih, 2023). In addition, teacher professional programs also aim to improve teachers' interpersonal skills, such as communication, empathy and leadership, all of which play an important role in building a conducive learning environment (Fitrawati, 2024).

Teacher professional development is an essential effort that plays a crucial role in improving the quality of education at various levels, from basic education to higher education (Smith, 2023; Ahmad, 2023). Facing the demands of an increasingly dynamic era, teachers are expected to be able to adapt to the development of science and technology in order to answer the increasingly complex and diverse learning needs (Varas, 2023). In this case, teachers not only carry out the role of teachers who transfer knowledge, but also as facilitators who support students in developing critical, creative and solution thinking skills, which are very important in facing today's global challenges (Ramadhanti, 2023). Through an effective mentoring process, teachers contribute to shaping students' mindset and character, helping students to become adaptive and innovative individuals. In the context of modern education, teachers' professional development is an important foundation in order to continuously update their competencies and provide meaningful learning experiences for students.

The relationship between teacher professional development and student learning outcomes is inseparable as teachers' abilities and skills directly influence the effectiveness of the learning process (Kousar, 2023). Professional development aims to deepen teachers' understanding of pedagogical theories, teaching methodologies, and the application of educational technology that supports the learning process (Fernandes, 2023). Teachers who follow professional development programs effectively usually have a broader knowledge of diverse learning methods, which ultimately improves student learning outcomes (Donath, 2023). With updated skills, teachers can identify students' different learning styles and devise appropriate teaching strategies, thus improving students' understanding and engagement in learning. Improved student learning outcomes are one indicator of the success of a teacher professional development program (Ahadi, 2024). Student learning outcomes include not only academic achievement, but also interpersonal skills, problem solving, and adaptability in different situations. With teachers who have high pedagogical competence, students are more likely to gain in-depth learning and be able to develop their potential optimally. Continuous and directed teacher professional development is expected to create a positive impact on learning outcomes, especially in optimizing the learning environment that supports 21st century skills.

Teacher professional development includes aspects of leadership, classroom management and educational psychology approaches (Sims, 2023). A teacher who understands the principles of developmental and learning psychology will be better able to understand the needs and challenges faced by students in the learning process. With this understanding, teachers can design learning approaches that are not only effective but also pay attention to students' emotional and social aspects. In-depth knowledge of good classroom management also enables teachers to create a conducive learning environment that supports positive interactions between students and teachers. Teachers' active involvement in professional development also increases intrinsic motivation to perform their duties (Shahzad, 2023). Teachers who feel valued and given the opportunity to continue developing will be more passionate about teaching, which in turn creates a dynamic and innovative learning environment. This motivation has an impact on students' enthusiasm for learning, as they see their teachers as passionate and actively involved in their own development. In the long run, this attitude fosters students' confidence and drive to continue learning, as they are taught by teachers who are not only competent but also dedicated.

As educators, teachers must have the ability to adjust learning strategies based on evaluations of student development (Widana, 2023). In this context, teacher professional development provides a strong foundation for teachers to continuously evaluate their teaching methods and techniques. By conducting continuous evaluations, teachers can identify areas that need improvement and adjust approaches to better suit students' needs. This evaluation is crucial to ensure that the learning provided can help students achieve optimal results and is relevant to the times. Professional development also encourages teachers to adopt technology as part of teaching methods (Oksanen, 2023). In today's digital era, the use of technology in the learning process is very important to accommodate the needs of students who are accustomed to technology. Teachers who have attended training related to educational technology will be better equipped to integrate digital devices, applications and online media as learning tools. This technology integration helps students to be more active in learning, facilitates wider access to information, and allows them to learn independently and collaboratively. Understanding the

importance of teacher professional development, this article aims to further explore the link between professional development programs and improved student learning outcomes. It is hoped that this article can contribute to the education literature and serve as a basis for policy makers in designing more effective professional development programs to improve learning quality.

Methodology

This research uses the literature review method to examine the relationship between teacher professional development and student learning outcomes. This method was chosen because it allows the researcher to collect, analyze and synthesize relevant research results to gain a comprehensive understanding of the topic under study. Through the literature review, the study was able to highlight key findings, evaluate the consistency or variation of results from different studies, and identify knowledge gaps that still need to be further explored. The literature review process began with a search for relevant scholarly sources, such as academic journals, books, conference proceedings and research reports that address teacher professional development and student learning outcomes. The search was conducted using online databases such as Google Scholar, JSTOR, and ScienceDirect, and utilizing keywords such as "teacher professional development," "student learning outcomes," and "teacher competencies." Inclusion criteria included publications that focused on professional development in the context of education, particularly at the primary and secondary education levels, and research published within the last five years to ensure the data used remained relevant to the current state of education. The data collected was analyzed using thematic analysis to identify the main themes related to teacher professional development and its influence on student learning outcomes. In this analysis, each study was sorted based on the focus of study, methods, main results and implications presented by the authors. The themes were then summarized and synthesized to provide a comprehensive picture of the impact of teacher professional development on student learning outcomes and the factors that support or hinder its success.

Result and Discussion

A review of the literature shows that teacher professional development programs have a significant impact on student learning outcomes (Gapari, 2023; Khoir, 2024; Sam, 2024). Teacher professional programs are designed to improve various aspects of teacher competencies, including pedagogical competencies, understanding of student development psychology, and skills in using educational technology in the classroom (Kholisoh, 2024). By attending comprehensive training, teachers become more skillful in designing effective andengaging learning experiences. This has a positive impact on student motivation and engagement. When students feelengaged in the learning process, they tend to show greater interest in the material being taught, thus improving overall learning outcomes (Ansya, 2023). Teachers who are skilled in understanding students' individual learning styles are able to tailor teaching methods to their needs in a more personalized way. With a more individualized approach, teachers can design teaching strategies that work for each student, whether they are visual, auditory or kinesthetic learners. These adjustments not only improve students' understanding of the subject matter, but also create an inclusive and supportive learning environment. Continuous professional development plays an important role in helping teachers become effective facilitators in the learning process (Perry, 2024). In this role, teachers not only deliver information, but also encourage students to think critically, collaborate and develop problem-solving skills, all of which are essential competencies in facing real-world challenges.

The use of technology in teaching that teachers learn throughprofessional development programsallows teachers to create more interesting and interactive learning experiences for students (Nurhidayat, 2024). By utilizing technology, teachers can overcome various time and space limitations in the educational process, so that students have the flexibility to learn anywhere and anytime. This innovation not only increases the accessibility of learning, but also allows teachers to create more dynamic and relevant materials, so as to attract students' attention. When teachers are skilledin the use of technology, they are more likely to utilize digital media to enrich learning materials, leading to the development of students' critical thinking skills and encouraging collaboration through various online learning applications. Theapplication of technology in learning allows students to learn more independently and actively engage ininteraction with classmates (Darmawan, 2023). With the interactive features provided by online learning platforms, students can share ideas, discuss and

complete group tasks efficiently. In today's fast-paced and connected environment, the ability to collaborate effectively, communicate well and think critically are key to future success. Therefore, the integration of technology in teaching through teacher professional development not only improves the education process, but also equips students with the necessary competencies to compete in a globalized world.

The impact of professional development on student learning outcomes is influenced by a variety of significant supporting factors, including institutional support, adequate education policies, and the availability of resources (Fatimah, 2024). Institutional support, such as schools and educational institutions, is crucial to creating a conducive environment for teachers to participate in professional development programs (Basri, 2024). When institutions support teachers' participation in training through adequate facilities and time, teachers will be more motivated to develop their skills and knowledge. Strong policy support from the government is necessary. With adequate budget allocation and special time arrangements for teacher training, the government can ensure that professional development programs are implemented in a more structured and effective manner. Proactive education policies can also encourage collaboration between various stakeholders, including schools, government and communities, in creating programs that meet the needs of teachers and students. Thus, the implementation of professional development programs supported by good policies and sufficient resources will result in a more optimal impact on student learning outcomes. This will not only improve the quality of teaching, but also help create a generation of students who are better prepared to face future challenges.

Teachers' intrinsic motivation is a crucial determining factor in the effectiveness of professional development (Fahrurrizal, 2024). Teachers who have high motivation to keep learning and updating their knowledge will be more proactive in implementing innovative teaching methods that are relevant to students' needs (Al, 2023). Active involvement in professional development programs is not just an obligation, but also an opportunity for teachers to enrich their insights and skills. Teachers who are passionate about professional development tend to show greater dedication in teaching, which directly affects the quality of their interactions with students (Juliani, 2024). Students can also sense the teacher's passion and commitment, which will have a positive impact on their motivation and engagement in the learning process. Conversely, teachers who lack professional development motivation will face difficulties in keeping up with the latest developments in teaching methodologies and educational technology. This inability potentially hinders teachers' ability to create an engaging learning environment that is responsive to students' needs. As a result, students' engagement in learning may decrease, and their learning outcomes may not be optimal. Therefore, it is important to create an environment that supports teachers' intrinsic motivation, whether through recognizing their achievements, providing sufficient resources or developing relevant and interesting training programs. By improving teacher motivation, it is expected that the quality of teaching will improve, which in turn will contribute to improved student learning outcomes.

The integration of professional development programs with the evaluation of student learning outcomes provides a more tangible positive impact in improving the quality of learning (Sari, 2024). By involving the evaluation of student learning outcomes, teachers can assess the effectiveness of the teaching methods they have learned through the professional development program. This process allows teachers to adapt and implement teaching strategies that are more appropriate to the context and needs in the classroom. Continuous evaluation is a very useful tool for teachers to get constructive feedback on student development, so that they can make necessary adjustments in teaching approaches (Nur, 2023). Through systematic evaluation, teachers can not only measure student learning outcomes, but also analyze the factors that influence student engagement and motivation in the learning process. With the information gained from this evaluation, teachers can develop lesson plans that are more relevant and focused on student needs. This is crucial to ensure that the training and development that teachers participate in has a direct and significant impact on the quality of student learning. In addition, the integration of these evaluations also creates a culture of reflection among teachers, where they are encouraged to continuously learn and adapt, resulting in better teaching practices and improved overall student learning outcomes. Thus, the synergistic relationship between teacher professional development and student learning outcome evaluation is key to creating a more effective and responsive educational environment.

Continuous teacher professional development has been shown to be more effective in the long term than occasional training (Kusumaningtyas, 2024). A continuous approach provides teachers with the

opportunity to continuously update their skills and knowledge in line with curriculum changes, technological advances, and the increasingly varied characteristics of students. Thus, teachers can remain relevant in teaching and are better prepared to face challenges that arise in the education process. In addition, ongoing training creates space for teachers to actively practice their newly acquired skills, evaluate their effectiveness and make necessary adjustments based on their field experience. Continuous professional development programs result in a more consistent positive impact on student learning outcomes and the quality of learning in general. When teachers are engaged in a continuous learning process, they are better able to adapt their teaching methods and learning strategies to suit students' needs. As a result, students become more engaged and motivated in learning, which ultimately contributes to improving their academic performance. This continuous approach also helps create a culture of learning among teachers, where they share best practices and support each other in professional development. Thus, continuous professional development benefits not only teachers, but also students and the education system as a whole.

Comprehensive teacher professional development not only focuses on aspects of teaching skills, but also includes classroom management, leadership and understanding of student psychology. This holistic approach is crucial to creating teachers who are not only skilled in teaching, but also able to understand and respond to the needs of students as a whole. Teachers who understand the psychology of student development can more easily design learning strategies that are not only effective, but also consider the emotional and social well-being of students (Sandilos, 2023). With a deep understanding of how students learn and develop, teachers can adapt their teaching methods to suit the various learning styles and individual needs of students. In addition, good classroom management skills enable teachers to create a positive and productive learning environment. In a conducive classroom atmosphere, students feel safe and comfortable to actively participate in the learning process. Teachers who are effective in classroom management can manage group dynamics, resolve conflicts that may arise, and build good relationships with students (Arfa, 2024). A positive learning environment also supports the development of students' social and emotional skills, which are important aspects of learning. Thus, comprehensive teacher professional development, which includes teaching skills, classroom management, leadership and understanding student psychology, is essential to improve the quality of education and facilitate students' holistic growth. Through this approach, a generation of students who are not only academically intelligent but also have strong social and emotional skills is expected. While teacher professional development has a positive impact on student learning outcomes, its effectiveness depends on a variety of supporting factors. Factors such as government policy support, teacher motivation and partnerships with various parties, including educational institutions, communities and non-governmental organizations, play an important role in the successful implementation of professional development programs. Strong policy support from the government, for example, can take the form of adequate budget allocations, provision of time for training and the development of a curriculum that supports teachers' skills development..

Conclusion

Teacher professional development plays a very important role in improving student learning outcomes. Effective professional development programs not only focus on improving pedagogical competence and the use of technology, but also on aspects of classroom management and understanding student psychology. Teachers' involvement in ongoing training has been shown to have a significant positive impact on their ability to create a conducive and interactive learning environment, which in turn increases student motivation and engagement in the learning process. However, there are some obstacles that need to be overcome, such as budget and time constraints and the need for stronger policy support from the government to ensure all teachers have access to adequate development programs. The implications of this study suggest that to achieve the goal of improving the overall quality of education, there needs to be synergy between the government, educational institutions and teachers in creating a sustainable professional development system. Continued support and high motivation from all parties will help improve program effectiveness and student learning outcomes, as well as create an educational environment that is more inclusive and responsive to the needs of the times

References

Ahadi, A., Bower, M., Lai, J., Singh, A., & Garrett, M. (2024). Evaluation of teacher professional learning workshops on the use of technology-a systematic review. Professional development in education, 50(1), 221-237. https://doi.org/10.1080/19415257.2021.2011773

Ahmad, N., Rashid, S., & Ali, Z. (2023). Investigating primary school teachers' perceptions about professional development and its impact on students achievement. Journal of Social Sciences Review, 3(1), 809-823. https://doi.org/10.54183/jssr.v3i1.234

Ali, M., Aini, M. A., & Alam, S. N. (2024). Integrating Technology In Learning In Madrasah: Towards The Digital Age. Indonesian Journal of Education (INJOE), 4(1), 290-304.

Al-Said, K. (2023). Influence of teacher on student motivation: Opportunities to increase motivational factors during mobile learning. Education and Information Technologies, 28(10), 13439-13457. https://link.springer.com/article/10.1007/s10639-023-11720-w

Ansya, Y. A. U. (2023). Upaya Meningkatkan Minat dan Prestasi Belajar Siswa Kelas IV Sekolah Dasar pada Pembelajaran IPA Menggunakan Strategi PjBL (Project-Based Learning). Jurnal Ilmu Manajemen dan Pendidikan, 3(1), 43-52. https://doi.org/10.30872/jimpian.v3i1.2225

Arfa, A. M., & Lasaiba, D. (2024). Penguatan Karakter dalam Manajemen Kelas: Strategi Efektif untuk Meningkatkan Kualitas Pendidikan dan Perkembangan Holistik Siswa. Lani: Jurnal Kajian Ilmu Sejarah dan Budaya, 5(1), 71-80. https://doi.org/10.30598/Lanivol5iss1page71-80

Basri, M. H., Suherman, I., & Ramdhani, M. R. (2024). Analisis Peran Kepala Sekolah sebagai Leader dalam Pengembangan Profesionalisme Guru pada Lembaga Pendidikan Berbasis Pesantren. Karimah Tauhid, 3(8), 9187-9208. https://doi.org/10.30997/karimahtauhid.v3i8.15024

Bergmark, U. (2023). Teachers' professional learning when building a research-based education: context-specific, collaborative and teacher-driven professional development. Professional Development in Education, 49(2), 210-224. https://doi.org/10.1080/19415257.2020.1827011

Catacutan, A., Kilag, O. K., Diano Jr, F., Tiongzon, B., Malbas, M., & Abendan, C. F. (2023). Competence-Based Curriculum Development in a Globalized Education Landscape. Excellencia: International Multi-disciplinary Journal of Education (2994-9521), 1(4), 270-282.

Darmawan, D. (2023). The dynamics of student social interaction with teachers and peers: Its influence on academic achievement at MA Miftahut Thullab Sampang. Kabillah: Journal of Social Community, 8(2), 161-170. https://doi.org/10.35127/kabillah.v8i2.305

Donath, J. L., Lüke, T., Graf, E., Tran, U. S., & Götz, T. (2023). Does professional development effectively support the implementation of inclusive education? A meta-analysis. Educational Psychology Review, 35(1), 30. https://link.springer.com/article/10.1007/s10648-023-09752-2

Ekantiningsih, P. D., & Sukirman, D. (2023). Trends of education and training teacher competency in information and communication technology. Jurnal Inovasi Teknologi Pendidikan, 10(1), 87-105. http://dx.doi.org/10.21831/jitp.v10i1.52630

Fahrurrizal, F., Marwan, M., & Bahri, S. (2024). Efektifitas Pengelolaan Pemberian Tunjangan Profesi Dalam Optimalisasi Kinerja Profesional Guru. Research And Development Journal Of Education, 10(2), 725-738. http://dx.doi.org/10.30998/rdje.v10i2.25030

Fatimah, U., Manik, A., Nadeak, P. E., & Yunita, S. (2024). Analisis Faktor-Faktor yang Mempengaruhi Pengembangan Profesi Guru di Era Digital. CENDEKIA: Jurnal Ilmu Sosial, Bahasa dan Pendidikan, 4(3), 107-115. https://doi.org/10.55606/cendekia.v4i3.2979

Fernandes, S., Araújo, A. M., Miguel, I., & Abelha, M. (2023). Teacher professional development in higher education: the impact of pedagogical training perceived by teachers. Education Sciences, 13(3), 309. https://doi.org/10.3390/educsci13030309

Fernandes, S., Araújo, A. M., Miguel, I., & Abelha, M. (2023). Teacher professional development in higher education: the impact of pedagogical training perceived by teachers. Education Sciences, 13(3), 309. https://doi.org/10.3390/educsci13030309

Fitrawati, F., Insan, N., & Djalil, N. A. (2024). Peran Komunikasi Interpersonal Dalam Meningkatkan Motivasi Kerja Pengawas dan Kepala Sekolah di Sekolah Menengah Pertama Kabupaten Penajam Paser Utara. Indonesian Journal of Research and Service Studies, 1(3), 120-139. https://jujurnal.com/index.php/ijrss/article/view/23

Gapari, M. Z. (2023). Pengaruh Signifikan Pada Profesional Guru Terhadap Prestasi Belajar Siswa Pada Mata Pelajaran Ekonomi Kelas VIII SMPN 2 Jerowaru. Al-Faiza: Journal of Islamic Education Studies, 1(1), 1-11. https://www.jurnal.zarilgapari.org/index.php/faiza/article/view/15

Juliani, R., Santoso, G., Hana, Y. H. F., Ramadani, R. F., & Kusumadiniati, S. (2024). Pengaruh

Motivasi Kerja Guru Terhadap Performa Mengajar Yang Tinggi dalam Mengajar. Jurnal Pendidikan Transformatif, 3(2), 202-211. https://doi.org/10.9000/jpt.v3i2.1851

Khoir, M. A. (2024). Pengaruh Kompetensi Profesional Guru Dan Motivasi Belajar Peserta Didik Terhadap Prestasi Belajar Fiqih Di MAN 3 Ngawi. Didaktika: Jurnal Kependidikan, 13(3), 3573-3584. https://doi.org/10.58230/27454312.797

Kholisoh, L. (2024). Manajemen Strategi Peningkatan Kompetensi Profesional Guru. BADA'A: Jurnal Ilmiah Pendidikan Dasar, 6(1), 115-125. https://doi.org/10.37216/badaa.v6i1.1515

Kousar, M., Mehmood, K., & Karim, A. (2023). Relationship Between Teachers' Professional Competencies and Student's Academic Achievement at Secondary Level in Azad Jammu & Kashmir. International Research Journal of Education and Innovation, 4(3), 10-30. https://irjei.com/index.php/irjei/article/view/195

Kusumaningtyas, W. (2024). Peran Guru Penggerak dalam Meningkatkan Profesionalisme Guru Sekolah Dasar: Sebuah Kajian Fenomenologi. Jurnal Guru Sekolah Dasar, 1(2), 10-17. https://doi.org/10.70277/jgsd.v1i2.2

Mira, T. E. (2024). The Role of the School Principle in Improving the Quality of Schools Through Human Resources Management at SMPIT Al Islam Kudus. ICCCM Journal of Social Sciences and Humanities, 3(2), 17-20. https://doi.org/10.53797/icccmjssh.v3i2.4.2024

Nur, E., & Junaris, I. (2023). Evaluasi dan monitoring manajemen pembelajaran pendidikan Islam dalam upaya peningkatan kualitas pendidikan. Refresh: Manjemen Pendidikan Islam, 1(2), 48-73. https://doi.org/10.59064/rmpi.v1i2.23

Nurhidayat, E., Mujiyanto, J., Yuliasri, I., & Hartono, R. (2024). Technology integration and teachers' competency in the development of 21st-century learning in EFL classroom. Journal of Education and Learning (EduLearn), 18(2), 342-349. https://doi.org/10.11591/edulearn.v18i2.21069

Oksanen, L., Oikkonen, E., & Pihkala, T. (2023). Adopting Entrepreneurship Education—Teachers′ Professional Development. Entrepreneurship Education and Pedagogy, 6(2), 276-298. https://doi.org/10.1177/25151274221091698

Perry, E., & Booth, J. (2024). The practices of professional development facilitators. Professional development in education, 50(1), 144-156. https://doi.org/10.1080/19415257.2021.1973073

Ramadhanti, I. (2023). TEACHER STRATEGIES IN FACING IN THE CHALLENGES OF 21st CENTURY EDUCATION. Visipena, 14(2), 122-134. https://doi.org/10.46244/visipena.v14i2.2561

Sam, R., & Sulastri, C. (2024). Profesionalisme Guru dan Dampaknya terhadap Hasil Belajar Siswa. Arini: Jurnal Ilmiah dan Karya Inovasi Guru, 1(1), 1-16. https://jurnal.fanshurinstitute.org/index.php/arini/article/view/74

Sandilos, L. E., Neugebauer, S. R., DiPerna, J. C., Hart, S. C., & Lei, P. (2023). Social–emotional learning for whom? implications of a universal SEL program and teacher well-being for teachers' interactions with students. School Mental Health, 15(1), 190-201. https://link.springer.com/article/10.1007/s12310-022-09543-0

Sari, N. D., & Saputra, R. (2024). Strategi Monitoring Kurikulum dan Pengembangan Profesional Guru untuk Meningkatkan Hasil Pendidikan di Sekolah Dasar Islam Terpadu. Indonesian Journal of Innovation Multidisipliner Research, 2(4), 61-71. https://doi.org/10.69693/ijim.v2i4.102

Shahzad, K., & Khan, S. A. (2023). The relationship between motivational factors and librarians' professional development (PD): A systematic review. Journal of Librarianship and Information Science, 55(2), 383-402. https://doi.org/10.1177/09610006221083685

Sims, S., Fletcher-Wood, H., O'Mara-Eves, A., Cottingham, S., Stansfield, C., Goodrich, J., ... & Anders, J. (2023). Effective teacher professional development: New theory and a meta-analytic test. Review of Educational Research, 00346543231217480 .

Smith, C., & Gillespie, M. (2023). Research on professional development and teacher change: Implications for adult basic education. In Review of Adult Learning and Literacy, Volume 7 (pp. 205-244). Routledge.

Sukmara, A. R. (2024). Human Resource Management (HR) To Maintain The Quality Of Education. Jurnal ekonomi, 13(03), 1907-1914. https://ejournal.seaninstitute.or.id/index.php/Ekonomi/article/view/5467

Varas, D., Santana, M., Nussbaum, M., Claro, S., & Imbarack, P. (2023). Teachers' strategies and challenges in teaching 21st century skills: Little common understanding. Thinking Skills and

Creativity, 48, 101289. https://doi.org/10.1016/j.tsc.2023.101289

Widana, I. W., Sumandya, I. W., & Citrawan, I. W. (2023). The special education teachers' ability to develop an integrated learning evaluation of Pancasila student profiles based on local wisdom for special needs students in Indonesia. Kasetsart Journal of Social Sciences, 44(2), 527-536. https://so04.tci-thaijo.org/index.php/kjss/article/view/266283