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Analysis of Self-Efficacy Among PPG Teachers in the Implementation of Physical Education Learning

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ABSTRACT (9 pt)

The high demands for professionalism in education, along with teachers' lack of competence, are linked to an increased prevalence of stress. This study aims to examine the self-efficacy of teachers participating in the Teacher Professional Education (PPG) program. The research utilized a survey method, modifying the National Association for Sport and Physical Education (NASPE) instrument, which was validated with a result of r_{hit} = 0.76 > r_{tab} = 0.33, indicating that all items were valid. The reliability test produced an alpha value greater than 0.90, reflecting high reliability. Accidental sampling was employed to select 44 respondents. The results indicated that 81.8% of respondents exhibited positive self-efficacy, while 18.2% displayed negative self-efficacy, with the predominant category being "moderate" at 50%. Further research is recommended to explore the impact of the PPG program through comparative studies among teachers who have not participated, are currently participating, or have completed the program.

Keywords:
Self-efficacy
Teacher education
Physical education

INTRODUCTION

Enhancing the quality of education is a key priority in Indonesia's sustainable development agenda (Bappenas, 2021). According to Bappenas (2021), strategies to achieve quality education are being implemented through policies for 2020–2024, focusing on strengthening teachers' roles in student learning assessments and utilizing assessment results to improve teaching practices (Maryani, 2022). The Teacher Professional Education (PPG) program, administered by the Directorate General of Teachers and Education Personnel, aims to enhance teaching quality and educational relevance across all levels (Maryani, 2022). Additionally, this initiative seeks to increase the percentage of certified teachers, targeting a rise from 53.19% in 2015 to 95.84% by 2030 under an intervention scenario, compared to 81.66% under a Business as Usual (BAU) scenario (Bappenas, 2021). However, the program's effectiveness depends on various factors, including teachers' qualifications, field relevance, abilities, motivation, educational background, work experience, and mastery of personal, social, pedagogical, and professional competencies (Syarafudin & Ikawati, 2020).

The high demands for professionalism in education, coupled with teachers' lack of competence, are associated with increased stress levels (Febriantina et al., 2020). Another issue is teachers' lack of awareness regarding self-improvement, which manifests as disengagement, low enthusiasm, and minimal physical, cognitive, and emotional investment in their roles (Rugiyanto, 2018). A survey of 758 secondary school teachers (286 male, 472 female) from 33 provinces in Indonesia revealed that work stress negatively impacts teachers' psychological well-being (Rangkuti et al., 2024). Conversely, a significant positive correlation exists between teachers' self-efficacy and their psychological well-being, indicating that higher self-efficacy leads to better mental health among teachers (Gündüz, 2022). Equally important is the role of self-efficacy in helping teachers achieve their planned learning objectives (Bandura, 1977).

Self-efficacy, a term popularized by Albert Bandura, is a central element of social cognitive theory (Bandura, 1977). Bandura defines self-efficacy as an individual's belief

in their ability to perform tasks or actions required to achieve specific outcomes (Bandura, 1977). In this context, self-efficacy refers to a psychological conviction that influences teachers' confidence (Bourne et al., 2021). Social cognitive theory is crucial for teachers to understand how individuals acquire knowledge, skills, and behaviors through social interactions (Chen et al., 2022). Modern research has demonstrated significant relationships between self-efficacy, teacher leadership, and teaching performance (Akman, 2021). Furthermore, teachers' leadership behaviors significantly contribute to professional learning processes, teaching quality, and institutional development (Hallinger et al., 2017).

To address the need for teacher professionalism, the Indonesian government has implemented the PPG program to prepare competent teachers (Maryani, 2022). The program equips teachers with innovative and engaging teaching methods, critical thinking, problem-solving skills, creativity, and the ability to innovate (Maryani, 2022). However, Bappenas (2021) suggests that teacher certification may not significantly impact learning outcomes. This claim necessitates further investigation through self-efficacy surveys (Kustyarini, 2020). Given the ideal conditions for teacher self-efficacy, assessing the self-efficacy levels of teachers after completing the PPG program conducted by the Directorate General of Teachers and Education is essential (Syarafudin & Ikawati, 2020).

RESEARCH METHOD

This study employed a survey research design to measure teachers' self-efficacy in relation to their participation in the Teacher Professional Education (PPG) program. The sample selection utilized an accidental sampling technique, targeting teachers currently enrolled in the PPG program at Universitas Negeri Malang. From this sampling approach, a total of 44 respondents voluntarily participated by completing the research instrument. The study participants comprised students currently enrolled in the Teacher Professional Education (PPG) program at Universitas Negeri Malang, whose self-efficacy levels were measured during their program participation. The respondent characteristics are presented in Table 1:

Table 1. Respondent Characteristics

Gender	n	Percentage
Male	36	82%
Female	8	18%

The research instrument was adapted from the National Association for Sport and Physical Education (NASPE) framework. Rigorous testing demonstrated strong psychometric properties, with validity testing yielding $r_{hit} = 0.76 > r_{tah} = 0.33$, indicating all instrument items were valid. Reliability analysis produced an alpha coefficient > 0.90, reflecting excellent internal consistency of the measurement tool.

For data analysis, the researchers employed descriptive statistics, presenting results in percentage form and providing a narrative interpretation of the findings. This analytical approach allowed for a comprehensive examination of teachers' self-efficacy levels across various dimensions of the PPG program implementation.

RESULTS AND DISCUSSION

Related to the research results, the measured self-efficacy contains seven main aspects such as the efficacy of physical education content knowledge, the effectiveness of applying scientific knowledge, the ability to accommodate differences in skill levels, inclusive skills, the effectiveness of instruction, the efficacy of using assessment instruments, and the effective use of technology. These seven assessment factors are presented as percentages in Table 2 as follows:

Table 2. Self-efficacy results data

Aspect	Excellent	Good	Fair	Deficient	Very Deficient
efficacy of physical education content knowledge	11.4%	13.6%	29.5%	43.2%	2.3%
effectiveness of applying scientific knowledge	15.9%	11.4%	52.3%	18.2%	2.3%
ability to accommodate differences in skill levels	0.0%	34.1%	13.6%	52.3%	0.0%
inclusive skills	11.4%	11.4%	0.0%	52.3%	25.0%
effectiveness of instruction	0.0%	34.1%	15.9%	47.7%	2.3%
efficacy of using assessment instruments	0.0%	31.8%	50.0%	15.9%	2.3%
effective use of technology	0.0%	40.9%	27.3%	31.8%	0.0%

Based on the data presented on the efficacy of physical education content knowledge, with a positive direction of 54.5% and a negative direction of 45.5%, this indicates that teachers tend to know a lot about fitness activities and can teach them effectively. Regarding the aspect of the effectiveness of applying scientific knowledge, with a positive direction of 79.5% and a negative direction of 20.5%, this means that, theoretically, teachers have a good understanding of sports science concepts. In terms of the ability to accommodate differences in skill levels, the positive direction was 47.7% while the negative direction was 52.3%, indicating that teachers tend to be less able to accommodate differences in students' learning abilities. In terms of inclusive skills, the positive direction is 22.7% while the negative direction is 77.3%, indicating that teachers are less able to provide appropriate accommodations for students with disabilities. In terms of the effectiveness of instruction, the positive direction is 50.0% while the negative direction is 50.0%, meaning that teachers are sufficiently capable of providing effective instruction to students. In terms of efficacy in the use of assessment instruments, the positive direction was 81.8% while the negative direction was 18.2%, meaning that teachers have very good efficacy in the use of assessment instruments. In terms of the effectiveness of technology use, the positive direction was 68.2% while the negative

direction was 31.8%, meaning that teachers have sufficient mastery of technology skills. Overall, the results are as shown in Table 3 below:

Table 3. Overall self-efficacy results

Aspect	Excellent	Good	Fair	Deficient	Very Deficient
Self-efficacy	11.4%	20.5%	50.0%	15.9%	2.3%

Overall, the results show a positive direction of 81.8% and a negative direction of 18.2%, indicating that, in general, teachers' self-efficacy in physical education within the PPG program falls into the "good" category based on the positive direction, with the majority of data distributed in the "adequate" category at 50%. Based on these results, it is evident that the PPG program provides benefits to teachers' efficacy, including content knowledge efficacy in physical education, the effectiveness of applying scientific knowledge, the ability to accommodate differences in skill levels, inclusive skills, instructional effectiveness, efficacy in using assessment instruments, and the effectiveness of using technology.

Discussion

Self-efficacy is a term popularized by Albert Bandura and is believed to be an important element in social cognitive theory (Bandura, 1977). Bandura states that an individual's sense of efficacy can make a difference (Bandura, 1977). Bandura describes the life of an individual who has goals and values but lacks a sense of meaning as tragic (Bandura, 1977). Such a person may know what they want but be unable to do anything with that knowledge (Bandura, 1977). With a sense of efficacy, people believe that they can control their environment, which has positive benefits for physical and mental health (Gündüz, 2022). In this case, self-efficacy refers to an individual's psychological belief that affects their self-confidence as a teacher (Bourne et al., 2021). Social cognitive theory plays an important role for teachers in understanding how individuals acquire knowledge, skills, and behavior through social interaction (Chen et al., 2022). The presence of self-efficacy in teachers will impact four main processes: cognitive processes, motivational processes, affective processes, and selection processes (Bandura, 1977). Based on the concept of self-efficacy in behavior that can be demonstrated by individuals, an analysis of the aspects is conducted (Akman, 2021).

Based on the low measurement results of self-efficacy in the aspect of accommodating differences in students' skill levels and inclusive skills, this indicates that policymakers or stakeholders should continue to enhance and develop teachers' abilities and skills to accommodate the diverse needs of students (Maryani, 2022). Regarding inclusive accommodation skills, according to the Ministry of Education and Culture regulations (Mendiknas, 2009), every student with physical, emotional, mental, or social disabilities, or those with exceptional intelligence and talent, has the right to receive inclusive education at a specific educational institution according to their needs and abilities (Jariono et al., 2022). The implementation of inclusion faces many challenges (Haegele et al., 2021). Haegele et al. (2021) detail the challenges in implementing adaptive physical education, including environmental challenges related to the availability of appropriate and safe facilities; in terms of equipment, there are limitations in terms of

appropriate and safe facilities for students with disabilities; in terms of personality, there are limitations related to medical conditions and the abilities of students; in terms of policy, there are limitations in accommodation due to policy constraints by stakeholders; in terms of program, there are limitations in terms of human resources and short learning durations; in the social aspect, there is a lack of public understanding of people with disabilities; and in the teacher aspect, there is a lack of competence and barriers to interaction between teachers and students with disabilities (Burhein & Saleh, 2023). Additionally, in the assessment aspect, there are still no valid and reliable instruments available for students with mobility disabilities (Burhein & Saleh, 2023). Therefore, improvements to the program and teaching methodology in the PPG program must enhance the necessary accommodation capabilities, such as psychological, pedagogical functions, as well as the theoretical, practical, and scientific foundations of inclusive education (Maryani, 2022).

Self-efficacy in terms of the ability to accommodate differences in students' skill levels includes statements regarding teachers' confidence in providing accommodations for students with diverse abilities (Roure et al., 2019). These statements are related to the appropriateness and suitability of learning strategies and methods in addressing students' learning barriers (Jariono et al., 2022). Indeed, learning strategies play a significant role in influencing students' interest and learning outcomes (Roure et al., 2019). As stated by Atkinson and Shiffrin's information processing theory in 1968, the sensory memory stage, or the stage of information input based on the five senses, requires attention and affection to be transferred to short-term memory and reinforced through repetition before being stored relatively longer in long-term memory (Atkinson & Shiffrin, 1968). Therefore, teachers may consider designing learning tasks that involve enjoyable interactions to engage students' attention and affect in the process of accommodating learning barriers that arise (Kustyarini, 2020).

Specifically, to refute the statement that the PPG program is not very useful, as has been suggested, in fact, based on the conditions of the respondents who are currently participating in the PPG program, when measuring self-efficacy, the positive direction was 81.8% and a negative direction of 18.2%, meaning that overall, teachers' self-efficacy in physical education within the PPG program, based on the positive direction, falls into the "good" category, with the majority of data distributed in the "adequate" category at 50% (Maryani, 2022). However, in terms of the ability to accommodate differences in students' skill levels and inclusive skills, further intervention is still needed (Jariono et al., 2022). In other aspects, such as the efficacy of physical education content knowledge, the effectiveness of applying scientific knowledge, the effectiveness of instruction, the efficacy of using assessment instruments, and the effectiveness of using technology, the results were positive (Maryani, 2022). It is hoped that, despite the limitations of the results of this study, further research can examine more broadly the impact of the PPG program through comparative tests between groups of teachers who have not yet participated, are currently participating, and have completed the PPG program (Bappenas, 2021).

CONCLUSION

Based on the results of the measurement of respondents who were participating in PPG when the self-efficacy measurement was conducted, 81.8% had a positive direction and

18.2% had a negative direction, which means that in general, the self-confidence or self-efficacy of physical education teachers in the PPG program based on the positive direction was in the good category with the dominant data distribution in the sufficient category at 50%. However, in terms of the ability to accommodate differences in students' skill levels and inclusive skills, further intervention is still needed. In other aspects, such as the efficacy of physical education content knowledge, the effectiveness of applying scientific knowledge, the effectiveness of instruction, the efficacy of using assessment instruments, and the effectiveness of using technology, the results were positive. Despite the limitations of the results in this study, further research can explore more broadly the impact of the PPG program through comparative tests between groups of teachers who have not yet participated, are currently participating, and have completed the PPG program.

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