



Overcoming Self-Efficacy Challenges in Teachers and Prospective Teachers: Key Factors and Solutions

Ayu Windy Malisa Menno^{1*}, Yanni Irma Waty Simanjuntak², Desma Linda³ 

^{1,2,3}Chemistry Education Magister Study Program, Universitas Negeri Yogyakarta, Yogyakarta, Indonesia

*Corresponding author: mennoayu@gmail.com

Abstrak

Efikasi diri berkaitan dengan keyakinan guru akan kemampuan diri untuk melaksanakan pembelajaran yang berhasil, dan mempengaruhi guru dalam menjalankan perannya dalam pembelajaran. Kajian literatur ini bertujuan untuk mengeksplorasi faktor-faktor yang mempengaruhi efikasi diri guru dan calon guru, menggali tantangan yang dihadapi, dan menyajikan solusi yang dapat membantu meningkatkan efikasi diri. Metode yang digunakan adalah literature review yang meliputi tahap perencanaan, pelaksanaan, dan pelaporan. Sebanyak 31 artikel digunakan dalam kajian literatur ini yang diperoleh dengan pencarian dan pengumpulan data pada basis data Scopus, Google Scholar, dan ERIC, serta melalui penyaringan dan seleksi berdasarkan kriteria inklusi. Berdasarkan hasil kajian literatur, faktor-faktor yang mempengaruhi dan menimbulkan tantangan pada efikasi diri guru dan calon guru adalah faktor praktik dan penguasaan kompetensi, faktor perbedaan lingkungan, budaya, dan kebutuhan siswa, faktor kondisi organisasi sekolah dan lingkungan belajar, dan faktor tekanan yang dialami. Adapun solusi mengatasi tantangan efikasi diri yang ditemukan meliputi pelaksanaan program pendidikan, pelatihan, dan pengembangan, kondisi organisasi dan lingkungan sekolah yang baik dan kolaboratif, program induksi dan mentoring, serta perhatian pada kesejahteraan guru, konseling dan manajemen stress. Kolaborasi antara pemerintah, institusi pendidikan, sekolah, dan komunitas diperlukan untuk mengembangkan efikasi diri guru dan calon guru serta meningkatkan kualitas pendidikan melalui kebijakan yang mendukung, kurikulum yang komprehensif, dan lingkungan belajar yang kondusif.

Kata kunci: Efikasi Diri, Guru, Calon Guru, Tantangan, Solusi

Abstract

Self-efficacy relates to teachers' belief in their ability to carry out successful instruction and influences teachers to carry out their roles in learning. This literature review aims to explore the factors that influence teachers' and prospective teachers' self-efficacy, explore the challenges faced, and present solutions that may assist in enhancing self-efficacy. The method used is a literature review which includes planning, conducting, and reporting stages. 31 articles were used in this literature review obtained by searching and collecting in Scopus, Google Scholar, and ERIC databases, and through screening and selection based on inclusion criteria. Based on the results of the literature review, the factors that influence and pose challenges to the self-efficacy of teachers and prospective teachers are factors of practice and mastery of competencies, factors of differences in environment, culture, and student needs, factors of school organizational conditions and learning environments, and factors of pressure experienced by teachers and prospective teachers. The solutions to the self-efficacy challenges found include the implementation of education, training, and development programs, a good and collaborative school organization and environment, induction and mentoring programs, and attention to teacher welfare, counseling, and stress management. Collaboration between the government, educational institutions, schools, and communities is needed to develop the self-efficacy of teachers and prospective teachers and enhance the quality of education through supportive policies, a comprehensive curriculum, and a conducive learning environment.

Keywords: Self-Efficacy, Teachers, Prospective Teachers, Challenges, Solutions

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1. INTRODUCTION

The evolution of the era is affecting various fields, including education. This development in the field of education led to the role of teachers becoming very crucial, especially as managers, professionals, and educators. Teacher effectiveness influences the success of planning and delivering well-quality learning, especially in relation to supporting students to meet the demands of the era, such as the implementation of innovative learning and preparing students for their future careers (Aghaei et al., 2022; Fauth et al., 2019; Kim et al., 2019; Leon et al., 2017; Thijssen et al., 2022). In performing their roles, there are various

challenges experienced by teachers such as the demands to innovate learning, job pressures, and challenges stemming from students such as the diversity of student needs, which requires teachers to be prepared to pay attention to all student needs and provide full support regardless of their background and learning abilities (Cate et al., 2018; Gülsün et al., 2023; Hester et al., 2020; Kim & Burić, 2020). These challenges have led to another problem, namely the shortage of teachers due to the low resilience of teachers in facing these challenges (Hammack et al., 2024; Hettinger et al., 2021). This brings up the need for support for teachers to be well-prepared and resilient in carrying out their roles amidst the changing era.

One of the key factors that influence teachers in performing their roles and facing various challenges in learning comes from within the teacher, namely self-efficacy. Self-efficacy is the belief that the individual can succeed in dealing with certain situations so self-efficacy in teaching can be interpreted as a teacher's belief in his or her ability to conduct successful teaching and learning (Cole & Feng, 2015; Lampropoulos et al., 2019). This belief is an integral part of teacher competence. Previous research has shown that teachers' self-efficacy significantly affects the quality of learning and teacher performance. For instance, previous study found that strong self-efficacy creates a conducive teaching environment for students' mastery of the subject (Hismanoglu & Hismanoglu, 2011). Other study demonstrated that teachers with high self-efficacy adapt their teaching methods to meet diverse student needs, improving student engagement and outcomes (Nizham et al., 2017). Other study highlighted that such teachers integrate innovative practices and technologies, positively impacting teachers' psychological well-being and learning quality (Miranda et al., 2021). Other study found that teachers' beliefs made teachers more effectively apply technology in learning, making the process more engaging and accessible (Daumiller et al., 2021). This evidence highlights the importance of fostering self-efficacy in teachers and prospective teachers to build resilient and high-quality educators. Supporting teachers' self-efficacy can contribute to the improvement of teaching practices and student success.

To further understand the self-efficacy of teachers and prospective teachers, it is necessary to investigate the influencing factors, challenges, and solutions to overcome the challenges. Previous research has provided valuable insights into teachers' self-efficacy, particularly regarding influencing factors and challenges. For instance, previous study found that teachers' self-efficacy significantly influences their ability to effectively implement and manage online teaching tools, but they did not thoroughly explore the specific challenges faced by teachers (Vaportzis et al., 2017). Other study reviewed the self-efficacy of immigrant teachers in Australia, highlighting language barriers and cultural differences as significant challenges (Huang et al., 2020). While this study highlighted important factors affecting immigrant teachers, it did not provide comprehensive solutions for overcoming these barriers. Such as study demonstrated that continuous professional development and peer support are crucial for enhancing self-efficacy among English teachers, yet did not examine the sustainability of these supports in different contexts (Cookson & Stirk, 2019). Other study identified mastery experiences and social persuasions as key contributors to teachers' self-efficacy but did not analyze how these sources interact and influence self-efficacy over the course of a teacher's career (P.-L. Yang, 2018). From the review of these studies, it is clear that while there are substantial literature review studies on various aspects of teachers' self-efficacy, notable gaps remain. There is a need for more comprehensive studies that address the factors, challenges, and solutions for enhancing self-efficacy among both teachers and prospective teachers. Therefore, the novelty of this study presents a comprehensive review of the literature on teacher and prospective teachers' self-efficacy. The aim is to explore the factors that influence their self-efficacy, highlight the challenges faced, and present solutions to enhance their self-efficacy. An in-depth understanding of these areas

is expected to aid in developing the self-efficacy of teachers and prospective teachers, ultimately improving their professionalism and the overall quality of education. The objectives of this study is to explore the factors that influence teachers' and prospective teachers' self-efficacy, explore the challenges faced, and present solutions that may assist in enhancing self-efficacy.

2. METHODS

The literature review method followed the procedure by Xiao and Watson (2019), which includes planning, conducting, and reporting the findings, as shown in [Figure 1](#). The search used Google Scholar, Education Resources Information Center (ERIC), and Scopus databases. Google Scholar was selected for its extensive scholarly articles, ERIC for education-related literature, and Scopus for its comprehensive peer-reviewed journals and high-impact research articles. Keywords used were “teachers’ self-efficacy”, “prospective teacher’ self-efficacy”, “pre-service teachers’ self-efficacy”, “teacher candidates’ self-efficacy”, “factors”, “challenges”, and “solutions”. Twenty keyword combinations yielded 5,138 articles, consisting of 3,137 from Scopus, 262 from the ERIC, and 1,739 from Google Scholar. Filtering based on title and author to avoid duplicates resulted in 240 articles.

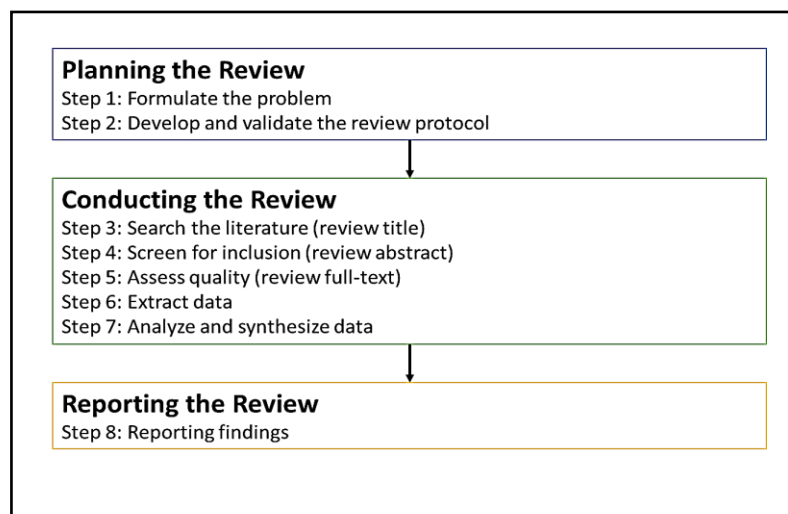


Figure 1. Literature Review Procedures

The inclusion criteria used were: (1) Articles published between 2014 and 2024, (2) articles written in English, (3) articles that were at least Q4 indexed by Scopus, (4) research articles that discuss teachers’ self-efficacy and/or prospective teachers’ self-efficacy, (2) factors affecting self-efficacy can be the results of relationship analysis or factors that are explained as the cause of self-efficacy challenges, (3) discuss challenges or problems related to self-efficacy and their solutions, (4) discusses solutions that can be in the form of suggestions or actions that have been taken to overcome challenges or self-efficacy issues. After reviewing abstracts and full texts, 31 articles were retained. The study flow is presented in [Figure 2](#).

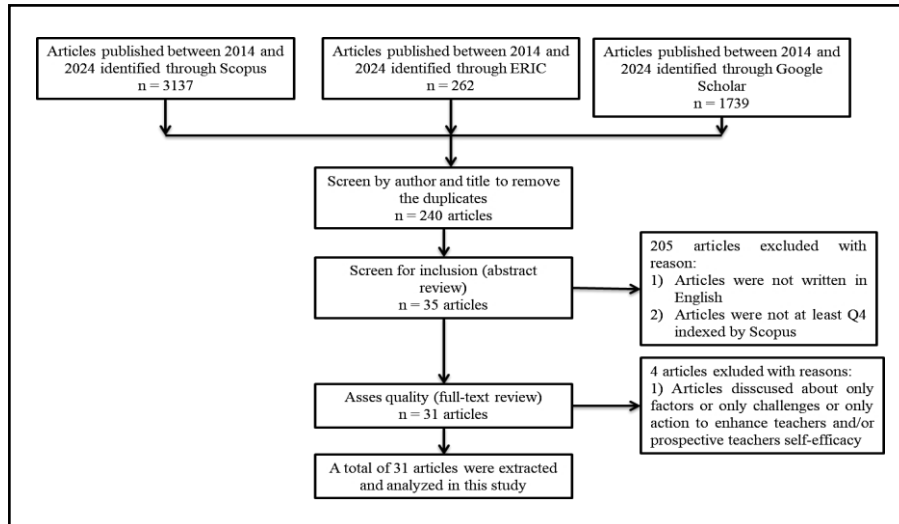


Figure 2. Study Flow Diagram

Base on Figure 2, key information from these 31 articles was then extracted such as the research objectives, methodology, key findings, and conclusion. The extracted data were then analyzed thematically to provide a comprehensive understanding of the self-efficacy of teachers and prospective teachers. The analysis involved several steps: 1) Reading and re-reading the extracted data to become thoroughly familiar with the content, 2) coding the data to identify important features related to the research questions, 3) collating codes into potential themes that capture significant patterns in the data, 4) refining the themes to ensure they accurately represent the data and are distinct from each other, 5) clearly defining each theme and giving them descriptive names, and 6) synthesizing the findings into a coherent narrative that answers the research questions.

3. RESULTS AND DISCUSSION

Results

The results of data extraction obtained a description of 31 articles based on the year of publication grouped into 2014-2018 and 2019-2024, research locations grouped by continent, and research methods grouped into quantitative, qualitative, and mixed-methods. An overview of the 31 articles is shown in Table 1. Then the focus of the articles can be seen in Figure 3.

Table 1. Overview of 31 Articles

		Frequency	%
Publication Year	2014-2018	5	16.13%
	2019-2024	26	83.87%
Location	Europe	9	29.03%
	Asia	10	32.26%
	America	6	19.36%
	Australia & New Zealand	2	6.45%
	Inter-regional	4	12.90%
Method	Qualitative	3	9.68%
	Quantitative	23	74.19%
	Mix-Methods	5	16.13%

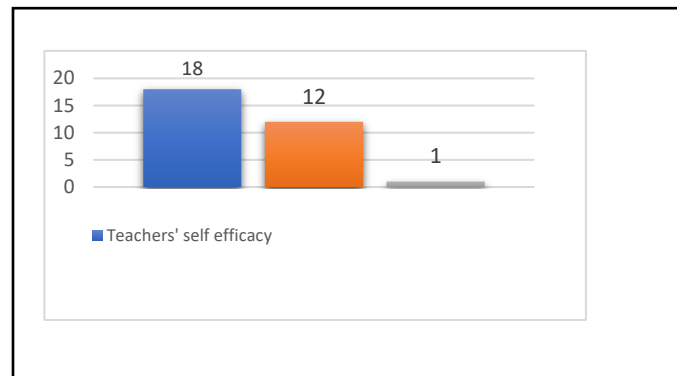


Figure 3. Number of Articles Based on the Research Focus

Based on [Figure 3](#), the dominant research focus is on teachers' self-efficacy with 18 articles. There are 12 articles discussing prospective teachers' self-efficacy and 1 article discussing both. The thematic analysis process generated several themes, including factors influencing teachers' and prospective teachers' self-efficacy, challenges faced by them, and solutions for enhancing their self-efficacy. These themes are presented in [Table 2](#).

Table 2. Factors Influencing Teachers' and Prospective Teachers' Self-efficacy

Factors	Articles
1 Differences in environment, culture, and student needs	(Baek et al., 2024); (Bailey et al., 2024); (Choi & Mao, 2021); (McKinnon et al., 2014); (Schwab, 2019)
2 Experience, practice, and competence mastery	(Baek et al., 2024); (Bellibas & Liu, 2017); (Berg & Smith, 2018); (Bürgermeister et al., 2021); (Gold et al., 2024); (Hammack et al., 2024); (Huang et al., 2020); (Li et al., 2021); (Prilop et al., 2021); (Sciuchetti & Yssel, 2019); (Tickell & Klassen, 2024); (Yurekli et al., 2020)
3 School organization and learning environment	(Clark & Newberry, 2019); (Gold et al., 2024); (Huang et al., 2020); (Teng et al., 2015)
4 Pressure experienced	(Bellibas & Liu, 2017); (Jörg et al., 2024); (Kim & Burić, 2020)

Based on [Table 2](#), 13 dominant articles discuss experience, practice, and mastery of competencies as factors influencing the self-efficacy of teachers and prospective teachers. Other factors identified include differences in environment, culture, and students' needs (discussed in 5 articles), conditions of school organization and learning environment (discussed in 4 articles), and the pressure experienced by teachers (discussed in 3 articles). Solutions to overcome these self-efficacy challenges are presented in [Table 3](#).

Table 3. Solutions to Enhance Teachers' and Prospective Teachers' Self-efficacy

Solutions	Articles
1 Induction and mentoring program	(Baek et al., 2024); (Bonneville-Roussy et al., 2019); (Choi & Mao, 2021); (McKinnon et al., 2014); (Tickell & Klassen, 2024)
2 Education, training, and development program	(Bailey et al., 2024); (Berg & Smith, 2018); (Bonneville-Roussy et al., 2019); (Bürgermeister et al., 2021); (Chan et al., 2023); (Clark & Newberry, 2019);

Solutions	Articles
	(Hußner et al., 2024); (Kelley et al., 2020); (Nadeem et al., 2024)
3 Good and collaborative school organization and environmental conditions	(Ekici, 2018); (Huang et al., 2020); (Nadeem et al., 2024); (Prilop et al., 2021)
4 Attention to teacher welfare, counseling, and stress management	(Kim & Burić, 2020); (X. Yang & Du, 2024)

Based on Table 3, most of the solutions applied to overcome the challenges are the implementation of education, training, and development programs discussed in 21 articles, followed by good and collaborative school organization and environment discussed in 5 articles, induction and mentoring programs discussed in 5 articles, and attention to teacher welfare, counseling, and stress management discussed in 3 articles.

Discussion

Factors Influencing Teachers' and Prospective Teachers' Self-Efficacy

The results of the literature review indicated that the first factor that can affect teachers' self-efficacy can come from students, which is about students' differences and needs. The differences relate to environmental, language, and cultural differences between teachers and students (Choi & Mao, 2021; McKinnon et al., 2014). These findings are consistent with study which stated that differences can create barriers to effective communication and understanding, challenging a teacher's ability to engage and support students effectively (Rahiem, 2020). The needs factor relates to the diversity of student needs and student problems that require special attention (Baek et al., 2024; Bailey et al., 2024). Teachers must adapt their teaching strategies to meet these varied needs, which can be demanding and influence their confidence in their ability to teach effectively. The second factor that influences efficacy comes from the individual teachers and prospective teachers, which is related to experience and competence, including experience in education, teaching experience, and opportunities to learn (Bürgermeister et al., 2021; Huang et al., 2020; Li et al., 2021). Research suggests that more experienced teachers are likely to have higher self-efficacy because they have had more opportunities to refine their skills, overcome challenges, and experience success in teaching. These findings align with a previous study which stated that mastery experiences and social persuasions are the key contributors to teachers' self-efficacy (Choi & Lee, 2020). Self-efficacy is also influenced by the amount of pressure felt, which can be caused by contractual status, time pressure, and the burden of responsibility, which can hinder the development of teachers and prospective teachers abilities and negatively affect the level of self-efficacy. found that high stress and pressure hinder teachers' and prospective teachers' abilities, negatively impacting their self-efficacy (Yada et al., 2021; Yurekli et al., 2020). This highlights the negative association between self-efficacy and job burnout, with higher stress linked to lower levels of self-efficacy.

In addition to factors from students and individual teachers and prospective teachers, good and collaborative school organizational and environmental conditions play a crucial role. Learning-focused leadership can enhance teachers' self-efficacy by providing experiences and verbal persuasive information (Huang et al., 2020; Skaalvik & Skaalvik, 2015). Effective foster a positive and supportive school culture that fosters teacher development and confidence. Conversely, negative phenomena in school organizations, such as lack of support or conflict, can reduce teachers' self-efficacy. A good and collaborative social environment also influences the growth of self-efficacy in teachers and prospective

teachers (Clark & Newberry, 2019; Gold et al., 2024). Social persuasion from colleagues and administrators, along with a collaborative work environment, reinforces teachers' beliefs in their capabilities.

Teachers' and Prospective Teachers' Self-Efficacy Challenges

The challenges to teachers' and prospective teachers' self-efficacy are closely related to the factors that influence it. Regarding the differences between teachers and students in terms of environment, language, and culture, a decrease in self-efficacy was found in teachers who served in schools with new cultures and environments and in teachers who taught students with diverse language and cultural backgrounds (Choi & Mao, 2021; McKinnon et al., 2014). These challenges arise because adapting to new cultural contexts requires additional effort and learning, which can overwhelm teachers and reduce their confidence. Teachers also showed lower self-efficacy when teaching students with special needs compared to regular students. The reason for this is that teachers experience difficulties and lack of confidence when dealing with differences, diversity of needs, and problems of students who are at high risk and require special strategies. This challenge points to a lack of attention and support for teachers in preparing themselves for environmental, cultural, and student differences (Teng et al., 2015; Tickell & Klassen, 2024).

Studies indicate that better-prepared and supported teachers report higher levels of self-efficacy. The experience and competence of teachers and prospective teachers also pose challenges, as those lacking expertise and competence often feel less confident in instruction (Hismanoglu, 2012; Yerdelen et al., 2019). This issue stems from factors like insufficient practical teaching experience, inadequate laboratory preparation, and the inability to develop effective practical lesson plans. As for prospective teachers, this challenge results from the lack of educational courses that focus on teaching techniques specific to their field, and less optimal teaching practice experience. These deficits can hinder their development of self-efficacy, as mastery experiences are crucial for building confidence. The next challenge is teachers' low self-efficacy due to the pressures they experience (Karagüven & Yukselöglu, 2013; Skaalvik & Skaalvik, 2016). This challenge can arise due to teachers working on temporary contracts and uncertainty of their tenure, as well as burnout and limited time to complete work. Teachers who experience higher stress have been shown to exhibit a lack of self-efficacy in classroom management and teaching. Stress can hinder a teacher's ability to manage the classroom and deliver instruction, reducing their confidence in their teaching abilities (Tseng et al., 2022; Williams et al., 2009).

This aligns with, who found that chronic stress and burnout lead to higher rates of nonattendance, turnover, and reduced self-efficacy among teachers. Last, challenges related to school organizational and environmental conditions. For teachers, these include hierarchical and bureaucratic educational structures with a lack of professional authority for teachers, which reduces their self-efficacy and hinders learning innovation. For prospective teachers, these challenges relate to their low self-efficacy due to negative experiences during education programs and teaching practice in schools, negative influences from the social environment, and the lack of a collaborative community (Li et al., 2021; Yada et al., 2021). These experiences can be discouraging and impede the development of a strong sense of self-efficacy. Based on the challenges found, it is necessary to enhance the self-efficacy of teachers and prospective teachers by paying attention to various factors that affect teachers' self-efficacy.

Solutions for Enhancing Teachers' and Prospective Teachers' Self-Efficacy

Various solutions can address the challenges of teacher and prospective teachers' self-efficacy. The first solution is an induction and mentoring program to prepare them for

challenges related to student differences and needs, as well as experience, practice, and competency mastery (Méndida-López & Extremera, 2020; Yildirim, 2017). This program can focus on culture and differentiated learning to enhance understanding of cultural values in the teaching and learning process, making teachers more confident in teaching students from diverse backgrounds. It can also include induction and mentoring programs to prepare teachers and prospective teachers to deal with students with special needs. Through mentoring programs, the self-efficacy and capabilities of teachers and prospective teachers can be enhanced (Baran et al., 2011; Mérida-López & Extremera, 2020). To effectively implement a mentoring program, it is necessary to consider the necessary competencies, attributes, and behaviors, such as practitioner skills, planning, implementation, and evaluation capabilities, as well as aspects of professionalism and inter- and intrapersonal intelligence.

The second solution is an education, training, and development program for teachers and prospective teachers, conducted through continuous professional development focusing on quality, length, content, and activities provided. These programs should aim to improve teachers' self-efficacy, emotional regulation, adaptability, and competencies needed in current instruction, such as online learning implementation, classroom management, and strategies for addressing student needs and problems (Huang et al., 2020; Yerdelen et al., 2019). Concrete field-specific programs can include the use of scientific sources as knowledge resources for teachers, STEM teaching practice, and the development of teaching skills on climate change topic in science subjects. Providing appropriate knowledge and skills can improve teachers' self-efficacy and support a supportive learning environment for all students (Li et al., 2021; Tusianah et al., 2021). An example of such a program is the Creative Science through Inquiry (CSI) Summer Workshop conducted by, which has proven to enhance laboratory competence and inquiry-based science teaching, thus increasing teachers' confidence in implementing science learning.

The third potential solution relates to the conditions of the school organization and environmental conditions. Good leadership, focus on learning, and teacher development, can significantly enhance self-efficacy by providing supportive experiences and opportunities for professional growth. Distributed leadership, which promotes shared responsibilities and professional autonomy, fosters a democratic and supportive collaborative atmosphere, encouraging teachers to innovate and feel confident in their abilities (Chan et al., 2023; Skaalvik & Skaalvik, 2015). A collaborative environment enhance engagement and self-development, and feedback sessions help teachers and prospective teachers develop social confidence and resilience. Self-efficacy beliefs can also be enhanced through indirect experiences, such as observation and feedback from colleagues, as well as through direct opportunities to teach in the classroom. Seeing peers face similar challenges can boost self-confidence and perseverance (Sciuchetti & Yssel, 2019; Tickell & Klassen, 2024). Ultimately, fostering a supportive and collaborative school environment has been proven to not only enhance teachers' self-efficacy but also contribute to a more positive and effective educational experience for both teachers and students.

The findings of this current study suggest that comprehensive and supportive induction and mentoring programs, ongoing professional development, supportive school environments, and attention to teacher welfare are crucial for enhancing teachers' and prospective teachers' self-efficacy. Future studies should evaluate the effectiveness of these solutions and explore additional strategies to enhance teachers' self-efficacy in diverse educational contexts.

4. CONCLUSION

Based on the literature review, factors such as differences in students' environment, culture, and needs, teachers' professional abilities, school and environmental conditions, and pressure can significantly affect self-efficacy. Identifying these challenges is crucial. Solutions include induction programs to prepare teachers and prospective teachers for different environments, cultures, and student needs; mentoring programs to develop competencies and self-efficacy, and continuous education and training. Supportive environments such as good school organizational conditions, collaborative social environments, and adequate psychological support are also vital. Collaboration between the government, educational institutions, schools, and communities is crucial in implementing these solutions to improve education quality. The government should support policies and resources, educational institutions focus on self-efficacy in curriculums, and schools and communities should create a supportive environment. Reforming educational policies to enhance teachers' self-efficacy will ultimately improve teaching and learning quality in schools.

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