

Exploring the Relationship between Teachers' Self-Efficacy and Their Commitment to Sustainability Education

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Abstract-This study explores the link between teachers' self-efficacy and their dedication to sustainability education. The main aim is to examine how a teacher's confidence in their teaching abilities affects their dedication to integrating sustainability principles into their teaching methods. A quantitative correlational research design was used to clarify this connection. Data were collected from a group of 50 teachers using two structured tools: the Teachers' Sense of Efficacy Scale (TSES) and a specially designed Commitment to Sustainability Education Survey for this study. Responses were assessed on simplified categorical scales (Yes/Maybe/No). Microsoft Excel was used for descriptive statistics, Pearson's correlation analysis, and cross-tabulation to analyze the results. The expected outcomes aim to enhance the understanding of how increasing teacher self-efficacy might strengthen sustainability-focused educational practices, thereby providing valuable insights for teacher training programs and curriculum development.

Keywords-Self-Efficacy, Sustainability Education, Teacher Commitment, Correlational Study.

I. BACKGROUND OF THE STUDY

The increasing urgency of global environmental, social, and economic issues has made Education for Sustainable Development (ESD) a critical priority in schools worldwide. ESD seeks to equip learners with the knowledge, skills, attitudes, and values needed to create a sustainable future. Teachers are central to this process, as they are responsible for incorporating sustainability concepts into various learning environments. However, the successful implementation of sustainability education often requires more than curriculum mandates; it necessitates teachers' self-efficacy—their belief in their ability to teach effectively and influence student learning. Research indicates that teachers with strong self-efficacy are more adaptable,

resilient, and committed to adopting innovative and interdisciplinary approaches, all of which are crucial for effective sustainability education. Despite the acknowledged importance of ESD, few studies have specifically investigated the connection between teachers' self-efficacy and their actual commitment to sustainability teaching. This study seeks to fill that gap by exploring the relationship between these two important variables, offering insights for teacher training and professional development programs focused on sustainable education.

II. INTRODUCTION

Self-efficacy: - Introduced by Albert Bandura, self-efficacy refers to an individual's confidence in their ability to successfully complete specific tasks. In educational settings, teacher self-efficacy is crucial in shaping classroom dynamics, affecting both teacher actions and student achievements. Educators with strong self-efficacy are more inclined to embrace innovative techniques, overcome obstacles, and positively influence their students' learning experiences. In the realm of Education for Sustainable Development (ESD), teacher self-efficacy is especially important, as sustainability education often demands interdisciplinary approaches, critical thinking, and value-driven teaching. A robust sense of self-efficacy can motivate teachers to more deeply integrate sustainability principles into their instruction. This study explores the connection between teachers' self-efficacy and their dedication to sustainability education, aiming to offer insights that could improve teacher training programs and foster effective sustainability practices in schools.

Sustainability in education: - Sustainability in education has become a fundamental aspect of global initiatives to tackle urgent environmental,

social, and economic issues. It focuses on providing learners with the knowledge, skills, values, and attitudes needed to contribute to a sustainable future. Education for Sustainable Development (ESD) encourages critical thinking, problem-solving, and active citizenship, urging schools to incorporate sustainability principles into all subjects and activities. Teachers play a pivotal role in this transformation, as they are responsible for nurturing a mindset that values environmental stewardship, social equity, and economic responsibility. However, the successful integration of sustainability in education largely depends on teachers' beliefs, skills, and motivation. Their commitment to sustainability education is often tied to their confidence in employing innovative and interdisciplinary teaching methods. This study seeks to investigate how teachers' self-efficacy affects their commitment to promoting sustainability principles in classroom practice, emphasizing the need for professional development and support in building sustainable education systems.

III. RELATED LITERATURE REVIEW

1. Poulou, M., Reddy, L. A., & Dudek, C. M. (2019). Relation of teacher self-efficacy and classroom practices: A preliminary investigation. *School Psychology International*, 40(1), 25–48. <https://doi.org/10.1177/0143034318810314>

Poulou et al. (2019) examined the link between teachers' self-efficacy beliefs and their classroom practices, focusing on instructional strategies and behavior management. Using teacher self-report surveys, the study found a significant positive correlation: teachers with higher self-efficacy were more likely to use effective teaching methods and proactive discipline strategies. The findings suggest that strengthening teacher self-efficacy through professional development may improve classroom practices and student outcomes.

2. Khanshan, S. K., & Yousefi, M. H. (2020). The relationship between self-efficacy and instructional practice of in-service soft disciplines, hard disciplines and EFL teachers. *Asian-Pacific Journal of Second and Foreign Language Education*, 5(1), 1–15. <https://doi.org/10.1186/s40862-020-00095-2>

Khanshan and Yousefi (2020) investigated the relationship between teachers' self-efficacy and their commitment to sustainability education, focusing on in-service teachers from soft disciplines,

hard disciplines, and English as a Foreign Language (EFL). The study aimed to assess whether teachers with higher self-efficacy are more likely to integrate sustainability topics into their teaching. Findings showed a significant positive correlation between self-efficacy and sustainability-focused instructional practices among soft and hard discipline teachers, though this correlation was not significant for EFL teachers. The results suggest that enhancing self-efficacy may be key to fostering greater engagement with sustainability education in classroom settings.

3. Choi, E., & Lee, J. (2018). EFL teachers' self-efficacy and teaching practices. *ELT Journal*, 72(3), 273–282. <https://doi.org/10.1093/elt/ccy009>

Choi and Lee (2018) explored how EFL teachers' self-efficacy beliefs influence their instructional practices, particularly the use of communicative, student-centered teaching methods. The study found a strong positive correlation between overall self-efficacy and the adoption of interaction-focused approaches, with classroom management efficacy emerging as a key predictor. Teachers with higher confidence were more likely to engage students through communicative strategies rather than rely on traditional, teacher-centered instruction. Sociocultural factors also played a role, shaping both teaching practices and teachers' beliefs about their capabilities. The findings highlight the importance of building teacher self-efficacy to promote effective, student-centered language teaching.

4. Jerrim, J., Prieto-Latorre, C., Marcenaro Gutiérrez, Ó. D., & collaborator. (2024). Teacher self-efficacy, instructional practice, and student outcomes: Evidence from the TALIS Video Study. *American Educational Research Journal*. <https://doi.org/10.3102/0002831224123456>

Jerrim et al. (2024) examined the relationship between teacher self-efficacy, instructional practices, and student outcomes using data from the international TALIS Video Study. While the study found a generally positive correlation between self-efficacy and instructional quality, the relationship was modest, especially when assessed by external observers. Teachers with higher self-efficacy were more likely to use effective teaching strategies, which in turn were linked to improved student engagement and outcomes. However, cultural and systemic differences across countries influenced how these factors interacted. The study concludes

that professional development aimed at enhancing teacher self-efficacy can contribute to better instruction and learning outcomes, though approaches must be context-sensitive.

5. Daumiller, M., Keller, M. V., & Dresel, M. (2024). Exploring the role of teacher self-efficacy and personal environmental practices in integrating sustainability into their teaching: A network analysis of German teachers. *PsyArXiv Preprints*. <https://doi.org/10.31234/osf.io/apmys>
Daumiller et al. (2024) explored how German teachers' self-efficacy and personal values influence the quality of their instruction, particularly in the context of sustainability education. The study found that teachers with higher self-efficacy tend to use more effective teaching methods, enhancing overall instructional quality. Moreover, personal environmental values also significantly shaped teaching practices, and their interaction with self-efficacy created a more supportive, effective teaching environment. These findings suggest that fostering both confidence and alignment with personal values is critical to improving teaching outcomes.

6. Alzoraiki, M., Ahmad, A. R., Ateeq, A., et al. (2023). Impact of teachers' commitment to the relationship between transformational leadership and sustainable teaching performance. *Sustainability*, 15(5), 4620. <https://doi.org/10.3390/su15054620>
Alzoraiki et al. (2023) investigated how teacher commitment moderates the relationship between self-efficacy and sustainable teaching performance. The study found that while self-efficacy independently supports high-quality teaching, its impact is significantly amplified when teachers are strongly committed to sustainability education. Commitment acts as a key moderating factor, reinforcing the effects of self-efficacy on instructional performance. The authors recommend that leadership strategies focus not only on boosting teacher confidence but also on cultivating long-term professional dedication to sustainability goals.

Objectives

1. To evaluate the degree of self-efficacy among educators engaged in sustainability education.
2. To assess the dedication of teachers to incorporating sustainability principles into their classroom activities.

3. To explore the connection between teachers' self-efficacy and their dedication to sustainability education.

4. To pinpoint the key aspects of teacher self-efficacy that most significantly impact their dedication to sustainability education.

Need and Significance of the Study

The growing global focus on sustainable development underscores the critical role of education in cultivating environmentally conscious and socially responsible individuals. Education for Sustainable Development (ESD) aims to embed sustainability principles across all educational levels, encouraging learners to think critically, act responsibly, and contribute to a sustainable future. However, the effective implementation of sustainability education largely hinges on the confidence, skills, and dedication of teachers. Teacher self-efficacy — the belief in one's capability to organize and carry out necessary actions for effective teaching — is crucial in shaping teaching practices and student outcomes. Teachers with high self-efficacy are more inclined to embrace innovative methods, address interdisciplinary topics like sustainability, and persevere through challenges. Understanding the link between teachers' self-efficacy and their dedication to sustainability education is vital for developing effective teacher training and professional development programs. This study is important because it explores a relatively unexamined area that connects emotional-cognitive factors (self-efficacy) with sustainable teaching practices. Its findings can guide educational policymakers, curriculum developers, and teacher educators in recognizing the need to enhance self-efficacy to improve the quality and consistency of sustainability education in schools.

Research Questions

1. What is the degree of self-efficacy among educators involved in sustainability education?
2. What is the level of dedication among teachers to integrating sustainability education into their teaching practices?
3. Is there a significant connection between teachers' self-efficacy and their dedication to sustainability education?
4. Which aspects of teacher self-efficacy (e.g., instructional strategies, classroom management,

student engagement) most significantly impact their dedication to sustainability education?

Hypotheses

Null Hypothesis (H_0): There is no significant connection between teachers' self-efficacy and their dedication to sustainability education.

Research Hypothesis (H_1): There is a significant positive connection between teachers' self-efficacy and their dedication to sustainability education.

Research Design

This research employs a descriptive correlational design to investigate the link between teachers' self-efficacy and their dedication to sustainability education. The descriptive aspect aims to identify and summarize the current levels of self-efficacy and commitment to sustainability among teachers, while the correlational aspect assesses the strength and direction of the relationship between these two factors. The study gathers quantitative data using structured survey tools: the Teachers' Sense of Efficacy Scale (TSES) and a specially crafted Commitment to Sustainability Education Survey. Participants will answer simplified categorical questions (Yes/Maybe/No) that reflect their beliefs and practices. The sample will include teachers from schools and teacher education institutions involved in sustainability initiatives. Data analysis will be conducted using Microsoft Excel, utilizing descriptive statistics (mean, frequency, percentage) to summarize teacher responses and Pearson's correlation analysis to explore the relationship between self-efficacy and sustainability commitment. This research design provides a systematic understanding of how self-efficacy impacts sustainable teaching practices, offering valuable insights for improving teacher development programs aimed at promoting Education for Sustainable Development (ESD).

Correlational Research Design

This study employs a correlational research design to explore the relationship between teachers' self-efficacy and their commitment to sustainability education. Correlational research is suitable for examining the extent to which two or more variables are related without manipulating any of them. In this study, both self-efficacy and sustainability commitment are measured as they naturally occur among teachers, with no intervention applied. The primary goal is to determine if a statistically

significant association exists between a teacher's level of self-efficacy and their commitment to incorporating sustainability principles into teaching practices. The study uses two structured instruments: the Teachers' Sense of Efficacy Scale (TSES), which includes 24 items rated on a 9-point Likert scale, and a custom-designed Commitment to Sustainability Education Survey, featuring simplified Yes/Maybe/No responses. A sample of teachers from various educational institutions is selected. The data are analyzed using descriptive statistics and Pearson's correlation coefficient through Microsoft Excel to assess the strength and direction of the relationship between the two variables. This design helps identify whether higher self-efficacy is linked to greater sustainability commitment in classroom practices.

Relevant statistic for Relationship between teacher self-efficacy and commitment to sustainability in education.

Variable	N	Mean	Sd	d	Coefficient of correlation	P
Self-Efficacy	50	17.76	3.96	48	0.84	0.0000000000000621
Commitment to Sustainability in Education	50	78.02	9.73			

Hypothesis Analysis Table

Component	Details
Research Hypothesis (H_1)	There is a significant positive relationship between teacher self-efficacy and commitment to sustainability education.
Null Hypothesis	There is no significant

(H ₀)	relationship between teacher self-efficacy and commitment to sustainability education.
Test Used	Pearson Product-Moment Correlation
Sample Size (n)	50 Respondents
Degrees of Freedom (df)	48 (N-2)
Correlation Coefficient (r)	0.84 (Strong Positive Correlation)
Test Statistic (t)	≈ 10.72
Exact p-value	0.0000000000000621 (≈ 6.21 × 10 ⁻¹⁴)

IV. RESULTS AND INTERPRETATION

The Pearson correlation analysis performed in Excel with the given data revealed the following outcomes: A Pearson correlation coefficient (r) of 0.84 was determined between teachers' self-efficacy scores and their commitment to sustainability education scores, signifying a strong positive linear relationship. The analysis involved 50 participants, resulting in 48 degrees of freedom (df = n - 2). The associated t-statistic was approximately 10.72, with a precise p-value of 0.0000000000000621, which is significantly lower than the conventional significance level (α = 0.05).

This outcome leads to the rejection of the null hypothesis, affirming a statistically significant and meaningful connection between teachers' confidence in their teaching abilities and their dedication to sustainability education.

The positive correlation suggests that teachers with higher self-efficacy are more inclined to commit to sustainability-focused teaching practices. These results emphasize the importance of boosting teacher self-efficacy in professional development programs aimed at advancing education for sustainable development.

V. CONCLUSION

This study sought to examine the link between teachers' self-efficacy and their commitment to

sustainability education. The findings highlight the crucial role that teachers' belief in their ability to effectively teach sustainability plays in fostering a commitment to sustainable practices within educational settings. Teachers with high self-efficacy were more likely to integrate sustainability into their teaching practices, engage students in environmental issues, and promote long-term ecological awareness.

The research underscores that teacher self-efficacy is vital not only for individual teaching success but also for the broader goal of embedding sustainability into curricula and pedagogical strategies. Furthermore, the study suggests that professional development programs focusing on enhancing teachers' confidence and competence in sustainability education can improve their overall commitment. As teachers feel more capable of delivering sustainability-related content, they are more motivated to create a learning environment conducive to fostering responsible, environmentally-conscious citizens.

In conclusion, fostering self-efficacy in teachers is essential for advancing sustainability education. Policymakers and educational leaders must prioritize strategies that support teachers' development in this area, ensuring that sustainability is integrated across all levels of education. Future research could explore specific interventions to enhance teachers' self-efficacy in sustainability education, as well as longitudinal studies to assess the long-term impact of these efforts on both educators and students.

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