PROMOTION OF SUSTAINABLE DEVELOPMENT GOALS IN PHYSICAL EDUCATION AS INFLUENCED BY TEACHING COMPETENCIES AND PERCEIVED PHYSICAL LITERACY: A CONVERGENT DESIGN

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Abstract:
This study used a convergent mixed methods design to determine the influence of teaching competencies and perceived physical literacy in the promotion of sustainable development goals in physical education. Data were obtained from the participants selected to participate in the quantitative and qualitative phases of the study. The participants were tertiary teachers teaching physical education from various higher education institutions in Region XI. In addition, adapted survey questionnaires, which had undergone validation from a panel of experts and were subjected to pilot testing using a five-point Likert Scale, were used for the quantitative phase, while an open-ended interview guide was used to collect qualitative data related to the research questions using IDI and FGD. Generally, mean, standard deviation and linear regression were used as statistical tools. In the qualitative section, code, content, and thematic analysis were used in the reference. Qualitative and quantitative data were collected simultaneously, followed by data analysis. Further, the results showed that teaching competencies, perceived physical literacy, and promotion of sustainable development goals were very high, indicating teaching competencies were always demonstrated, physical literacy in physical education was always exhibited, and promotion of sustainable development goals in physical education is always evident, respectively. In addition, in a singular capacity, only teaching competencies have a significant influence on the promotion of sustainable development goals in physical education. However, when combined, teaching competencies and perceived physical literacy revealed a significant influence on

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the promotion of sustainable development goals in physical education. In the qualitative phase of the study, six essential themes emerged from the lived experiences of the participants: fostering active lifestyle and health, promoting an inclusive atmosphere, developing critical thinkers and problem solvers, catering to equal opportunities, promoting social inclusion, and supporting quality education. Meanwhile, six themes emerged on the role of experiences in shaping the beliefs, attitudes, and commitments of the participants: being supportive of holistic development, leaving a legacy, experiencing personal transformation, shaping a sense of agency, pledging to educate and foster awareness, and supporting community engagement. Furthermore, the merging of quantitative and qualitative findings produced a merging-converging nature on the promotion of sustainable development goals and on the roles of experiences in shaping the beliefs, attitudes, and commitments shared by the participants towards promoting sustainable development goals in physical education.

Keywords: physical education, teaching competencies, perceived physical literacy, sustainable development goals, convergent design, Philippines

1. Introduction

The idea of sustainable development goals has evolved through stages of growth since it was introduced. Thus, various organizations have been actively shaping the concept through efforts towards sustainable development goals (Shayan *et al.*, 2022). Explicitly, poverty, gender inequalities, and social and environmental obstacles are the reasons why teachers frequently face educational challenges when integrating sustainable development goals and principles into their instructional practices (Guerrero & Puerta, 2023). Meanwhile, the United Nations Educational, Scientific and Cultural Organization (UNESCO) has limits in prioritizing educational integration for sustainable development, including physical education, as one of the primary tools for achieving sustainability goals (Essa & Harvey, 2022). Further, there is a misalignment in developing teaching strategies aligned with physical education to widen students' critical awareness and commitment to promoting sustainability (Merma-Molina *et al.*, 2023).

Adding on, the Swedish national physical education curriculum allows for integration in promoting sustainable development goals; the curriculum provides various opportunities but does not explicitly highlight the sustainable development connections (Fröberg *et al.*, 2022). More so, Swedish normative assumptions and political factors affect the nationwide trend of sustainable development goals (United Nations, 2021). Thus, ethical considerations, moral responses, and established standards for socially acceptable conduct may emerge from discussions on sustainable development in the classroom that led teachers to doubt (Östman & Öhman, 2019).

On one hand, Afghanistan is a country where dedication to "leave no one behind" is rigorously tested (UNESCO, 2024). Moreso, enduring four decades of conflict, Afghanistan faces challenges due to its geographical location, vulnerability to climate

change, natural disasters, and primarily rural populace, rendering it a challenging environment to work in (United Nations, 2023). Meanwhile, Afghanistan was confronted with climate challenges that added complexity to educational endeavors, and irregular weather conditions led teachers and students to displacement and attendance in school (Shafiey, 2024). Thus, the literacy rate stands at thirty-seven-point three percent, particularly with women encountering the most significant obstacles (Ahmad, 2023).

On the other hand, in India, there is a rapid rise in population, along with increasing poverty levels, urbanization, and industrialization (Singh, 2020). Likewise, various interconnected factors contribute to the swift deterioration of sustainability (Kumar *et al.*, 2022). Moreso, India scored sixty-one point nine out of a total of one hundred points in sustainable development due to difficulties in tackling hunger and food security targets (Kaur, 2021). Furthermore, the decline in India's ranking is attributed to gender equality, resilient infrastructure, industrialization, and lack of innovation (Shylajan, 2024). Thus, the Indian government has to implement a range of policy measures that include education and vocational training (Pinto, 2024); to increase literacy rates and raise awareness of economic, environmental, and social issues (Suresh & Shobana, 2023).

Moreover, even while the value of sustainability education is becoming more widely acknowledged in the Philippines, especially in physical education programs, difficulties still exist in converting this knowledge into efficient pedagogical practices (Corpuz *et al.*, 2022). Studies showed that Filipino teachers frequently deal with limitations, including few funds, packed courses, and insufficient training in sustainable pedagogy (Hernandez *et al.*, 2020). Thus, physical literacy in physical education and sustainability also dramatically influences the effectiveness of sustainability-focused teaching in the Philippines (Ceazar & Sinio, 2024). Therefore, it is essential to adopt strategies that promote physical fitness and foster a sense of environmental responsibility and social awareness among teachers (Baena-Morales *et al.*, 2021).

Further, teachers frequently face challenges when integrating sustainable development principles into their instructional practices. Inconsistencies in teaching physical education (PE) across schools and regions can undermine the effectiveness of the seven key initiatives (Infrastructure Imperatives, carbon Management, Green Energy, Circular Economy, Environment Conservation, Water Conservation, and Energy Efficiency) to achieve sustainability goals (Tinning *et al.*, 2022). However, UNESCO (2020) believes teaching competencies are essential for future education and sustainable development. Also, teaching competencies helped physical education teachers understand, reflect, and make sense of the complex relationship between exercise and the environment (Lohmann *et al.*, 2021).

Moreover, Del-Aguila-Arcentales *et al.* (2022) also stressed that teaching competencies gauged the socio-ecological effects of education and used it to either lessen or increase the sound effects of sustainable development goals. Consequently, Vare *et al.* (2019) research emphasized that teachers must have more abilities and competence to prepare for sustainable development educational challenges. Ergo, this is a testament that

teaching competencies are the favorable sum of teachers' knowledge, skills, and readiness to deal effectively and responsibly with changing situations (García-Rico *et al.*, 2021).

Furthermore, in a study conducted by Bucht *et al.* (2022), several sustainable development goals are the aim of physical literacy. However, it needs a fresh emphasis on how people develop their physical ability, attitudes toward physical activity, environment, knowledge, and comprehension (Fröberg & Lundvall, 2021). Thus, physical literacy is a significant idea that can help accomplish several sustainable development goals (Chen, 2020). Likewise, physical literacy is the growth of an individual's confidence, knowledge, comprehension of physical exercise, and physical competence. This comprehensive strategy fits nicely with the SDGs' emphasis on high-quality education, well-being, and health (Carl *et al.*, 2024). Ergo, a continuation of physical literacy through ecological consciousness highlights the need for people to foresee the effects of their actions on their integrity as well as the health of the world (Martins *et al.*, 2020).

Likewise, extensive studies on physical education have been published, and these factors have been separately examined. The study of Baena-Morales *et al.* (2021) focused on sustainable development and physical education. These studies were done for a practice-based model using qualitative research. Moreover, the respondents of these studies were community stakeholders and other international institutions. Thus, this study aims to fill the current informational void using mixed methods, specifically a convergent design, to understand better the intricate dynamics of tertiary teachers in the Davao Region, Philippine physical education setting towards sustainable development.

Also, this study argued that physical education's movement education and health focus, among other unique subject characteristics, can offer unique contributions to the sustainable development agenda, complementary to other theoretical and practical schools using mixed methods. Subsequently, some research teams were dispersed across multiple countries, each with a distinct culture and environment; consequently, certain implicit assumptions concerning sustainable development and physical education may be subject to nationalistic biases (Lohmann, 2021).

2. Research Questions

This research explored the influence of teaching competencies and perceived physical literacy on the promotion of physical sustainable development goals in physical education among tertiary physical education teachers in Region XI. Specifically, it sought to answer the following questions:
1) What is the status of teaching competencies, perceived physical literacy, and promotion of sustainable development goals in physical education?
2) Do teaching competencies and perceived physical literacy in physical education significantly influence the promotion of sustainable development goals in physical education?

3) What are the lived experiences of the participants regarding the promotion of sustainable development goals in physical education?
4) How do these experiences shape the beliefs, attitudes, and commitment of the participants?
5) To what extent do the qualitative data findings corroborate with the quantitative data?

3. Literature Review

3.1 Teaching Competencies

Apriliyanti (2021) defined teaching competencies as applying various pedagogical, content, and social-emotional skills to address students' diverse needs. Similarly, the study of Karvonen *et al.* (2023) emphasized the significance of teachers having both subject matter knowledge and skills that involve students and cater to their unique learning requirements. Meanwhile, the study of Schönstein and Budke (2024) described that teaching competencies with adequate skills will encourage students to work individually and collaboratively to create a better future. Also, the study conducted by Trần and O'Connor (2023) emphasized that teachers excel in choosing appropriate teaching methods for their field of specialization. Likewise, Hattie and Anderman (2019) highlighted teacher proficiency as having a crucial impact on student achievement and educational outcomes.

3.2 Perceived Physical Literacy in Physical Education

Physical literacy was described as the combination of movement knowledge and physical proficiency that promotes lifetime involvement in various activities by (Young *et al.*, 2021). Moreover, Huang *et al.* (2020) uncovered that the interpretation and definition of physical literacy differs from around the world and defined physical literacy as the ability to use strength and confidence. This means that physical literacy can be shown through deliverance and self-representation. Additionally, beyond engagement in physical activities, physical, cognitive, and affective domains are included in physical literacy (Cornish *et al.*, 2020).

3.3 Promotion of Sustainable Development Goals in Physical Education

Sustainable development is a complex concept that combines social, economic, and environmental factors in physical education (Alibrahim, 2023). Moreover, as cited by Nazar *et al.* (2019), integrating concepts in physical education increases the quality of education, ensures appropriate and integrated education, and promotes long-term opportunities. Teachers play an essential role in learning and empowering students to be aware and able to change to promote sustainable development goals (Boeren, 2019).

Hence, by imparting knowledge and promoting critical thinking and values, teachers can inspire a new generation committed to building a sustainable and balanced future (Fröberg *et al.*, 2023). Further, Van Poeck *et al.* (2019) exposed that from

a teacher's point of view, there may be a concern that the political and cultural aspects of SD tend to focus on direct outcomes, such as solutions to specific problems that the teacher has set.

4. Methods

4.1 Research Design

The researcher used a mixed-methods research design, especially a convergent one. The mixed-methods research design encourages the methodical combination or mixing of a single study or set of connected inquiries (Creswell & Poth, 2016). This approach combined quantitative and qualitative data collecting and analysis with data collected during the discussion. This method applies quantitative and qualitative techniques (Fetters *et al.*, 2013). The convergent design, sometimes called the convergent parallel design, entails the researcher applying qualitative and quantitative research stages simultaneously. This arrangement enables independent and discrete data collection and analysis using the techniques usually associated with each kind of data. The results are combined or blended throughout the interpretation phase (Creswell & Plano Clark, 2019)

4.2 Research Instruments

The qualitative strand of the study employed a specific set of tools, and three sets were utilized for the quantitative strand. The first set is for Teaching Competencies, the second is for Perceived Physical Literacy, and the third is for the Promotion of Sustainable Development Goals. In the qualitative phase of the study, the researcher conducted FGD and IDI among tertiary (college and university) teachers. In the phase of IDI and FGD, the researcher used a validated open-ended questionnaire to ask participants about the problem study. Before the interview, the researcher prepared the validated guide questions regarding the topic the researcher wanted to study and develop. Reliability and validity checks were done by experts who evaluated them for content validity. The final questionnaire modifications included the experts' comments, critiques, and suggestions.

4.3 Participants

The procedures for selecting participants for the quantitative and qualitative components are detailed below.

4.3.1 Quantitative Strand

In the quantitative phase, 211 physical education teachers from college and university schools in the Davao region were part of the study. Bujang *et al.* (2021) supported that the actual sample size of the study is adequate by stating that in multiple regression, an approximation of estimates with parameters in a survey requires a minimum sample size of 200 or more. Further, as to responders, the teacher responders filled out survey forms on the teaching competencies, perceived physical literacy in physical education, and promotion for sustainable development in physical education questionnaire at the

quantitative stage. The researcher used complete enumeration sampling to identify the possible respondents in the study.

Complete enumeration sampling is a method of collecting data survey by using possible elements in a limited set. Since the researcher selects participants based on familiarity with the material requested. Complete enumeration involves the selection, acquisition, and quantification of a part of a population to provide a delegated sample based on specific criteria. In this study, specific inclusion criteria determined the participants. The main criterion for this study is to select teachers who have been teaching physical education subjects in colleges or universities for at least one to three years, full-time and part-time, and are Music, Arts, Physical education, and Health (MAPEH) majors or Physical Education (PE) majors and the like. Also, this included sectarian and non-sectarian tertiary schools in all HEIs in Region XI. Furthermore, the study focused exclusively on the specific characteristics of the problem as defined by the research questions without considering the teachers' rank, position, and or performance ratings. This excludes public and private secondary schools, such as junior and high schools in Region XI.

4.3.2 Qualitative Strand

In the qualitative phase, the researcher purposively selected 7 individuals who partake in the focus group deliberation (FGD), while 10 participants were chosen for the in-depth interview (IDI). Crouch and Mckenzie (2006) suggested the ideal sample size for Focus Group discussion. A decision was made to restrict the number of participants for the in-depth interview to seven to eight. This enhanced the group's governance and allowed everyone to contribute their ideas and perspectives. Executing a focus group that includes fewer than ten members is a more expedient approach that can concurrently provide a pleasant and conducive environment for the participants. The study had a regional focus, so Focus Group Discussions (FGDs) were conducted with seven participants from different tertiary schools in Region XI. The same individuals participated in comprehensive, in-depth interviews (IDI).

4.4 Data Collection

A survey instrument was used to collect quantitative data. This instrument consists of three modified questionnaires and measures the two independent variables: perception in teaching competencies and perceived physical literacy in physical education. These variables are predictors of physical education for sustainable development. Subsequently, the researcher sent a letter to the regional director of the Commission of Higher Education (CHED). After approval, the research secured letters to the different school Presidents; the same letter was given to the school Dean and Program Coordinators as part of the protocol. After obtaining the necessary certifications and endorsements, the researcher asked and secured the participants to sign the Informed consent form (ICF) before conducting the procedures for data gathering. Likewise, this is common to both quantitative and qualitative.

Further, instructions for using the instrument were provided. The data collection was conducted on-site to establish and explain the guidelines and instructions for data gathering. In addition to making the purpose of the study precise and safeguarding confidentiality for all responses, the filled-out questionnaires were coded. Also, by allowing the use of pseudonyms, the privacy of an individual's name was protected. The withdrawal of participation at any time was discussed, and potential contact people were identified. The researcher also retrieved and secured questionnaires containing substantial information. Following data retrieval, the data were encoded with the appropriate label.

4.5 Data Analysis

The state of teaching competencies and perceived physical literacy in physical education towards physical education for sustainable development was ascertained by statistical techniques applied to the quantitative data analysis.

Mean helped to understand the properties of data sets. Also, the mean gauges the responses' central tendency (Creswell, 2017). It was used to measure the average mean level of teaching competencies and perceived physical literacy in the promotion of sustainable development goals in physical education. Measured proportionately to the mean, the standard deviation (SD) indicates how widespread the data and the mean score are. Data were grouped according to the mean when the standard deviation was low and more dispersed when it was high. It was applied to ascertain the range of responses from the participants in the survey carried out for the study. Moreover, multiple regression analysis is a statistical method that forecasts the result of a response variable by using numerous explanatory variables. This work aimed to represent the influence of independent variables, teaching competencies, and perceived physical literacy in physical education towards the dependent variable, promoting sustainable development goals in physical education.

4.5.1 Qualitative Strand

Thematic analysis was used to analyze the identified and categorized codes based on the qualitative data-gathering procedure. Dewadi (2020) enthused that thematic analysis makes the data more valid because of its flexibility, accessibility, and transparency of the coded data without trying to fit into the pre-existing coding perspective of the researcher.

5. Results and Discussion

5.1 The Status of Teaching Competencies among Tertiary Physical Education Teachers

It is shown in Table 1.1 that, in totality, the status of teaching competencies among tertiary physical education teachers has an overall mean of 4.77, which is described as very high, which means that the teaching competencies of physical education teachers are always demonstrated. Considering the degrees of dispersion in this variable, the standard deviation is .31, indicating that the responses are relatively clustered around the mean.

The result of this study reveals that the teaching competencies of tertiary PE teachers in HEIs in Region XI are rated very high. It means that the teaching competencies of HEIs teaching physical education are always demonstrated.

Table 1.1: The Status of Teaching Competencies
among Tertiary Physical Education Teachers

		Mean	SD	Description
A. Teaching-Learning Processes of PE				
1.	Designing, creating and assessing the teaching and learning processes associated with physical activity and sports in relation to specific and contextual characteristics of individuals.	4.69	.50	Very High
2.	Designing, creating and assessing the teaching and learning processes associated with motor competence in relation to specific and contextual characteristics of individuals.	4.73	.46	Very High
3.	Having helped in developing teaching competence in terms of design, application, and analysis of didactic interventions in Physical Education.	4.61	.55	Very High
4.	Having helped in the development and implementation of physical education programs that promote the inclusion of students with special educational needs.	4.76	.45	Very High
5.	Being able to reflect on the teaching/learning process, the different organizational types and the different methodologies within Physical Education classes.	4.69	.51	Very High
6.	Responding to diversity in Physical Education practices.	4.80	.40	Very High
7.	designing, modifying and/or adapting to the educational context of motor situations oriented to the development and improvement of motor skills.	4.75	.48	Very High
8.	Knowing how to use assessment tools in the subject of Physical Education.	4.84	.39	Very High
	Category Mean	**4.74**	**.33**	**Very High**
B. Fundamentals of Physical and Psychomotor Development				
1.	Knowing the psychomotor development and its evolving stages of maturity.	4.75	.45	Very High
2.	Knowing the physical capacities and the factors that determine their evolution and to know how to apply their specific technical foundations.	4.73	.47	Very High
3.	Knowing and understanding the evolutionary processes of the body and of the motor skills.	4.80	.45	Very High
4.	Knowing the biological and physiological fundamentals of the human body in relation to physical activity.	4.73	.49	Very High
5.	Knowing and promoting the different motor manifestations that are part of the traditional culture.	4.73	.50	Very High
	Category Mean	**4.75**	**.38**	**Very High**
C. Learning Contents and Physical Abilities				
1.	Knowing how to apply the fundamentals or techniques of physical activities in the natural environment	4.80	.45	Very High

2.	Knowing how to use games as a teaching resource and as teaching content	4.82	.41	Very High
3.	Knowing the elements and foundations of the body language and of the non-verbal communication and its formative and cultural value	4.73	.47	Very High
4.	Knowing the basics of sports initiation at school and designing specific tasks for use in the field of education	4.76	.48	Very High
5.	Promoting complementary activities related to physical activity and sports inside and outside the educational field	4.78	.47	Very High
	Category Mean	**4.78**	**.36**	**Very High**
D. Body Hygiene and Healthy Habits				
1.	Identifying and preventing the health risks that result from the practice of inappropriate physical activities	4.81	.42	Very High
2.	Analyzing and communicating, in a critical but grounded way, the value of physical activity and sport and their possibilities to contribute to the development and well-being of people.	4.78	.46	Very High
3.	Having strategies to apply the health elements of hygiene and nutrition in the educational practice	4.86	.35	Very High
4.	Having teaching strategies that promote the acquisition of regular physical activity habits	4.85	.36	Very High
	Category Mean	**4.82**	**.33**	**Very High**
	Overall Mean	**4.77**	**.31**	**Very High**

A. Teaching-Learning Processes of PE

This domain was rated by tertiary PE teachers as very high, with a category mean rating of 4.74. The item mean rating ranges from 4.61 to 4.84. Particularly, the item, *having helped in developing the teaching competence in terms of design, application, and analysis of didactic interventions in Physical Education*, has a mean rating of 4.61, which is described as very high. However, the item *knowing how to use assessment tools in the subject of Physical Education* has a mean rating of 4.84, which is described as very high. The result of this study proved that this competency was rated as very high by the tertiary PE teachers. This indicates that physical education teachers are equipped with knowledge and skills that they use in teaching physical education. This very high level of teaching-learning process of physical education implies that teachers possess and fully understand the necessary skills and experiences that motivate students to enhance learning.

B. Fundamentals of Physical and Psychomotor Development

This domain reveals a category mean of 4.75, which is described as very high. In particular, the mean ratings in this category range from 4.73 to 4.80. It shows that the items, *knowing the physical capacities and the factors that determine their evolution, and to know how to apply their specific technical foundations, knowing the biological and physiological fundamentals of the human body in relation to physical activity, and knowing and promoting the different motor manifestations that are part of the traditional culture* have equal mean rating of

4.73 described as high. Meanwhile, the item, *knowing and understanding the evolutionary processes of the body and of the motor skills* has a mean of 4.80 described as very high. The result of this study supports a very high level of teaching competencies in the fundamentals of physical and psychomotor development. This implies that motor skills development is vital in the lives of our students. Hence, teaching competencies and teachers' experiences recognize these developmental indicators and plan lessons to meet the needs and abilities of students (Frost & Dolan, 2021).

C. Learning Contents and Physical Abilities
The category mean of mastery is 4.78, described as very high, with mean ratings of the items that range from 4.73 to 4.82. It shows that the item, *knowing the elements and foundations of the body language and of the non-verbal communication and its formative and cultural value* has a mean rating of 4.73, and the item *knowing how to use games as a teaching resource and as teaching content* has a mean of 4.82 described as very high. The participants rated this domain very highly. This implies the impact of teaching competencies, especially in the practical implementation of activities and contents in physical education classes. The study discovered that teachers' learning contents and physical abilities are important in acquiring skills and knowledge and delivering effective teaching. Despite the lack of sufficient guidelines, teachers were able to guarantee learning physical education. This implies that teachers are prepared to understand the topics that will benefit the transfer of knowledge to students.

D. Body Hygiene and Healthy Habits
It reflects a category mean of 4.82, described as very high, with mean ratings that range from 4.78 to 4.86. Evidently, the items, *analyzing and communicating, in a critical but grounded way, the value of physical activity and sport and their possibilities to contribute on the development and well-being of people* reveals a mean rating of 4.78 described as very high while *having strategies to apply the health elements on hygiene and nutrition in the educational practice* shows a mean of 4.86 which is described as very high. The result shows very high-level teaching competencies among tertiary PE teachers regarding body hygiene and healthy habits. The findings imply that teachers manifested that eating healthy and proper hygiene can help improve overall wellness. This denotes that eating healthy, exercising, and maintaining healthy habits can help improve health and prevent the progression of disease (Jefferson-Buchanan, 2022). Thus, observing hygiene, good habits, and promoting behaviors that promote a healthy lifestyle is necessary for physical education (Griban *et al.*, 2022).

5.2 The Status of Perceived Physical Literacy among Tertiary Physical Education Teachers
It is shown in Table 1.2 that, in totality, the status of perceived physical literacy among tertiary physical education reflects an overall mean of 4.73, described as very high, which means that teachers always exhibit physical literacy in physical education. In addition,

its standard deviation of .36 is less than one, showing that the responses of the physical education tertiary teachers are clustered close to the mean. The result of this study reveals that the teaching competencies of tertiary PE teachers in HEIs in Region XI are rated very high. This means that the perceived physical literacy of HEIs in teaching physical education is always exhibited. This implies that the teachers teaching physical education in universities and colleges in Region XI manifested the necessary physical literacy requirements. This means that physical education teachers show a sense of self and self-confidence regardless of age bracket, and they possess self-management skills for fitness and self-evaluation skills for health.

Table 1.2: The Status of Perceived Physical Literacy
among Tertiary Physical Education Teachers

		Mean	SD	Description
Sense of Self and Self-confidence				
1.	Being physically fit, in accordance to their age	4.61	.59	Very High
2.	Possessing self-management skills for fitness	4.66	.50	Very High
3.	Possessing self-evaluation skills for health	4.65	.53	Very High
	Category Mean	**4.64**	**.46**	**Very High**
Self-expression and Communication with Others				
1.	Having strong social skills	4.73	.50	Very High
2.	Being confident in wild/natural survival	4.63	.59	Very High
3.	Being capable in handling problems and difficulties	4.74	.46	Very High
	Category Mean	**4.70**	**.43**	**Very High**
Knowledge and Understanding				
1.	Having a positive attitude and interest in sports	4.77	.50	Very High
2.	Appreciating themselves or others doing sports	4.82	.50	Very High
3.	Being aware of the benefits of sports related to health	4.91	.36	Very High
	Category Mean	**4.83**	**.37**	**Very High**
	Overall Mean	**4.73**	**.35**	**Very High**

A. Sense of Self and Self-confidence

The category mean of this domain is 4.64, which is described as very high. As shown in the table, item mean ratings in this category range from 4.61 to 4.66. The item *being physically fit, in accordance with their age,* reflects a mean of 4.61, described as very high, while the item *possessing self-management skills for fitness* shows a mean of 4.66. The very high level indicates that teachers in Region XI exhibited a sense of self and self-confidence while teaching physical education. This finding implies that physical education teachers could successfully carry out the expected actions and obstacles that may come along inside and outside class that improve skill, worth, and confidence.

B. Self-expression and Communication with Others

A very high category means of 4.70 is reflected for self-expression and communication with others. As shown in the table, the mean of items in this category ranges from 4.63 to 4.74. On the one hand, the item *being confident in wild/natural survival* has a mean has a

mean rating of 4.63, which is described as very high, while on the other hand, the item *being capable in handling problems and difficulties* is shown with a mean of 4.74 described as very high. This domain was rated very high. This result implies that self-expression and communication with others are highly related to physical literacy. The finding supports the study conducted by Jiang and Ning (2022), which states that effective communication and expression of personal thoughts are essential in physical education as they facilitate collaboration to accomplish shared objectives in sports and other group activities.

C. Knowledge and Understanding

It reflects a category mean of 4.83, described as very high, with item mean ratings that range from 4.77 to 4.91. The item *having a positive attitude and interest in sports* reflects a mean of 4.77, while the item *being aware of the benefits of sports related to health* reflects a mean of 4.91, which are described as very high. This domain is rated very high, implying that physical education teachers understand their jobs well. This indicates that physical education teachers understand and demonstrate their lessons well and incorporate the necessary competencies in a particular lesson. This also manifests in the fact that those teachers exhibited a positive attitude towards sports and other related physical activities. These findings relate to the research of Cale and Harris (2018), which emphasized that knowledge and understanding of developing physical fitness is essential to successful participation in physical activity and promoting and taking responsibility for engaging in physical activities for life.

5.3 The Status on the Promotion of Sustainable Development Goals in Physical Education

It is shown in Table 1.3 that the status of the promotion of sustainable development goals in physical education has an overall mean of 4.78, which is described as very high. It means that PE for sustainable development is always evident. Considering the degrees of dispersion in this variable, the standard deviation is .27, indicating that the responses are clustered near the mean. The discussion of the promotion of sustainable development goals in physical education focuses on environmental, health, and economic sustainability, social sustainability, gender, and Inclusion. The result denotes a very high level of promotion, which means that the promotion of sustainable development goals in teaching physical education is always evident. This signifies that tertiary physical education teachers incorporated sustainability despite the depleted guidelines from each institution.

Table 1.3: The Status on Promotion of Sustainable Development Goals in Physical Education

Mean			SD	Description
Environmental, Health and Economic Sustainability				
1.	Promoting actions that improve the mental health and well-being of their students.	4.84	.39	Very High
2.	Helping to reduce the use of harmful substances among their students.	4.82	.46	Very High
3.	contributing to forming habits and attitudes to improve traffic safety.	4.59	.65	Very High
4.	Favoring the development of competencies of their students which promote and develop actions for improving the school facilities in an entrepreneurial and business spirit.	4.58	.66	Very High
5.	Improving knowledge on how to promote sustainable lifestyles.	4.84	.39	Very High
6.	Promoting and developing actions for the improvement of the school facilities.	4.66	.53	Very High
7.	Developing actions that favor their students' capacity for creativity and innovation.	4.80	.42	Very High
8.	Promoting knowledge of local culture and products among their students.	4.68	.61	Very High
9.	Promoting the social, economic, and political inclusion of all people.	4.63	.61	Very High
10.	Emphasizing the importance of the sustainable consumption and production of resources.	4.63	.56	Very High
11.	Promoting the efficient and/or sustainable use of natural resources.	4.69	.55	Very High
12.	Contributing to the reduction of waste generation.	4.69	.54	Very High
13.	Seeking to provide the information and knowledge necessary for sustainable development.	4.64	.58	Very High
14.	Promoting actions that can mitigate climate change.	4.50	.63	Very High
15.	Promoting improvements in education and an awareness of the importance of, individual and global actions to reduce climate change.	4.60	.58	Very High
	Category Mean	**4.68**	**.37**	**Very High**
Social Sustainability Gender and Inclusion				
1.	Promoting the development of the physical health of their students.	4.89	.31	Very High
2.	being accessible to all of their students regardless of gender, race, functional diversity, or personal situation.	4.87	.36	Very High
3.	Helping to reduce gender inequalities among their students.	4.85	.39	Very High
4.	Contributing to promoting equality for vulnerable people.	4.87	.34	Very High
5.	Promoting among their students the elimination of any kind of discrimination against women and girls.	4.91	.28	Very High
6.	Promoting among their students the elimination of all forms of violence against women and girls.	4.91	.28	Very High
7.	Encouraging the participation of women with an equal opportunity.	4.87	.34	Very High
8.	promoting the empowerment of women.	4.83	.42	Very High
9.	Encouraging the participation of their students, taking into account equal opportunities.	4.85	.38	Very High
10.	Ensuring inclusive, participatory, and representative decision-making among their students.	4.87	.36	Very High
	Category Mean	**4.87**	**.24**	**Very High**
	Overall Mean	**4.78**	**.27**	**Very High**

A. Environmental, Health and Economic Sustainability

The category mean is 4.68, which is described as very high. As shown in the table, items in this category range from 4.50 to 4.84. The item *promoting actions that can mitigate climate change* has a mean of 4.50, which is described as very high. Meanwhile, the items *promoting actions that improve the mental health and well-being of their students and improving knowledge on how to promote sustainable lifestyles have the same mean rating of 4.84*, described as very high. Further, the environmental, health, and economic sustainability status is very high. This implies that teachers actively integrate concepts and promote actions that improve students' awareness of sustainable development goals on environment, health, and economic sustainability. The finding supports the statement of Baena-Morales (2020) *et al.* (2022), which emphasized that the primary purpose of physical education teachers is to develop physical skills, promote a healthy lifestyle, and promote a positive attitude towards physical environmental development, mental health, and economic dynamism.

B. Social Sustainability Gender and Inclusion

The category mean is 4.87, which is described as very high. As shown in Table 1.3, mean ratings range from 4.83 to 4.91. Specifically, the item *promoting the empowerment of women* has a mean of 4.83, described as very high, while the items *promoting among their students the elimination of any kind of discrimination against women and girls* and *promoting among their students the elimination of all forms of violence against women and girl* reflect the same mean rating of 4.91 described as very high. This implies that teachers are sensitive to equality and gender bias in planning and integrating physical activities. Also, this denotes eliminating discrimination against women and girls, ensuring inclusivity, participatory and representative decision-making among students, and promoting equality for vulnerable people. Likewise, the results imply that physical education widely contributes to the acquisition and development of social sustainability, gender equality, and inclusion

5.4 Significance of the Influence of Teaching Competencies and Perceived Physical Literacy on the Promotion of Sustainable Development Goals in Physical Education

Table 2 shows the results of the multiple regression analysis, which is set at the level of significance (α = 0.05 (two-tailed).

Table 2: Significance of the Influence of Teaching Competencies and Perceived
Physical Literacy on Promotion of Sustainable Development Goals in Physical Education

Individual Influence of Predictors	Promotion of Sustainable Development Goals in Physical Education			
	Standardized Coefficient	t	p-value	Remarks
Teaching Competencies	.74	14.51	.00	Significant
Perceived Physical Literacy	-.04	-.82	0.41	Not Significant
Combined Influence of Predictors				
R	.72			
R²	.52			
F	114.61			
P	.00			Significant

The result of the linear regression analysis revealed that the independent variable, teaching competencies, significantly influenced the promotion of sustainable development goals in physical education. This denotes that teaching competencies such as the teaching-learning processes of PE, fundamentals of physical and psychomotor development, learning contents and physical abilities, and body hygiene and healthy habits influenced the transmission of knowledge, values, and commitment to physical education in promoting sustainable development goals.

However, in a singular capacity, the perceived physical literacy of tertiary PE teachers did not significantly influence the status of the promotion of sustainable development goals in PE. This implies that physical education teachers are unclear about the meaning of sustainable development goals in physical education and mainly relate sustainable development to environmental issues (Grauduszus *et al.*, 2024). This is supported by the study of Moyer and Hedden (2020), which states that teaching some sustainable development goals is difficult if we focus on physical literacy since not all sustainability goals are known.

5.5 Lived Experiences of the Participants as Regards to the Promotion of Sustainable Development Goals in Physical Education

Table 3.2: Lived Experiences of the Participants as Regards to the
Promotion of Sustainable Development Goals in Physical Education

Essential Themes	Core Ideas
Fostering Active Lifestyle and Health	PE promotes better life and humanity PE is an avenue to promote good health and well-being Skills in physical education can lead to good health and well-being Developing a habit of physical activity

Promoting Inclusive Atmosphere	PE encourages inclusivity Physical incapabilities does not hinder participation in PE Creating safe spaces for all children Modifying strategies for all students to Participate
Developing Critical Thinker and Problem Solver	Encourage critical thinking about the information learned from any material in any platform Playing games in PE foster critical thinking and problem solving Strategizing in sports and games is problem Solving
Catering Equal Opportunities	PE activities can be designed to promote gender equality Informing students their responsibilities to promote equality Better life for everybody Adapt practices that promotes equality
Promoting Social Inclusion	Conducting activities suited for all PE classes can be an avenue to stop bullying PE can create alternative activities for social inclusion PE can engage community to participate Cultivate good values
Embracing Quality Education	Exude expertise in physical education Provide a framework to design or redesign curriculum Support curriculum revision for Physical Education Filling in the research gaps about physical Education Integrate different teaching strategies

A. Fostering Active Lifestyle and Health

The results revealed that PE is an avenue to create humanitarian spaces, promote good health and well-being, and help students be active and live as they learn, work, and play. These findings imply that staying active and healthy can be achieved by taking care of yourself and others, making decisions, managing life situations, and ensuring that the community in which you live creates a culture where members can live together. Thus, in physical education, fitness goals are promoted because they promote healthy living.

B. Promoting Inclusive Atmosphere

Inclusion is an effort to create an environment where everyone is valued and has equal rights to participation and support access to resources and opportunities, regardless of status. When teachers were interviewed about their lived experiences in the promotion of sustainable development goals in physical education, their answers revealed inclusivity. The theme of promoting an inclusive atmosphere implies that physical education supports inclusivity, that disabilities are not a hindrance to physical activities,

and that creating a safe space for all is essential, and therefore, students should be encouraged to participate.

C. Developing Critical Thinker and Problem Solver

A meaningful discussion is needed to solve social, economic, political, and environmental problems, make decisions for the present and future generations, and contribute to analytical information and solution needs. Thus, SDGs were promoted in physical education because they produce and develop critical thinkers and problem solvers. During the interview, the participants shared, based on their lived experiences, that the promotion of sustainability in physical education encourages critical thinking about information from anything on any platform, playing games in physical education improves critical thinking and problem-solving, and applying tactics in sports games is a kind of problem solution. This implies that critical thinkers are vital in the promotion of SDGs.

D. Catering Equal Opportunities

This refers to the policies that everyone has an equal opportunity to work, pay, and promotion without discrimination against certain groups. In teaching physical education, SDGs are promoted because they cater to equal opportunities. During the vivid interview of the participants, they were able to share ideas on the promotion of sustainability in physical education. Gender equality is evident in physical education students' awareness of their responsibilities in promoting equality, fostering a good life for everybody, and practicing equality development. This implies that physical education fosters equal opportunities.

E. Promoting Social Inclusion

It is the process of improving the conditions by which individuals and groups participate in society and improving the capabilities, opportunities, and rights of the deprived based on their identity. In physical education, SDGs are promoted because they promote social inclusion. Physical Education shared that physical education activities are an avenue to foster activities suited to all ages, to stop bullying, to integrate complementary activities for inclusion, and to involve the community in cultivating good values. This implies that SDGs help communities to foster healthy relationships among others.

F. Embracing Quality Education

An educational understanding that supports and promotes the holistic development of students. Physical education promotes fostering SDGs because it supports quality education, as stated in SDG 4. Teachers shared that physical education served as an avenue for exuding proficiency during classes, provided a curriculum framework, satisfied research gaps on physical education, and integrated promotional teaching strategies. This implies that physical education and SDGs are co-equal in fostering quality education for all.

5.6 The Role of Experiences in Shaping the Beliefs, Attitudes and Commitment of the Participants in the Promotion of Sustainable Development Goals

Table 4.1: Role of Experiences in Shaping the Beliefs of Participants
toward the Promotion of Sustainable Development Goals in Physical Education

Essential Themes	Core Ideas
Being Supportive of Holistic Development	Contribute to the holistic development of students
	Reinforcing values to students
	Extending help to those
	Helping in shaping healthy citizens
	Aid in fostering justice and peace
Leaving a Legacy	Contribute to developing lifelong participation in physical activities
	Being true to what you teach
	Providing safe spaces for children
	Helping to promote good health and well-being
	Creating a culturally sensitive atmosphere in class
	Developing a physical literate individual
	Fostering healthy habits to students

C. Being Supportive of Holistic Development

A first-hand experience of a person through various circumstances. An essential theme in participants' descriptions of how they shape their attitudes is the promotion of sustainable development goals in physical education, such as fostering holistic development, strengthening values, extending help to others to become healthy, and promoting peace towards others. This implies that teaching is not only about knowledge in textbooks but about social importance in meeting the needs of society. This finding supports the study conducted by Kwee (2021), which underscores that teachers' personal knowledge contributed to students' quest and in shaping healthy citizens. Thus, teaching sustainability has become vital in imparting knowledge that reinforces values and extends help to those in need.

D. Leaving a Legacy

It is the sense of how you inspire other people. During the in-depth interview and focus group discussion of participants on the experiences that shaped their belief in promoting sustainable development goals, ideas came up, such as living on what they taught, developing longtime participation in physical activities, and helping foster a healthy, literate, and productive citizen. This implies that being faithful to your teaching provides a positive understanding that fosters holistic development and a culturally sensitive environment.

Table 4.2: Role of Experiences in Shaping the Attitudes of Participants toward
the Promotion of Sustainable Development Goals in Physical Education

Essential Themes	Core Ideas
Experiencing Personal Transformation	Becoming emphatic
	Becoming optimistic
	Becoming resilient
	Being passionate
	Being consistent in doing what benefits the students
	Being grateful
Shaping Sense of Agency	Be effective and creative in teaching
	Serving for a greater purpose
	Awareness of the greater purpose
	Touching lives of the students
	Incorporating SDG goals in teaching
	Keeping oneself updated

A. Experiencing Personal Transformation

The ability of a person to make sense of a topic in a specific situation. In the discussion during the participants' interview that shaped their attitude in promoting sustainable development goals, participants unveiled the main ideas: being optimistic, satisfying, and emphatic towards others and humanity. This finding implies that being emphatic is an avenue to pursue goals and perspective toward a sustainable goal by helping others develop community awareness and interventions.

B. Shaping Sense of Agency

The experience of having a causal impact on the world is accompanied by a feeling of having control over one's actions. When participants were asked about their attitude toward the promotion of sustainable development goals in physical education, participants expressed that they were efficient and creative in serving their purpose of touching the lives of the students through sustainable development goals. This implies that physical education teachers in Region XI keep themselves updated regarding sustainability for them to be practical and creative in teaching.

Table 4.3: Role of Experiences in Shaping the Commitment of Participants
toward the Promotion of Sustainable Development Goals in Physical Education

Essential Themes	Core Ideas
Pledging to Educate and Foster Awareness	Anchor efforts on research
	Seeing the bigger purpose of SDG
	Integrating SDGs in the lessons
	Support my institution in implementing SDGs initiatives
	Foster awareness of SDGs in our institution
Supporting Community Engagement	Engage in efforts in line with SDGs
	Plan activities that promote social inclusion
	Encourage lifelong engagement to physical activities
	Inculcate service to the community
	Commit to decrease poverty

E. Pledging to Educate and Foster Awareness

An ability to enhance knowledge to help avoid various risks. Another essential theme in participants' descriptions of how they shape their commitments is the promotion of sustainable development goals in physical education evolved in research-anchored initiatives, integration of sustainability goals in curriculum, and helping aware of SDGs. This implies that physical education teachers in Region XI believed that the promotion of sustainable development goals requires firm conviction from teachers to pledge awareness and educate themselves, students, and the community.

F. Supporting Community Engagement

Working with a group of people bound by geographic proximity, interest, and similar circumstances to solve problems affecting their lives. In the discussion regarding the participants' experiences that shaped their commitment to the promotion of sustainable development goals, participants disclosed the main ideas, which are the importance of inclusivity and improvement of life. This implies that Region XI physical education teachers are engaged in efforts aligned with sustainable development goals that promote physical activities and social inclusion.

5.7 Data Integration of the Salient Qualitative and Quantitative Findings

The data in Table 5 are the joint display of the salient quantitative and qualitative findings on the promotion of sustainable development goals in physical education in Region XI.

Table 5: Data Integration of the Salient Qualitative and Quantitative Findings

Aspects of Focal Point	Quantitative Findings	Qualitative Findings	Nature of Data Integration
On Teaching Competencies	Table 1.1 on teaching competencies in terms of Teaching -Learning Processes of PE with a mean of 4.74 rated as very high with SD of .33. In particular, the item designing, creating and assessing the teaching and learning processes associated with the motor competence in relation to specific and contextual characteristics of individuals with a mean of 4.73 rated as very high with SD of .46	Table 3.2 the theme promoting inclusive atmosphere, the core idea "PE encourages inclusivity"	Merging-converging
On Perceived Physical Literacy	Table 1.2 on perceived physical literacy in terms of self-expression and communication with others with a mean of 4.70 rated as very high with SD of .43. In particular, the item is capable in handling problems and difficulties with a mean of 4.74 rated as very high with SD of .46	Table 3.2 the theme developing critical thinker and problem solver, the core idea "Playing games in PE foster critical thinking and problem solving"	Merging-converging
On Promotion of Sustainable Development in Physical Education	Table 1.2 on promotion of sustainable development in physical education in terms of environmental, health and economic sustainability with a mean of 4.68 rated as very high with SD of .37 In particular the	Table 3.2 the theme fostering active lifestyle and health and the core idea "Skills in physical education can lead to good	Merging-converging

	item, promoting actions that improve the mental health and well-being of their students. with a mean of 4.84 rated as very high with SD of .39	health and well-being"	
	Table 1.2 on promotion of sustainable development in physical education in terms of social sustainability gender and Inclusion with a mean of 4.87 rated as very high with SD of .24 In particular the item, being accessible to all of their students regardless of gender, race, functional diversity, or personal situation with a mean of 4.87 rated as very high with SD of .36	Table 3.2. the theme catering equal opportunities. The core idea, "Adapt practices that promotes equality"	Merging-converging
	Table 1.2 on the promotion of sustainable development in physical education in terms of social sustainability gender and inclusion with a mean of 4.87 rated as very high with SD of .24 In particular the item, ensuring inclusive, participatory, and representative decision-making among their students with a mean of 4.87 rated as very high with SD of .36	Table 3.2 the theme promoting social inclusion, the core idea "PE can create alternative activities for social inclusion"	Merging-converging
Role of Experiences Shape the Beliefs of Participants	Table 1.1 on the status of teaching competencies in terms of teaching-learning process with a mean of 4.74 rated as very high with SD of .33 In particular the item, "knowing and promoting the different motor manifestations that are part of the traditional culture." with a mean of 4.73, rated as very high with SD of .38	Table 4.1 the theme leaving a legacy, the core idea "Creating a culturally sensitive atmosphere in Class".	Merging-Converging
Role of Experiences Shape the Attitude of Participants	Table 1.2 on the status perceived literacy in terms of self-expression and communication with others with a mean of 4.70 rated as very high with SD of .43 In particular the item, "being capable in handling problems and difficulties" with a mean of 4.74, rated as very high with SD of .46	Table 4.2 the theme Experiencing Personal Transformation, the core idea "becoming resilient".	Merging-Converging
Role of Experiences Shape the Commitment of Participants	Table 1.3 on the status of the status on promotion of sustainable development goals in physical education in terms of social sustainability gender and inclusion a mean of 4.78 rated as very high with SD of .59 In particular the item, "being accessible to all of their students regardless of gender, race, functional diversity, or personal situation.in the future" with a mean of 4.87, rated as very high with SD of .27	Table 4 the theme supporting community engagement, the core idea "plan activities that promote social inclusion".	Merging-Converging

The quantitative results corroborate qualitative findings on the focal point of teaching competencies. In terms of teaching-learning processes, it reflected a very high mean rating, which reflects that teachers foster in designing, creating, and assessing the teaching and learning processes associated with the motor competence about specific and contextual characteristics of individuals. When the quantitative finding is merged with

qualitative findings under participants' description of teaching competencies, converging data is formed, as shown by the essential theme of promoting an inclusive atmosphere based on the core idea that "physical education encourages inclusivity."

Further, the **second focal point is perceived physical literacy**, which showed a converging nature when quantitative and qualitative findings emerged. In terms of self-expression and communication with others on the item of being capable of handling problems and difficulties forms the essential theme of producing a critical thinker and problem solver with the specific core idea of "playing games in PE foster critical thinking and problem-solving."

On the one hand, **the third focal point is the promotion of sustainable development in physical education in terms of environmental, health, and economic sustainability**, which deals with the particular item promoting actions that improve the mental health and well-being of their student and formed essential theme fostering active lifestyle and health with the core idea "skills in physical education can lead to good health and well-being."

On the other hand, **another focal point revolves around the promotion of sustainable development goals in physical education, on social sustainability, gender, and inclusion**; and being accessible to all of students regardless of gender, race, functional diversity, or personal situation, which formed the essential theme catering equal opportunities from the core idea "adapt practices that promote equality." This finding supports the study conducted by Cañabate *et al.* (2021) that interaction between society and physical education activities requires a strong foundation and continuous support for teachers to constantly adapt new methods and strategies in evaluating student learning based on grounded and non-biased pedagogies.

Adding on, **the fifth focal point is on the promotion of sustainable development goals in physical education in terms of gender and inclusion that pertains to ensuring inclusive, participatory, and representative decision-making among their students** and is rated very highly formed the theme promoting social inclusion from the core idea "physical education can create alternative activities for social inclusion." This finding supports the study conducted by Hinojo Lucena *et al.* (2019), who expedited those sports as one of the main courses of physical education, which has contributed significantly to the promotion of social inclusion.

Further, **the sixth focal point is the role of experiences that shape participants' beliefs, which showed a converging nature when quantitative and qualitative findings were merged. Meanwhile, teaching-learning processes, that deals with knowing and promoting the different motor manifestations that are part of the culture**, are rated very high and form the essential theme, leaving a legacy from the core idea of "creating a culturally sensitive atmosphere class." This implies that tertiary physical education teachers consistently contribute to developing lifelong participation in physical activities. This finding supports the study by Rosenow (2024), who stated that teachers influence empowered students who contribute to lifelong participation in physical activities.

Comparatively, **the seventh focal point is the role of the experiences shaping the attitude of participants, which showed the converging nature when quantitative and qualitative findings were merged. In terms of self-expression and communication with others, which deals with being capable of handling difficulties**, it is rated very high and formed the essential theme experiencing personal transformation from the core idea of "becoming resilient." This finding supported the study conducted by Yuan *et al.* (2021) that having concern and empathy is a quality ability that ensures the well-being of all through daily activities that provide life for oneself, the community, and on earth.

Furthermore, the eighth focal point is the role of experiences that shape the commitment of participants, which showed a converging nature when quantitative and qualitative findings were merged. In terms of the promotion of sustainable development goals in physical education in terms of sustainability, gender, and inclusion, which deals with being accessible to all students regardless of gender, race, functional diversity, or personal situation in the future, which is rated very high and formed the essential theme supporting community engagement from the core ideas plan activities that promote social inclusion. This implies that physical education teachers strongly express themselves through supporting community engagement that fosters understanding of inclusivity and equality within and among students.

6. Conclusions

Generally, teaching competencies and perceived physical literacy influence the promotion of sustainable development goals in physical education. However, in singular capacities, perceived physical literacy has no influence. This emphasizes that teaching competencies with perceived physical literacy contribute to a relatively high level of sustainable development in physical education.

Further, twelve essential themes emerged from the lived experiences of the participants. The themes favored in the promotion of sustainable development goals that foster active lifestyle, equal opportunities, and social inclusion. Furthermore, the participants' lived experiences shaped their attitudes, beliefs, and commitment toward the promotion of sustainable development goals in physical education. They believed sustainability is achieved through high teaching competencies and concrete examples of physical literacy among students.

Furthermore, when the quantitative results emerged with qualitative results, a merging converging nature was found to exist in teaching competencies and perceived physical literacy towards the promotion of sustainable development goals. This indicates that the relationship between experiences and the formation of beliefs, attitudes, and commitments was convergent. Most aspects of the participants' experiences may have aligned and led to a shared perspective, while other subjective judgments may be different but the same viewpoint as a whole. This emphasizes the intricate and varied nature of how people's experiences shape their views on teaching competencies and physical literacy in achieving sustainable development goals.

7. Recommendations

On the teaching competencies, results revealed a very high level of teaching competencies by PE teachers in the promotion of sustainable development goals. Although the results showed a very high means, some items and factors could still be improved, such as having helped in developing the teaching competencies in terms of design, application, and analysis of didactic interventions in physical education and being able to reflect on the teaching/learning process, the different organizational types and the different methodologies within Physical education classes. With this, leaders and administrators from various institutions may provide more holistic, productive, and active teaching strategies for all teachers that involve engaging, fun, inclusive, and aligned to students' developmental needs.

On the one hand, the study revealed that physical literacy among tertiary PE teachers has always been exhibited. However, regarding influence, physical literacy is not a significant predictor of promoting sustainable development goals in physical education. To improve this understanding significantly, physical literacy may be enhanced by restructuring the physical education curriculum subject, encouraging teachers to use various platforms, and pursuing specialized certifications in PE and physical literacy. Also, this could involve foundational literacy courses, access to resources, fostering collaboration, leveraging technology and reflective practices, celebrating success, and sharing best practices to co-create interdisciplinary activities.

On the other hand, concerning the promotion of sustainable development goals in physical education, results revealed that PE for sustainable development is always evident. To continuously improve this, since SDGs are not really so new but are also not yet so developed, they have to focus on the positive effects and the excellent benefits they give the learners, and they should be exhausted and applied to actual practice. It has to be understood more at the grassroots level by which physical education and SPED teachers can be a suitable vessel for this understanding and practice.

Teaching competencies significantly influence the promotion of sustainable development goals in physical education, while perceived physical literacy has reflected no significant influence among tertiary physical education teachers in Region XI. Thus, future researchers may investigate other factors that may influence the promotion of sustainable development goals in physical education aside from teaching competencies and perceived physical literacy.

Future investigations could be pursued by academic scholars or researchers, utilizing the findings from this research. Areas of interest can be other factors that influence the promotion of sustainable development goals that may utilize other teaching-learning skills and competencies.

Conflict of Interest Statement

The authors declare no conflicts of interest.

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