

ECO-RECREATIONAL ENGAGEMENT AND CAMPUS SUSTAINABILITY: THE ROLE OF SPORT FISHING IN PROMOTING ENVIRONMENTAL AWARENESS

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Abstract

This qualitative study examines the potential of sport fishing as an eco-recreational activity that promotes environmental awareness and sustainability within a university context. Grounded in a qualitative interpretive research design using thematic analysis, the study explores the experiences and perceptions of students, faculty members, and community participants at Universiti Selangor (UNISEL) regarding their engagement in sport fishing as part of campus sustainability initiatives. Data were collected through semi-structured interviews, participant observations, and document analysis to capture the multidimensional relationship between recreational practices and environmental values. Thematic analysis identified five emergent themes: (1) development of ecological awareness, (2) cultivation of ethical responsibility toward nature, (3) emotional and restorative connection to the aquatic environment, (4) enhancement of social learning and collaboration, and (5) integration of sport fishing into institutional sustainability culture. The findings suggest that sporting fishing serves not merely as a leisure pursuit but also as a transformative educational medium that reinforces sustainability literacy, fosters community engagement, and supports the holistic realisation of a green campus ecosystem.

Keywords: *Sport Fishing, Sustainability, Environmental Awareness, Eco-recreational, Green Campus*

Kajian kualitatif ini meneliti potensi aktiviti sukan memancing sebagai satu bentuk rekreasi ekologi (eco-recreational) yang berperanan dalam meningkatkan kesedaran alam sekitar dan memupuk nilai kelestarian dalam konteks universiti. Berteraskan reka bentuk kajian kualitatif interpretif menggunakan analisis tematik, kajian ini meneroka pengalaman dan persepsi pelajar, pensyarah serta ahli komuniti di Universiti Selangor (UNISEL) terhadap penglibatan

mereka dalam aktiviti sukan memancing sebagai sebahagian daripada inisiatif kelestarian kampus. Data dikumpul melalui temu bual separa berstruktur, pemerhatian peserta dan analisis dokumen bagi memahami hubungan pelbagai dimensi antara amalan rekreasi dengan nilai kelestarian alam sekitar. Analisis tematik mengenal pasti lima tema utama, iaitu: (1) pembangunan kesedaran ekologi, (2) pembentukan tanggungjawab etika terhadap alam, (3) hubungan emosi dan pemulihan dengan persekitaran akuatik, (4) pengukuhan pembelajaran sosial dan kolaborasi, serta (5) integrasi aktiviti sukan memancing dalam budaya kelestarian institusi. Dapatan kajian menunjukkan bahawa sukan memancing bukan sekadar aktiviti riadah, tetapi merupakan medium pendidikan yang bersifat transformasi dalam memperkukuh literasi kelestarian, memupuk penglibatan komuniti, dan menyokong pelaksanaan budaya kampus hijau secara holistik.

Kata kunci: *Sukan Memancing, Kelestarian, Kesedaran Alam Sekitar, Rekreasi Ekologi, Kampus Hijau*

Introduction

In recent decades, the sustainability agenda has transformed higher education, compelling universities to act as catalysts for environmental change. In addition to their conventional functions in research and education, universities are now anticipated to exemplify sustainable practices, integrate ecological literacy throughout various fields, and cultivate graduates equipped to guide society towards a more sustainable future (Leal Filho et al., 2018; Lozano et al., 2015). In this context, education for sustainable development (ESD) has become a pedagogical imperative that emphasises experiential, value-based, and action-orientated learning (Tilbury, 2011). However, theory alone cannot fully internalise sustainability, even though classroom instruction and policy frameworks are essential. Meaningful transformation requires emotional connection, real-world interaction, and lived experience with the natural environment (Monroe et al., 2019).

Nature-based recreation has become increasingly recognised as an effective means of bridging the gap between environmental knowledge and practical engagement. Activities such as hiking, eco-volunteering, birdwatching, and sport fishing provide direct, experiential interaction with natural ecosystems, which encourages a greater sense of place, environmental stewardship, and ecological responsibility among participants (Brymer et al., 2018). Among these activities, sport fishing—often underestimated as a mere form of leisure—holds a distinctive position as an eco-recreational practice that harmoniously integrates enjoyment, environmental education, and conservation ethics (Arlinghaus et al., 2019; Granek et al., 2008). The integration of recreation and conservation underscores the potential for nature-based activities to promote environmentally friendly behaviours and sustainable engagement with natural resources (Gelcich et al., 2014; Larson et al., 2015).

Sport fishing requires participants to understand aquatic systems, fish population dynamics, and sustainable harvesting practices. This creates opportunities for both experiential learning and ethical reflection (Cooke & Cowx, 2006). From an educational standpoint, fishing can serve as a living metaphor for sustainability principles: balance, restraint, and reciprocity with nature. Through catch-and-release practices, habitat restoration activities, and waste reduction initiatives, students can experience first-hand the complexities of maintaining ecological equilibrium. Such experiences not only cultivate environmental literacy but also promote psychosocial well-being and community cohesion (Beardmore et al., 2015).

At the campus level, integrating sport fishing into sustainability programmes aligns with the Campus Sustainability Framework, which emphasises whole-institution engagement through education, operations, and student life (Wright & Horst, 2013). However, this remains an underexplored domain in academic literature, as most studies focus on green infrastructure or administrative policy rather than the pedagogical potential of eco-recreational engagement. This study, therefore, investigates the role of sport fishing as a medium for environmental education and campus sustainability within the context of Universiti Selangor (UNISEL). Unlike conventional classroom approaches, sport fishing situates students within natural ecosystems, making sustainability learning both tangible and transformative. By organising eco-recreational fishing programmes, universities can link sustainability objectives with students' interests and well-being, effectively translating theoretical awareness into participatory action (Collins et al., 2020).

However, the integration of sport fishing into campus sustainability remains an underexplored domain in academic literature. Most existing studies on sustainability in higher education have focused on curriculum innovation, green infrastructure, or administrative policy (Lambrechts et al., 2013; Filho et al., 2021). Similarly, research on sport fishing has predominantly examined ecological management, angler behaviour, or conservation policy (Arlinghaus et al., 2019; Granek et al., 2008), rather than its pedagogical potential in higher education contexts. Consequently, there is a need to explore how sportfishing, when framed as an educational and sustainability-orientated practice, can foster ecological awareness, ethical reasoning, and sustainable behaviour among university students.

In Malaysia and across Southeast Asia, where rivers, lakes, and coastal areas play an integral role in community life, sport fishing carries both cultural and ecological significance. The activity offers an authentic platform for reconnecting students with local aquatic ecosystems, thereby complementing global sustainability discourse with localised engagement (Shah & Rahim, 2021). As universities increasingly adopt green campus initiatives and sustainability indicators, incorporating community-linked and culturally grounded ecorecreational programmes can help translate institutional policies into active, student-led participation (Omar et al., 2022).

This study, therefore, investigates the role of sport fishing as a medium for environmental education and campus sustainability within the context of Universiti Selangor (UNISEL). Adopting a qualitative approach, it explores how students, academic staff, and sustainability officers perceive the educational, social, and ecological dimensions of sport fishing. Specifically, the study aims to understand how participating in nature-based recreational activities fosters environmental awareness, encourages environmentally friendly behaviours, and promotes sustainable practices in a university setting.

Literature Review

Experiential Learning & Environmental Education

A foundational premise of sustainability education is that knowing about environmental issues is insufficient without direct and affective engagement. Experiential learning theory (Kolb, 1984) suggests that knowledge is constructed through a cycle of concrete experience, reflective observation, abstract conceptualisation, and active experimentation. The sustainability education literature applies this theory to nature-based recreation, where learners actively participate rather than just observe. For example, educational programmes involving field-based ecological work, community gardens, or outdoor conservation tasks show a greater long-

term retention of pro-environmental attitudes (Monroe, 2020; Stevenson et al., 2022).

Environmental education (EE) and education for sustainable development (ESD) emphasise values, ethics, and behaviour, not just cognition (UNESCO, 2020). The UNESCO ESD for 2030 program emphasises the need to transform both the content and the methods of teaching, making nature-immersive, ethics-centered recreational activities like sports fishing a fitting part of that shift. These theories support the idea that sport fishing can serve as an experiential catalyst for environmental awareness, emotional connection to nature, and development of environmental responsibility.

Sport Fishing: Leisure, Ecology, and Education

Sport fishing has traditionally been studied through ecological, economic, or recreational lenses: species population dynamics, fisheries management, angler behaviour, leisure economics, etc. But increasingly, researchers have started to explore sport fishing's potential as an educational tool.

Ecological Awareness and Conservation Outcomes: Arlinghaus et al. (2019) and Granek et al. (2008) examine how recreational fishers involved in conservation programmes develop a deeper understanding of ecosystem functioning and show greater commitment to ecologically responsible behaviour. In particular, programmes that included ethics (e.g., catch-and-release), habitat restoration, and water quality monitoring were effective not only in improving ecological outcomes but also in shaping fishermen's identities around stewardship.

Fishing Education Programmes: Though less common, some programmes worldwide have incorporated fishing into environmental education curricula. A recent MDPI article (Torralba-Burrial et al., 2023) described a game-based learning environmental education experience in Northwest Spain involving artisanal fishing; this initiative increased students' knowledge of sustainable practices in seafood sourcing, the ecological health of waters, and their personal responsibility. While not identical to sport fishing, it shares many features: direct interaction with aquatic resources, decision-making about ethics, and community linkages.

Behavioural Change: Studies like Siemer & Knuth's (2001) show that fishing education programmes can positively affect antecedents of responsible environmental behaviour, such as knowledge, attitudes, and intentions. More recently, preliminary research in Malaysia (2025) indicates rising interest in how fishers perceive environmental impacts and their responsibilities. Though empirical results are still somewhat sparse (especially in higher education settings), existing data suggest that fishers with regular fishing activities show more concern about pollution, habitat degradation, and sustainable harvesting.

Campus Sustainability, Green Campus, and Living Labs

Universities have long adopted the "Green Campus" model to integrate sustainability in operations, policy, and curricula (Wright & Horst, 2013; Lozano et al., 2015). Another complementary model is the university as a "living lab", using campus grounds, ecosystems, and communities as experimental and educational sites (Walter-Hof et al., 2021; Kelly & Kepler, 2022). For example, biodiversity zones, campus gardens, or water catchment systems serve both functional and pedagogical roles. Recreational ecology is less frequently incorporated explicitly, but there are growing case studies. Nature immersion and outdoor education are being used to foster student well-being, environmental attitudes, and social

cohesion (Brymer et al., 2018; Duerden & Witt, 2010). Sport fishing, a more specialised form of nature recreation, has been under-represented in campus-based living labs, but it offers unique advantages: its aquatic setting, individual and group engagement, and ethical trade-offs provide rich learning sites.

Recent Empirical Work (2020–2025)

Torralba-Burrial, Dopico, & Rodríguez-González (2023) conducted a study in Spain combining artisanal fishing and game-based learning, which revealed significant improvements in students' understanding of sustainable fishing practices, ethical seafood sourcing, and awareness of water quality issues. A Systematic Review of Recreational Fishing in Malaysia (2025) identified prominent themes such as environmental concerns, fishery management policies, and recreational behaviour, but it also highlighted a notable gap in studies focusing on educational and campus-based contexts. Furthermore, the 2030 UNESCO Education for Sustainable Development (ESD) framework emphasises that sustainability education should go beyond formal classroom instruction; it must include immersive, place-based experiences and active community engagement—principles that align closely with the pedagogical potential of sport fishing as both experiential learning and conservation education. Recent research by Smith, Tan, and Omar (2024) in Southeast Asia supports these principles, showing that involvement in community fish-conservation projects and guided fishing field trips leads to measurable increases in environmental literacy and pro-environmental behaviour among university students.

Methodology

Research Design

This study employed a qualitative interpretive research design to explore the experiences and perceptions of participants engaged in sport fishing within the broader context of campus sustainability. The interpretive approach centres on meanings constructed by participants through their interactions with nature during sport fishing activities. Thematic analysis was used to identify, analyse, and interpret recurring patterns within the qualitative data, enabling an in-depth examination of participants' perspectives and experiences (Creswell & Poth, 2018). Grounded in the interpretivist paradigm, the study emphasises meaning-making and the subjective realities co-constructed through participants' narratives and the researcher's interpretive engagement. Data triangulation across interviews, participant observations, and document analysis was employed to strengthen the interpretive robustness of the findings.

Research Setting

The study was conducted at **University Selangor (UNISEL)**, Malaysia, an institution committed to promoting sustainable campus initiatives through its Eco-Recreational and Sustainability Program. UNISEL's Eco-Recreational and Sustainability Program integrates outdoor activities such as sport fishing, tree planting, and waste management awareness. This environment provided a natural setting for examining the relationship between recreation, ecological awareness, and sustainability education.

Participants and Sampling

Participants were selected using purposive sampling to capture diverse stakeholder perspectives related to sport fishing and campus sustainability initiatives. A total of 17 participants took part in the study, including students, academic staff, university personnel, and community members involved in or associated with sport fishing activities on campus. Sampling continued until sufficient depth of perspectives was achieved to support thematic interpretation

Table 1. Participant Profile

Participant ID	Role/Position	Faculty/Department	Gender	Fishing Experience (Years)	Involvement in Sustainability
P1	Student	Engineering & Life Sciences	Male	3	Member of the Eco-Fishing Club (MPP)
P2	Student	Business and Accountancy	Female	1	Participant in Green Campus Week
P3	Faculty	Education & Social Science	Male	8	Sustainability Committee Member
P4	Staff	Cooperate Department	Male	5	Tasik Lindungan Burung Team
P5	Community Member	Local Fisher	Male	15	Fishing Buddies Academic
P6	Student	Engineering & Life Sciences	Male	4	Eco-Recreation Program Participant
P7	Student	Engineering & Life Sciences	Female	2	Green Ambassador Programme
P8	Faculty	Engineering and Life Sciences	Male	10	Advisor, Eco-Fishing Student Club
P9	Staff	Student Affairs Department	Female	3	Coordinator, Sustainable Campus Activities
P10	Student	Faculty of Business	Male	6	University Recreational Fishing Team
P11	Student	Education	Female	1	Volunteer, Environmental Awareness Campaign

P12	Community Member	Recreational Angler	Male	12	Collaborator, Campus–Community Eco Events
P13	Faculty	Faculty of Business	Female	7	CSR Initiative Member
P14	Staff	Facilities & Maintenance	Male	9	Campus Lake Conservation Team
P15	Student	Engineering & Life Sciences	Female	5	Research Assistant, Sustainability Project
P16	Community member	Youth Angling Club Leader	Male	11	Environmental Education Outreach
P17	Student	Engineering and Life Sciences	Female	2	Volunteer, Eco-Recreation Program

Data Collection

Data were collected using three qualitative methods to allow for triangulation. Semi-structured interviews were conducted with participants to explore their perceptions, experiences, and reflections related to sport fishing, environmental awareness, and sustainability practices. Each interview lasted approximately 45–60 minutes and was conducted in English or Malay, with all interviews audio-recorded with participant consent. In addition, participant observations were carried out during three organised sport fishing activities held on campus, with field notes documenting participant engagement, environmental practices, social interactions, and expressions of sustainability-related values observed during the activities. Relevant institutional documents, including sustainability policies, programme reports, and event materials related to eco-recreational initiatives, were also reviewed to provide contextual understanding and to support the interpretation of the empirical data.

Findings and Discussion

The thematic analysis yielded five major themes: (1) Environmental Awareness and Learning, (2) Ethical Responsibility and Reflection, (3) Emotional and Spiritual Connection to Nature, (4) Community and Social Learning, and (5) Institutional Integration and Sustainability Policy. These themes collectively illustrate the function of sport fishing as an experiential platform for sustainability education within the campus context.

Environmental Awareness and Learning

A dominant theme emerging from the data was the enhancement of environmental awareness and ecological literacy among participants. Both students and staff reported that engagement in sport fishing activities deepened their understanding of aquatic ecosystems and sustainability

principles. Participants described increased awareness of water quality, fish habitats, and the impact of pollution on the lake environment.

“Before I joined the fishing programme, I never thought about water quality or fish habitats. Now I realise how pollution affects everything in the lake.” (P3, Faculty)

Sport fishing was perceived as a practical form of environmental education that translated abstract sustainability concepts into tangible experiences. Participants observed environmental changes directly, such as sedimentation and plastic waste, which heightened their appreciation of ecosystem balance and environmental stewardship. These findings align with Monroe and Krasny (2019), who emphasised that experiential, nature-based learning fosters ecological responsibility and strengthens sustainability understanding. In this context, sport fishing functioned as a “living classroom,” reinforcing the principle of learning through direct engagement with nature, a core element of Education for Sustainable Development (ESD).

Ethical Responsibility and Reflection

The second theme reflects the development of ethical awareness and moral responsibility toward the environment and fishing practices. Participants reported a shift in perception, moving beyond viewing fishing as a recreational activity toward recognising its ethical and ecological dimensions. Practices such as catch-and-release, proper waste disposal, and respect for aquatic life were frequently mentioned.

We consistently ensure the release of smaller fish. It’s about balance, not taking more than we need.” (P1, Student)

This ethical consciousness by the P1 reflects increased sensitivity to sustainability values and aligns with Kellert and Wilson’s (1993) biophilia hypothesis, which suggests that direct interaction with nature fosters empathy and moral concern for living systems. Participants also described fishing as a reflective activity that encouraged mindfulness and responsibility. The deliberate processes of waiting, observing, and handling fish carefully prompted reflection on human–nature relationships, supporting Payne’s (2020) assertion that outdoor education can cultivate ecological ethics when reflection is embedded in experiential activities.

Emotional and Spiritual Connection to Nature

A recurring theme was the emotional and spiritual connection that participants experienced during fishing. Fishing provided psychological restoration and a sense of belonging within the natural world. Participants described the activity as “therapy” and a lesson in patience and humility. Socially, fishing events served as inclusive platforms where students, faculty and local anglers exchanged knowledge about sustainable practices. This communal experience transformed sustainability from an abstract policy into a shared responsibility.

“When I sit quietly at the lake, I feel peace. It’s more than a hobby; it’s therapy.” (P7, Student)

“Fishing teaches patience and humility. Nature doesn’t always give what we want immediately.” (P5, Community Member)

These experiences align with Ulrich's (1984) theory of restorative environments, which posits that natural settings contribute to stress reduction and emotional recovery. In the university context, such emotional benefits support students' mental well-being and complement formal learning, reinforcing the holistic dimension of sustainability education (Chawla, 2020). Additionally, participants linked fishing to cultural and spiritual values, describing it as a means of reconnecting with ancestral traditions and local ecological knowledge. This finding highlights sustainability as a relational and humanistic concept, extending beyond technical or scientific interpretations.

Community and Social Learning

Another key theme was the role of sport fishing in fostering social learning and community engagement. Participants viewed fishing events as inclusive spaces that facilitated interaction among students, faculty members, staff, and local community anglers.

"We learn from each other – students, lecturers, and even the local anglers. It's teamwork." (P4, Staff)

Through shared participation, individuals exchanged knowledge related to sustainable fishing practices, local species, and cultural narratives. This reflects Wenger's (1998) concept of communities of practice, where collective engagement in shared activities promotes learning and identity formation. Intergenerational learning was also evident, as experienced anglers mentored younger participants, supporting Hargreaves and Fink's (2006) argument that sustainability education benefits from collaborative and intergenerational approaches. Overall, sport fishing transformed sustainability from an abstract institutional concept into a lived, communal experience.

Institutional Integration and Sustainability Policy

The final theme highlights the importance of institutional support and policy integration in sustaining sport fishing as an educational initiative. Participants acknowledged the sustainability value of fishing activities but noted that these efforts remain largely informal and are rarely embedded within official curricula.

"Fishing could be a beneficial learning tool if integrated into courses like Environmental Studies or Outdoor Education." (P2, Faculty)

This finding highlights the need for formal institutional recognition to bridge the gap between ad hoc experiential activities and structured educational frameworks. Aligning with the Campus Sustainability Framework proposed by Velázquez et al. (2006), participants emphasised that meaningful sustainability integration requires coherence across curriculum, operations, and campus culture. Recent studies further support that successful sustainability initiatives in higher education institutions depend on institutional governance, policy alignment, and resource support that enable long-term implementation and cross-departmental collaboration (Leal Filho et al., 2025; Agus Sugiarto et al., 2022).

Discussion

This study set out to examine the role of sport fishing as an eco-recreational medium for environmental education and campus sustainability within a higher education context. The findings indicate that sport fishing functions as an experiential learning platform through which participants developed environmental awareness, ethical responsibility, emotional well-being, social learning, and insights into institutional sustainability practices. These outcomes directly address the study's aim of understanding how nature-based recreational activities can translate sustainability concepts into lived educational experiences.

Consistent with experiential learning theory (Kolb, 1984), the findings demonstrate that direct engagement with natural environments enabled participants to internalise sustainability principles more effectively than abstract classroom-based instruction alone. Participants' increased awareness of water quality, fish habitats, and pollution reflects the role of concrete experience and reflection in shaping environmental understanding. This supports existing research suggesting that nature-based activities strengthen ecological literacy by allowing learners to observe environmental processes firsthand (Monroe et al., 2019; Brymer et al., 2018). In this sense, sport fishing operated as a "living laboratory," reinforcing the educational value of experiential and place-based learning highlighted in Education for Sustainable Development (ESD) frameworks.

The findings also reveal that participation in sport fishing fostered ethical reflection and responsibility toward the environment. Practices such as catch-and-release and conscious waste management indicate a shift from recreational consumption to ethical engagement with natural resources. This aligns with earlier studies on recreational fishing that associate sustained nature interaction with increased environmental stewardship (Arlinghaus et al., 2019; Granek et al., 2008). The emergence of ethical awareness among participants supports the biophilia hypothesis (Kellert & Wilson, 1993), which suggests that repeated, meaningful interactions with nature cultivate moral concern for living systems.

Beyond cognitive and ethical outcomes, the findings highlight the emotional and psychological dimensions of eco-recreational engagement. Participants consistently described fishing as restorative, calming, and spiritually meaningful. These experiences correspond with theories of restorative environments (Ulrich, 1984), which emphasise the capacity of natural settings to support emotional well-being. Within the university context, such emotional benefits complement academic learning by supporting student well-being and reinforcing sustainability as a holistic concept that integrates environmental, emotional, and cultural dimensions (Chawla, 2020).

The social learning outcomes identified in the study further extend the educational potential of sport fishing. Fishing activities facilitated interaction among students, staff, and community members, enabling the exchange of ecological knowledge, cultural practices, and sustainability values. This communal learning reflects Wenger's (1998) concept of communities of practice, where shared activities foster collective learning and identity formation. The intergenerational exchange observed in the findings also supports arguments that sustainability education is strengthened through collaborative and socially embedded learning processes (Hargreaves & Fink, 2006).

Finally, the findings draw attention to the institutional dimension of campus sustainability. While participants recognised the educational value of sport fishing, they also noted the absence of formal integration into curricula and policy frameworks. This gap reflects broader

challenges identified in sustainability literature, where experiential initiatives often remain peripheral unless supported by institutional governance and policy alignment (Velázquez et al., 2006; Leal Filho et al., 2025). The findings suggest that the long-term impact of eco-recreational education depends not only on individual participation but also on institutional commitment to embedding such practices within structured sustainability strategies.

Overall, the discussion highlights that sport fishing, when framed as an educational and ethical practice rather than solely a recreational activity, can contribute meaningfully to campus sustainability efforts. By linking experiential learning, ethical reflection, emotional well-being, social engagement, and institutional support, the findings reinforce the view that sustainability education in higher education is most effective when it is lived, relational, and embedded within everyday campus practices.

Limitations

Several limitations of this study should be acknowledged. First, the research was conducted exclusively at Universiti Selangor (UNISEL), and the findings are therefore shaped by the specific institutional, cultural, and environmental context of the university. As a qualitative and context-bound inquiry, the study does not aim for statistical generalisation, and the findings should be interpreted within the boundaries of the study setting.

Second, the study relied on participants' self-reported experiences and reflections, which may be influenced by personal perceptions and social desirability. While data triangulation across interviews, observations, and document analysis was employed to strengthen interpretive robustness, the findings remain interpretive in nature and reflect participants' subjective meaning-making processes.

Finally, the sample size was limited to participants directly involved in or associated with sport fishing activities on campus. Although this allowed for in-depth exploration of experiences, future studies could expand participation across multiple institutions or compare different forms of eco-recreational activities to further examine the broader applicability of eco-recreational education in higher education contexts.

Conclusion

This study demonstrates that sport fishing can function as a meaningful eco-recreational approach to sustainability education in higher education. By engaging participants directly with natural aquatic environments, sport fishing supports experiential learning that connects environmental knowledge with ethical awareness, emotional well-being, and social engagement.

The findings highlight the potential of eco-recreational practices to complement formal sustainability initiatives and reinforce the role of universities as spaces for lived sustainability experiences. When intentionally structured and supported at the institutional level, sport fishing can contribute to the cultivation of environmentally responsible individuals and strengthen campus sustainability culture.

Overall, the study shows that sustainability education is most effective when it extends beyond curriculum and policy to include experiential, nature-based practices embedded within everyday campus life.

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