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Outdoor Learning and Attitude towards Sustainability of Grade 3 Teachers

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Abstract:- This study investigated the relationship between outdoor learning and sustainability attitudes among Grade 3 teachers, examining the extent of outdoor learning and its influence on attitudes towards environmental sustainability. Utilizing a descriptive correlation approach, the study employed survey to gather data from a sample of Grade 3 teachers. Outdoor learning was assessed across multiple indicators, including exploring nature, participating actively, working together, having fun, and discovering outdoors. Concurrently, attitudes towards sustainability were gauged through indicators related to taking care of the environment, learning about nature, and reducing waste. The results revealed a robust positive correlation between outdoor learning and sustainability attitudes, suggesting that increased engagement in outdoor learning positively influences teachers' attitudes towards sustainability. Multiple linear regression underscored the significance of all outdoor learning indicators, emphasizing their collective impact on sustainability attitudes. The regression model elucidated that exploring nature, participating actively, working together, and having fun were key contributors. This study contributes to the growing field of environmental education by empirically establishing the critical role of outdoor learning in shaping sustainable attitudes among teachers. The findings emphasize the need for educational stakeholders to prioritize and integrate outdoor learning initiatives within the curriculum, fostering a holistic approach to sustainability education.

Keywords:- *Outdoor Learning, Sustainability Attitudes, Primary Education, Environmental Education, Grade 3 Teachers.*

I. INTRODUCTION

Outdoor learning is a method of education that emphasizes the importance of direct experience and interaction with the natural environment, which is particularly relevant to promoting attitudes towards sustainability. By engaging with nature and learning about the environment, students can develop a sense of responsibility for its protection and gain a deeper understanding of the interconnectedness of ecological systems.

Recent research has highlighted the urgent need to promote sustainable behaviors and attitudes among young teachers, particularly in the face of global environmental challenges such as climate change, resource depletion, and biodiversity loss. Outdoor learning has been identified as a promising approach to addressing this need, as it offers a unique and engaging way for students to connect with the natural world and learn about sustainability (Dyment & Bell, 2018; Kuo & Taylor, 2014).

However, there is still a lack of understanding about the specific mechanisms and factors that contribute to the effectiveness of outdoor learning programs in promoting sustainability attitudes and behaviors, especially in international settings with different cultural and environmental contexts (Bentsen et al., 2019). Therefore, further research is needed to explore the potential of outdoor learning as a tool for Grade 3 teachers in promoting sustainability education among young learners in different global contexts.

In the global context, there is a growing recognition of the importance of sustainability education for promoting environmental stewardship and sustainable development. The United Nations' Sustainable Development Goals (SDGs) highlight the critical role of education in achieving sustainable development, with SDG 4 specifically calling for "inclusive and equitable quality education" and SDG 13 focusing on "climate action" (UN, 2015).

Furthermore, international frameworks such as the Education for Sustainable Development (ESD) and the Global Action Programme (GAP) on ESD have emphasized the need to integrate sustainability education across all levels and sectors of education, from early childhood to higher education (UNESCO, 2014; UNEP, 2014). Outdoor learning can play a vital role in achieving these goals by providing a hands-on and engaging learning environment that fosters environmental awareness, critical thinking, and action-oriented learning (Kellert, 2002). Therefore, it is essential to explore the potential of outdoor learning as a tool for promoting sustainability education by teachers in the global context.

II. METHOD

This chapter presents the methodology employed in this study to investigate the relationship between outdoor learning and attitudes towards sustainability among Grade 3 teachers. This chapter provides a detailed description of the research design, sampling procedure, data collection tools and procedures, and data analysis methods used in the study.

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III. RESULTS AND DISCUSSIONS

The results and discussions of the provides a comprehensive analysis of the data collected about attitudes towards sustainability and experiences with outdoor learning. This chapter aims Summary of the Extent of Outdoor Learning of Grade 3 Teachers

Table 1 reveals a remarkable commitment to outdoor learning among Grade 3 teachers, with consistently high mean scores across all indicators.

Table 1 Summary of the Extent of Outdoor Learning of Grade 3 Teachers

Indicators	Mean	SD	Description
Exploring Nature	4.77	0.37	Very Extensive
Participating Actively	4.72	0.43	Very Extensive
Working Together	4.69	0.45	Very Extensive
Having Fun	4.68	0.45	Very Extensive
Discovering Outdoors	4.67	0.49	Very Extensive
Overall	**4.71**	**0.39**	**Very Extensive**

Particularly, "Exploring Nature" stands out with the highest mean of 4.77 (SD = 0.37), signifying a very extensive engagement in fostering students' exploration of the natural environment. This implies a robust emphasis on hands-on experiences in nature, potentially enhancing students' ecological awareness and connection to the environment. On the other hand, "Discovering Outdoors" registers the lowest mean at 4.67 (SD = 0.49), still indicating a very extensive involvement but suggesting a marginally less pronounced focus. Addressing this aspect more deliberately could further enrich the comprehensiveness of outdoor learning experiences. The overall mean of 4.71 (SD = 0.39) underscores the overarching commitment of Grade 3 teachers to very extensive outdoor learning practices, showcasing a holistic approach to incorporating the outdoors into the curriculum. This means that outdoor learning is always manifested.

These results resonate with existing literature on the positive impact of outdoor learning experiences on student engagement and academic achievement (Angell et al., 2020; Lester et al., 2017). The high mean scores align with the findings that teachers, much like those in the study by Bell and Dyment (2017), prioritize immersive outdoor experiences, recognizing their potential to contribute to students' overall well-being and development. The emphasis on "Exploring Nature" aligns with the work of Kellert (2002), who highlights the significance of direct experiences with nature in fostering environmental attitudes.

The slightly lower mean for "Discovering Outdoors" mirrors the nuanced findings of Bentsen et al. (2019), suggesting that specific dimensions of outdoor learning may vary in emphasis. Overall, these results reinforce the importance of tailoring outdoor learning experiences to different dimensions while ensuring a comprehensive and integrated approach to harness the full benefits of outdoor education.

Extent of Outdoor Learning of Grade 3 Teachers in terms of Exploring Nature

Table 2 provides an in-depth insight into the extent of outdoor learning concerning the dimension of "Exploring Nature" among Grade 3 teachers.

Table 2 Extent of Outdoor Learning of Grade 3 Teachers in terms of Exploring Nature

	Statements	Mean	SD	Description
1.	I like to look at different plants and animals.	4.80	0.45	Very Extensive
2.	I enjoy walking and hiking in nature.	4.78	0.44	Very Extensive
3.	I enjoy exploring and discovering new things in nature.	4.74	0.53	Very Extensive
	Overall	**4.77**	**0.37**	**Very Extensive**

Notably, the mean scores for individual statements highlight a consistent and very extensive engagement. The statement "I like to look at different plants and animals" yields the highest mean of 4.80 (SD = 0.45), underscoring a strong affinity for fostering observational skills and ecological awareness. The enthusiasm for direct nature encounters is further emphasized by the high means for "I enjoy walking and hiking in nature" (Mean = 4.78, SD = 0.44) and "I enjoy exploring and discovering new things in nature" (Mean = 4.74, SD = 0.53). This means that outdoor learning is always manifested. Collectively, these high mean scores reinforce the teachers' profound commitment to facilitating diverse and immersive experiences centered around exploring and appreciating the natural world.

The results align with existing literature, particularly the work of Ojala (2015), which emphasizes the importance of nature experiences in shaping environmental attitudes. The consistent emphasis on direct engagement with flora and fauna corresponds with Kellert's (2002) framework, which identifies the significance of direct encounters with biodiversity. The findings also resonate with the systematic review by Angell et al. (2020), indicating that fostering a connection to nature is a crucial component of effective outdoor learning. These results underscore the alignment of

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teacher practices with established principles of effective outdoor education, emphasizing the pivotal role of direct nature experiences in nurturing ecological awareness among students.

Extent of Outdoor Learning of Grade 3 Teachers in terms of Participating Actively

Table 3 outlines the extent to which Grade 3 teachers actively engage in outdoor learning, particularly in the dimension of "Participating Actively."

Table 3 Extent of Outdoor Learning of Grade 3 Teachers in Terms of Participating Actively

	Statements	Mean	SD	Description
1.	I like to participate in outdoor activities with my colleagues.	4.70	0.56	Very Extensive
2.	I like to be physically active when I'm teaching about nature.	4.74	0.47	Very Extensive
3.	I like to ask questions and encourage my students to share their ideas when we're learning outdoors.	4.72	0.50	Very Extensive
	Overall	**4.72**	**0.43**	**Very Extensive**

The mean scores reveal a consistently high level of involvement across all statements. Notably, the highest mean of 4.74 (SD = 0.47) is associated with the statement "I like to be physically active when I'm teaching about nature," emphasizing the teachers' commitment to incorporating movement into outdoor educational activities. The mean score of 4.70 (SD = 0.56) for "I like to participate in outdoor activities with my colleagues" underscores the collaborative nature of these activities. Additionally, the mean score of 4.72 (SD = 0.50) for "I like to ask questions and encourage my students to share their ideas when we're learning outdoors" highlights the interactive pedagogical approach employed during outdoor lessons.

The results align with the findings of Baker et al. (2019), emphasizing the positive impact of physical activity on learning outcomes. Furthermore, the collaborative nature of outdoor activities, as indicated by the high mean for participating with colleagues, resonates with the research of Bell and Dyment (2017), emphasizing the importance of collaborative and social elements in effective outdoor education. These findings underscore the congruence between the active teaching strategies employed by Grade 3 teachers and the principles advocated by scholars in the field of outdoor education. The emphasis on physical activity and interactive teaching methods aligns with the broader literature on the benefits of such approaches in enhancing student engagement and learning outcomes.

Extent of Outdoor Learning of Grade 3 Teachers in terms of Working Together

Table 4 presents the extent to which Grade 3 teachers collaborate and work together during outdoor learning activities, particularly in the dimension of "Working Together."

Table 4 Extent of Outdoor Learning of Grade 3 Teachers in Terms of Working Together

	Statements	Mean	SD	Description
1.	I like to work with my colleagues when we're teaching outdoors.	4.72	0.54	Very Extensive
2.	I like to share my knowledge and experiences with others when we're teaching about nature.	4.72	0.52	Very Extensive
3.	I like to help others when they need assistance during outdoor activities.	4.63	0.58	Very Extensive
	Overall	**4.69**	**0.45**	**Very Extensive**

The mean scores indicate a very high level of teamwork among teachers engaged in outdoor education. Specifically, the highest mean of 4.72 (SD = 0.54) is associated with the statements "I like to work with my colleagues when we're teaching outdoors" and "I like to share my knowledge and experiences with others when we're teaching about nature." These findings emphasize the collaborative and knowledge-sharing aspects of outdoor teaching. Additionally, the mean score of 4.63 (SD = 0.58) for "I like to help others when they need assistance during outdoor activities" underscores the supportive nature of teachers within this context.

The results align with the collaborative nature of effective outdoor education, as highlighted by Bentsen et al. (2019). The emphasis on working together, sharing experiences, and providing assistance during outdoor activities reflects the communal and supportive environment that characterizes successful outdoor learning initiatives. These collaborative practices are consistent with the socio-constructivist approach advocated by Johnson, Johnson, and Holubec (2018), emphasizing the importance of social interaction in the learning process. The findings further contribute to the growing body of evidence supporting the positive outcomes associated with collaborative and cooperative strategies in outdoor education.

Extent of Outdoor Learning of Grade 3 Teachersin terms of Having Fun

Table 5 illustrates the extent to which Grade 3 teachers find enjoyment and fun in their outdoor teaching experiences, focusing on the dimension of "Having Fun."

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Table 5 Extent of Outdoor Learning of Grade 3 Teachers in Terms of Having Fun

	Statements	Mean	SD	Description
1.	I have fun when I'm teaching outdoors.	4.72	0.51	Very Extensive
2.	I like to have enjoyable and playful experiences with my colleagues when we're outside.	4.70	0.52	Very Extensive
3.	I think teaching outdoors is more enjoyable than teaching indoors.	4.63	0.56	Very Extensive
	Overall	**4.68**	**0.45**	**Very Extensive**

The mean scores suggest a remarkably high level of enjoyment among teachers engaged in outdoor education. Particularly, the highest mean of 4.72 (SD = 0.51) is associated with the statement "I have fun when I'm teaching outdoors." Additionally, the mean scores of 4.70 (SD = 0.52) and 4.63 (SD = 0.56) for statements related to having enjoyable and playful experiences outdoors emphasize the positive and enjoyable nature of outdoor teaching. This means that outdoor learning is always manifested.

These findings align with the research of Lester et al. (2017), emphasizing the positive impact of natural spaces on well-being and learning. The high mean scores reflect the perceived enjoyment and satisfaction that teachers derive from teaching in an outdoor environment. The results also support the notion that learning in natural settings enhances engagement and fun, as discussed by Bell and Dyment (2017). The preference for outdoor teaching being more enjoyable than indoor teaching resonates with the idea that nature-based education can contribute significantly to positive teacher experiences and, consequently, effective pedagogy in the outdoor context.

Extent of Outdoor Learning of Grade 3 Teachers in terms of Discovering Outdoors

Table 6 presents the Grade 3 teachers' inclination towards "Discovering Outdoors" in their teaching practices.

Table 6 Extent of Outdoor Learning of Grade 3 Teachers in Terms of Discovering Outdoors

	Statements	Mean	SD	Description
1.	I enjoy incorporating outdoor games and activities into my teaching.	4.69	0.57	Very Extensive
2.	I find it exciting to learn new things about nature and the environment.	4.67	0.54	Very Extensive
3.	I like to explore and introduce new outdoor activities, such as camping or fishing, to my students.	4.66	0.54	Very Extensive
	Overall	**4.67**	**0.49**	**Very Extensive**

The mean scores indicate a high extent of enthusiasm among teachers for incorporating outdoor elements into their pedagogy. Notably, the highest mean of 4.69 (SD = 0.57) is associated with the statement "I enjoy incorporating outdoor games and activities into my teaching." This suggests a robust engagement in utilizing outdoor methods for educational purposes. Moreover, the overall mean of 4.67 (SD = 0.49) emphasizes the consistently high level of interest and involvement in discovering the outdoors in the teaching process. This means that outdoor learning is always manifested.

These findings align with the research by Rickinson et al. (2016), emphasizing the benefits of outdoor learning experiences in promoting teachers' enthusiasm and creativity in utilizing outdoor spaces. The high mean scores reflect the teachers' proactive approach to integrating outdoor games and activities into their teaching methods, showcasing a positive attitude towards innovative and experiential learning. The excitement in learning new things about nature and the environment, as indicated by a mean score of 4.67 (SD = 0.54), underscores the potential of outdoor education in fostering a continuous sense of curiosity and discovery among Grade 3 teachers.

Summary of the Extent of Attitude Towards Sustainability of Grade 3 Teachers

Table 7 illustrates the Grade 3 teachers' attitudes towards sustainability across different indicators.

Table 7 Summary of the Extent of Attitude towards Sustainability of Grade 3 Teachers

Indicators	Mean	SD	Description
Taking Care of The Environment	4.71	0.44	Very Extensive
Learning About Nature	4.67	0.42	Very Extensive
Reducing Waste	4.66	0.52	Very Extensive
Overall	**4.68**	**0.43**	**Very Extensive**

Notably, the mean scores for each indicator and the overall mean suggest a very extensive commitment to sustainability. This means that the Grade 3 teachers' attitude towards sustainability is always manifested. Taking Care of the Environment is highlighted with the highest mean of 4.71 (SD = 0.44), indicating a strong dedication among teachers to foster environmental stewardship. Meanwhile, Learning About Nature and Reducing Waste also exhibit high mean scores of 4.67 (SD = 0.42) and 4.66 (SD = 0.52), respectively, emphasizing an extensive embrace of sustainable practices in education.

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These findings resonate with the literature on environmental education and teachers' attitudes towards sustainability (Bamberg & Möser, 2007; Beltran et al., 2018). The high mean scores reflect a holistic commitment among Grade 3 teachers to integrate sustainability principles into their teaching practices. The emphasis on taking care of the environment aligns with the broader goal of promoting ecological awareness and responsibility (Ojala, 2015; UN, 2015). The positive attitudes towards learning about nature and reducing waste are indicative of a comprehensive approach to instilling sustainable values in the educational context. Overall, the teachers' very extensive commitment to sustainability bodes well for the integration of eco-centric principles in Grade 3 education.

Extent of Attitude Towards Sustainability of Grade 3 Teachers in terms of Taking Care of the Environment

Table 8 outlines the Grade 3 teachers' attitudes towards taking care of the environment, revealing a very extensive commitment to environmentally responsible behaviors.

Notably, the highest mean is associated with the statement "I turn off lights and electronics when I'm not using them" (Mean = 4.72, SD = 0.55), indicating a proactive effort to conserve energy. Conversely, the statement "I try to take care of the environment by not littering" has a slightly lower mean of 4.66 (SD = 0.57), yet still reflects a very extensive commitment to reducing littering. The overall mean for this category is 4.71 (SD = 0.44), signifying an overwhelmingly positive attitude towards adopting eco-friendly practices. This means that the Grade 3 teachers' attitude towards sustainability is always manifested.

Table 8 Extent of Attitude towards Sustainability of Grade 3 Teachers in Terms of Taking Care of the Environment

	Indicators	Mean	SD	Description
1.	I try to take care of the environment by not littering.	4.66	0.57	Very Extensive
2.	I turn off lights and electronics when I'm not using them.	4.72	0.55	Very Extensive
3.	I try to save water by not letting the faucet run when I'm brushing my teeth.	4.74	0.47	Very Extensive
4.	I like to help plant trees and flowers.	4.69	0.53	Very Extensive
5.	I think it's important to take care of the environment so that animals have a safe place to live.	4.74	0.47	Very Extensive
	Overall	**4.71**	**0.44**	**Very Extensive**

These findings are consistent with research emphasizing the significance of individual behaviors in fostering environmental sustainability (Deci et al., 2017; Ojala, 2021). Teachers' active engagement in turning off lights and conserving water aligns with the broader goals of reducing ecological footprints and promoting responsible resource use (Bamberg & Möser, 2007; UNEP, 2014). The consistently high mean scores across all indicators reinforce the notion that Grade 3 teachers manifest a deep commitment to instilling eco-centric values, creating a conducive environment for sustainability education in primary schools.

Extent of Attitude Towards Sustainability of Grade 3 Teachers in terms of Learning About Nature

Table 9 elucidates the Grade 3 teachers' attitudes towards learning about nature, portraying a highly extensive commitment to nature education.

Table 9 Extent of Attitude towards Sustainability of Grade 3 Teachers in Terms of Learning about Nature

	Indicators	Mean	SD	Description
1.	I like to learn about different animals and plants.	4.68	0.48	Very Extensive
2.	I think it's important to learn about the environment and how to take care of it.	4.70	0.50	Very Extensive
3.	I like to read books and watch videos about nature.	4.65	0.56	Very Extensive
4.	I like to visit parks and gardens to learn more about nature.	4.60	0.51	Very Extensive
5.	I think it's important to learn about nature so that we can protect it.	4.71	0.51	Very Extensive
	Overall	**4.67**	**0.42**	**Very Extensive**

The statement with the highest mean is associated with the statement "I think it's important to learn about nature so that we can protect it" (Mean = 4.71, SD = 0.51), indicating a profound acknowledgment of the crucial role education plays in environmental conservation efforts. Conversely, the statement "I like to visit parks and gardens to learn more about nature" has a slightly lower mean of 4.60 (SD = 0.51), yet still reflects a very extensive enthusiasm for experiential learning. The overall mean for this category is 4.67 (SD = 0.42), underscoring a collective eagerness among teachers to immerse themselves in nature-oriented educational pursuits. This means that the Grade 3 teachers' attitude towards sustainability is always manifested.

These findings resonate with the assertions of Bell and Dyment (2017), who emphasize the positive impact of nature-focused education on fostering environmental awareness. The results align with the literature that underscores the importance of exposing teachers to diverse strategies, including visiting parks and utilizing multimedia resources, to enhance nature-based learning experiences (Lester et al., 2017; Kyttä et al., 2015). The consistently high mean scores reflect a comprehensive dedication to

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incorporating nature education into the curriculum, contributing to the overall sustainability goals of primary education.

Extent of Attitude towards Sustainability of Grade 3 Teachers in terms of Reducing Waste

Table 10 outlines the Grade 3 teachers' attitudes toward waste reduction, revealing a substantial commitment to sustainable practices.

Table 10 Extent of Attitude towards Sustainability of Grade 3 Teachers in terms of Reducing Waste

	Indicators	Mean	SD	Description
1.	I try to recycle whenever I can.	4.67	0.55	Very Extensive
2.	I bring a reusable water bottle and lunch box to school.	4.65	0.61	Very Extensive
3.	I try to use less plastic by bringing reusable bags to the grocery store.	4.62	0.62	Very Extensive
4.	I try to use both sides of a piece of paper when I'm drawing or writing.	4.61	0.62	Very Extensive
5.	I think it's important to reduce waste so that we don't harm the environment.	4.74	0.49	Very Extensive
	Overall	**4.66**	**0.52**	**Very Extensive**

Notably, the statement with the highest mean is "I think it's important to reduce waste so that we don't harm the environment" (Mean = 4.74, SD = 0.49), indicating a profound understanding of the environmental repercussions of waste generation. On the other hand, the practice of using both sides of a piece of paper has a slightly lower mean of 4.61 (SD = 0.62), reflecting a still highly extensive effort toward waste minimization. The overall mean for this category is 4.66 (SD = 0.52), underscoring a collective commitment among teachers to adopt eco-friendly practices. This means that the Grade 3 teachers' attitude towards sustainability is always manifested.

These findings align with the literature emphasizing the crucial role of educators in modeling sustainable behaviors (Beltran et al., 2018; Fredricks et al., 2016). The results resonate with the research of Bamberg and Möser (2007), indicating a high level of pro-environmental behavior among the teachers, particularly in waste reduction efforts. The consistent emphasis on reducing waste across various statements suggests a holistic and integrated approach to sustainability education among Grade 3 teachers.

Test of Relationship Between Outdoor Learning and Attitude towards Sustainability of Grade 3 Teachers

The Pearson Product Moment Correlation was used to test if there is a significant relationship between outdoor learning and attitude towards sustainability of Grade 3 teachers at a 0.05 Level of Significance. The results show that there is a significant Very High Relationship (R: 0.90, $p<0.05$) between outdoor learning and attitude towards sustainability of Grade 3 teachers at a 0.05 Level of Significance. The results imply that encouraging outdoor learning would contribute to a higher extent of attitude towards sustainability among Grade 3 teachers. The results also imply that 81.0 percent (R2: 0.81) of the variance or changes in attitude towards sustainability of Grade 3 teachers can be accounted for by their outdoor learning.

Table 11 Test of Relationship between Outdoor Learning and Attitude towards Sustainability of Grade 3 Teachers

Variables	Mean	SD	R	R2	Degree of Relationship	p-value	Decision
@ a 0.05 Level							
Outdoor Learning	4.71	0.39	0.90	0.81	Very High	0.00	Significant
(Reject Ho)							
Attitude towards Sustainability	4.68	0.43					

The obtained results, indicating a significant and very high relationship (R: 0.90, $p < 0.05$) between outdoor learning and the attitude towards sustainability among Grade 3 teachers, align with existing literature in the field. These findings are consistent with the research of Angell et al. (2020), who emphasized the positive impact of outdoor learning on academic achievement and engagement. The strong correlation echoes the insights of Lester et al. (2017), who highlighted the influential role of natural spaces in enhancing well-being and learning outcomes among students and teachers. Moreover, the present study's outcome resonates with the work of Beltran et al. (2018), underlining the positive relationship between environmental education and pro-environmental behaviors.

The implication that encouraging outdoor learning contributes to a higher extent of attitude towards sustainability is in line with the arguments put forth by Bäckstrand et al. (2019), who explored the challenges and opportunities for nature-based learning. The current study reinforces the idea that outdoor experiences play a pivotal role in fostering positive attitudes toward sustainability, echoing the sentiments expressed by Bell and Dyment (2017) regarding effective outdoor education.

Furthermore, the finding that 81.0 percent (R2: 0.81) of the variance in attitude towards sustainability among Grade 3 teachers can be accounted for by their engagement in outdoor learning is consistent with the overarching theme of nature-based interventions having a substantial impact. This aligns with the longitudinal study conducted by Ojala

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(2021), emphasizing the enduring influence of environmental values on adolescents. In essence, the current research reinforces and extends the existing literature, substantiating the argument that incorporating outdoor learning experiences significantly contributes to shaping positive attitudes toward sustainability among Grade 3 teachers.

Indicators of Outdoor Learning Significantly Influences Attitude towards Sustainability of Grade 3 Teachers

The Multiple Linear Regression Model was used to determine the Indicators of Outdoor Learning that significantly influences the Attitude towards Sustainability of Grade 3 Teachers at a 0.05 level of significance. The results show that all indicators of Outdoor Learning significantly influence (F:78.52, $p<0.05$) the Attitude towards Sustainability of Grade 3 Teachers at a 0.05 level of significance. The Multiple Linear Regression Model, Attitude towards Sustainability = 0.51 + 0.23(Exploring Nature) +0.14(Participating Actively) + 0.15(Working Together) + 0.14(Having Fun) accounts for 81.0 percent (R2: 0.81) of the variance or changes in the Attitude towards Sustainability of Grade 3 Teachers at a 0.05 level of significance. Moreover, the results imply that Outdoor Learnings have very important roles for in the Attitude towards Sustainability of Grade 3 Teachers.

Table 12 Indicators of Outdoor Learning Significantly Influences Attitude towards Sustainability of Grade 3 Teachers

Indicators of Outdoor Learning	B	SE	Beta	t-stat	p-value	Decision
@ a 0.05 Level						
(Constant)	0.51	0.39		3.02	0.00	Significant
Exploring Nature	0.23	0.08	0.19	2.90	0.00	Significant
Participating Actively	0.14	0.07	0.32	4.41	0.00	Significant
Working Together	0.15	0.05	0.20	5.21	0.00	Significant
Having Fun	0.14	0.05	0.21	4.22	0.00	Significant
Regression Model:						
Attitude Towards Sustainability = 0.51 + 0.23(Exploring Nature) +0.14(Participating Actively) + 0.15(Working Together) + 0.14(Having Fun)						
F: 78.52, R: 0.90, R2: 0.81, p: 0.00						

The application of the Multiple Linear Regression Model to identify significant indicators of Outdoor Learning influencing the Attitude towards Sustainability among Grade 3 Teachers aligns with established research methodologies. This approach has been utilized in various studies investigating the multifaceted nature of factors influencing attitudes and behaviors (Deci, Koestner, & Ryan, 2017; Rickinson et al., 2016).

The finding that all indicators of Outdoor Learning significantly influence the Attitude towards Sustainability (F:78.52, $p<0.05$) corresponds with the comprehensive approach advocated by Johnson, Johnson, and Holubec (2018), emphasizing the importance of cooperative and participative learning experiences. The results reinforce the notion that various dimensions of outdoor learning collectively contribute to shaping sustainability attitudes, corroborating the work of Alshuwaikhat and Abubakar (2018), who highlighted the multidimensional aspects of sustainability education.

The Multiple Linear Regression Model, with its equation (Attitude towards Sustainability = 0.51 + 0.23(Exploring Nature) + 0.14(Participating Actively) + 0.15(Working Together) + 0.14(Having Fun)), demonstrates the nuanced interplay of different dimensions of outdoor learning. This is consistent with the call for a holistic understanding of the impact of outdoor experiences on attitudes, as suggested by Bell and Dyment (2017). The model accounting for 81.0 percent (R2: 0.81) of the variance aligns with the substantial explanatory power observed in studies focusing on the relationship between environmental interventions and behavioral outcomes (Gough, Scott, & Whitehouse, 2016).

The conclusion that Outdoor Learning plays a very important role in shaping the Attitude towards Sustainability of Grade 3 Teachers resonates with the broader literature on the positive impact of environmental education and outdoor experiences on individuals' attitudes and behaviors (Lester et al., 2017; Ojala, 2015; Yoon & Kim, 2019). The study reinforces and extends the existing literature by providing specific insights into the critical indicators within outdoor learning that significantly contribute to fostering sustainability attitudes among Grade 3 teachers.

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