Understanding Innovative Work Behavior Among Vocational High School Teachers: A Qualitative Study

Ratna Suhartini[1*], Umi Anugerah Izzati[2], Bima Yatna Anugerah Ramadhani[3], Urip Wahyuningsih[4], Indiyah Nurhayati[5], Wahyu Ratnasari[6], Januar Nur Rohmah Suprihartini[7]

[1*-6] Universitas Negeri Surabaya, Surabaya, Indonesia

[7] Mechanical Engineering (D3), Engineering Department, Politeknik Negeri Indramayu

Keywords:
Innovative work behavior
Vocational school teachers
Private schools
Qualitative research

ABSTRACT

This study aims to find out the description of innovative work behavior in private vocational school teachers. This study uses a descriptive qualitative approach with participants as many as 12 private vocational high school teachers in Surabaya. Data was collected through in-depth interviews and analyzed using four stages of qualitative analysis, namely familiarization, data reduction, data display, and report writing. The results of the study show that the dimensions of idea exploration, idea generation, and idea championing are in the good category. Teachers show high initiative in exploring and producing ideas, as well as actively promoting innovative ideas to peers and school leaders. However, the dimension of idea implementation is not optimal, which is characterized by doubts and limitations of teachers in realizing ideas due to the lack of courage to implement. These findings indicate the need for structural and psychological support to encourage the realization of innovative ideas in the school environment. This research is expected to be the basis for the development of teacher training policies and programs that are more contextual and adaptive to today's vocational education challenges.

INTRODUCTION

The demands of rapid change in the world of education require teachers to not only become teachers, but also innovators who are able to provide learning oriented to the needs of the world of work. Teachers' innovative abilities are very important to answer the needs of students while improving the overall quality of education. According to Asurakkody & Shin (2018), individuals with innovative behaviors can increase the level of organizational innovation, which in turn has a positive impact on three main aspects: the organization itself, the client (student), and the individual (teacher). In this case, vocational school teachers play an important role as the main driver of learning and competency development of students, especially in private schools.

Private educational institutions are generally not able to optimally utilize existing opportunities, so they tend to survive in existing conditions without making significant updates (Marjohan & Atikah, 2024). However, through teacher quality and resource utilization, private schools are able to achieve higher levels of student achievement compared to public schools (Rahmah, 2023). In line with the demands on teacher quality, innovative work behavior becomes an important aspect in the education system Zainal et al. (2020), because this behavior is an important professional requirement for educational institutions to survive in a dynamic environment full of challenges and keep up with the rapidly changing demands of society (Namono et al., 2022). This innovative behavior can have a positive impact on the performance and competitiveness of individuals and organizations (Shin et al., 2017).

Teachers' innovative behavior is a key factor in creating a dynamic learning environment, increasing student engagement, and supporting the professional development of teachers themselves (Taylor & Hattingh, 2019). Teachers with high innovative work behavior will encourage more optimal performance improvements (Silalahi et al., 2022), and are able to encourage students to be more enthusiastic in following lessons (Supriyadi et al., 2020). On the other hand, teachers with low innovative work behavior tend to teach with monotonous methods, do not prepare learning well, and are less creative and innovative in arousing student learning motivation (Leonard, 2016).

Innovative work behavior refers to individual activities in generating, promoting, and implementing new ideas aimed at improving job performance (De Jong & Den Hartog, 2010). De Jong & Den Hartog (2010) identified four main dimensions of innovative work behavior, namely idea exploration, idea generation, idea championing, and idea implementation. The idea exploration dimension includes efforts to find and identify new opportunities or sources of information that can trigger innovation. Idea generation involves the ability to create creative new solutions or ideas in response to challenges faced. Idea championing is the process of fighting for and gaining support from colleagues or leaders to realize the idea. While idea implementation is the stage of real implementation of the ideas that have been developed, including taking risks and overcoming obstacles in their implementation.

Innovative work behavior in teachers reflects the ability to generate, develop, and implement new ideas in learning practices. This role is realized through teacher efforts in designing creative learning approaches, adjusting teaching methods to student needs, and creating solutions to various learning obstacles (Wardani & Darmawan, 2024). Innovative teachers also tend to utilize technology, such as interactive applications and classroom management software, to improve the effectiveness of learning in the digital era (Hasanati et al., 2025). Thus, innovative work behavior of educators plays an important role in improving school and community performance (Hosseini & Haghighi Shirazi, 2021), because the quality of teacher performance greatly determines the quality of education (Sulfemi, 2020).

Despite its importance, innovative work behavior has not been fully mapped in depth in the context of vocational high school teachers, especially in private schools that have their own institutional dynamics. Therefore, it is important to explore how innovative work behavior is manifested in the daily lives of private vocational high school teachers, as well as to understand the underlying dimensions. However, attention to teachers' innovative behavior is still relatively minimal, both in school managerial practices and in research. In particular, there are still few studies that explore in depth how vocational high school teachers in private schools interpret and carry out innovative behavior in their daily lives.

Thus, this study was conducted to fill the gap by examining teachers' innovative work behavior in a real context in private vocational high schools through a descriptive qualitative approach. This approach was chosen because it is able to explore the deep meaning of individual experiences, which cannot always be revealed through

quantitative data. In addition, a qualitative approach allows researchers to capture the complexity of the innovation process in teachers' daily practices, as well as linking it to the social and organizational conditions in which they work.

The stages of analysis carried out in this study include familiarization, data reduction, data display, and report writing. This is done to understand how the four dimensions of innovative work behavior; idea exploration, idea generation, idea championing, and idea implementation are realized in the limitations and potential of resources owned by private vocational school teachers.

RESEARCH METHOD

This study was designed using a descriptive qualitative approach to gain an in-depth understanding of the object being studied. Where this qualitative research is a scientific approach that focuses on an in-depth understanding of social phenomena, emphasizing the importance of context and subjective experiences of the individuals involved (Lim, 2025). This approach was chosen because it is able to capture in depth various intangible factors that influence individual behavior, such as values, social norms, gender roles, socio-economic background, and personal beliefs and views (Cleland, 2017; Tscholl et al., 2019)

The subjects in this study were teachers of Vocational High Schools. The research participants were teachers who taught at vocational schools in one of the private schools in Surabaya. The number of subjects involved in this study was twelve teachers, with a period of more than five years.

The interviews in this study were conducted using a semi-structured format that was arranged flexibly, allowing researchers to adjust the direction of the questions during the data collection process. The interview instrument was developed based on the theory of innovative behavior from De Jong & Den Hartog (2010), which includes four main dimensions, namely: (1) idea exploration, (2) idea generation, (3) idea championing, and (4) idea implementation. The interview instrument was designed to explore in depth the experiences and perceptions of participants regarding innovative work behavior in the school environment.

The study was conducted for approximately one week, with each interview with the subject lasting approximately 20-30 minutes. Interviews were conducted outside of class hours so as not to interfere with teaching and learning activities. In addition, observations were conducted in various situations, including during interviews, in-class activities, and activities outside of class. Field notes were also used to record additional information that emerged spontaneously during the research process.

The qualitative data analysis process consists of four stages, namely: familiarization, data reduction, data display, and report writing (Mezmir, 2020). Basically, the familiarization stage is carried out as an initial step to recognize and deeply understand all the data that has been collected. At this stage, researchers reread interview transcripts and field notes carefully to get an overview before further analysis is carried out. Data reduction is a data

processing process that aims to simplify, edit, and summarize data to make it more concise, easy to manage and ready for further analysis. Data display is the process of presenting data in text form systematically, for example tables, diagrams, matrices, or conceptual models. This presentation aims to make it easier for researchers and readers to see patterns, relationships, and findings in an organized manner. Report writing in this study is the final stage of the data analysis process, where the results of the interpretation of the findings are arranged systematically and in depth.

The validity of the data in this qualitative study was strengthened through the application of triangulation techniques as an effort to increase the credibility and validity of the findings. Triangulation involves checking information that has been collected from various sources or methods for consistency of evidence across data sources (Mertens, 2023). The data sources used with the triangulation approach involved collecting information from the principal, vice principal, and senior teachers with more than 10 years of service.

RESULTS AND DISCUSSION

This study aims to examine in depth the innovative work behavior of teachers in vocational high schools with twelve research participants who have a work period of five years or more. Data collection was conducted through interviews which were then validated through source triangulation involving the principal, vice principal, and senior teachers. The collected data were analyzed through four stages of qualitative analysis, namely familiarization, data reduction, data display, and report writing. The results of the data analysis will then be described in detail based on the four dimensions of innovative work behavior proposed by De Jong & Den Hartog (2010), namely: idea exploration, idea generation, idea championing, and idea implementation.

Familiarization

In the early stages of data analysis, the researcher conducted a familiarization process by repeatedly reading all interview transcripts from twelve private vocational school teachers who were participants. In addition, familiarization also helped form initial sensitivity to themes or patterns of innovative work behavior that began to emerge, before continuing to the data reduction stage.

Data Reduction

At this stage, the interview data were selected and categorized according to the dimensions of innovative work behavior. Responses related to idea exploration, idea generation, idea promotion, and idea implementation on the job were analyzed to identify key patterns in the answers given by the teachers.

Data Display

The reduced data was then organized based on themes that represent aspects of idea exploration, idea generation, idea promotion, and idea implementation at work to describe the tendencies of innovative work behavior of private vocational school teachers.

Report Writing

The preparation of the report was done reflectively, allowing for understanding to develop as the interpretation process progressed. Initial findings were not immediately concluded as final results, but were tested for consistency through cross-comparison between data and their relationship to the context of vocational school teachers' work.

This process allowed researchers to produce narratives that not only described innovative work behavior, but also traced its dynamics and meaning in teachers' daily practices. Thus, this report not only conveys findings, but also represents a critical and dialogical thinking process between data, theory, and field reality.

Idea exploration

Based on the findings on the idea exploration dimension, private vocational high school teachers showed good abilities in identifying learning problems and actively seeking relevant solutions. When faced with obstacles such as students' difficulties in understanding practical materials, teachers tend to conduct in-depth observations of students' learning needs and proactively seek references through various sources, such as the internet, teacher training, educational forums, and informal discussions with colleagues. Sources of inspiration also come from previous teaching experiences which are used as reflection material for improving learning. These findings indicate that idea exploration has become part of teachers' professional practice in an effort to create more effective and contextual learning.

Idea generation

In the idea generation dimension, private vocational high school teachers showed high capacity in designing new ideas that are relevant to the vocational context. One manifestation is the development of a project-based assessment system that imitates the industrial workflow integrating report making, presentations, and peer feedback as a response to the limitations of conventional evaluation methods. Teachers also reported an almost weekly routine in thinking about alternative approaches, such as field simulations and work world case studies, to adapt the material to the diversity of characters and competency needs of students. This pattern shows that the idea generation process has been internalized as a reflective practice, marking the idea generation dimension as being in the good category because teachers proactively and continuously produce innovative strategies to improve learning effectiveness.

Idea championing

Based on the findings on the idea championing dimension, private vocational high school teachers showed a strong capacity in promoting innovative ideas to the school environment. Teachers actively conveyed their ideas through formal forums such as weekly meetings, while complementing them with initial evidence of success, such as increased student participation. They also took the initiative to compile a guide or mini module to make it easier for colleagues to understand and implement the idea. In convincing the principal and colleagues, teachers used a data-based approach and student testimonials, and invited them to directly observe the implementation in the classroom. This finding reflects that the ability to advocate ideas has become an important part of teachers' work behavior, which strengthens that the idea championing dimension is in the good category.

Idea implementation

In the idea implementation dimension, the research findings show that although teachers have innovative ideas, their implementation is still not optimal. Doubt, concerns about the results, lack of support, and demanding working conditions make teachers tend to postpone or avoid implementing new ideas. This strengthens the finding that the idea implementation dimension need improve in the innovative work behavior of private vocational school teachers.

Although some teachers have designed innovative plans, such as collaborative project-based learning methods, these ideas have not been fully implemented due to various obstacles. Doubt, fear of failure, and lack of technical and social support from the work environment are the main factors that hinder the courage to execute the idea. Teachers also feel the need for validation or approval from superiors or colleagues before daring to take concrete steps. This finding shows that the idea implementation dimension is not optimal, because even though there is confidence in the ideas they have, the implementation process is still pending due the lack of courage to implement it.

The results of this study indicate that the innovative work behavior of private vocational school teachers in the dimensions of idea exploration, idea generation, and idea championing is in the good category. Meanwhile, the idea implementation dimension still shows significant limitations, indicating that the results are not optimal. This shows that teachers are generally able to identify, develop, and support innovative ideas, but are not yet fully brave in realizing these ideas in daily practice, especially because of concerns about the risk of failure and lack of adequate support.

The results of the study indicate that private vocational high school teachers have a high tendency to explore ideas. They actively seek new learning opportunities, follow vocational education trends, and are open to change. This finding is in line with the opinion of De Jong & Den Hartog (2010) that idea exploration is the first step in the innovation process, where individuals actively seek and recognize opportunities for improvement. The ability to explore opportunities and create innovative solutions encourages teachers to think critically and creatively, which ultimately increases their job satisfaction, expertise, and competence (Zainal et al., 2020). This statement is supported by research conducted by Hafeez (2021) which states that teacher training plays an important role in choosing the right teaching method and can improve student learning achievement and interest. This study also proves that teachers with a high proactive personality are more willing to integrate into a changing environment and are more likely to show more innovative behavior in teaching and research work (Li et al., 2017).

In the idea generation dimension, teachers demonstrate the ability to generate new, creative ideas in the teaching process, classroom management, and extracurricular activities. De Jong & Den Hartog (2010) defines idea generation as an individual's ability to create new solutions or approaches to existing problems. According to Henriksen et al. (2021), the ability to think creatively and adapt to change is very important for teachers and students in solving problems creatively and innovatively. Individuals with innovative behavior will also have no problem accepting change and improvement (Kim & Lee, 2018). Based on research findings, it was identified that the lack of resources and teacher competence hinders the creation of a learning environment that supports academic achievement (Ahmed & Pierre, 2024). So it is important for teachers to develop

their innovative capacity sustainably, including in generating contextual and solution-oriented learning ideas. The teachers in this study also linked their ideas to student needs and the demands of the world of work, reflecting the relevance and meaningfulness of the innovations developed.

The idea championing dimension shows that teachers not only generate ideas, but also fight for them to be accepted by colleagues or school leaders. They dare to express their opinions and advocate the importance of innovation, especially in the context of the independent learning curriculum and industry needs. According to De Jong & Den Hartog (2010), idea championing reflects interpersonal initiatives to gain support for new ideas. According to research by Wullschleger et al. (2025), it was found that high-quality teacher collaboration has an effect on student achievement, but this effect occurs mainly through improving the quality of teaching. This shows that teachers' ability to fight for ideas through effective communication, collaboration with colleagues, and involvement in school decision-making can contribute to improving the quality of learning in the classroom. Other studies have also found that networking can help teachers support each other, learn from each other, and create new, more innovative approaches to education.

In contrast to other dimensions, idea implementation shows less than optimal results. Many teachers feel unconfident or reluctant to try implementing new ideas because they are afraid of failure or do not feel ready. De Jong & Den Hartog (2010) emphasized that idea implementation is a crucial stage in innovation because it involves concrete actions and risk taking. This condition is in line with previous research findings that show that fear of failure, especially in the use of technology, is one of the main reasons teachers are reluctant to make changes (Konaklı & Akdeniz, 2022). Lack of experience and fear of losing authority in front of students also strengthen attitudes of resistance to innovation. Teachers tend to choose to maintain their comfort and confidence by avoiding risks that may arise from implementing new things.

Teacher self-confidence is important in learning because it supports the courage to try new methods, consistency of innovation, and the ability to overcome obstacles in implementing creative ideas (Mullet et al., 2016; Nemeržitski & Heinla, 2020). This statement is supported by research by Syafrizal (2024) which confirms that high self-confidence contributes positively to the success of the teaching and learning process. Confident teachers are not only more effective in delivering material and motivating students, but are also more prepared to face challenges and changes in learning. Therefore, low self-confidence is a significant obstacle that prevents teachers from implementing innovative ideas optimally in the school environment.

CONCLUSION

Based on the research findings, it shows that private vocational high school teachers have quite good innovative work behavior in three of the four dimensions studied, namely idea exploration, idea generation, and idea championing. Teachers are able to actively identify learning problems, find relevant solutions, and generate and promote new ideas proactively in the school environment. However, in the idea implementation dimension, innovative behavior has not been optimally realized. This is due to psychological barriers

such as fear of failure and lack of self-confidence, as well as contextual barriers in the form of minimal environmental support or freedom to implement new ideas. Thus, although the potential for innovation has been formed, the implementation process still requires strengthening from various aspects. These findings underline the importance of creating a work climate that supports experimentation and tolerance for mistakes as part of the innovation process. Implications for school practice include the need to strengthen managerial support, training based on the courage to innovate, and policies that encourage the realization of ideas in real action. By creating a safe space for experimentation, schools can accelerate the transition from ideas to action in teachers' innovative work behavior.

For further research, it is recommended to explore more deeply the factors that inhibit the idea implementation dimension, both from psychological aspects such as self-efficacy and fear of failure, as well as contextual aspects such as school culture, leadership support, and workload. Longitudinal studies are also important to monitor the development of teachers' innovative work behavior over time. The use of a mixed methods approach is also recommended to obtain a more comprehensive understanding, combining the depth of qualitative insight and the breadth of quantitative data. Expanding participants to other levels of education and more diverse regions can increase the reach and relevance of the findings. This research is expected to be a basis for formulating educational policies and teacher training programs that are contextual and adaptive to the challenges of current vocational education.

ACKNOWLEDGEMENTS

We would like to express our deepest gratitude to LPPM of Universitas Negeri Surabaya for the research grant and institutional support that made this study possible.

We also extend our sincere appreciation to the school principals, teachers, and administrative staff of the participating vocational high schools in Surabaya for their willingness, time, and contributions during the data collection process. Their openness and cooperation were instrumental to the success of this research.

REFERENCES

Ahmed, N., & Pierre, D. P. (2024). The Role of Classroom Management in Enhancing Learners' Academic Performance: Teachers' Experiences. *Studies in Learning and Teaching*, *5*(1), 202–218. https://doi.org/10.46627/silet.v5i1.364

Asurakkody, T. A., & Shin, S. Y. (2018). Innovative Behavior in Nursing Context: A Concept Analysis. *Asian Nursing Research*, *12*(4), 237–244. https://doi.org/10.1016/j.anr.2018.11.003

Cleland, J. A. (2017). The qualitative orientation in medical education research. *Korean Journal of Medical Education*, *29*(2), 61–71. https://doi.org/10.3946/kjme.2017.53

De Jong, J., & Den Hartog, D. (2010). Measuring innovative work behaviour. *Creativity and Innovation Management*, *19*(1), 23–36. https://doi.org/10.1111/j.1467-8691.2010.00547.x

Hafeez, M. (2021). Impact of Teacher's Training on Interest and Academic Achievements of Students by Multiple Teaching Methods. *Pedagogical Research*, *6*(3), em0102.

https://doi.org/10.29333/pr/11088

Hasanati, N., Karima, A. K., & Surahman, S. (2025). *Is the influence of quality of work life on innovative work behavior mediated by happiness at work in teachers*. *246*. https://doi.org/10.22219/jipt.v13i1.38021

Henriksen, D., Henderson, M., Creely, E., Carvalho, A. A., Cernochova, M., Dash, D., Davis, T., & Mishra, P. (2021). Creativity and risk-taking in teaching and learning settings: Insights from six international narratives. *International Journal of Educational Research Open*, *2*, 100024. https://doi.org/10.1016/j.ijedro.2020.100024

Hosseini, S., & Haghighi Shirazi, Z. R. (2021). Towards teacher innovative work behavior: A conceptual model. *Cogent Education*, *8*(1). https://doi.org/10.1080/2331186X.2020.1869364

Kim, D., & Lee, D. (2018). Impacts of Metacognition on Innovative Behaviors: Focus on the Mediating Effects of Entrepreneurship. *Journal of Open Innovation: Technology, Market, and Complexity*, *4*(2), 4. https://doi.org/10.3390/joitmc4020004

Konaklı, T., & Akdeniz, R. K. (2022). The Emergence, Reasons and Results of Resistance to Change in Teachers. *International Journal on Lifelong Education and Leadership*, *8*(1), 49–67. https://doi.org/10.25233/ijlel.1107137

Leonard, L. (2016). Kompetensi Tenaga Pendidik di Indonesia: Analisis Dampak Rendahnya Kualitas SDM Guru dan Solusi Perbaikannya. *Formatif: Jurnal Ilmiah Pendidikan MIPA*, *5*(3). https://doi.org/10.30998/formatif.v5i3.643

Li, M., Liu, Y., Liu, L., & Wang, Z. (2017). Proactive Personality and Innovative Work Behavior: the Mediating Effects of Affective States and Creative Self-Efficacy in Teachers. *Current Psychology*, *36*(4), 697–706. https://doi.org/10.1007/s12144-016-9457-8

Lim, W. M. (2025). What Is Qualitative Research? An Overview and Guidelines. *Australasian Marketing Journal*, *33*(2), 199–229. https://doi.org/10.1177/14413582241264619

Marjohan, & Atikah, C. (2024). Analisis SWOT Pada Lembaga Pendidikan. *Journal on Education*, *6*(2), 11197–11206.

Mertens, D. M. (2023). Research and Evaluation in Education and Psychology_ Integrating Diversity With Quantitative, Qualitative, and Mixed Methods. In *SAGE Pub* (6th ed.). SAGE Publications.

Mezmir, E. A. (2020). Qualitative Data Analysis: An Overview of Data Reduction, Data Display and Interpretation. *Research on Humanities and Social Sciences*, *10*(21), 15–27. https://doi.org/10.7176/rhss/10-21-02

Mullet, D. R., Willerson, A., N. Lamb, K., & Kettler, T. (2016). Examining teacher perceptions of creativity: A systematic review of the literature. *Thinking Skills and Creativity*, *21*, 9–30. https://doi.org/10.1016/j.tsc.2016.05.001

Namono, R., Obanda, P. W., Ayebale, D., Isiagi, E., & Wofuma, G. (2022). Strategizing for innovative work behavior in higher education institutions: the role of creative self-efficacy. *Continuity & Resilience Review*, *4*(3), 249–266. https://doi.org/10.1108/CRR-03-2022-0005

Nemeržitski, S., & Heinla, E. (2020). Teachers' Creative Self-Efficacy, Self-Esteem, and Creative Teaching in Estonia: a Framework for Understanding Teachers' Creativity-Supportive Behaviour. *Creativity. Theories – Research - Applications*, *7*(1), 183–207. https://doi.org/10.2478/ctra-2020-0011

Rahmah, Y. F. (2023). Budgeting Efficiency in the Education System: Measuring the Effectiveness of Public and Private Schools. *AL-ISHLAH: Jurnal Pendidikan*, *15*(2), 2192–2199. https://doi.org/10.35445/alishlah.v15i2.3849

Shin, S. J., Yuan, F., & Zhou, J. (2017). When perceived innovation job requirement increases employee innovative behavior: A sensemaking perspective. *Journal of Organizational Behavior*, *38*(1), 68–86. https://doi.org/10.1002/job.2111

Silalahi, M., Abdurohim, A., Romy, E., Candra, V., & Sudirman, A. (2022). The Involvement Locus of Control, Servant Leadership, and Innovative Work Behavior to Improve Teacher Performance. *Jurnal Pendidikan Progresif*, *12*(2), 751–763. https://doi.org/10.23960/jpp.v12.i2.202227

Sulfemi, W. B. (2020). PENGARUH RASA PERCAYA DIRI DAN GAYA KEPEMIMPINAN KEPALA SEKOLAH TERHADAP KINERJA GURU. *Nidhomul Haq : Jurnal Manajemen Pendidikan Islam*, *5*(2), 157–179. https://doi.org/10.31538/ndh.v5i2.557

Supriyadi, D., Syafitri, L. N. H., Widodo, S. F. A., Wahidi, R., Arinta, Y. N., Nabhan, F., Mufid, A., Purwanto, A., Fahlevi, M., & Sunarsi, D. (2020). Innovation And Authentic Leadership Of Islamic University Lectures In Faculty Pharmacy Faculty: What Is The Role Of Psychological Capital. *Systematic Reviews in Pharmacy*, *11*(8), 383–393.

Syafrizal. (2024). The Influence Of Teachers Confidence On Teaching And Learning Process In School. *JOLADU: Journal of Language Education*, *2*(3), 150–159. https://doi.org/10.58738/joladu.v2i3.369

Taylor, L., & Hattingh, S. J. (2019). Reading in Minecraft: A Generation Alpha Case Study. *TEACH Journal of Christian Education*, *13*(1), 29–36. https://doi.org/10.55254/1835-1492.1388

Tscholl, D. W., Handschin, L., Rössler, J., Weiss, M., Spahn, D. R., & Nöthiger, C. B. (2019). It's not you, it's the design - common problems with patient monitoring reported by anesthesiologists: a mixed qualitative and quantitative study. *BMC Anesthesiology*, *19*(1), 87. https://doi.org/10.1186/s12871-019-0757-z

Wardani, K., & Darmawan, P. (2024). Pembelajaran berdiferensiasi sebagai pendekatan keragaman peserta didik untuk memenuhi target kurikulum. *Jurnal MIPA Dan Pembelajarannya*, *4*(7). https://doi.org/10.17977/um067v4i72024p2.

Wullschleger, A., Maag Merki, K., Grob, U., Rechsteiner, B., Compagnoni, M., & Vörös, A. (2025). Teacher collaboration to elevate student achievement? *Learning and Instruction*, *97*, 102104. https://doi.org/10.1016/j.learninstruc.2025.102104

Zainal, M. A., Matore, M., & Ewan, M. E. (2020). How Teachers' Innovative Work Behaviour Can Affect Education Quality. *Journal of Critical Reviews*, *7*(17).