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PATHFit Students' Lived Experiences in Outdoor Education: Exploring Its Contribution to Holistic Development

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ABSTRACT: This study explored the lived experiences of students participating in outdoor education activities in Physical Activity Toward Health and Fitness (PATHFit) 3 and PATHFit 4 at Bulacan State University and examined how students made sense of these experiences in relation to their holistic development. Using an Interpretative Phenomenological Analysis (IPA) approach, the study focused on students' descriptions, interpretations, and meaning-making processes arising from their participation in outdoor education activities. Participants were selected through purposive sampling, and data were generated through in-depth, semi-structured interviews.The findings revealed that students experienced outdoor education as a multidimensional and experiential learning process characterized by encountering unfamiliar activities, experiencing physical and practical challenges, navigating emotional experiences, engaging in teamwork and social participation, connecting directly with nature, experiencing accomplishment, and learning through direct experience. In making meaning of these experiences, students described discovering their physical capabilities while also recognizing limitations, developing nature appreciation and environmental responsibility, managing pressure and emotional difficulty, persisting through challenges, and drawing strength from social support. Significant developmental experiences included new and unfamiliar activities, challenges, accomplishment, peer support, leadership and responsibility, nature connection, and hands-on learning. The analysis further generated themes reflecting self-discovery, confidence and resilience, experiential learning, relationships, nature connection, and individual pathways of development. These findings indicate that outdoor education may function as a transformative learning experience by challenging existing perceptions, encouraging reflection and adaptation, and enabling students to construct new understandings through direct experience. However, the nature and extent of development varied among students, highlighting the importance of individual meaning-making and developmentally responsive learning experiences. Based on the findings, an Outdoor Education Enhancement Framework was proposed to guide the strengthening of outdoor education implementation within PATHFit 3 and PATHFit 4 through meaningful challenge, experiential learning, psychological development, social interaction, nature connection, reflection, and consideration of individual developmental pathways.

KEYWORDS: outdoor education, PATHFit, lived experiences, holistic development, transformative learning

I. INTRODUCTION

In the Philippine higher education context, outdoor education has been integrated into Physical Activity Toward Health and Fitness (PATHFit) courses as part of the general education curriculum to promote students' physical wellness, experiential learning, and active participation in recreational and nature-based activities. Outdoor education provides opportunities for students to engage in authentic learning experiences beyond the traditional classroom setting through activities such as trekking, environmental exploration, cooperative outdoor tasks, and other experiential physical activities. These learning experiences encourage active participation, reflection, and personal growth among students while fostering meaningful interaction with natural environments (Beames & Brown, 2021).

Holistic development, within the context of this study, refers to the balanced growth of students across physical, environmental, and psychological dimensions through meaningful outdoor learning experiences. Specifically, the study views holistic development as the enhancement of students' perceived physical competence, appreciation of nature, and mental toughness as shaped by their participation in outdoor education activities. Through direct engagement in outdoor environments, students are expected to develop not only physical capability and confidence but also environmental awareness, emotional resilience, and reflective understanding of themselves and their surroundings (Mann et al., 2021).

Bulacan, a province known for its diverse natural landscapes such as mountain trails, rivers, eco-parks, and environmental sites, provides an appropriate setting for experiential outdoor learning. Within this geographical context, Bulacan State University (BulSU) implements outdoor education through PATHFit 3 and PATHFit 4 courses, which incorporate structured outdoor and experiential activities designed to strengthen students' physical engagement, environmental appreciation, and psychological resilience. The university's active integration of outdoor education within its PATHFit curriculum makes it a relevant and significant site for examining how students experience and interpret outdoor learning in higher education.

Despite the growing recognition of outdoor education as a valuable pedagogical approach, existing studies have primarily focused on quantitative assessments of physical activity, environmental attitudes, and psychological well-being (Mann et al., 2021; Tillmann et al., 2022). Limited qualitative and phenomenological studies have explored how university students make sense of their lived experiences in outdoor education, particularly within PATHFit courses in the Philippine context. Furthermore, previous research often examines physical, environmental, and psychological outcomes separately, resulting in limited understanding of how these dimensions interact to contribute to students' holistic development. There remains a need for integrative qualitative inquiry that explores how outdoor education serves as a transformative learning experience shaping students' perceived physical competence, appreciation of nature, and mental toughness.

Given these considerations, this study seeks to explore the lived experiences of students participating in outdoor education activities in PATHFit 3 and PATHFit 4 at Bulacan State University. By examining students' narratives and identifying patterns of meaning, the study aims to understand how outdoor education contributes to holistic student development. The findings of this study are expected to provide meaningful insights into the role of outdoor education in higher education and serve as the basis for proposing an Outdoor Education Enhancement Framework that may strengthen the implementation of outdoor education programs.

Research Question

Outdoor education has been widely recognized as an effective pedagogical approach that promotes experiential learning and supports students' holistic development. In higher education, particularly within Physical Activity Toward Health and Fitness (PATHFit) courses, outdoor education activities provide opportunities for students to engage in meaningful learning experiences that enhance their perceived physical competence, foster appreciation for nature, and strengthen psychological resilience. Despite these intended outcomes, there remains limited understanding of how students themselves experience, interpret, and make sense of their participation in outdoor education activities.

Existing literature has largely focused on quantitative assessments of outdoor education outcomes, such as physical activity levels, environmental awareness, and psychological well-being. While these studies provide valuable insights, they often fail to capture the depth and richness of students' lived experiences. Moreover, previous research tends to examine perceived physical competence, nature appreciation, and mental toughness as separate dimensions, rather than exploring how these aspects are interconnected in shaping students' holistic development and meaning-making processes.

In the context of Bulacan State University, outdoor education is integrated into PATHFit 3 and PATHFit 4 courses as part of the physical education curriculum. These courses expose students to experiential outdoor activities that encourage engagement with nature, physical challenges, and reflective learning experiences. However, there remains a need to examine how students perceive, interpret, and make meaning of these experiences in relation to their holistic development. Understanding these lived experiences is essential for improving the design and implementation of outdoor education programs and ensuring that such programs contribute meaningfully to transformative learning.

Given these considerations, this study seeks to explore the lived experiences of students participating in outdoor education activities in PATHFit 3 and PATHFit 4 at Bulacan State University using an Interpretative Phenomenological Analysis (IPA) approach.

Thus, the central question that guides this study is:

Central Question

How do students make sense of their lived experiences in participating in outdoor education activities in PATHFit 3 and PATHFit 4 at Bulacan State University in relation to their holistic development?

Corollary Questions

1. How do students describe their lived experiences in participating in outdoor education activities in PATHFit 3 and PATHFit 4?
2. How do students interpret and make meaning of these experiences in relation to their perceived physical competence, nature appreciation, and mental toughness?
3. What significant experiences or moments do students perceive as influential in shaping their development?
4. What emergent themes capture the essence of students' meaning-making processes regarding their holistic development?

5. How do these interpreted meanings contribute to a deeper understanding of outdoor education as a transformative learning experience?
6. Based on the results of the study, what Outdoor Education Enhancement Framework may be proposed?

II. SCOPE AND LIMITATION OF THE STUDY

This study focused on the effectiveness of ICT-supp This study focuses on exploring the lived experiences of students participating in outdoor education activities within the Physical Activity Toward Health and Fitness (PATHFit) courses at Bulacan State University. Specifically, it examines how students enrolled in PATHFit 3 and PATHFit 4 describe, interpret, and make meaning of their experiences in outdoor education and how these experiences contribute to their holistic development in terms of perceived physical competence, nature appreciation, and mental toughness.

The study is confined to a qualitative phenomenological approach, specifically Interpretative Phenomenological Analysis (IPA), which aims to explore how participants understand and make meaning of their lived experiences. It centers on understanding the meanings that students attach to their participation in outdoor education activities rather than measuring outcomes quantitatively. Data are generated through in-depth, semi-structured interviews, allowing participants to provide rich and detailed accounts of their experiences.

The participants of the study consist of eight (8) to twelve (12) students currently enrolled in PATHFit 3 and PATHFit 4 at Bulacan State University. The participants are selected using purposive sampling to ensure that individuals with direct experience in outdoor education activities are included. The study is limited to students who have participated in such activities as part of their coursework, thereby ensuring the relevance of their experiences to the phenomenon being investigated.

The scope of the inquiry primarily focuses on three dimensions of holistic development: perceived physical competence, nature appreciation, and mental toughness. Other experiences and developmental processes, including teamwork, peer support, leadership, social participation, practical learning, environmental responsibility, and reflection, are considered insofar as they emerge from the participants' lived experiences and contribute to understanding their meaning-making and broader holistic development. These emergent dimensions are not treated as separate primary variables but as interconnected aspects of the students' outdoor education experiences.

Moreover, the findings of this study are based solely on the narratives and perspectives of the selected participants from Bulacan State University. As such, the results are not intended for statistical generalization to other populations or institutions. Instead, the study aims to provide in-depth, context-specific insights into how students experience and make meaning of outdoor education within the PATHFit context.

The study also seeks to develop an Outdoor Education Enhancement Framework based on the interpreted findings. The proposed framework is intended to translate the identified experiences and meaning-making processes into practical considerations for strengthening the implementation of outdoor education within PATHFit 3 and PATHFit 4 at Bulacan State University.

FRAMEWORK



Figure 1. *Conceptual Framework of the Study*

The conceptual framework of this study illustrates how students' participation in outdoor education activities contributes to their holistic development. It is grounded on the premise that experiential learning in outdoor environments provides meaningful opportunities for students to develop physically, environmentally, and psychologically through direct engagement with nature and participation in challenging activities.

In this study, outdoor education experiences serve as the central phenomenon being explored. These experiences are situated within the context of Physical Activity Toward Health and Fitness (PATHFit) 3 and PATHFit 4 courses at Bulacan State University. Students participate in various outdoor activities such as environmental exploration, trekking, camping, cooperative outdoor tasks, and other experiential physical activities conducted in natural settings. These activities provide authentic learning environments where students actively engage, reflect, and construct meaning from their experiences.

Through participation in outdoor education activities, students are expected to develop three interrelated dimensions of holistic growth. First, physical development (perceived physical competence) is enhanced as students engage in physically demanding tasks that require endurance, coordination, and movement competence. These experiences improve students' physical fitness, body awareness, and confidence in performing physical activities in diverse environmental conditions.

Second, outdoor education fosters nature appreciation, as students are exposed to natural environments that allow them to directly observe ecological systems and environmental processes. Through meaningful interactions with nature, students develop environmental awareness, emotional connection to the natural world, and a deeper appreciation for sustainability and conservation.

Third, outdoor education contributes to the development of mental toughness, as students encounter challenges that require persistence, adaptability, and problem-solving. Participation in outdoor activities exposes students to unfamiliar and demanding situations where they must overcome discomfort, manage stress, and collaborate with others. These experiences strengthen psychological resilience, self-confidence, and emotional regulation.

These three dimensions—perceived physical competence, nature appreciation, and mental toughness—are viewed as interconnected components that collectively contribute to students' holistic development. Holistic development in this study refers to the balanced growth of students across physical, environmental, and psychological domains, which are shaped through their engagement in outdoor education experiences.

Guided by a phenomenological approach, this study seeks to explore and understand the meanings that students attach to their outdoor education experiences. Through the analysis of students' lived experiences, significant patterns of meaning will be identified to explain how outdoor education contributes to their holistic development. These insights will serve as the basis for the development of an Outdoor Education Enhancement Framework, which aims to improve the implementation of outdoor education programs in higher education institutions.

Research Design and Rationale

This study employed a qualitative research approach utilizing an Interpretative Phenomenological Analysis (IPA) research design to explore the lived experiences of students participating in outdoor education activities. Qualitative research was appropriate for this study because it focused on understanding individuals' experiences, perceptions, and the meanings they attached to a particular phenomenon. Through this approach, the researcher obtained rich, detailed, and in-depth descriptions of students' lived experiences, which were essential in examining complex educational and developmental processes.

Specifically, the study adopted Interpretative Phenomenological Analysis (IPA), a qualitative phenomenological approach concerned with exploring how individuals make sense of their personal lived experiences. IPA is grounded in phenomenology, hermeneutics, and idiography, emphasizing both participants' meaning-making processes and the researcher's interpretative role in understanding those experiences. Unlike narrative research, which primarily focuses on the chronological stories and life histories of individuals, IPA seeks to examine the meanings participants attach to significant experiences and how they interpret those experiences within a particular context.

In this study, the phenomenon under investigation was students' participation in outdoor education activities within Physical Activity Toward Health and Fitness (PATHFit) 3 and PATHFit 4 courses at Bulacan State University. The IPA approach enabled the researcher to explore how students perceived, interpreted, and made meaning of their experiences in outdoor learning environments. This design was particularly appropriate because the study aimed to understand students' subjective experiences related to perceived physical competence, nature appreciation, and mental toughness within the context of outdoor education.

The use of Interpretative Phenomenological Analysis allowed the study to move beyond surface-level descriptions and focus on the deeper meanings embedded in students' experiences. Through in-depth interviews and reflective narratives, the researcher examined how participants interpreted physical challenges, environmental interactions, and psychologically demanding situations encountered during outdoor education activities. These experiences provided insight into how students developed resilience, environmental awareness, and perceptions of their physical capabilities.

Furthermore, IPA supported the identification of shared themes and patterns of meaning across participants' experiences while also recognizing the uniqueness of each individual's lived experience. Through careful and systematic interpretation of participants' narratives, the study uncovered the essence of how outdoor education contributed to students' holistic development. This process enabled a deeper understanding of how experiential outdoor learning shaped students' physical, environmental, and psychological growth.

The rationale for selecting IPA as the research design lay in its strong alignment with the purpose of the study, which was to explore how students made sense of their lived experiences rather than simply describe events or measure outcomes quantitatively. By focusing on subjective interpretation, meaning-making, and lived experience, IPA provided a context-rich and phenomenological understanding of outdoor education within the higher education setting.

The findings of this study generated meaningful insights that may contribute to the improvement of outdoor education programs in higher education institutions. In particular, the results served as the foundation for the development of an Outdoor Education Enhancement Framework aimed at strengthening the implementation of outdoor education activities in PATHFit courses.

Role of the Researcher and Reflexivity

In this qualitative phenomenological study, the researcher served as the primary instrument in the process of data generation and analysis. The researcher was responsible for conducting the interviews, facilitating open and meaningful dialogue with the co-participants, and interpreting their narratives to understand the meanings they attached to their lived experiences. As the primary instrument, the researcher played a critical role in ensuring that the data generated were rich, accurate, and reflective of the participants' perspectives.

Throughout the study, the researcher adopted a stance of openness, sensitivity, and attentiveness to the experiences shared by the co-participants. Rapport was established, and a respectful and non-judgmental environment was maintained to encourage participants to freely express their thoughts, feelings, perceptions, and reflections regarding their participation in outdoor education activities. The researcher actively listened to the participants and used appropriate probing questions to deepen the understanding of their responses while ensuring that their voices remained central to the inquiry.

Reflexivity was an important component of the research process, particularly because the study employed Interpretative Phenomenological Analysis (IPA). The researcher acknowledged prior knowledge and experiences related to Physical Education and outdoor activities that could potentially influence the interpretation of participants' narratives. To address this, the researcher engaged in bracketing or epoché by consciously recognizing and setting aside personal preconceptions as much as possible and maintaining focus on the participants' descriptions and interpretations of their lived experiences.

The researcher also maintained reflexive awareness throughout data generation and analysis by documenting relevant insights, observations, methodological decisions, and potential biases. These reflexive records provided opportunities for the researcher to examine how personal assumptions or interpretations might influence the research process. This practice helped ensure that the emerging interpretations remained closely grounded in the participants' narratives and supported the credibility and integrity of the findings.

In accordance with the interpretative nature of IPA, the researcher also recognized that meaning was developed through an interpretative process involving both the participants' accounts and the researcher's engagement with those accounts. The researcher therefore sought to preserve the participants' intended meanings while carefully interpreting the deeper significance of their experiences within the context of outdoor education in PATHFit 3 and PATHFit 4.

Finally, the researcher's role involved facilitating the interpretation and co-construction of meaning while preserving the authenticity and individuality of the participants' experiences. Through reflexive practice, careful engagement with the narratives, and systematic IPA procedures, the researcher developed an interpretation of how students experienced and made sense of outdoor education in relation to perceived physical competence, nature appreciation, mental toughness, and holistic development.

Data Generation Methods

This study utilized in-depth, semi-structured interviews as the primary method of data generation to explore the lived experiences of students participating in outdoor education activities in Physical Activity Toward Health and Fitness (PATHFit) 3 and PATHFit 4 at Bulacan State University. This method was appropriate for the phenomenological nature of the study because it allowed participants to describe their experiences in their own words while enabling the researcher to guide the conversation toward the focus of the inquiry.

A semi-structured interview guide was developed to facilitate the data generation process. The guide consisted of open-ended questions designed to elicit detailed descriptions of the participants' experiences in outdoor education, particularly their experiences related to perceived physical competence, nature appreciation, and mental toughness. Probing questions were also utilized to clarify responses and encourage participants to elaborate on their thoughts, feelings, perceptions, and reflections concerning their experiences.

The interviews were conducted individually to provide a safe and comfortable environment in which the co-participants could openly share their experiences. Each interview lasted approximately 30 to 45 minutes, depending on the depth and richness of the participants' responses. With the consent of the participants, the interviews were audio-recorded to ensure accurate capture of their narratives. Field notes were also taken during the interviews to document relevant contextual observations, nonverbal cues, and the researcher's initial reflections.

Prior to the conduct of the interviews, the researcher established rapport with the participants and explained the purpose and procedures of the study. The researcher ensured that the participants understood the nature of their involvement and the voluntary character of their participation. Informed consent was obtained before data generation commenced. Participants were assured that their identities and responses would be treated confidentially and that they had the right to withdraw from the study at any point without penalty.

The data generated from the interviews consisted of rich narrative accounts of the participants' lived experiences in outdoor education activities. These narratives served as the primary source of data for the subsequent IPA analysis. The interview accounts enabled the researcher to examine participants' descriptions, interpretations, reflections, and meaning-making processes and to identify significant patterns and emergent themes related to their experiences and holistic development.

Data Analysis Procedure

The data generated from the in-depth interviews were analyzed using Interpretative Phenomenological Analysis (IPA) to examine how the co-participants described, interpreted, and made meaning of their lived experiences in outdoor education. The analysis focused on both the individual experiences of the participants and the patterns of meaning that emerged across their accounts. This approach was consistent with the phenomenological orientation of the study and allowed the researcher to examine the depth, context, and meaning of the participants' experiences.

The analysis followed a systematic process of engaging with the participants' narratives, identifying significant statements and experiential details, developing initial codes, and organizing related meanings into emergent themes. The researcher first familiarized herself with each transcript by reading and re-reading the participants' accounts while listening to the corresponding audio recordings when necessary. This process enabled the researcher to become immersed in each participant's narrative and to develop an initial understanding of the experiences being described.

Following familiarization, the researcher examined each transcript individually and identified significant portions of the participants' narratives that were relevant to the research questions. Initial notes were made regarding descriptive content, language used by the participants, emotional expressions, contextual details, and interpretative meanings. Particular attention was given to accounts concerning unfamiliar outdoor activities, physical and practical challenges, emotional experiences, social interactions, engagement with nature, accomplishment, and learning through direct experience.

The researcher then developed initial codes and experiential meanings from the significant portions of the narratives. These codes captured important aspects of how participants experienced and interpreted outdoor education. The analysis remained closely grounded in the participants' accounts while considering the broader context of perceived physical competence, nature appreciation, mental toughness, and holistic development.

Table 1. *Students' Lived Experiences in Participating in Outdoor Education Activities in PATHFit 3 and PATHFit 4*

Emergent Theme	Description of the Lived Experience	Participants
Encountering the Unfamiliar	Students experienced outdoor education as an opportunity to participate in new activities beyond their usual routines.	P1, P2, P4, P7, P8, P12
Experiencing Physical and Practical Challenges	Students encountered physical demands, unfamiliar skills, fatigue, time pressure, and practical difficulties that required active participation and adaptation.	P1, P3, P4, P8, P10, P11, P12
Navigating Emotional Experiences	Students experienced varying emotions, including excitement, nervousness, anxiety, discomfort, enjoyment, and pressure while participating in outdoor activities.	P1, P2, P3, P4, P6, P11, P12
Experiencing Teamwork and Social Participation	Students described cooperation, communication, peer support, shared responsibility, and collective participation as integral parts of their outdoor experiences.	P1, P4, P5, P6, P8, P9, P10, P11, P12
Engaging Directly With Nature	Students experienced nature through direct exposure to the outdoor environment, including fresh air, open spaces, natural surroundings, and environmental activities.	P1, P2, P3, P4, P5, P6, P7, P8, P10, P11, P12
Experiencing Accomplishment	Students described feelings of achievement, pride, satisfaction, and accomplishment after completing challenging or unfamiliar activities.	P1, P4, P8, P10, P11, P12
Learning Through Direct Experience	Students experienced outdoor education as learning through doing, where practical activities, movement, problem-solving, teamwork, and authentic situations extended learning beyond the classroom.	P1–P12

Related codes and meanings were subsequently examined for patterns and connections within each participant's account. These were organized into emergent themes that captured important aspects of the individual participant's lived experience. Consistent with IPA, the researcher first attended to the particularity of each participant's account before examining similarities and differences across participants.

After the individual cases had been analyzed, the researcher compared the emergent themes across participants to identify areas of convergence and divergence. Shared patterns were grouped into broader thematic structures, while unique or contrasting experiences were retained when they provided meaningful insight into the phenomenon. This process resulted in the identification of themes concerning students' lived experiences, meaning-making, significant developmental experiences, holistic development, and transformative learning.

The emergent themes were then reviewed, refined, and interpreted in relation to the complete dataset and the research questions. The researcher examined whether each theme was adequately supported by the participants' narratives and whether the themes were sufficiently distinct while remaining connected to the overall phenomenon. Participant codes were retained to demonstrate the distribution of themes across the twelve co-participants.

The final stage involved developing an integrated interpretative account of the participants' lived experiences. The researcher synthesized the emergent themes to explain how students experienced outdoor education and how they made meaning of these experiences in relation to perceived physical competence, nature appreciation, mental toughness, and broader holistic development. Particular attention was given to the interconnected nature of physical challenges, emotional experiences, social relationships, engagement with nature, direct learning, reflection, and personal development.

Throughout the analysis, the researcher maintained reflexivity by documenting analytical decisions, observations, interpretations, and potential assumptions that could influence the interpretation of the data. The researcher continuously returned to the original narratives to ensure that interpretations remained grounded in the participants' accounts and that the individuality of their experiences was preserved.

The findings generated through this process served as the basis for the discussion of the research questions and the development of the proposed Outdoor Education Enhancement Framework. The framework was derived from the interpreted

patterns of meaning across the participants' experiences and translated these findings into practical considerations for strengthening outdoor education within PATHFit 3 and PATHFit 4.

III. RESULTS

This chapter presents, analyzes, and interprets the data gathered in the study in accordance with the research questions and objectives. It provides a systematic presentation of the findings and highlights the significant information, patterns, and themes that emerged from the data. The results are examined and interpreted to provide a clear understanding of the phenomenon under investigation and serve as the basis for the discussion, conclusions, recommendations, and practical output of the study.

1. Students' Lived Experiences in Participating in Outdoor Education Activities

This section presents the lived experiences of students who participated in outdoor education activities in PATHFit 3 and PATHFit 4 at Bulacan State University. The findings were drawn from the participants' accounts and organized into emergent themes that capture the different ways students experienced outdoor education. These include encountering unfamiliar activities, responding to physical and practical challenges, navigating emotional experiences, participating in teamwork and social interactions, engaging directly with nature, experiencing accomplishment, and learning through direct experience. Together, these themes provide an understanding of the nature and meaning of students' participation in outdoor education and establish the experiential foundation for examining their subsequent meaning-making and holistic development.

Table 1 presents seven emergent themes that describe the lived experiences of the students during their participation in outdoor education activities in PATHFit 3 and PATHFit 4. The themes demonstrate that students' experiences extended across physical, emotional, social, environmental, and experiential dimensions. Rather than being limited to participation in physical activities, outdoor education involved exposure to unfamiliar situations, responses to challenges, interactions with peers, direct engagement with nature, experiences of accomplishment, and learning through actual participation. This multidimensional nature of outdoor education is consistent with literature describing outdoor learning as an approach that integrates experiential learning, physical activity, environmental engagement, and personal development (Mann et al., 2021; Beames & Brown, 2021).

The first theme, Encountering the Unfamiliar, indicates that outdoor education provided students with opportunities to participate in activities beyond their usual routines. This experience of unfamiliarity represents an important aspect of outdoor learning because students were placed in situations that differed from their ordinary experiences. Six participants, namely P1, P2, P4, P7, P8, and P12, reflected this experience. Exposure to unfamiliar outdoor situations is consistent with the experiential nature of outdoor education, in which learners engage in authentic environments that require active participation, adaptability, and reflection (Beames & Brown, 2021; Becker et al., 2018). Such experiences can provide opportunities for students to develop new perspectives regarding their capabilities and become more actively involved in their learning (Kolb & Kolb, 2017).

The second theme, Experiencing Physical and Practical Challenges, reflects the demands students encountered during outdoor activities. These included physical demands, unfamiliar skills, fatigue, time pressure, and practical difficulties. Seven participants described experiences associated with these challenges, suggesting that outdoor education required students to actively participate and adapt to the demands of the activities. This finding is supported by Gray et al. (2015), who noted that outdoor activities expose learners to physical challenges that can contribute to movement competence and confidence in physical abilities. Similarly, Eigenschenk et al. (2019) emphasized that sustained physical effort and exposure to physical discomfort and fatigue in outdoor activities can contribute to physical resilience. Thus, the challenges encountered by the students formed an important part of their lived experience and provided opportunities to respond to demanding physical and practical situations.

The third theme, Navigating Emotional Experiences, shows that students' outdoor experiences were accompanied by varied emotional responses. Participants reported experiences involving excitement, nervousness, anxiety, discomfort, enjoyment, and pressure. These responses indicate that outdoor education was not experienced solely as a physical undertaking but also involved emotional engagement as students responded to different situations during participation. Outdoor activities may expose learners to unfamiliar and challenging circumstances that require emotional control, coping, and adaptation (Gucciardi et al., 2015; Cowden & Meyer-Weitz, 2016). Mutz and Müller (2016) likewise found that outdoor adventure experiences can contribute to psychological development, including self-confidence, resilience, and emotional well-being. In the present study, the range of emotions described by the participants suggests that emotional responses were an integral part of experiencing and making sense of outdoor activities.

The fourth theme, Experiencing Teamwork and Social Participation, highlights the social dimension of outdoor education. Students described cooperation, communication, peer support, shared responsibility, and collective participation as important components of their experiences. The theme was evident among nine participants, indicating that interaction with others was a substantial part of the outdoor learning experience. Outdoor experiential learning commonly involves collaboration, teamwork, and problem-solving, allowing students to develop interpersonal competencies through shared activities (Beames & Brown, 2021;

Dyson et al., 2021). Scrutton (2015) similarly reported that outdoor learning environments provide meaningful opportunities for teamwork, peer relationships, and engagement beyond traditional classroom settings. The experiences of the participants therefore indicate that social interaction formed an important component of their participation in outdoor education.

The fifth theme, Engaging Directly With Nature, reflects students' direct encounters with the natural environment. Participants described experiences involving fresh air, open spaces, natural surroundings, and environmental activities. This theme was reflected by 11 of the 12 participants, making it one of the most broadly represented experiences in the data. Direct engagement with natural environments has been associated with stronger connections with nature and increased environmental awareness (Barrable & Booth, 2020; Martin et al., 2020). Lumber et al. (2017) further explained that direct contact, emotional experiences, and meaningful engagement with nature can contribute to stronger nature connection and environmental responsibility. The prominence of this theme in the participants' accounts therefore suggests that the natural environment was not merely the setting for the activities but an important component of their outdoor education experience.

The sixth theme, Experiencing Accomplishment, captures students' experiences after completing challenging or unfamiliar activities. Participants described feelings of achievement, pride, satisfaction, and accomplishment. These experiences suggest that successfully engaging with outdoor activities provided students with meaningful experiences of completing tasks that they had perceived as challenging or unfamiliar. Experiences of successfully overcoming difficult tasks can strengthen individuals' beliefs in their ability to manage future challenges, consistent with the concept of self-efficacy (Bandura, 1997). Gray et al. (2015) also associated outdoor physical experiences with increased confidence in physical abilities, while Mutz and Müller (2016) identified self-confidence as one of the psychological benefits associated with outdoor adventure experiences. Thus, students' experiences of accomplishment may have contributed to a stronger perception of their own capabilities.

Finally, Learning Through Direct Experience reflects the experiential nature of outdoor education. All participants, from P1 to P12, were represented in this theme. Students experienced learning through doing, including practical activities, movement, problem-solving, teamwork, and authentic situations that extended learning beyond the classroom. This finding strongly reflects the principles of experiential learning, in which learners develop knowledge through active engagement with experiences and subsequent reflection (Kolb & Kolb, 2017). Outdoor education provides authentic contexts where students can apply knowledge, make decisions, collaborate, solve problems, and adapt to real-world situations (Beames & Brown, 2021). Such experiences can also strengthen student engagement, practical learning, and personal development (Mann et al., 2021).

Taken together, the seven themes indicate that students experienced outdoor education as a multidimensional and experiential form of learning. Their participation involved encountering unfamiliar situations, responding to physical and practical demands, managing emotions, engaging with peers, interacting directly with nature, experiencing accomplishment, and learning through actual experience. These findings are consistent with the broader literature indicating that outdoor education can integrate physical activity, experiential learning, environmental engagement, social interaction, and psychological development within authentic learning contexts (Becker et al., 2018; Mann et al., 2021). The findings directly address Research Question 1 by demonstrating that students' lived experiences of outdoor education extended beyond participation in physical activities and encompassed interconnected physical, emotional, social, environmental, and learning experiences. These experiential dimensions provide the foundation for examining how students subsequently interpreted these experiences in relation to perceived physical competence, nature appreciation, and mental toughness.

2. Meaning-Making in Relation to Perceived Physical Competence, Nature Appreciation, and Mental Toughness

This section presents how students interpreted and made meaning of their outdoor education experiences in relation to perceived physical competence, nature appreciation, and mental toughness. The findings show that students' meaning-making extended beyond the activities themselves as they reflected on their physical capabilities, recognized their limitations, experienced connections with nature, managed emotional difficulties, developed persistence, and drew strength from social support. The findings further indicate that students understood their experiences as interconnected, with physical challenges, emotional responses, relationships, and engagement with nature contributing to their personal development.

Table 2. *Students' Meaning-Making in Relation to Perceived Physical Competence, Nature Appreciation, and Mental Toughness*

Dimension	Emergent Theme	Meaning-Making of Students	Participants
Perceived Physical Competence	Discovering Physical Capability	Outdoor challenges enabled students to recognize abilities they had previously underestimated and develop greater confidence in their physical capabilities.	P1, P2, P4, P8, P10, P11, P12
Perceived Physical Competence	Recognizing Limitations and Areas for Improvement	Difficult activities also encouraged students to recognize physical limitations and areas that required further development.	P3, P9
Nature Appreciation	Nature as a Source of Restoration and Connection	Direct exposure to nature provided relaxation, calmness, reflection, and opportunities to reconnect with the environment.	P1, P2, P3, P7
Nature Appreciation	Developing Environmental Appreciation and Responsibility	Outdoor experiences increased awareness and appreciation of nature and encouraged students to recognize the importance of caring for and protecting the environment.	P4, P5, P7, P8, P10, P11, P12
Mental Toughness	Managing Pressure and Emotional Difficulty	Students experienced nervousness, anxiety, discomfort, and pressure but learned to remain focused and manage their emotional responses during challenging activities.	P1, P2, P3, P4, P11, P12
Mental Toughness	Persistence and Resilience Through Challenge	Students interpreted difficult experiences as opportunities to persist, adapt, practice, and continue despite fatigue or uncertainty.	P1, P3, P4, P10, P11, P12
Mental Toughness	Drawing Strength From Social Support	Peer encouragement, teamwork, and consultation helped students manage difficulties and sustain participation.	P1, P4, P6, P11, P12
Integrated Meaning-Making	Developing Through Challenge, Nature, and Relationships	Students understood outdoor education as an interconnected experience in which physical challenges, emotional experiences, social relationships, and nature contributed to personal development.	P1–P12

Table 2 presents the students' meaning-making in relation to three central dimensions of the study: perceived physical competence, nature appreciation, and mental toughness. The findings show that students interpreted their outdoor education experiences in multiple but interconnected ways. Their accounts reflected not only what they were able to accomplish physically but also how they understood their limitations, experienced nature, managed emotional difficulty, persisted through challenges, and relied on relationships with others. This interconnected experience is consistent with the broader understanding of outdoor education as an experiential approach that can involve physical, psychological, social, and environmental dimensions of learning and development (Becker et al., 2018; Eigenschenk et al., 2019; Mann et al., 2021).

Under perceived physical competence, the theme Discovering Physical Capability shows that outdoor challenges enabled students to recognize abilities they had previously underestimated. Seven participants, namely P1, P2, P4, P8, P10, P11, and P12, were represented in this theme. Their meaning-making suggests that participation in challenging outdoor activities provided opportunities for students to develop greater confidence in their physical capabilities. This finding is consistent with Bandura's (1997) view that successful experiences can strengthen individuals' beliefs in their ability to perform tasks and manage challenges. Similarly, outdoor adventure education has been associated with opportunities to develop physical competence and confidence through participation in physically demanding activities (Gray et al., 2015). The experience therefore involved not only performing physical tasks but also developing a changed perception of what they were capable of doing.

At the same time, the theme Recognizing Limitations and Areas for Improvement indicates that outdoor experiences did not lead exclusively to increased confidence. Participants P3 and P9 interpreted difficult activities as opportunities to recognize their physical limitations and identify areas that required further development. This finding provides a more balanced understanding of perceived physical competence because students were able to recognize both their capabilities and areas where further improvement was necessary. Such awareness is relevant to the development of physical competence because participation in physical activities can provide opportunities for learners to assess their abilities and identify areas for continued development (Gray et al., 2015; Warburton & Bredin, 2017).

For nature appreciation, the theme Nature as a Source of Restoration and Connection indicates that direct exposure to natural environments was associated with relaxation, calmness, reflection, and reconnection with the environment. Participants P1, P2, P3, and P7 expressed meanings associated with these experiences. Thus, nature was not merely the physical setting in which outdoor activities occurred but also became part of the students' experiential and reflective process. Research has associated contact with and connection to nature with well-being and positive psychological experiences (Martin et al., 2020; Tillmann et al., 2022). Barrable and Booth (2020) likewise emphasized the importance of experiences that strengthen individuals' connection with nature. The participants' accounts therefore suggest that direct engagement with natural environments contributed meanings that extended beyond the physical activity itself.

The second nature-related theme, Developing Environmental Appreciation and Responsibility, shows a broader meaning associated with students' engagement with the environment. Seven participants, P4, P5, P7, P8, P10, P11, and P12, described

experiences that increased their awareness and appreciation of nature and encouraged recognition of the importance of caring for and protecting the environment. This finding is consistent with research indicating that meaningful contact with nature and nature connectedness can be associated with pro-environmental attitudes and behaviors (Lumber et al., 2017; Martin et al., 2020). Ardoin et al. (2020) further emphasized the potential of environmental education experiences to contribute to environmental knowledge, attitudes, and behaviors. Thus, students' direct engagement with nature may have provided opportunities for them to develop not only appreciation but also a greater sense of environmental responsibility.

Under mental toughness, the theme Managing Pressure and Emotional Difficulty reflects how students interpreted experiences of nervousness, anxiety, discomfort, and pressure. Six participants, P1, P2, P3, P4, P11, and P12, were represented in this theme. Despite experiencing emotional difficulty, students learned to remain focused and manage their emotional responses while participating in challenging activities. This finding is consistent with the conceptualization of mental toughness as involving the capacity to respond effectively to demanding situations and maintain functioning when confronted with pressure or difficulty (Gucciardi et al., 2015; Cowden & Meyer-Weitz, 2016). Mutz and Müller (2016) also reported psychological benefits associated with outdoor adventure experiences. The finding therefore suggests that mental toughness was evident not through the absence of difficult emotions but through students' efforts to manage and respond to those emotions during participation.

The theme Persistence and Resilience Through Challenge further demonstrates that students interpreted difficult experiences as opportunities to persist, adapt, practice, and continue despite fatigue or uncertainty. Six participants, P1, P3, P4, P10, P11, and P12, were represented in this theme. Their meaning-making suggests that challenge became an important context through which students developed persistence and resilience. This interpretation corresponds with research describing mental toughness in terms of persistence and effective responses to adversity, pressure, and demanding circumstances (Gucciardi et al., 2015; Cowden & Meyer-Weitz, 2016). Outdoor activities can likewise provide situations in which individuals encounter physical and psychological challenges that require continued effort and adaptation (Eigenschenk et al., 2019). Rather than viewing difficulty solely as an obstacle, students could interpret it as an experience that required continued effort and adaptation.

The theme Drawing Strength From Social Support highlights the role of interpersonal relationships in students' responses to difficulty. Participants P1, P4, P6, P11, and P12 described peer encouragement, teamwork, and consultation as sources of support that helped them manage difficulties and sustain participation. This finding suggests that students' responses to challenges were influenced not only by individual capacities but also by their interactions with peers. Cooperative learning research in physical education emphasizes the value of cooperation, interaction, and shared participation in supporting learning and social development (Dyson et al., 2021). Similarly, outdoor education provides opportunities for teamwork and peer relationships through shared activities and challenges (Scrutton, 2015). In the present study, social support therefore formed part of the context through which students managed difficulties and continued participating.

Finally, the theme Developing Through Challenge, Nature, and Relationships represents the integrated dimension of students' meaning-making. All participants, P1–P12, were represented in this theme. Students understood outdoor education as an interconnected experience in which physical challenges, emotional experiences, social relationships, and engagement with nature contributed to personal development. This finding reflects the multidimensional character of outdoor education identified in the literature, where physical activity, experiential learning, social interaction, environmental engagement, and psychological development may occur within the same learning experience (Becker et al., 2018; Eigenschenk et al., 2019; Mann et al., 2021). It also reflects the experiential learning perspective in which learners develop meaning by engaging with experiences and reflecting on what those experiences represent for them (Kolb & Kolb, 2017). Thus, the participants did not necessarily experience perceived physical competence, nature appreciation, and mental toughness as isolated dimensions but as interconnected aspects of their broader outdoor education experience.

Overall, the findings in Table 2 indicate that students' meaning-making involved discovering capabilities, recognizing limitations, connecting with nature, developing environmental responsibility, managing emotional difficulty, persisting through challenges, and drawing strength from relationships. These meanings demonstrate that students interpreted their outdoor education experiences across interconnected physical, psychological, social, and environmental dimensions. This interpretation is consistent with literature emphasizing the broad developmental potential of outdoor learning and experiential education (Beames & Brown, 2021; Mann et al., 2021). The findings directly address Research Question 2 by demonstrating how students interpreted their experiences in relation to perceived physical competence, nature appreciation, and mental toughness. They also provide an important foundation for understanding the significant experiences that students perceived as influential in shaping their development, which are presented in the succeeding section.

3. Significant Experiences Influencing Students' Development

This section presents the significant experiences that students identified as influential in shaping their development through participation in outdoor education activities in PATHFit 3 and PATHFit 4. The findings highlight memorable and meaningful

experiences that contributed to students' personal, physical, emotional, social, and environmental development. These experiences include encountering new activities, facing challenges, experiencing accomplishment, receiving social support, developing leadership and responsibility, connecting with nature, and learning through experience. The themes provide insight into the specific moments and experiences that students perceived as influential in their development and directly address the third research question of the study.

Table 3. *Significant Experiences Influencing Students' Development*

Emergent Theme	Significant Experience	Participants
Encountering New Experiences	First-time and unfamiliar outdoor activities became memorable learning experiences.	P1, P2, P4, P7, P8, P12
Facing Challenges	Physical, practical, and performance challenges required effort, persistence, practice, and adaptation.	P1, P3, P4, P10, P11, P12
Experiencing Accomplishment	Successfully completing difficult activities generated pride, satisfaction, and confidence.	P1, P2, P4, P8, P10, P11, P12
Receiving Social Support	Peer encouragement, teamwork, and shared responsibility helped students manage challenges.	P1, P4, P5, P6, P8, P9, P11, P12
Developing Leadership and Responsibility	Leadership experiences provided opportunities to assist others, assume responsibility, and contribute to group success.	P6, P12
Connecting With Nature	Direct engagement with nature encouraged relaxation, reflection, appreciation, and environmental awareness.	P1, P2, P3, P4, P7, P8, P10, P11, P12
Learning Through Experience	Hands-on activities allowed students to apply practical knowledge beyond conventional classroom learning.	P1–P12

Table 3 presents seven emergent themes representing experiences that students perceived as significant in shaping their development. The findings indicate that meaningful development occurred through a combination of new experiences, challenges, accomplishments, social interactions, leadership opportunities, engagement with nature, and direct learning experiences. This broad range of experiences is consistent with the literature describing outdoor education as a multidimensional learning context that can support physical, psychological, social, environmental, and experiential development (Becker et al., 2018; Eigenschenk et al., 2019; Mann et al., 2021).

The theme Encountering New Experiences shows that first-time and unfamiliar outdoor activities became memorable learning experiences for six participants. These experiences were significant because they exposed students to activities outside their usual routines and provided opportunities to encounter situations that were new to them. Outdoor education emphasizes authentic and adventurous learning experiences that place students in situations where they can actively engage with unfamiliar contexts and develop through experience (Beames & Brown, 2021). From an experiential learning perspective, encounters with new situations can become meaningful when learners actively engage with and reflect on those experiences (Kolb & Kolb, 2017).

Facing Challenges emerged as another significant experience. Six participants described physical, practical, and performance challenges that required effort, persistence, practice, and adaptation. These experiences demonstrate that difficulty itself became an important part of students' development as they responded to demanding situations and worked toward completing the activities. Outdoor adventure activities can provide opportunities for participants to encounter physical demands and develop confidence and resilience through responding to challenges (Gray et al., 2015; Eigenschenk et al., 2019). The finding therefore suggests that challenges became meaningful when students were required to actively respond, adjust, and persist.

The theme Experiencing Accomplishment indicates that successfully completing difficult activities generated feelings of pride, satisfaction, and confidence among seven participants. Such experiences appeared to provide students with a sense of achievement following their engagement with challenging activities. Bandura (1997) explained that successful performance experiences can strengthen individuals' beliefs in their capabilities, while Gray et al. (2015) associated outdoor physical experiences with increased confidence in physical abilities. Similarly, Mutz and Müller (2016) identified self-confidence as one of the psychological benefits that may emerge from outdoor adventure experiences. Thus, accomplishment in the present study may have served as an important experience through which students developed greater confidence in their ability to manage challenging tasks.

Receiving Social Support highlights the importance of peer relationships in students' experiences. Eight participants identified peer encouragement, teamwork, and shared responsibility as experiences that helped them manage challenges. This suggests that significant developmental experiences were not limited to individual achievement but also occurred through interaction and support from others. Cooperative learning in physical education emphasizes interaction, cooperation, and shared participation as important conditions for learning and social development (Dyson et al., 2021). Outdoor education can likewise provide opportunities for teamwork and meaningful peer relationships through shared challenges and activities (Scrutton, 2015). The participants' experiences therefore indicate that social support contributed to how they managed challenges and sustained their participation.

The theme Developing Leadership and Responsibility was identified by Participants 6 and 12. Their experiences provided opportunities to assist others, assume responsibility, and contribute to group success. Although represented by fewer participants, the theme illustrates that outdoor education could also provide experiences through which students assumed active and responsible roles within a group. Shared activities and cooperative learning can create opportunities for learners to contribute to group processes, communicate with others, and assume responsibilities within collaborative tasks (Dyson et al., 2021). In this study, leadership and responsibility therefore emerged as specific experiences through which students could contribute beyond their individual participation.

Connecting With Nature emerged as a significant experience among nine participants. Direct engagement with nature encouraged relaxation, reflection, appreciation, and environmental awareness. This finding demonstrates that the natural environment formed an important part of students' meaningful experiences and was associated not only with physical activity but also with reflective and environmental experiences. Research indicates that direct contact with nature and stronger nature connectedness can be associated with well-being, environmental appreciation, and pro-environmental behaviors (Martin et al., 2020; Lumber et al., 2017). Barrable and Booth (2020) likewise emphasized the importance of direct experiences in developing connections with nature. The participants' accounts therefore suggest that nature became a meaningful component of their developmental experiences.

Finally, Learning Through Experience was represented by all participants. The theme shows that hands-on activities allowed students to apply practical knowledge beyond conventional classroom learning. The universal representation of this theme indicates that direct experience was a central feature of the students' outdoor education experiences and provided opportunities to connect learning with actual situations and activities. This finding strongly reflects experiential learning theory, which emphasizes learning through concrete experience, reflection, and application (Kolb & Kolb, 2017). Outdoor education similarly provides authentic situations in which learners can apply knowledge, participate actively, solve problems, and learn through direct engagement (Beames & Brown, 2021). Thus, learning through experience emerged as a common element across the participants' accounts.

Overall, the findings indicate that students perceived significant developmental experiences through new encounters, challenges, accomplishments, social support, leadership, nature engagement, and hands-on learning. These experiences demonstrate that development within outdoor education emerged through varied forms of participation rather than from a single type of activity. The findings are consistent with the view that outdoor learning can provide interconnected opportunities for physical activity, experiential learning, social participation, environmental engagement, and personal development (Becker et al., 2018; Eigenschenk et al., 2019; Mann et al., 2021). The findings directly address Research Question 3 by identifying the experiences and moments that students perceived as influential in shaping their development. They also provide the basis for examining the broader themes that capture the essence of students' meaning-making processes regarding holistic development in the next section.

4. Emergent Themes Capturing Students' Meaning-Making Processes Regarding Holistic Development

This section presents the emergent themes that capture how students made meaning of their outdoor education experiences in relation to their holistic development. The themes reflect the interconnected physical, psychological, practical, social, and environmental dimensions of students' experiences. The findings show that students developed greater self-awareness through challenges, built confidence and resilience, learned through direct experience, grew through relationships, connected with nature, and recognized that development could occur in different ways and at different levels among individuals. These themes provide an integrated interpretation of the students' meaning-making processes and directly address the fourth research question of the study.

Table 4. Emergent Themes Capturing Students' Meaning-Making Processes Regarding Holistic Development

Superordinate Theme	Core Meaning	Participants
Discovering the Self Through Outdoor Challenge	Outdoor challenges enabled students to discover capabilities, recognize limitations, and develop greater self-awareness.	P1, P2, P3, P4, P8, P10, P11, P12
Developing Confidence and Resilience	Students interpreted difficulty, pressure, and uncertainty as opportunities to develop confidence, persistence, emotional control, and resilience.	P1, P2, P3, P4, P6, P11, P12
Learning Through Doing	Practical activities transformed learning into direct experience, application, and development of self-reliance.	P1, P2, P4, P5, P6, P7, P8, P9, P10, P11, P12
Growing Through Relationships	Teamwork, peer support, belonging, leadership, and shared responsibility shaped students' personal and social development.	P1, P4, P5, P6, P8, P9, P10, P11, P12
Connecting With Nature	Direct engagement with nature fostered appreciation, restoration, reflection, and environmental responsibility.	P1, P2, P3, P4, P5, P6, P7, P8, P10, P11, P12
Recognizing Individual Pathways of Development	Students did not experience transformation uniformly; development ranged from increased confidence and resilience to greater self-awareness, enjoyment, or limited perceived change.	P3, P9, P12

Table 4 presents six superordinate themes that capture the students' meaning-making processes regarding holistic development. The findings demonstrate that students understood their outdoor education experiences through interconnected dimensions of self-discovery, confidence and resilience, experiential learning, relationships, nature, and individual development. This multidimensional interpretation is consistent with the literature describing outdoor learning as an experience that can encompass physical, psychological, social, environmental, and educational outcomes rather than a single developmental dimension (Becker et al., 2018; Eigenschenk et al., 2019; Mann et al., 2021).

The theme Discovering the Self Through Outdoor Challenge indicates that outdoor challenges provided students with opportunities to discover their capabilities, recognize their limitations, and develop greater self-awareness. Eight participants were represented in this theme. The finding suggests that students' encounters with challenging outdoor situations encouraged reflection on their own abilities and limitations, allowing them to develop a clearer understanding of themselves. This interpretation is consistent with Bandura's (1997) explanation that experiences of successfully managing challenges can influence individuals' beliefs about their capabilities. Outdoor adventure education can likewise provide situations in which participants encounter physical and practical challenges that encourage personal development and greater confidence in their abilities (Gray et al., 2015; Eigenschenk et al., 2019).

Developing Confidence and Resilience reflects how students interpreted difficulty, pressure, and uncertainty as opportunities for personal development. Seven participants were represented in this theme. Their experiences indicate that responding to demanding situations could contribute to confidence, persistence, emotional control, and resilience. Thus, challenges were understood not only as difficulties to overcome but also as experiences through which students could develop psychological capacities. This finding is consistent with research on mental toughness, which identifies effective responses to pressure, adversity, and demanding circumstances as important aspects of psychological resilience and adaptive functioning (Gucciardi et al., 2015; Cowden & Meyer-Weitz, 2016). Outdoor adventure experiences have also been associated with psychological benefits, including increased self-confidence and resilience (Mutz & Müller, 2016).

The theme Learning Through Doing demonstrates the importance of direct experience in students' understanding of learning. Eleven participants were represented in this theme. Practical activities enabled students to transform learning into direct experience and application while developing self-reliance. This finding emphasizes that outdoor education provided learning opportunities through actual participation rather than through classroom-based instruction alone. The experiential learning perspective emphasizes that learning develops through engagement with concrete experiences, reflection, and application (Kolb & Kolb, 2017). Similarly, outdoor education provides authentic learning situations in which students can actively participate, apply knowledge, solve problems, and develop practical understanding (Beames & Brown, 2021).

Growing Through Relationships highlights the social dimension of students' development. Nine participants described experiences involving teamwork, peer support, belonging, leadership, and shared responsibility. These experiences suggest that students' personal and social development was shaped not only by individual encounters with outdoor challenges but also by their relationships and interactions with others during participation. Cooperative learning research in physical education emphasizes the value of interaction, cooperation, and shared participation in supporting students' learning and social development (Dyson et al., 2021). Outdoor adventure education can likewise provide opportunities for teamwork and peer relationships through shared

experiences and challenges (Scrutton, 2015). The finding therefore indicates that relationships formed an important context through which students experienced and interpreted their development.

The theme Connecting With Nature was represented by 11 participants and reflects the environmental and reflective dimension of students' meaning-making. Direct engagement with nature fostered appreciation, restoration, reflection, and environmental responsibility. The prominence of this theme indicates that nature functioned as an important part of students' experiences and contributed meanings that extended beyond physical participation. Research has associated contact with and connection to nature with well-being and positive psychological experiences (Martin et al., 2020; Tillmann et al., 2022). Nature connection has also been associated with emotional engagement and environmental responsibility (Lumber et al., 2017), while environmental education experiences may contribute to environmental knowledge, attitudes, and conservation-related outcomes (Ardoin et al., 2020).

Finally, Recognizing Individual Pathways of Development emphasizes that students did not experience transformation in the same manner. Three participants were represented in this theme, with development ranging from increased confidence and resilience to greater self-awareness, enjoyment, or limited perceived change. This finding is important because it recognizes variation in how students interpreted and experienced the developmental value of outdoor education. Outdoor learning research identifies a range of potential outcomes and suggests that learners may experience and benefit from outdoor experiences in different ways depending on the nature of the activity and the learner's circumstances (Mann et al., 2021; Eigenschenk et al., 2019). Thus, the findings indicate that holistic development should not be understood as a uniform outcome experienced by all students in exactly the same way.

Overall, the six superordinate themes demonstrate that students' holistic development was understood as a multidimensional and individually experienced process. Outdoor challenges encouraged self-discovery and resilience, direct activities facilitated experiential learning, relationships supported personal and social growth, and engagement with nature contributed to appreciation and reflection. At the same time, the findings acknowledge that the nature and extent of development differed among students. This interpretation is consistent with the broader literature recognizing outdoor education as a context for interconnected physical, psychological, social, environmental, and experiential outcomes (Becker et al., 2018; Eigenschenk et al., 2019; Mann et al., 2021). These findings directly address Research Question 4 by identifying the themes that capture the essence of students' meaning-making processes regarding holistic development. They also provide the foundation for examining how these interpreted meanings contribute to understanding outdoor education as a transformative learning experience, as presented in the next section.

5. Outdoor Education as a Transformative Learning Experience

This section presents how students' interpreted experiences contributed to understanding outdoor education as a transformative learning experience. The findings highlight the ways in which challenges, practical activities, social interactions, engagement with nature, and learning beyond the classroom contributed to students' personal development. At the same time, the findings recognize that transformation was not experienced uniformly, with students reporting different degrees and forms of personal change. These themes directly address the fifth research question by showing how students' experiences and interpretations contributed to their understanding of outdoor education as an experience that could influence learning, self-perception, relationships, and personal development.

Table 5. *Outdoor Education as a Transformative Learning Experience*

Superordinate Theme	Transformative Contribution	Participants
Challenge as a Catalyst for Self-Discovery	Outdoor challenges encouraged students to reassess their physical abilities, recognize limitations, and develop greater self-awareness.	P1, P2, P3, P4, P8, P10, P11, P12
Developing Confidence and Resilience	Managing unfamiliar, demanding, and stressful situations contributed to confidence, persistence, emotional regulation, and resilience.	P1, P2, P3, P4, P6, P11, P12
Practical Learning and Self-Reliance	Hands-on activities enabled students to develop practical competence, resourcefulness, independence, and skills applicable beyond the learning setting.	P1, P2, P4, P5, P7, P10, P12
Transformation Through Social Interaction	Teamwork, peer support, leadership, belonging, and shared responsibility demonstrated how personal development can occur through relationships with others.	P1, P4, P5, P6, P8, P9, P10, P11, P12
Nature as a Context for Transformation	Direct engagement with nature promoted appreciation, reflection, emotional restoration, and environmental responsibility.	P1, P2, P3, P4, P5, P7, P8, P10, P11, P12
Learning Beyond the Classroom	Experiential outdoor activities allowed students to apply knowledge, encounter authentic situations, and construct meaning through direct experience.	P1–P12
Individual Variation in Transformation	The degree and form of transformation varied, ranging from increased confidence and resilience to self-awareness, enjoyment, or limited perceived personal change.	P3, P9, P12

Table 5 presents seven superordinate themes that describe the contribution of outdoor education to students' transformative learning experiences. The findings indicate that transformation was associated with students' encounters with challenges, development of confidence and resilience, acquisition of practical skills, interaction with others, engagement with nature, and learning through authentic experiences. These dimensions correspond with the broader literature identifying outdoor learning as a context that can support physical, psychological, social, environmental, and experiential outcomes (Eigenschenk et al., 2019; Mann et al., 2021).

The theme Challenge as a Catalyst for Self-Discovery indicates that outdoor challenges encouraged students to reassess their physical abilities, recognize limitations, and develop greater self-awareness. Eight participants were represented in this theme. The experience of confronting challenges may provide opportunities for learners to examine their existing perceptions of their abilities and develop new understandings through direct experience. Bandura (1997) emphasized the role of successful experiences in shaping perceptions of capability, while Kolb and Kolb (2017) explained that learning can develop through engagement with experiences and subsequent reflection. In the present study, outdoor challenges therefore contributed to transformation by encouraging students to reconsider what they could do and recognize areas in which they could continue to improve.

Developing Confidence and Resilience reflects how students interpreted unfamiliar, demanding, and stressful situations as experiences that contributed to confidence, persistence, emotional regulation, and resilience. Seven participants were represented in this theme. This finding is consistent with research identifying persistence, effective responses to adversity, and the management of pressure as important aspects of mental toughness (Gucciardi et al., 2015; Cowden & Meyer-Weitz, 2016). Outdoor adventure experiences have likewise been associated with psychological benefits, including increased confidence and resilience (Mutz & Müller, 2016). Thus, the students' experiences suggest that transformation could occur through learning how to respond to difficulty rather than simply avoiding or removing challenging situations.

The theme Practical Learning and Self-Reliance shows that hands-on activities enabled students to develop practical competence, resourcefulness, independence, and skills applicable beyond the learning setting. Seven participants were represented in this theme. The finding reflects the central principle of experiential learning, in which knowledge is developed through concrete experiences, reflection, and application (Kolb & Kolb, 2017). Outdoor learning can provide authentic situations in which learners actively participate, apply knowledge, solve problems, and develop practical competencies (Beames & Brown, 2021). In this context, practical learning contributed to transformation by allowing students to recognize that knowledge acquired through participation could extend beyond the immediate learning activity.

Transformation Through Social Interaction highlights the role of relationships in students' development. Nine participants described experiences involving teamwork, peer support, leadership, belonging, and shared responsibility. These findings indicate that personal development occurred not only through individual encounters with challenges but also through interaction with others. Cooperative learning in physical education emphasizes the developmental value of cooperation and shared participation (Dyson et al., 2021), while outdoor education provides opportunities for teamwork and peer relationships through shared experiences (Scrutton, 2015). Social interaction therefore formed an important context through which students experienced support, assumed responsibilities, and contributed to group activities.

The theme Nature as a Context for Transformation reflects the developmental meanings associated with students' direct engagement with the natural environment. Eleven participants were represented in this theme. Students associated nature with appreciation, reflection, emotional restoration, and environmental responsibility. This finding is consistent with research showing that contact with nature and nature connectedness can be associated with well-being and positive psychological experiences (Martin et al., 2020; Tillmann et al., 2022). Nature connection may also involve emotional and meaningful experiences that can encourage environmental responsibility (Lumber et al., 2017). Thus, the natural environment served not only as a setting for outdoor activities but also as a context in which students developed reflective, emotional, and environmental meanings.

Learning Beyond the Classroom was represented by all participants. The theme indicates that experiential outdoor activities allowed students to apply knowledge, encounter authentic situations, and construct meaning through direct experience. This finding strongly corresponds with experiential learning theory, which views experience and reflection as central processes in the development of knowledge and meaning (Kolb & Kolb, 2017). Beames and Brown (2021) likewise describe outdoor learning as a form of authentic learning in which students engage directly with situations beyond conventional classroom environments. The representation of all participants suggests that learning through direct experience was a particularly consistent feature of how students understood the contribution of outdoor education.

Finally, Individual Variation in Transformation emphasizes that the degree and form of transformation varied among students. Three participants were represented in this theme, with experiences ranging from increased confidence and resilience to self-awareness, enjoyment, or limited perceived personal change. This finding is important because it indicates that transformative

experiences cannot necessarily be assumed to produce identical outcomes for all learners. Outdoor learning may generate varied benefits depending on the learner, the experience, and the context in which learning occurs (Mann et al., 2021; Eigenschenk et al., 2019). The finding therefore adds an important dimension to the interpretation of transformation by recognizing that students may derive different meanings and developmental outcomes from similar outdoor experiences.

Overall, the findings in Table 5 demonstrate that students experienced outdoor education as a potentially transformative learning context through challenge, confidence and resilience, practical learning, social interaction, nature engagement, and authentic experience. At the same time, the findings indicate that transformation was not uniform across participants. This understanding is consistent with experiential learning theory, which emphasizes that learning and meaning are constructed through individuals' engagement with and reflection upon their experiences (Kolb & Kolb, 2017). The findings directly address Research Question 5 by demonstrating how students' interpreted meanings contributed to a deeper understanding of outdoor education as a transformative learning experience. These findings also provide the empirical basis for the development of the Outdoor Education Enhancement Framework presented in the succeeding chapter.

Practical Output / Proposed Outdoor Education Enhancement Framework

The findings of the study served as the basis for the development of the Outdoor Education Enhancement Framework for PATHFit 3 and PATHFit 4 at Bulacan State University. The framework translates the students' lived experiences and meaning-making processes into an integrated structure that may guide the planning, implementation, facilitation, and evaluation of outdoor education activities. Rather than treating outdoor education primarily as a means of providing physical activity, the framework positions it as an experiential educational process through which students may develop physical competence, psychological resilience, practical skills, social relationships, nature appreciation, and self-awareness.

The framework was derived from the convergence of the findings presented in Tables 1 to 5. Students' lived experiences revealed the importance of unfamiliar activities, physical and practical challenges, emotional experiences, teamwork, nature engagement, accomplishment, and direct learning. Their meaning-making further demonstrated the importance of perceived physical competence, nature appreciation, mental toughness, and social support. The significant experiences identified by the participants emphasized challenge, accomplishment, peer support, leadership, nature connection, and hands-on learning. These findings were subsequently integrated into broader themes of self-discovery, confidence and resilience, experiential learning, relationships, nature connection, and individual developmental pathways. Finally, the findings concerning transformative learning demonstrated how these experiences could contribute to changes in students' perceptions, capabilities, relationships, learning, and engagement with the environment.

Table 6. *Proposed Outdoor Education Enhancement Framework for PATHFit 3 and PATHFit 4*

Framework Component	Findings-Based Basis	Enhancement Strategies	Intended Developmental Contribution
1. Meaningful Challenge and Self-Discovery	Students encountered unfamiliar activities and physical and practical challenges that enabled them to discover capabilities and recognize limitations.	Provide progressive, purposeful, and developmentally appropriate outdoor challenges; introduce unfamiliar activities gradually; allow students to assess their capabilities and areas for improvement.	Self-awareness, perceived physical competence, confidence, adaptability, and willingness to engage with challenge
2. Experiential Learning and Practical Competence	Students described learning through doing, practical participation, problem-solving, and authentic situations.	Use hands-on activities, authentic tasks, problem-solving situations, skill application, and opportunities for self-reliance.	Practical competence, resourcefulness, independence, application of knowledge, and experiential learning
3. Confidence, Resilience, and Emotional Development	Students experienced nervousness, anxiety, pressure, fatigue, uncertainty, persistence, accomplishment, and confidence.	Provide supportive challenges, encourage persistence, normalize manageable difficulty, provide instructor guidance, and integrate emotional reflection.	Confidence, persistence, emotional regulation, resilience, and mental toughness
4. Social Learning and Shared Responsibility	Students identified teamwork, communication, peer support, leadership, belonging, and shared responsibility as important experiences.	Incorporate cooperative tasks, peer support, group problem-solving, rotating leadership roles, and shared responsibilities.	Social competence, communication, leadership, belonging, cooperation, and collective responsibility
5. Nature Connection and Environmental Responsibility	Students experienced nature through relaxation, reflection, appreciation, connection, and environmental awareness.	Integrate direct nature experiences, environmental activities, observation, reflection, conservation-oriented tasks, and responsible environmental practices.	Nature appreciation, environmental awareness, restoration, reflection, and environmental responsibility
6. Reflection and Meaning-Making	Students developed meanings from their experiences by interpreting their capabilities, emotions, relationships, challenges, and engagement with nature.	Conduct structured pre-activity preparation, guided reflection during activities, post-activity processing, journals, group reflection, and reflective discussions.	Meaning-making, self-awareness, deeper learning, transfer of learning, and personal insight
7. Individualized Developmental Pathways	Students did not experience development uniformly; outcomes ranged from confidence and resilience to self-awareness, enjoyment, or limited perceived change.	Provide differentiated participation opportunities, flexible levels of challenge, multiple activity options, supportive facilitation, and opportunities for individual reflection.	Inclusive participation, individualized growth, autonomy, self-awareness, and recognition of diverse developmental outcomes

4.1 Rationale and Foundation of the Framework

The proposed framework is grounded in the central finding that students' development emerged through the interaction of experience, challenge, reflection, relationships, and nature. The framework therefore does not present seven independent activities or program components. Instead, the components represent interconnected dimensions that may be intentionally incorporated into the design and implementation of outdoor education.

The first component, Meaningful Challenge and Self-Discovery, responds directly to the students' experiences of encountering unfamiliar activities and facing physical and practical challenges. The findings indicate that unfamiliarity and difficulty provided opportunities for students to reassess what they could do and recognize limitations that they had not previously considered. The purpose of this component is therefore not to maximize difficulty but to provide challenges that are meaningful, manageable, and appropriate to students' capabilities. Through progressive challenges, students may be encouraged to move beyond familiar routines while maintaining a supportive learning environment.

This component is particularly relevant to perceived physical competence. Students who successfully engaged with challenging activities experienced accomplishment and greater confidence, while other students became more aware of areas that required further development. Thus, challenge should be understood as an opportunity for self-discovery rather than simply performance testing.

The second component, Experiential Learning and Practical Competence, reflects the consistent finding that students valued learning through direct participation. All participants were represented in the theme Learning Through Experience, demonstrating the centrality of hands-on learning in their outdoor education experiences. Outdoor activities provide opportunities for students to apply knowledge in authentic situations, solve practical problems, and develop skills that may not be fully developed through classroom-based instruction alone.

This component may therefore involve activities that require students to make decisions, apply previously learned concepts, work with available resources, and respond to real situations. The emphasis is on learning through action and application, consistent with experiential learning (Kolb & Kolb, 2017). The practical dimension also supports self-reliance, which emerged as an important aspect of the students' meaning-making.

4.2 Confidence, Resilience, and Emotional Development

The third component, Confidence, Resilience, and Emotional Development, responds to students' experiences of nervousness, anxiety, discomfort, pressure, fatigue, uncertainty, persistence, and accomplishment. The findings indicate that outdoor education provided situations in which students encountered emotional difficulty but also learned to continue participating and manage their responses.

The framework therefore recommends that challenging activities be accompanied by appropriate instructor guidance and opportunities for students to process their emotional experiences. The purpose is not to eliminate difficulty or negative emotions but to help students develop constructive ways of responding to them. This is consistent with research relating mental toughness to responses to demanding situations and persistence under pressure (Gucciardi et al., 2015; Cowden & Meyer-Weitz, 2016).

Experiences of accomplishment may also strengthen students' perceptions of their capabilities. Bandura (1997) emphasized the importance of successful performance experiences in the development of perceived capability. Within outdoor education, completing a challenging task may therefore become meaningful when students are able to recognize the effort, persistence, and adaptation that contributed to their accomplishment.

4.3 Social Learning and Shared Responsibility

The fourth component, Social Learning and Shared Responsibility, is based on the strong presence of teamwork and social participation throughout the findings. Students described cooperation, communication, peer encouragement, shared responsibility, leadership, and belonging as meaningful aspects of their experiences.

The framework consequently positions social interaction as an intentional element of outdoor education rather than an incidental outcome. Activities may include cooperative problem-solving, group challenges, peer assistance, shared decision-making, and rotating leadership responsibilities. Such activities can allow students to experience both the responsibility of contributing to a group and the value of receiving support from others.

This component also recognizes that the development of resilience and persistence may occur within social contexts. Students in the study described drawing strength from peers when they encountered difficulties. Thus, social support can function as an important resource that enables students to remain engaged with challenging activities. This interpretation is consistent with research emphasizing cooperation and shared participation in physical education (Dyson et al., 2021).

4.4 Nature Connection and Environmental Responsibility

The fifth component, Nature Connection and Environmental Responsibility, responds to the prominence of nature-related experiences across the findings. Direct engagement with nature was represented by most participants and was associated with relaxation, reflection, appreciation, connection, and environmental awareness.

The framework therefore emphasizes that nature should not be treated merely as a location where physical activities are conducted. Instead, the natural environment can become an intentional component of the learning experience. Students may be provided with opportunities to observe natural surroundings, reflect on their experiences in nature, participate in environmental activities, and develop responsible practices toward the environment.

This component is supported by literature showing relationships between nature contact, nature connectedness, well-being, and pro-environmental behaviors (Martin et al., 2020), as well as pathways to nature connection involving emotion, meaning, and appreciation (Lumber et al., 2017). Environmental education research also suggests that meaningful environmental experiences may contribute to conservation-related outcomes (Ardoin et al., 2020).

4.5 Reflection and Meaning-Making

The sixth component, Reflection and Meaning-Making, serves as a critical mechanism connecting participation with learning and development. The IPA findings demonstrate that students did not simply report what happened during outdoor activities. They also interpreted what those experiences meant in relation to their abilities, emotions, relationships, nature, and development.

For this reason, reflection should be intentionally incorporated into outdoor education. Pre-activity reflection may prepare students for the experience by identifying expectations and possible challenges. During-activity reflection may encourage students to recognize their responses and make adjustments. Post-activity reflection may provide opportunities to examine what happened, what was learned, how difficulties were managed, and how the experience relates to personal development.

This component is strongly grounded in experiential learning theory, which emphasizes the role of reflection in transforming experience into learning (Kolb & Kolb, 2017). It also supports the transformative dimension of the findings because students may develop new understandings when they critically examine their experiences.

4.6 Individualized Developmental Pathways

The seventh component, Individualized Developmental Pathways, responds to one of the important findings of the study: students did not experience transformation in exactly the same manner. Some participants described increased confidence and resilience, while others emphasized self-awareness, enjoyment, or limited perceived change.

This finding suggests that outdoor education should not be designed around the assumption that every student will experience the same developmental outcome. Instead, students should be provided with different opportunities to participate, respond to challenge, reflect, and demonstrate development. Activities may include different levels of difficulty or alternative ways of completing tasks while maintaining the intended learning outcomes.

This component is particularly important for maintaining a student-centered approach. Recognizing individual pathways allows outdoor education to accommodate differences in prior experience, physical capability, confidence, interests, and personal responses to challenge.

4.7 Integrated Implementation of the Framework

The seven components of the framework are intended to operate as an integrated system rather than as a linear sequence. Meaningful challenges may initiate opportunities for self-discovery, while direct participation provides the experience through which learning occurs. Emotional responses may require persistence and social support, while interaction with peers may influence how students respond to challenges. Engagement with nature may create opportunities for reflection, and reflection may allow students to recognize the meaning of their experiences.

The framework may therefore be conceptualized through the following integrated process:

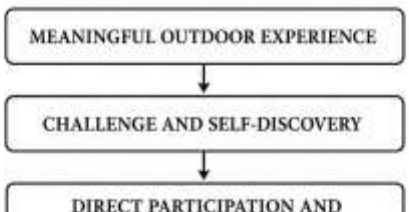


Figure 2. Integrated Process of the Outdoor Education Enhancement Framework

The arrows should be understood as interconnected relationships rather than a rigid step-by-step process. Reflection may occur throughout the activity, social support may influence responses to challenge, and nature engagement may simultaneously contribute to emotional restoration, reflection, and environmental awareness.

4.8 Proposed Application to PATHFit 3 and PATHFit 4

For PATHFit 3 and PATHFit 4, the framework may be applied through the intentional integration of the seven components into outdoor education planning and implementation. Instructors may begin with activities that provide meaningful and manageable challenges, followed by opportunities for students to apply practical skills and work collaboratively. Activities may incorporate nature-based experiences and environmental responsibilities while providing appropriate support for students experiencing uncertainty or difficulty.

Following participation, structured reflection may be used to help students identify changes in their perceptions, capabilities, emotions, relationships, and understanding of the natural environment. The instructor may then use students' reflections to identify areas for improvement and adjust subsequent outdoor learning experiences. In this way, the framework supports a continuous cycle of experience, participation, challenge, reflection, and development.

The framework may also support program evaluation. Rather than evaluating outdoor education solely according to participation or completion of activities, program implementers may consider whether activities provide meaningful challenges, opportunities for practical learning, social interaction, nature connection, reflection, and developmental experiences. Such an approach is consistent with the multidimensional nature of outdoor learning identified in the present study (Eigenschenk et al., 2019; Mann et al., 2021).

4.9 Expected Contribution of the Framework

The proposed Outdoor Education Enhancement Framework is intended to strengthen the educational value of outdoor education within PATHFit by placing students' lived experiences at the center of program enhancement. It provides a structure for integrating the physical, psychological, social, practical, experiential, and environmental dimensions identified in the study.

More importantly, the framework recognizes that outdoor education becomes meaningful not simply because students are placed outdoors, but because they are provided with experiences that allow them to participate, encounter appropriate challenges, interact with others, engage with nature, reflect on what they experience, and construct personal meaning from those experiences. In this sense, the framework translates the phenomenological findings of the study into practical considerations for outdoor education implementation.

The proposed framework may therefore serve as a guide for Physical Education teachers, University Administrators, Curriculum Developers, and Outdoor Education Program Coordinators in enhancing PATHFit 3 and PATHFit 4. Its ultimate purpose

is to support outdoor education experiences that are experiential, student-centered, developmentally responsive, socially supportive, environmentally meaningful, and capable of contributing to students' holistic development.

This chapter provides a synthesis of the study by presenting the summary of the major findings, conclusions drawn from the results, and recommendations based on the findings. It highlights the key insights generated from the study and relates them to its research questions and objectives. The chapter also presents the practical output or proposed framework of the study and concludes with the overall significance and contribution of the research.

This section presents a synthesis of the major findings of the study based on the participants' lived experiences of participating in outdoor education activities in PATHFit 3 and PATHFit 4 at Bulacan State University. The summary consolidates the findings presented in Chapter 4 and discussed in Chapter 5, highlighting the major themes that emerged from the students' accounts and their meaning-making processes.

1. Students described outdoor education as a multidimensional and experiential experience involving encountering the unfamiliar, experiencing physical and practical challenges, navigating emotional experiences, experiencing teamwork and social participation, engaging directly with nature, experiencing accomplishment, and learning through direct experience. These findings demonstrate that students' experiences extended beyond physical participation and included interconnected physical, emotional, social, environmental, and learning dimensions.
2. Students interpreted and made meaning of their outdoor education experiences in relation to perceived physical competence, nature appreciation, and mental toughness. In relation to perceived physical competence, students described discovering physical capabilities while also recognizing limitations and areas for improvement. In relation to nature appreciation, students experienced nature as a source of restoration and connection and developed greater environmental appreciation and responsibility. In relation to mental toughness, students described managing pressure and emotional difficulty, developing persistence and resilience through challenge, and drawing strength from social support.
3. Students identified several experiences as significant in shaping their development. These included encountering new experiences, facing challenges, experiencing accomplishment, receiving social support, developing leadership and responsibility, connecting with nature, and learning through experience. The findings indicate that developmental experiences emerged from both challenging situations and supportive, meaningful interactions throughout students' participation in outdoor education.
4. Six superordinate themes captured the students' meaning-making processes regarding holistic development: Discovering the Self Through Outdoor Challenge; Developing Confidence and Resilience; Learning Through Doing; Growing Through Relationships; Connecting With Nature; and Recognizing Individual Pathways of Development. These themes demonstrate that students understood holistic development as involving interconnected personal, physical, psychological, social, practical, and environmental dimensions.
5. The findings demonstrated how students' interpreted meanings contributed to understanding outdoor education as a transformative learning experience. Seven superordinate themes emerged: Challenge as a Catalyst for Self-Discovery; Developing Confidence and Resilience; Practical Learning and Self-Reliance; Transformation Through Social Interaction; Nature as a Context for Transformation; Learning Beyond the Classroom; and Individual Variation in Transformation. These findings indicate that outdoor education provided experiences through which students could reassess their capabilities, respond to challenges, develop practical and psychological capacities, interact with others, engage meaningfully with nature, and construct new understandings through direct experience.

Based on the findings of the study the following conclusion were drawn

1. Students experienced outdoor education as a multidimensional and experiential learning process. Their participation involved encountering unfamiliar activities, responding to physical and practical challenges, navigating emotional experiences, engaging in teamwork and social participation, connecting directly with nature, experiencing accomplishment, and learning through direct experience.
2. Students made meaning of outdoor education through perceived physical competence, nature appreciation, and mental toughness. Their experiences enabled them to recognize physical capabilities and limitations, develop appreciation and responsibility toward nature, manage emotional difficulties, and develop persistence and resilience through challenging situations and social support.
3. Students identified new experiences, challenges, accomplishment, social support, leadership, nature engagement, and hands-on learning as significant influences on their development. These experiences provided meaningful opportunities

for students to respond to challenges, interact with others, assume responsibility, and develop through direct participation.

4. Students understood holistic development as an interconnected and individually experienced process. Their meaning-making involved self-discovery, confidence and resilience, experiential learning, relationships, nature connection, and recognition that students may experience different pathways and degrees of development.
5. Outdoor education was understood as a potentially transformative learning experience. Through challenge, reflection, practical participation, social interaction, and engagement with nature, students developed new understandings of their capabilities, responses to difficulty, relationships, learning, and environment. However, the extent and form of perceived transformation varied among students.

Based on the findings and conclusions of the study, the following recommendations are proposed for the identified stakeholders:

1. Students are encouraged to actively participate in outdoor education activities and engage in reflection on their experiences. Awareness of the potential contributions of outdoor education to physical competence, nature appreciation, psychological resilience, and personal development may encourage students to participate meaningfully in outdoor learning experiences.
2. Physical Education teachers are encouraged to design outdoor education activities that provide appropriate physical and practical challenges while incorporating opportunities for reflection, teamwork, peer support, nature engagement, and experiential learning. Activities may be structured progressively to accommodate differences in students' abilities, experiences, and developmental needs.
3. University administrators may strengthen institutional support for outdoor education within the PATHFit curriculum through appropriate planning, resource allocation, logistical support, safety measures, and institutional policies. Such support may help create conditions that enable meaningful and sustainable outdoor education experiences.
4. Curriculum developers may consider integrating the identified experiential, physical, psychological, social, and environmental dimensions into the design and enhancement of Physical Education programs. The findings may serve as a basis for incorporating appropriate challenge, experiential learning, reflection, nature engagement, collaboration, and opportunities for holistic development within outdoor education activities.
5. Outdoor Education Program Coordinators may consider the proposed Outdoor Education Enhancement Framework as a practical guide for planning, organizing, and implementing outdoor education activities. The framework may support the integration of challenge, experiential learning, reflection, social interaction, nature engagement, and consideration of individual developmental pathways.
6. Future researchers may conduct further qualitative and mixed-method studies involving different educational contexts, student populations, and types of outdoor education activities. Further investigations may explore how outdoor education experiences influence students' development over time and examine the applicability of the proposed framework in other higher education settings.

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