Shibyana

Jurnal Pendidikan Dasar

10.24952/shibyana.v1i1.17617

The Role of Teacher Feedback in Improving Self-Efficacy and Learning Outcomes of Elementary School Students

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Keywords:

Teacher feedback; Self-Efficacy; Learning Outcomes; Formative Assessment

Abstract

This study aims to synthesize empirical evidence on the relationship between teacher feedback, self-efficacy, and students' learning achievement through a systematic literature review of peer-reviewed 18 articles published between 2010 and 2025. The review followed the PRISMA guidelines, encompassing identification, screening, eligibility, and inclusion stages. The findings reveal that high-quality, formative, descriptive, and empathetic feedback significantly enhances students' self-efficacy, which in turn mediates improvements in academic performance. Conversely, evaluative or negative feedback without constructive guidance tends to decrease motivation and confidence, particularly among low-achieving students. Contextual factors such as teacher–student relationships, classroom climate, and cultural norms were found to influence how feedback is perceived and internalized by students. Furthermore, digital feedback platforms show potential but require humanistic adaptation to be effective in primary education. The study concludes that teacher feedback functions not merely as an evaluative instrument but as a pedagogical and psychological process that fosters self-belief, intrinsic motivation, and meaningful learning.

INTRODUCTION

Background of the Study

Basic education is a fundamental phase in shaping students' cognitive, affective, and social abilities. At this stage, students begin to develop confidence in their ability to study and complete academic assignments. One of the psychological aspects that has a great influence on learning success is *self-efficacy* — that is, an individual's belief in his or her ability to organize and carry out the actions necessary to achieve certain outcomes (Bandura, 1997). A high level *of self-efficacy* has been proven to encourage students to be more diligent, motivated, and resilient in the face of academic challenges. In contrast, students with *low self-efficacy* tend to give up easily and experience learning anxiety.

One of the pedagogical strategies that has proven effective in developing *self-efficacy* is providing *teacher feedback*. Feedback serves not only to assess learning outcomes, but also to provide direction, motivation, and information about the

ongoing learning process (Hattie & Timperley, 2007). Feedback that is specific, positive, and process-oriented has been shown to increase student confidence, intrinsic motivation, and learning engagement (Brandmo & Gamlem, 2025; Qi et al., 2024; Smit et al., 2023). In the context of basic education, teachers have a dual role as academic informants as well as facilitators of students' psychological development, making the quality of feedback a key factor in effective learning.

The Problem of The Study

Although various studies show that teacher feedback has a positive impact on student learning outcomes and *self-efficacy*, the practice of giving feedback in elementary schools still faces a number of obstacles. In many schools, especially in Indonesia, teacher feedback is still dominated by evaluative or corrective forms that are oriented towards the final result (*summative feedback*), rather than on the student learning process (*formative feedback*). This approach often only highlights mistakes without providing clear guidelines for improvement, thus potentially lowering students' motivation to learn (Selvaraj et al., 2021).

In addition, time constraints, high teacher-student ratios, and administrative burdens make it difficult for teachers to provide personalized and ongoing feedback. In fact, research shows that the effectiveness of feedback is highly dependent on the social and emotional context of the classroom, as well as students' perceptions of the teacher's intentions in providing the feedback (Affuso et al., 2023; Blazar & Kraft, 2017). This situation creates a gap between pedagogical ideals and field practices that occur, especially at the basic education level. Thus, the main issue that arises is how the role and characteristics of teacher feedback can effectively improve *the self-efficacy* and learning outcomes of elementary school students, as well as the extent to which social, emotional, and cultural contexts moderate these relationships.

Research's State of the Art

Research on the relationship between teacher feedback, *self-efficacy*, and learning outcomes has grown rapidly over the past two decades. Meta-analytical studies (Brandmo & Gamlem, 2025; Qi et al., 2024) show that the quality of feedback has a significant effect on motivation and academic achievement. Formative and descriptive feedback are considered more effective than summative or normative feedback (Cahyani et al., 2024; Smit et al., 2023). In addition, several studies explain that *self-efficacy* functions as a mediator that bridges the relationship between feedback and learning outcomes (He et al., 2023; Usher et al., 2019). Other findings highlight the importance of contextual factors such as teachers' social support, classroom climate, and interpersonal relationships in strengthening the effects of feedback on learning outcomes (Kartika & Jannah, 2024; Ma et al., 2022).

However, most of the studies still focus on the overseas and secondary contexts, while research at the primary school level, particularly in the context of Indonesian education, is still limited. In addition, most of the research is short-term quantitative, so it has not explored much about the long-term dynamics or impact of technology-based feedback that is now becoming widely applied in 21st century learning.

Novelty, Research Gap, & Objective

The novelty of this study lies in the effort to synthesize in depth the role of teacher feedback on *self-efficacy* and learning outcomes of elementary school students by highlighting the learning context in Indonesia. A number of previous studies have shown that teacher feedback has a significant influence on increasing student motivation, confidence, and learning achievement (Brandmo & Gamlem, 2025; Qi et al., 2024; Smit et al., 2023). However, most of the research focuses on international contexts, especially in developed countries, and rarely addresses the cultural context of learning in developing countries.

Another novelty of this research is in the way of viewing feedback not only as a tool for evaluating results, but as a reflective and empathetic dialogical process between teachers and students. This approach is in line with the findings of He et al. (2022) and Usher et al. (2019) who emphasize that *self-efficacy* plays a role as the main mediator between feedback and learning outcomes. Thus, this study seeks to develop a new conceptual framework that positions teacher feedback as a pedagogical instrument that is not only oriented to academic achievement, but also to the psychological strengthening of students through social support and positive interactions in the classroom (Affuso et al., 2023; Blazar & Kraft, 2017; Kartika & Jannah, 2024). Although previous research confirms the importance of feedback in learning, there are still significant *research gaps*. *First*, most of the research was conducted outside the Indonesian context and has not explored the variation in feedback effects in different learning cultures (Ma et al., 2022; Zhang, 2024). *Second*, there is still limited longitudinal research that observes the long-term impact of giving feedback on *student* self-efficacy development (Qi et al., 2024; Smit et al., 2023). *Third*, research on the effectiveness of feedback on students with special needs or low achievement is still very minimal, even though this group is most dependent on the affective and social support of teachers (Asrori, 2017; Wardana et al., 2025).

In addition, there is also a gap in the application of learning technology. In the midst of the increasing use of digital media in elementary schools, research on the effectiveness of technology-based feedback on the formation of *student self-efficacy* is still rare (Cahyani et al., 2024). These findings show that the field of feedback research is still wide open for exploration, especially in the context of digitizing basic education.

Based on these gaps, this study has several main objectives. *First*, to synthesize the results of recent research on the relationship between teacher feedback, *self-efficacy*, and learning outcomes of elementary school students. *Second*, to identify mediation and moderation mechanisms that explain how *self-efficacy* becomes a bridge between feedback and learning outcomes. *Third*, to examine contextual factors such as teachers' social support, classroom climate, and student perceptions that can strengthen the effectiveness of feedback (Affuso et al., 2023; Fauth et al., 2019; Ialuna et al., 2025). *Fourth*, to reveal the *research gap* and the direction of further research, especially in the context of basic education in Indonesia and the use of learning technology. Through a systematic synthesis approach, this research is expected to enrich theoretical and practical understanding of how teacher feedback can be optimized not only as a means of assessment, but also as a psychopedagogical

instrument to build *self-efficacy* and learning outcomes of elementary school students in a sustainable manner.

METHOD

Type and Design

This study uses a qualitative approach with a systematic *literature review design*. This approach was chosen because it allows researchers to collect, analyze, and synthesize a range of relevant empirical research results comprehensively (Jesson et al., 2011). Through a systematic literature review method, this study seeks to provide a more comprehensive picture of how teacher feedback plays a role in building *self-efficacy* and improving learning outcomes of elementary school students. The research steps followed the guidelines of PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) which consisted of four stages, namely: (1) identification of relevant literature, (2) screening by title and abstract, (3) determination of article eligibility, and (4) inclusion of the final article. This approach ensures transparency and repeatability of the process, so that the results obtained can be scientifically accounted for (Page et al., 2021). This research does not involve human subjects directly, but rather analyzes secondary data from published articles. Therefore, this study does not require ethical approval, but all data sources come from legitimate scientific publications and are publicly accessible.

Data and Data Sources

The data in this study are in the form of scientific articles, conference proceedings, and research reports that discuss the relationship between teacher feedback, *self-efficacy*, and learning outcomes of elementary school students. The data source is drawn from various reputable academic databases such as Semantic Scholar, PubMed, ERIC, ScienceDirect, Google Scholar, which indexes research papers from various fields of education and psychology. The selected articles are from the range of 2010 to 2025, with English and Indonesian publication languages. The research focus covers a wide range of basic education contexts, ranging from formative, descriptive, to technology-based feedback, as well as its relationship to student motivation and confidence.

Data Collection Technique

The data collection process is carried out systematically through several main stages: *First*, keyword identification is carried out to determine relevant search terms, including *teacher feedback*, *self-efficacy*, *learning outcomes*, *primary school*, and *formative assessment*. These keyword combinations are used in each database with the help of Boolean operators (AND, OR) to expand the search results. *Second*, article screening is carried out based on titles and abstracts. Articles that do not fit the research topic, do not have a full text, or are not scientific publications are removed from the list. *Third*, a feasibility assessment was conducted against the remaining articles to ensure that each study actually addressed the relationship between teacher feedback, *self-efficacy*, and student learning outcomes. Articles that are only conceptual in nature without empirical data are excluded. *Fourth*, data extraction was carried out by recording important information from each article, including the

author's name, year of publication, research objectives, methods, population, type of feedback, main findings, and implications for *self-efficacy* and learning outcomes of elementary school students. All of these data are compiled in a synthesis matrix to facilitate the analysis and comparison process between studies.

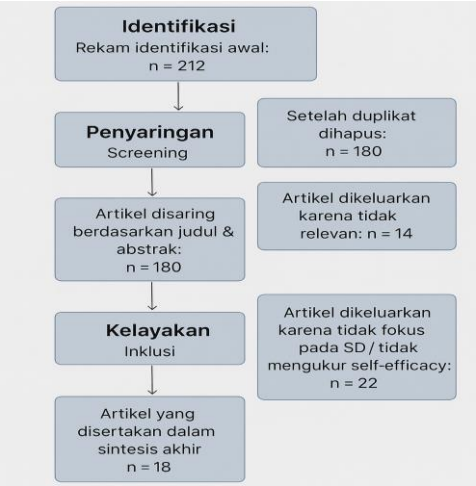

Figure 1. PRISMA Diagram of the Literature Selection Process (n = 18)

The diagram above shows the flow of the research article selection process using the PRISMA (*Preferred Reporting Items for Systematic Reviews and Meta-Analyses*) model. The process began with the identification stage of 212 publications from four databases (Google Scholar, ScienceDirect, ERIC, and Semantic Scholar). After the duplicate removal process, there are 180 articles left which are then filtered by title and abstract. A total of 140 articles were eliminated because they were irrelevant to the focus of the study, were not available in full-text form, or were merely conceptual. Furthermore, 40 articles were read in full to assess *eligibility*, and 22 of them were excluded because they did not address the context of elementary school or did not measure *student self-efficacy*. The final stage produced 18 empirical articles that met all inclusion criteria and were used in the data synthesis. This diagram illustrates the transparency and rigor of the literature selection process, thus ensuring that only relevant and valid research is used as a basis for a systematic analysis.

After going through the literature selection process using the PRISMA guide, 18 scientific articles were obtained that met the inclusion criteria. The articles are the result of empirical research published between 2010 and 2025, both from reputable national and international journals. The entire article discusses the relationship between teacher *feedback*, student *self-efficacy*, and learning outcomes in the context of basic education. The selection process is rigorously conducted to ensure that each article has direct relevance to the research topic, uses a valid methodology, and presents comparable empirical findings.

Table 1. List of Articles Included After the Literature Selection Process (n = 18)

No	Author & Year	Article Title	Source/Journal	Research Focus
1	Chan, J. C. Y., & Lam, S. (2010)	*Effects of different evaluative feedback on students' self-efficacy in learning*	*Instructional Science, 38(1), 37–58*	The effect of feedback types on *student* self-efficacy
2	Asrori, A. (2017)	*Feedback Effectiveness Attributional Modification Schunk Model for Improvement of Academic Self-Efficacy Primary School Students in Math Lesson*	*JETL, 2(2), 170*	Schunk's model to improve *elementary school academic* self-efficacy
3	Blazar, D., & Kraft, M. A. (2017)	*Teacher and Teaching Effects on Students' Attitudes and Behaviors*	*Educational Evaluation and Policy Analysis, 39(1), 146–170*	The impact of teacher support on learning behaviour and attitudes
4	Usher, E. L., Li, C. R., Butz, A. R., & Rojas, J. P. (2019)	*Perseverant grit and self-efficacy: Are both essential for children's academic success?*	*Journal of Educational Psychology, 111(5), 877–902*	The relationship between grit and *self-efficacy* on elementary school students' achievement
5	Fauth, B., Decristan, J., Decker, A.-T., Büttner, G., Hardy, I., Klieme, E., & Kunter, M. (2019)	*The effects of teacher competence on student outcomes in elementary science education: The mediating role of teaching quality*	*Teaching and Teacher Education, 86, 102882*	Teacher competence & teaching quality as a mediator of learning outcomes
6	Selvaraj, A. M., Azman, H., & Wahi, W. (2021)	*Teachers' Feedback Practice and Students' Academic Achievement: A Systematic Literature Review*	*IJLTER, 20(1), 308–322*	Teacher feedback practices and student academic achievement
7	Ma, L., Xiao, L., & Hau, K.-T. (2022)	*Teacher feedback, disciplinary climate, student self-concept, and reading achievement: A multilevel moderated mediation model*	*Learning and Instruction, 79, 101602*	Multilevel models of *feedback*, classroom climate, and reading outcomes

8	Lihong, X., Xiao, L., & Hau, K. (2022)	*Teacher feedback, disciplinary climate, student self-concept, and reading achievement*	*Learning and Instruction*	The effect of the discipline and *feedback* climate on *students*' self-concept
9	Smit, R., Dober, H., Hess, K., Bachmann, P., & Birri, T. (2023)	*Supporting primary students' mathematical reasoning practice: The effects of formative feedback and the mediating role of self-efficacy*	*Research in Mathematics Education, 25(3), 277–300*	Formative feedback improves reasoning & *self-efficacy*
10	He, J., Liu, Y., Ran, T., & Zhang, D. (2023)	*How students' perception of feedback influences self-regulated learning: The mediating role of self-efficacy and goal orientation*	*European Journal of Psychology of Education, 38(4), 1551–1569*	*Self-efficacy* as a mediator of *feedback* perception & self-regulation
11	Affuso, G. et al. (2023)	*The effects of teacher support, parental monitoring, motivation and self-efficacy on academic performance over time*	*European Journal of Psychology of Education, 38(1), 1–23*	Teacher support & *self-efficacy* for long-term learning outcomes
12	Cahyani, N. M. V. A., Widiana, I. W., & Bayu, G. W. (2024)	*SMART-Based Feedback Guidelines to Improve Student Learning Motivation and Self-Efficacy*	*International Journal of Elementary Education, 8(4), 762–772*	SMART *feedback* guide to increase motivation & *self-efficacy*
13	Kartika, A., & Jannah, M. (2024)	*The relationship among self-efficacy, teacher social support, and self-regulated learning of elementary school students*	*Jurnal Psikologi Pendidikan dan Konseling, 10(1), 70*	Social Support Teachers & *Self-Efficacy* in Self-Learning
14	Qi, B., Ma, L., & Wang, X. (2024)	*Using meta-analytic path analysis to examine mechanisms relating students' perceived feedback, motivation, self-*	*Learning and Motivation, 88, 102059*	*Self-efficacy* as a psychological mechanism in relationships *feedback*–prestasi

		efficacy, and academic performance		
15	Zhang, J. (2024)	*A Study on the Shaping of Students' Self-Efficacy by Teachers' Feedback Styles in the View of Educational Psychology*	*Journal of Education, Humanities and Social Sciences, 46, 167–174*	Teacher feedback style and the formation of *student* self-efficacy
16	Ialuna, F., Civitillo, S., Schachner, M. K., & Jugert, P. (2025)	*Culturally responsive teaching self-efficacy and cultural diversity climate...*	*Cultural Diversity & Ethnic Minority Psychology, 31(4), 683–698*	*Self-efficacy* of culturally responsive teachers & students' academic adaptation
17	Wardana, I. K., Wiryadi Joni, D. A. A., & Arsana, A. A. P. (2025)	*Factors affecting teacher feedback on writing achievement, self-efficacy, and self-regulation in EFL context*	*Indonesian Journal of Applied Linguistics, 14(3), 596–611*	*Teacher feedback*, *self-regulation*, and student writing achievement
18	Brandmo, C., & Gamlem, S. M. (2025)	*Students' perceptions and outcome of teacher feedback: A systematic review*	*Frontiers in Education, 10, 1572950*	*Review* students' perception of *feedback* and its impact on learning outcomes

Data Analysis

Data analysis was carried out using *a thematic content analysis* approach which aims to find key patterns, similarities, and differences between studies (Drisko & Maschi, 2016). Each article was analyzed to identify central themes, such as the type of teacher feedback, students' perceptions of feedback, the role of *self-efficacy* as a mediator, as well as contextual factors that affect the effectiveness of feedback. The results of the analysis are then categorized into three major dimensions: (1) Cognitive dimension, which includes improved academic comprehension and achievement; (2) The affective dimension, which is related to motivation, self-confidence, and *self-efficacy*; (3) Social dimensions, which include teacher-student relationships, social support, and classroom climate.

In addition, a meta-synthesis approach is also used to integrate similar research results. This process helps identify consistent patterns of findings and differences in outcomes based on the research context (Leary & Walker, 2018). Through this analysis, researchers also found a number of research *gaps*, such as the lack of longitudinal studies, the lack of research in the Indonesian context, and the low exploration of the effectiveness of technology-based feedback at the elementary

school level. This comprehensive analysis aims to generate a robust conceptual understanding of the mechanisms by which teacher feedback contributes to the improvement of *self-efficacy* and learning outcomes of primary school students, as well as to open up space for further research in the field of pedagogy and educational psychology.

RESULTS AND DISCUSSIONS

The Relationship between Teacher Feedback, *Self-Efficacy*, and Elementary School Student Learning Outcomes

The results of the systematic review show that teacher feedback has a fundamental role in shaping *self-efficacy* and learning outcomes of elementary school students. These relationships are not only direct, but also involve complex psychological mechanisms between motivation, self-perception, and social interactions in the classroom. In general, the research analyzed showed that students who received clear, specific, and process-oriented feedback showed a significant increase in their confidence and academic achievement. For example, research by Smit et al. (2023) found that providing formative feedback in mathematics learning not only improves students' reasoning skills, but also increases their confidence in their own abilities. These findings are in line with the results of a meta-analysis conducted by Qi et al. (2024), which show that students' perception of the quality of feedback has a direct effect on learning motivation through increased *self-efficacy*.

The link between teacher feedback and *self-efficacy* can be explained through *Bandura's (1997)* Social Cognitive Learning theory, which states that individual self-confidence develops through success experiences, observation of others, social persuasion, and emotional states. In the context of learning in elementary school, teacher feedback acts as a form of social persuasion that strengthens students' experiences of success. When teachers appreciate students' efforts and provide constructive suggestions for improvement, students tend to interpret their learning experience as something controllable. This perception is what fosters a sense of *self-efficacy* and encourages improvement in learning outcomes. However, not all types of feedback have the same impact. Feedback that is formative, descriptive, and positive has been shown to be more effective than summative or normative feedback. Formative feedback, which focuses on learning processes and strategies, provides space for students to reflect on mistakes and understand improvement steps independently. Cahyani et al. (2024), for example, found that the use of the SMART-based *feedback* approach—which is specific, measurable, realistic, relevant, and time-bound—can increase students' motivation and confidence in completing tasks. On the other hand, feedback that is evaluative or overemphasizes the final outcome often creates pressure and lowers the morale of learning, especially for students with *low* self-efficacy.

In addition to the cognitive aspect, the affective dimension also plays an important role in this relationship. Some studies confirm that warmth, empathy, and emotional support from teachers reinforce the positive impact of feedback. Blazar & Kraft (2017) and Affuso et al. (2023) show that when students feel valued and emotionally supported, they are more open to feedback, are not afraid to make

mistakes, and are more persistent in improving their work. Positive interpersonal relationships between teachers and students create a safe classroom climate, which allows feedback to be received as a form of attention, not criticism. In addition, literature analysis also shows that *self-efficacy* often acts as a mediator between feedback and learning outcomes. This means that effective feedback increases student confidence first, and it is the increase in confidence that then drives better learning outcomes. Qi et al. (2024) describe this mechanism through *path analysis*, where students' perception of feedback affects motivation and academic achievement through *self-efficacy* as the main link.

Social and cultural contexts have also been shown to influence the effectiveness of feedback. Research by Kartika and Jannah (2024) in Indonesia found that factors such as teachers' communication styles, perceptions of authority, and social support in the classroom can strengthen or even weaken the impact of feedback on *self-efficacy*. In a learning culture that tends to be hierarchical, students may interpret critical feedback as a form of negative judgment, rather than an opportunity to learn. Therefore, cultural sensitivity and an empathetic approach from teachers are crucial in ensuring feedback is understood as a form of support. While most studies show a positive influence, some studies also highlight the opposite side. Feedback that is negative, too general, or delivered in a judgmental tone can lower students' motivation and confidence (Chan & Lam, 2010; Selvaraj et al., 2021). This is especially true in low-achieving students who are more prone to learning anxiety. In such cases, a personalized and reinforcement-based feedback approach is more recommended.

From the results of this synthesis, it can be concluded that the relationship between teacher feedback, *self-efficacy*, and learning outcomes is dynamic and multidimensional. Feedback is not only an assessment tool, but also a means of psychological communication that mediates the process of building student confidence. The quality of social relationships, the context of the class, and the clarity of the message conveyed by the teacher are the main determining factors in the effectiveness of the feedback. Theoretically, these findings enrich the literature on learning in primary schools by asserting that improved learning outcomes depend not only on teaching methods, but also on *how teachers provide feedback* and *how students interpret it*. Practically, these results encourage teachers to provide reflective, constructive, and empathetic feedback—which not only corrects mistakes, but also fosters confidence that each student is capable of progressing through appropriate effort and guidance.

Mediation and Moderation Mechanisms of Self-Efficacy in the Relationship between Teacher Feedback and Elementary School Student Learning Outcomes

The results of an in-depth review of the literature show that *self-efficacy* plays a central role as a mediating variable and at the same time moderation in the relationship between teacher feedback and student learning outcomes. This means that the feedback provided by the teacher does not directly improve learning achievement, but first builds the student's self-confidence in his or her abilities, which in turn influences the motivation, effort, and learning strategies of students to achieve better results. This concept is in line with the theory *of Social Cognitive Learning*

developed by Bandura (1997), which emphasizes that *self-efficacy* functions as a cognitive-affective mechanism that bridges the influence of external factors on learning behavior. In the context of learning in elementary school, teacher feedback is an important source for the formation *of self-efficacy* because students are still highly dependent on evaluation and recognition from education authorities. In other words, students interpret teacher feedback not only as information about the results of their work, but also as a form of recognition of their competence.

The findings from Qi et al. (2024) reinforce this view through the results of *meta-analytic path analysis* which shows that students' perception of the quality of feedback has a positive effect on *self-efficacy*, and that *self-efficacy* further mediates the relationship between feedback and academic outcomes. The model generated in their research illustrates that when students find teacher feedback helpful and supportive, they will develop confidence that learning success can be achieved through appropriate effort and strategies. This belief encourages them to actively participate in the learning process, endure difficulties, and show better learning outcomes. Smit et al. (2022) also found a similar pattern in the context of mathematics learning in elementary school. In their experimental study, students who received formative feedback showed a significant improvement in mathematical reasoning skills, and the effect was mediated by increased *self-efficacy*. Students who feel confident in their abilities are better able to apply effective study strategies and solve problems with greater perseverance.

In addition to being a mediator, several studies have identified *that self-efficacy* also plays a role as a moderator in the relationship between feedback and learning outcomes. In this context, *self-efficacy* affects how much feedback influences student learning behavior. For example, students with high levels of *self-efficacy* tend to interpret feedback, even critical ones, as constructive challenges and opportunities for self-improvement. In contrast, students with low *self-efficacy* often interpret negative feedback as a form of failure or rejection, which ultimately lowers their motivation to learn (Lihong et al., 2022; Zhang, 2024). These differences in perception suggest that the effectiveness of feedback is highly dependent on the psychological state of the student receiving the message. In this case, the role of the teacher is very important to adjust the form and tone of the feedback to match the level *of self-efficacy* of the students. For example, students with *low self-efficacy* need more supportive and motivating feedback, while students with high *self-efficacy* can receive more challenging or critical feedback without losing their enthusiasm for learning.

In addition to individual factors, social and emotional factors also moderate the influence of feedback on *self-efficacy*. Research by Affuso et al. (2023) and Blazar & Kraft (2017) shows that social support from teachers—in the form of attention, warmth, and trust—strengthens the relationship between feedback and *self-efficacy*. When students feel valued and supported, they are more likely to interpret feedback as constructive guidance, rather than as self-esteem-threatening criticism. Research in the Indonesian context conducted by Kartika and Jannah (2024) shows that a positive classroom climate can strengthen the mediating effect of *self-efficacy*. In an open and collaborative learning environment, students find it easier to internalize feedback messages and use them as motivation to grow. In contrast, in competitive

and authoritative classes, students tend to be defensive and reject feedback they perceive as threatening. This shows that the effectiveness of feedback is strongly influenced by *the social climate* and interpersonal relationships between teachers and students.

Variations of Feedback Types and Contexts of Their Application in Elementary School Learning

The results of the literature synthesis show that the effectiveness of teacher feedback in improving *self-efficacy* and learning outcomes is highly dependent on the type of feedback used and the context in which it is applied. Not all forms of feedback have the same impact, and their effectiveness is often influenced by the way teachers convey the message, the characteristics of the students who receive it, and the social environment in which the learning interaction takes place. In general, the research analyzed in this document groups feedback into several main types, namely formative, summative, descriptive, evaluative, positive, negative, and technology-based feedback. Each has a different role and influence on the cognitive and affective aspects of elementary school students.

The majority of studies agree that formative and descriptive feedback are the most effective forms of supporting meaningful learning. This type of feedback focuses on processes and strategies, not just the end result, and provides concrete direction on how students can correct their mistakes. According to Smit et al. (2022), providing formative feedback in basic mathematics learning has been proven to significantly improve students' reasoning skills and *self-efficacy*. A similar thing was found by Cahyani et al. (2024), who emphasized that SMART-based descriptive feedback (*Specific, Measurable, Achievable, Relevant, Time-bound*) makes students better understand learning goals, so that they can organize improvement steps independently.

From a psychological point of view, formative feedback functions as *scaffolding* initiated by Vygotsky (1978), which is a temporary help provided by teachers to guide students until they are able to learn independently. When teachers emphasize on aspects of process and progress, students learn to assess their own efforts, not just results. This experience strengthens their self-confidence that they are able to control learning success through personal strategies and efforts. In contrast, summative and evaluative feedback emphasize the end result more than the learning process. This type of feedback usually comes in the form of numerical grades, general comments, or comparisons between students. While useful for assessing academic achievement, various studies show that summative feedback tends to be ineffective in building *self-efficacy* (Brandmo & Gamlem, 2025; Chan & Lam, 2010).

Elementary school students, who are still in the early stages of psychological development, find it easier to interpret evaluative feedback as an assessment of themselves as a whole, rather than of their work. As a result, when receiving negative feedback without corrective guidance, some students experience decreased motivation to learn and confidence. Therefore, some researchers suggest that summative feedback should be kept in place, but combined with formative elements. Teachers can deliver final grades along with reflective explanations, such as what is

already good, what needs to be improved, and concrete steps for improvement. This approach allows students to not only receive assessments, but also gain guidance for growth.

Research conducted by Asrori (2017) and Wardana et al. (2025) highlights the importance of positive and personalized feedback, especially for students with low achievement or *low self-efficacy*. Students in this group tend to have a high sensitivity to criticism and need positive validation from teachers to maintain motivation to learn. Positive feedback is not just in the form of praise, but also recognition of the efforts and small progress made by students. For example, the teacher might say, *"You've tried a new, better way today"* or *"Your steps are correct, just pay attention to this part."* Process-oriented praise like this helps students attribute success to their own efforts, not to fixed abilities. In the long run, this pattern fosters confidence and a willingness to keep learning. Conversely, negative, non-specific, or overly generic feedback has been shown to have counterproductive effects. Chan and Lam (2010) and Selvaraj et al. (2021) found that comments such as *"Your assignment is not good"* or *"You have to study harder"* without corrective explanations can lower students' motivation and confidence in their abilities. Elementary school students, who are still in the stage of emotional development, very easily interpret feedback like this as a form of personal rejection. Without a guide to improvement, they tend to internalize failures as evidence of incompetence. This has the potential to lower *self-efficacy* and even cause fear of evaluation.

To avoid these impacts, experts suggest that negative feedback be conveyed in the form of corrective feedback, i.e. pointing out mistakes while providing alternative improvements. Thus, the correction message is still conveyed, but without lowering the student's self-esteem. As educational technology develops, new trends have emerged in the form of digital technology-based feedback, such as through online learning platforms, automated assessment applications, or video *feedback*. Cahyani et al. (2024) highlight that interactive digital feedback has the potential to increase motivation and *self-efficacy*, especially because it provides a quick and personalized response. However, the effectiveness of digital feedback is highly dependent on the design of the message and the context in which it is used. Without the guidance of teachers, automated feedback can lose the emotional dimension that is important in building social relationships with students. In the context of elementary schools, the presence of teachers remains the key so that the digital message is received positively and meaningfully.

Social and cultural contexts have also been shown to play an important role in determining the meaning and effect of feedback. Research by Zhang (2024) and Lihong et al. (2022) shows that in a culture that emphasizes hierarchy and respect for teachers, students tend to be passive in responding to feedback and rarely discuss their difficulties openly. This is in contrast to the Western context, where teacher-student interaction is more egalitarian. In the Indonesian context, research by Kartika and Jannah (2024) shows that the effectiveness of feedback increases when teachers combine instructive and empathetic approaches, so that students feel valued but still directed. In other words, the balance between authority and warmth is key to the success of feedback in a learning culture that tends to respect teachers. Based on the

results of the review, it can be concluded that the variation in the type of feedback has a different influence on the development *of self-efficacy* and learning outcomes of elementary school students. Formative, descriptive, positive, and personalized feedback has proven to be most effective because it focuses on the process, provides concrete direction, and strengthens students' self-confidence. On the other hand, feedback that is sumative, evaluative, or negative in nature tends to lower motivation and confidence, especially if it is not followed by clear guidance. Social and cultural contexts reinforce these findings: the effectiveness of feedback depends not only on its content, but also on the way teachers build interpersonal relationships with students. In a learning environment full of emotional support, each form of feedback has a greater chance of being positively received and sparking growth in self-confidence. Thus, feedback is not just a means of assessment, but a pedagogical tool that fosters confidence, strengthens social relationships, and directs students to learn reflexively and independently.

Contextual and Individual Factors Affecting the Effectiveness of Teacher Feedback in Elementary School Learning

The results of the systematic review show that the effectiveness of teacher feedback in improving *the self-efficacy* and learning outcomes of elementary school students is not only determined by the content or form of the feedback itself, but is also strongly influenced by contextual and individual factors. These factors include social relationships in the classroom, the emotional climate of learning, students' personal characteristics, and the cultural values that frame how students interpret feedback. At the most basic level, the interpersonal relationship between teacher and student emerges as the most influential contextual factor to the success of feedback. Research conducted by Affuso et al. (2023) and Blazar & Kraft (2017) shows that students who feel social support from teachers — in the form of attention, appreciation, and empathy — are more likely to receive feedback with a positive attitude. In this context, students view feedback as a form of helpful guidance, not criticism that threatens self-esteem.

In contrast, in a competitive or authoritative learning environment, feedback is often interpreted negatively. When teachers make comments in a harsh tone or without empathy, elementary school students tend to internalize the message as a sign of failure. This condition can reduce *self-efficacy* and make them reluctant to take risks in learning. Kartika and Jannah (2024) emphasized that the success of feedback does not only depend on the message conveyed, but also on the quality of the emotional relationship between teachers and students. Trust-based relationships allow students to be open to criticism and motivated to improve themselves.

In addition to social relationships, the classroom climate also plays a big role in determining the effectiveness of feedback. Fauth et al. (2019) show that classes with positive emotional atmospheres—where students feel safe, valued, and free to express—tend to produce better learning responses to teacher feedback. A positive classroom climate encourages active participation, builds a sense of belonging to the learning process, and enhances two-way interaction between teachers and students. Meanwhile, in rigid classrooms that emphasize strict discipline with no room for

dialogue, feedback often only serves as a form of assessment, not a means of learning. In contexts like these, students tend to be passive and dependent on the teacher's instruction, so the opportunity to build *self-efficacy* through self-reflection becomes limited.

Another contextual factor that also influences the effectiveness of feedback is parental support and the home learning community. Research by Ialuna et al. (2024) reveals that when communication between teachers and parents goes well, students are more likely to understand and follow up on the feedback they receive at school. Parental support can strengthen the message conveyed by teachers, especially by providing positive reinforcement at home. In the context of primary education, synergy between schools and families is important to ensure that the feedback provided by teachers is truly translated into concrete learning behaviors. In addition to contextual factors, individual student characteristics also play a big role in determining how feedback is understood and responded to. Some of the studies in this document (He et al., 2022; Qi et al., 2024) show that differences in initial *self-efficacy*, intrinsic motivation, and self-regulatory abilities cause variations in the effectiveness of feedback.

Students with high *levels of self-efficacy* tend to respond constructively to feedback, even those that are corrective. They see feedback as a challenge to grow, not as an assessment of one's abilities. Meanwhile, students with low *self-efficacy* are more sensitive to criticism and easily lose motivation when receiving negative comments, especially if the message is not accompanied by direction for improvement. The ability to *self-regulate* is also an important determinant in this context. Students who are able to plan, monitor, and evaluate their learning process have an easier time using feedback to correct mistakes. In contrast, students with weak self-regulation skills often fail to translate feedback into concrete action. Teachers in this case need to provide additional guidance, for example by helping students set realistic learning goals and providing gradual feedback so they don't get overwhelmed.

The cultural and social context also gives its own color to how feedback is received. In a culture like Indonesia, where the relationship between teacher and student tends to be hierarchical and respectful, students are often passive in responding to feedback. They are reluctant to ask questions or clarify the teacher's comments for fear of being considered disrespectful. Zhang (2024) and Lihong et al. (2022) found that cultural characteristics like this can be an obstacle to effective two-way communication. Therefore, it is important for teachers in the context of collectivist culture to foster an inclusive classroom atmosphere and encourage students' courage in dialogue. In the context of modern learning, a new dimension has also emerged in the form of the use of technology in providing feedback. Although research on this subject is still limited, Cahyani et al. (2024) show that digital platforms can expand the range of feedback and allow for faster and more personalized communication. However, its effectiveness still depends on the emotional involvement of the teacher. Without warm social interaction, digital feedback risks losing its psychological meaning for elementary school students who are still in desperate need of personal validation.

Overall, the effectiveness of teacher feedback is the result of dynamic interaction between contextual and individual factors. There is no one universally effective form of feedback; Its success is strongly influenced by the social environment in which the learning process takes place and the psychological characteristics of the recipients. From a practical point of view, these results show that teachers need to have pedagogical sensitivity to read the social context of the classroom as well as understand the individual differences of students. Effective feedback is not just about "what was said," but also "how" and "to whom" the message was delivered. By understanding those dynamics, teachers can adjust their approach—for example, by providing empathic feedback to sensitive students, or reflective feedback to more independent students. In the long run, a deeper understanding of these contextual and individual factors can help educational institutions design teacher training programs that focus on reflective and empathic communication skills. Teachers who are able to combine cognitive and emotional aspects in giving feedback will be more effective in building student *self-efficacy*, improving learning outcomes, and creating a positive and empowering classroom climate.

Limitations, Implications, and Further Research Directions

The results of a systematic review of the scientific articles in this study show a strong picture of how teacher feedback plays a role in improving *the self-efficacy* and learning outcomes of elementary school students. However, as with other studies, this study has a number of conceptual, methodological, and contextual limitations that need to be considered in interpreting the results. The first limitation relates to the nature of the data being reviewed. Most of the studies analyzed used *a cross-sectional design*, in which the relationship between feedback, *self-efficacy*, and learning outcomes was measured at one time. This design provides a correlational picture, but it is not possible to ascertain causal relationships longitudinally. Thus, the conclusions about how feedback gradually builds student *self-efficacy* over time still need to be studied further. The second limitation is the disparity of geographical and cultural contexts in the available literature. Most of the research was conducted in developed countries such as the United States, the Netherlands, Norway, and China. Meanwhile, studies in the context of Indonesia or developing countries are still very limited. In fact, differences in learning culture, social values, and teacher-student communication patterns can affect how feedback is perceived and translated in learning behavior.

The third limitation is related to the variation in age and level of education. Some of the articles reviewed covered a wide range of student ages, ranging from elementary to middle school, so generalization of results specific to elementary school students should be done with care. In addition, some research places more emphasis on specific academic fields—especially mathematics and language—while fields such as character education, art, and social-emotional are relatively underrepresented. The fourth limitation is the lack of exploration of the digitalization aspect of learning. While some research has begun to highlight the potential for technology-based feedback, most have not addressed in depth how digital contexts can mediate

affective interactions between teachers and students, especially at the elementary school level where they still rely heavily on personal relationships.

Finally, the fifth limitation is the methodological limitations of the source article, such as differences in *self-efficacy* measurement instruments, feedback assessment scales, and diversity of data analysis approaches. This heterogeneity makes cross-study comparisons need to be done with caution, as each study uses a different approach to define "feedback effectiveness." Despite its limitations, the results of this review make an important contribution to educational theory and practice, especially in the context of strengthening the role of teachers as learning facilitators and confidence builders.

Theoretically, this study strengthens the framework *of Social Cognitive Theory* Bandura (1997) by showing that teacher feedback is one of the main sources of student *self-efficacy*. Feedback is not only a means of evaluating learning outcomes, but also serves as a social mechanism that shapes students' perception of their own competencies. Thus, the results of this study broaden the understanding that *self-efficacy* is not only the result of personal experience, but also the result of meaningful social interaction in the learning environment. Practically, these findings confirm the importance of developing reflective and empathic competencies in teachers. Teachers need to understand that the effectiveness of feedback is not only determined by the accuracy of the content, but also by the way it is delivered. Feedback that is process-oriented, empathetic, and dialogue-building will foster confidence, while judgmental feedback without direction can lower motivation. This implication leads to the need for professional training for teachers, particularly in terms of learning communication, providing positive reinforcement, and utilizing formative feedback. Educational institutions also need to provide time and structural support so that teachers can provide meaningful feedback, not just administrative ones. In terms of education policy, the results of this study support efforts to integrate a more reflective and humanistic learning evaluation system into the elementary school curriculum. A curriculum that emphasizes formative and dialogical assessments can help create a learning culture that is process- and growth-oriented, not just grade-achievement.

Based on the results and limitations found, there are several directions of research that need to be developed in the future: *first,* longitudinal and experimental research is needed to understand the long-term dynamics of the relationship between feedback, *self-efficacy*, and learning outcomes. This kind of study can shed light on whether the increase *in self-efficacy* due to feedback is temporary or ongoing. *Second, the* exploration of the local cultural context, especially in Indonesia, is very important. Further research needs to explore how social norms, collectivism values, and typical Indonesian teacher-student communication styles affect the effectiveness of feedback.

CONCLUSION

This study concludes that teacher feedback has a very important role in shaping self-efficacy and improving student learning outcomes, especially at the elementary school level. Effective feedback is formative, specific, constructive, and empathetic

because it encourages students to reflect on the learning process, self-regulate, and trust in their ability to grow. Conversely, feedback that is evaluative or negative without direction for improvement tends to lower student motivation and confidence.

The findings of this study confirm that feedback is not just an evaluation tool, but also a pedagogical and psychological process that encourages meaningful learning and emotional growth of students. Its effectiveness is greatly influenced by contextual and individual factors, such as the classroom climate, teacher-student relationships, and cultural backgrounds. Therefore, teachers need to develop reflective and empathetic communication skills so that the feedback given is not only informative, but also inspiring.

Further research is suggested to explore longitudinal and cross-cultural perspectives, as well as develop technology-based feedback models that maintain humanistic values in learning. Ultimately, high-quality teacher feedback serves as a transformative force that fosters confident, independent, and resilient students in the face of learning challenges.

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Conflict of Interest Statement: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be constructed as a potential conflict of interest.