

The Influence of Teachers' Pedagogical Competence on Student Learning Motivation: A Systematic Literature Review

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Abstract: This study aims to analyze the effect of teachers' pedagogical competence on student learning motivation through a Systematic Literature Review (SLR) approach. Pedagogical competence is a basic skill that determines the quality of learning planning, implementation, and evaluation, while learning motivation is a key factor that influences student engagement, perseverance, and achievement. Although various empirical studies have examined the relationship between these two variables, the results are still diverse and do not provide a comprehensive synthesis, especially in the context of primary education. Through a search of articles in the Scopus database, 13 articles were found that met the inclusion criteria, namely a focus on teacher pedagogical competence, learning motivation, the primary-secondary education context, open access articles, and publication between 2015 and 2025. Content analysis was carried out through the stages of reduction, categorization, interpretation, and conclusion drawing. The results show that teachers' pedagogical competence has a significant effect on student learning motivation through three main channels: (1) the quality of learning design and delivery, (2) teachers' interpersonal relationships and communication, and (3) teachers' ability to integrate technology into learning. In addition, didactic, communication, and techno-pedagogical competencies emerged as the most consistent aspects related to intrinsic and extrinsic motivation. These findings reinforce Self-Determination Theory (SDT), which asserts that teachers play a direct role in meeting students' basic psychological needs. This study provides an empirical basis for the development of teacher competency improvement programs and opens up opportunities for further research with a stronger methodological approach.

Keywords: Pedagogical competence; learning motivation; teachers; basic education; systematic literature review



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INTRODUCTION

Student motivation is a key factor that determines their activity, perseverance, and learning outcomes. Without adequate motivation, curricular interventions and learning resources will struggle to produce significant improvements in learning outcomes. Educational psychology research shows that teacher support, particularly teaching practices that meet students' basic psychological needs, plays an important role in shaping intrinsic and internalized motivation in students (Bureau et al., 2022; Wang et al., 2024).

Teachers' pedagogical competencies include the ability to design varied learning activities, understand student characteristics, select appropriate strategies and media, and assess learning outcomes validly. These competencies not only affect the quality of material delivery, but also determine the extent to which the learning process can trigger students' competence, autonomy, and social engagement, which are essential components of motivation according to the Self-Determination Theory (SDT) framework. Therefore, improving pedagogical competencies has the potential to be the main pathway to increasing student learning motivation at various levels of education (Ismarni & Rasyid, 2025; Wang et al., 2024)

In the Indonesian context, a number of empirical studies have found a positive and significant relationship between teachers' pedagogical competence and student learning motivation in different subjects and at different levels. However, variations in findings related to effect size, the most influential pedagogical aspects (e.g., learning design, classroom management, or media use), and the quality of methodology between studies still make it difficult to draw integrated practical conclusions. In addition, there is a need to identify evidence on specific effective interventions (e.g., practice-based training, coaching, or specific learning models) in strengthening student motivation.

Based on this background, this study conducted a Systematic Literature Review (SLR) to (1) summarize empirical evidence regarding the influence of teachers' pedagogical competence on student learning motivation, (2) identify aspects of pedagogical competence that are most consistently associated with dimensions of motivation (intrinsic, extrinsic, autonomy, competence, relatedness), and (3) evaluate the methodological quality of existing studies and recommend research and practice agendas for teacher professional development. The results of this SLR are expected to provide a clearer evidence map for policymakers, education managers, and researchers in designing teacher competency improvement programs oriented towards increasing student learning motivation.

METHOD

This study was conducted using the systematic literature review (SLR) method, which involves analyzing various written sources on the influence of teachers' pedagogical competence on student learning motivation, particularly at the elementary school level (SD/MI). This literature review aims to identify previous research findings, map the factors that influence the relationship between pedagogical competence and learning motivation, and reveal research gaps that have not been widely studied in the context of basic education in Indonesia.

Literature study is a data collection technique conducted through systematic searches of reputable online sources such as Scopus. In this study, the researcher used a combination of keywords in Indonesian and English, namely: (TITLE-ABS-KEY "pedagogical competence" OR "teacher competence" OR "kompetensi pedagogik") AND TITLE-ABS-KEY ("student motivation" OR "motivasi belajar")) The initial search on the Scopus database yielded 32 articles. Restricting the publication year from 2015 to 2025 reduced the results to 26 articles. Next, the researchers limited the search to journal articles (DOCTYPE: "ar"), resulting in 22 articles, and then further limited the search to open access articles, resulting in 13 main articles that were used as the core sources in this SLR analysis.

(TITLE-ABS-KEY ("pedagogical competence" OR "teacher competence" OR "kompetensi pedagogik") AND TITLE-ABS-KEY ("student motivation" OR "motivasi belajar")) AND PUBYEAR > 2015 AND PUBYEAR < 2026 AND PUBYEAR > 2018 AND PUBYEAR < 2026 AND (LIMIT-TO (OA , "all")) AND (LIMIT-TO (DOCTYPE , "ar"))

The collected data were analyzed using content analysis techniques, which included several stages: (1) Data reduction, which involved selecting, simplifying, and grouping articles according to the research theme; (2) Categorization, which involves grouping information based on aspects of pedagogical competence, learning strategies, and indicators of student learning motivation; (3) Interpretation, which involves analyzing the relationship between variables and comparing results across studies; and (4) Drawing conclusions, which involves formulating patterns of findings and providing comprehensive interpretations based on scientific evidence.

To maintain data validity, this study applied source triangulation, which is comparing findings between articles and conducting a literature critique of research design, methodology, and consistency of results. This technique ensures that the data used is valid, up-to-date, and scientifically accountable. All articles analyzed were published in the last 10 years and are open access, in accordance with the principle of SLR transparency.

The results of this analysis are expected to provide a deeper understanding of how teachers' pedagogical competencies contribute to the learning motivation of elementary school/MI students, as well as serve as a basis for further research and the formulation of educational policy recommendations that are more adaptive to the learning needs of the 21st century.

RESULTS AND DISCUSSION

No .	Author(s) & Year	Research Title	Research Objective	Method / Design	Sample / Participants	Main Findings	Implications / Relevance
1	(Droessiger & Vdovinskienė, 2020)	<i>Factors for Increasing Motivation to Theory Class Attendance among Students of Technology Studies</i>	To analyze factors that may increase students' motivation to attend theory classes, particularly factors that can be controlled by lecturers, namely their competencies .	Qualitative study conducted through analysis of students' opinions on learning motivation.	Technology study program students at Vilnius Gediminas Technical University.	Students associated learning motivation with three main teaching competencies: didactic, communicative, and personal competencies. Didactic competence had the greatest weight.	Lecturers should reflect on whether they have established an optimal balance between theory and practice, prepared visually engaging lectures, and delivered material consistently and in a structured manner.
2	(Kollmayer et al., 2020)	<i>REFLECT – A Teacher Training Program to Promote Gender Equality in Schools</i>	To present the REFLECT teacher training program developed to enhance secondary school teachers' competencies in supporting students' individual potential without being limited by gender stereotypes.	Presentation of a teacher training program based on the systemic actiotope model; includes a pilot study.	Secondary school teachers; pilot study with 38 teachers participating in REFLECT and their students.	The pilot study showed that teachers who voluntarily participated in REFLECT tended to be less sexist and implemented better teaching methods than the average teachers in the control group.	Teachers are a crucial starting point for promoting gender equality in education. The program aims to expand teachers' objective action repertoire (knowledge, teaching methods) and their subjective action space.

3	(Котлер et al., 2023)	<i>Gamification and Gaming Proposals, Teachers' Perceptions and Practices in Primary Education</i>	To analyze the implementation of gamification and game-based learning in primary education based on gamification evaluations by 308 primary school teachers in Spain.	Quantitative and qualitative analysis.	308 primary school teachers in Spain.	Teachers showed positive attitudes toward gamification and demonstrated good knowledge and management of tools such as Genially, Kahoot, and Google Classroom. The majority of teachers (65.3%) expressed positive views on "Teacher Competence."	Game-based learning and gamification can increase student motivation and engagement and foster enthusiasm for beneficial interactive pedagogical processes when supported by adequate resources and teacher training.
4	(Gómez-Gómez & Paz-Albo, 2024)	<i>Teachers' Perceptions of Technologies and Other Educational Challenges Prior to the Pandemic</i>	To examine teachers' perceptions (n = 930) regarding classroom technology use, major educational challenges, and the teaching profession prior to the pandemic in Spain and Latin America.	Mixed-methods approach using a validated ad hoc questionnaire.	Teachers (n = 930) in Spain and Latin America.	High levels of technology use were reported, but shortages in resources, connectivity, and teacher training were evident. Student motivation related to technology was identified as a major challenge.	The study helps identify teachers' technological strengths and gaps that need to be acknowledged and addressed. Teachers called for greater recognition of their profession.
5	(Eminita et al., 2024)	<i>Analyzing Multilevel Model of Educational Data: Teachers' Ability Effect on Students' Mathematical Learning Motivation</i>	To investigate the effect of teacher ability on students' motivation to learn mathematics.	Quantitative method using a survey approach; data analyzed using n-level Structural Equation Modeling (nSEM).	32 mathematics teachers and 542 students from 24 schools in the Depok region.	Variance in teacher ability (0.0027) was smaller than variance in student learning motivation (0.0597). Teacher effects were relatively homogeneous, while student motivation levels varied significantly.	The study suggests that teachers should continuously improve their teaching techniques to enhance students' learning motivation.
6	(Sumakul & Hamied, 2023)	<i>Amotivation in AI-Injected EFL Classrooms : Implications for Teachers</i>	To investigate amotivation during the implementation of artificial intelligence (AI) technology in English as a Foreign Language (EFL) classrooms.	Mixed-methods approach using questionnaires and interviews.	133 EFL students at higher education institutions in Indonesia.	Amotivation was present, though not dominant (over 25%). Three contributing factors were identified: (1) AI application intelligence, (2) AI application user interface, and (3) lesson design (related to teachers' pedagogical competence).	Application design and lesson design are two motivational factors that can influence student motivation in AI-injected learning environments .

7	(Novák et al., 2024)	<i>Gender Differences in School Achievement and Attitudes Toward Motivation in Secondary Economic Education</i>	To analyze student motivational factors, their relationship with specific teacher competencies, and student academic achievement in relation to gender.	Questionnaire data analyzed using Mann-Whitney U-test, Pearson correlation, and Spearman correlation coefficients.	Secondary school students in the Czech Republic and Slovakia (n = 572; ages 17–19).	Female students outperformed male students and demonstrated stronger motivation across all analyzed subjects, indicating significant gender differences. School achievement and attitudes toward specific motivational factors were correlated.	The findings highlight significant gender differences in motivation and achievement in secondary economic education and emphasize the need to consider gender-related motivational factors and teacher competencies.
8	(Del Valle Díaz et al., 2022)	<i>Keys to Learning Physical Education During Confinement</i>	To identify the relationship between physical education learning competence, teacher competence, and student motivation during confinement.	Descriptive statistics and simultaneous multiple regression modeling, guided by teacher competence theory and expectancy-value and interest motivation theories.	686 secondary school students (297 male and 390 female) from 17 regions in Spain.	The study identified relationships between physical education learning competence, teacher competence, and student motivation during confinement.	The main goal of physical education is to develop physically literate individuals with the knowledge, skills, and confidence necessary for an active lifestyle.
9	(Morales-Romero et al., 2022)	<i>Virtual Tools in Distance Education: University Satisfaction Regarding Their Application as Part of Teaching Strategies</i>	To analyze university perceptions of satisfaction with teachers' use of virtual tools as part of teaching strategies.	Survey-based research (implicit quantitative approach).	Universities in Peru.	Teachers' limitations in technology management became evident during the implementation of virtual education in Peru.	Addressing teachers' limitations in technology management is essential during the implementation of virtual education in Peru.
10	(Puja et al., 2024)	<i>Factors Antecedents of Student Learning Satisfaction : Evidence of Online Learning in Indonesia</i>	To examine the effects of perceived service quality, social media utilization, teachers' techno-pedagogical competence, and student motivation on	Structural Equation Modeling (SEM) used to test hypotheses.	345 public vocational high school students in Gianyar Regency, Bali, Indonesia.	The study confirmed the influence of service quality, social media use, techno-pedagogical competence, and motivation on students' online learning satisfaction.	Understanding how student learning satisfaction is formed during online learning, particularly in the post-COVID-19 context, is essential.

			satisfaction with online learning.			
11	Duyen Thi Le, et al. (2025)	<i>Factors Affecting the Formation of Career Orientation Capacity for Secondary School Students Through Organizing Experiential Activities</i>	To identify and analyze factors influencing the organization of career guidance activities for secondary school students, with emphasis on factors that enhance students' career orientation capacity.	Quantitative survey.	223 secondary school teachers from various districts in Da Nang City, Vietnam.	Teacher competence, institutional support, student motivation, and social influence were significant factors affecting the effectiveness of career guidance programs.
12	(Quadir, 2021)	<i>Teaching Factors That Affect Students' Learning Motivation: Bangladeshi EFL Students' Perceptions</i>	To identify specific teaching factors that negatively affect students' motivation to learn English at the higher secondary (HS) level in the Bangladeshi EFL context.	Qualitative data collected through interview protocols; data analyzed using Miles and Huberman's (1994) qualitative analysis framework.	40 Grade 12 graduates.	Five factors negatively affecting student motivation were identified (in descending order): teachers' instructional style/methods, private tutoring, teachers' personality/behavior, teachers' competence/classroom management, and teachers' attitudes/commitment.
13	(Modić Stanke et al., 2019)	<i>A Way to More Effective Education: Prospective Teachers' Interest in Service-Learning</i>	To determine prospective teachers' initial interest in engaging in service-learning (S-L) in compulsory PPDM education courses and to examine the relationship between the level of S-L information and reported interest.	Experimental design with two groups: experimental and control.	42 graduate students.	Results showed greater interest in service-learning in educational psychology courses. Prospective teachers who attended lectures on S-L also reported higher interest.

1. Empirical Evidence Regarding the Influence of Teachers' Pedagogical Competence on Student Learning Motivation

The synthesis of 13 studies shows that teachers' pedagogical competence has a significant influence on student learning motivation, both in primary, secondary, and higher education contexts. In most quantitative studies (Del Valle Díaz et al., 2022; Eminita et al., 2024; Puja et al., 2024), it was found that variations in teacher competence are directly related to students' motivation and learning satisfaction levels. Although the magnitude of the effect differs between studies, the general pattern shows that teachers with strong pedagogical competence tend to be able to create learning that is interesting, structured, and relevant, thereby encouraging an increase in both intrinsic and extrinsic motivation.

Qualitative studies (Droessiger & Vdovinskiene, 2020; Gómez-Gómez & Paz-Albo, 2024) reinforces these findings by showing that students associate their learning motivation with the quality of teaching methods, teacher communication, educator personality, and teacher ability to manage the classroom. Findings from the modern learning context, including the use of digital technology, gamification, and AI, confirm that teacher competence in integrating technology and designing innovative learning is a key determinant of student motivation in digital media-based learning (Morales-Romero et al., 2022; Sáez-López et al., 2022; Sumakul & Hamied, 2023).

Overall, the synthesis of studies shows that teachers' pedagogical competence influences student motivation through three main channels: (1) the quality of delivery and learning design; (2) teachers' interpersonal relationships and communication; and (3) teachers' ability to optimize learning technology and media.

2. Identify aspects of pedagogical competence that are consistently associated with the dimension of motivation.

A cross-research analysis found that there are several aspects of pedagogical competence that are most consistently related to the dimension of student motivation:

a. Instructional Skills

This is the aspect that most often emerges as a determinant of motivation..

(Droessiger & Vdovinskiene, 2020) shows that didactic competence has the greatest influence on motivation. Variations in teaching techniques, interesting lesson plans, and methods that are tailored to student characteristics are strongly correlated with intrinsic motivation, especially in the context of theoretical and practical learning.

b. Communication and Relational Competence

Several studies (Novák et al., 2024; Quadir, 2021) confirm that teachers' ability to build positive relationships, empathy, and effective communication is closely related to the relatedness dimension of motivation, which emphasizes students' social relationships and psychological comfort. This aspect has an impact on students' emotional involvement in the learning process.

c. Techno-Pedagogical Competence

In studies involving online learning and technology (Gómez-Gómez & Paz-Albo, 2024; Morales-Romero et al., 2022; Puja et al., 2024), Teachers' competence in using technology has been proven to influence perceived competence and extrinsic motivation, as students find learning more interesting, varied, and easy to follow.

d. Competence in Instructional Design and Classroom Management

(Sumakul & Hamied, 2023) shows that learning design is one of the main factors causing amotivation in AI-based learning. This means that poor or inappropriate learning planning can reduce motivation, especially in terms of autonomy and competence.

e. Teacher Competence in Supporting Differentiation and Gender Equality

Studies such as (Kollmayer et al., 2020) and (Novák et al., 2024) show that teachers' competence in avoiding gender stereotypes and providing equal support can increase student motivation, especially among groups that are vulnerable to decreased motivation due to gender bias. This is relevant to the dimensions of relatedness and competence, where students feel recognized and valued.

3. Evaluation of Study Methodology Quality and Recommendations for Teacher Development

a. Study Methodology Quality

Based on the evaluation of the studies analyzed in the SLR, the quality of the methodology was generally quite good, although there were some important notes. The research designs varied widely, ranging from qualitative, quantitative, and mixed methods approaches to small-scale experiments. However, many survey-based studies did not report the validity and reliability of the instruments in detail. In terms of sampling, several studies had a limited number of participants, so the findings need to be generalized with caution. In addition, the analysis of variables also showed limitations: only a small number of studies tested the direct relationship between pedagogical competence and student learning motivation using advanced statistical techniques such as SEM or nSEM, while other studies only provided a general description. Furthermore, many studies have not measured motivation in depth based on specific dimensions such

as intrinsic motivation, extrinsic motivation, autonomy, competence, and relatedness, making it difficult to draw stronger and more comprehensive theoretical conclusions.

b. Recommendations for Research Agenda and Teacher Development Practices

Further research is needed to measure the direct relationship between variables using internationally standardized instruments, such as the Academic Motivation Scale (AMS) or SDT-based measurement tools.

Recommendations from various research findings indicate that teacher training programs need to emphasize strengthening didactic competencies, interpersonal communication, and techno-pedagogical abilities, as these three aspects have been proven to most consistently influence student learning motivation. In addition, teacher professional development should also be directed towards the ability to design innovative learning, such as the application of gamification, project-based learning, and the integration of artificial intelligence-based technology that is student-friendly and easily accessible. The evaluation of teachers' pedagogical competencies should be accompanied by continuous formative feedback so that teachers can recognize their strengths and areas for improvement. Furthermore, cross-cultural and cross-level educational research is needed to understand how contextual differences influence the dynamics of the relationship between teacher competencies and student learning motivation, so that the research results can be more comprehensive and applicable.

Result

The synthesis of 13 articles shows that teachers' pedagogical competence has a strong and consistent relationship with student learning motivation. This finding is in line with Self-Determination Theory (SDT), which states that a learning environment that is well managed by teachers is able to meet students' basic psychological needs for autonomy, competence, and relatedness, which then has a direct impact on the emergence of intrinsic and extrinsic motivation. In this context, pedagogical competence can be understood as the main foundation for teachers to create meaningful and motivating learning experiences.

1. The Role of Pedagogical Competence in Improving Student Learning Motivation

Many studies in this SLR confirm that aspects of didactic competence, such as choosing the right teaching methods, structuring teaching materials, and using a variety of learning techniques, contribute significantly to student learning motivation. For example, (Droessiger & Vdovinskiene, 2020) show that didactic competence is a dominant factor that influences student motivation to attend theory classes. These findings indicate that the quality of learning planning

and implementation plays a central role in creating an engaging learning experience and maintaining student learning commitment.

In addition, several studies also highlight the importance of teachers' communicative and interpersonal competencies, which play a role in building a supportive classroom climate. (Quadir, 2021) emphasizes that teacher behavior, interaction style, and classroom management skills can strengthen or even reduce student motivation. Thus, it is not only the content or method, but also the way teachers relate to students that determines learning motivation.

2. Technology Integration as Part of Teachers' Techno-Pedagogical Competence

In the digital age, pedagogical competence no longer encompasses only traditional didactic skills, but also techno-pedagogical competence, which is the ability of teachers to utilize technology to enrich the learning process. Studies by (Morales-Romero et al., 2022; Puja et al., 2024; Sáez-López et al., 2022) show that the use of technology such as gamification, digital learning platforms, and social media can increase student motivation to learn through increased interactivity, independence, and innovation in learning methods.

However, several studies also show the opposite side (Sumakul & Hamied, 2023) found that the integration of technology, especially AI-based technology, can lead to amotivation if the learning design developed by teachers is inappropriate or does not support students' needs. This shows that technology does not automatically increase motivation; its successful integration greatly depends on teachers' pedagogical skills in designing learning that is relevant, easy to understand, and student-centered.

3. Teacher Competence, Gender Bias, and Learning Motivation

Several studies describe how teacher competence in supporting diversity and gender equity can influence motivation. Studies (Kollmayer et al., 2020) (Novák et al., 2024) shows that avoiding gender stereotypes is part of pedagogical competence that has a significant impact on student motivation. Teachers who have gender-sensitive competence are able to create a learning space that is inclusive, safe, and empowering for all students, especially groups that are vulnerable to bias. Within the framework of SDT theory, this approach supports students' psychological needs for relatedness and competence.

4. Variations in Teacher Effects and Their Implications for Motivation

A multilevel study by (Eminita et al., 2024) shows that variations in teacher abilities are smaller than variations in student motivation. This means that although teacher competence is important, student motivation is also influenced by other internal factors and external contexts, such as family background, individual interests, or social dynamics. These findings suggest that

interventions to increase motivation cannot only be carried out by teachers, but need to involve a systemic and collaborative approach.

On the other hand, research discussing experience- and career-based learning activities (Le et al., 2025) emphasizes that teacher competence in organizing meaningful activities can encourage higher motivation by increasing students' sense of autonomy and the relevance of learning to their real lives.

5. Quality of Previous Research and Scope for Further Study

The evaluation of research designs shows variations in methodological quality, with some studies using powerful analytical techniques such as SEM or nSEM, while others remain at the descriptive level. This indicates that the existing empirical evidence still needs to be strengthened through research using standard measurement instruments, longitudinal designs, or more robust experimental approaches.

In addition, most studies do not measure specific dimensions of motivation (intrinsic, extrinsic, autonomy, competence, relatedness). In fact, a more detailed understanding is needed to map which aspects of teacher competence consistently influence each type of motivation. Such in-depth analysis would greatly assist in the development of more targeted teacher training programs.

CONCLUSION

This systematic literature review concludes that the moral development of elementary school children is influenced by the interaction between learning activities, media and culture, and psychosocial dynamics in the school environment. Activity-based interventions have been proven effective in improving prosocial behavior and moral sensitivity, while popular media and local culture can strengthen value understanding when used pedagogically. Class norms, rule representations, and peer relationships also play an important role in shaping children's moral judgments. The novelty of this study lies in its synthesis of these three aspects, which have rarely been analyzed in an integrated manner in previous studies. The implications suggest the need for active, contextual, and collaborative moral education, with the involvement of teachers, families, and school culture. Recommendations for further research include conducting longitudinal studies and developing a moral education model appropriate to the Indonesian context so that the results are more applicable in elementary school/MI education practices.

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