

The 7th East Asia University Physical Education Research Forum

Date

February 13[Thu]2025
12:30-15:30

Hybrid Location

Global Sport Innovation Building (GSI 301),
University of Tsukuba, Tsukuba, Ibaraki, JAPAN

- For online participation

Please register at

<https://us06web.zoom.us/j/86265884378?pwd=ApGKuLsbGOBQv7Y3doa1eAf6DJtP4Q.1>

Meeting ID: 862 6588 4378

Passcode: 810348

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February 13 Thu 2025, 12:30–15:30, Hybrid Location
Global Spor Innovation (GSI) Building (Meeting Room 301)
University of Tsukuba, JAPAN, and on Zoom

For online participation, Please register ↓

<https://us06web.zoom.us/j/86265884378?pwd=ApGKuLsbGOBQv7Y3doalE Af6DJtP4Q.l>

Moderator: **Hirokazu Matsuo** (University of Tsukuba, Ibaraki)

Translator: **Po-Hsiu LIN** (National Taiwan Normal University, Taipei)

Kyungjin PARK (University of Sacred Heart, Tokyo)

- 12:30–12:40 Opening (**Hideki TAKAGI**, University of Tsukuba)
- 12:40–13:20 Developing Self-Authorship of University Students through Outdoor Education Programs as Physical Education Classes
Fuyuka SATO/ Assistant professor, Tokyo Kasei Gakuin University, JAPAN
- 13:30–14:10 Implementing Assessment for Learning in Taiwanese Higher Education Physical Education (PE): Action and Reflection from Badminton Courses.
siu-Wei Yang/ Lecturer, Doctoral Candidate, National Taiwan Normal University/ Department of Physical Education & Sport Science
Deng-Yau Shy/ Associate Professor, National Taiwan Normal University/ Department of Physical Education & Sport Science
- 14:10–14:40 Break Time
- 14:40–15:20 Exploring Physical Education Teachers' Perceptions on Sustainable Development in PE: Implications for PE Teacher Education
Jongho Lee and Euichang Choi, Ducksu Middle School & Seoul National University
- 15:20–15:30 Closing (**Akihiro SAKAMOTO**, University of Tsukuba)
(**Ching-Ping LIN**, National Taiwan Normal University)
(**Euichang CHOI**, Seoul National University)

2025.2.13Thu, 12:40-13:20 (presentation 30min., Q&A 10 min.)

Fuyuka SATO, Assistant professor, Tokyo Kasei Gakuin University, JAPAN

Developing Self-Authorship of University Students through Outdoor Education Programs as Physical Education Classes

In the 21st-century, higher education emphasizes developing self-authorship as a vital capability. This study examined the impact of an outdoor education program, conducted as a physical education class, using the Action Socialization Experience (ASE) approach on university students' self-authorship. It also investigated the factors and processes related to self-authorship development. A mixed-methods analysis was employed, comprising a quantitative analysis using the Japanese Self-Authorship Scale (JSAS) (Study 1) and a qualitative analysis of students' term papers (Study 2). The study divided 113 students into three groups: an ASE group and two control groups, and compared their JSAS scores. Results indicated a significant improvement in JSAS scores exclusively in the ASE group ($F(1,110)=12.79, p<.01$). In addition, content analysis of the ASE group's term papers identified six categories include:[1] confronting the unknown challenges; [2] doing trial and errors for problem solving; [3] building a trusting relationship with group members; [4] self-understanding through interacting with others; [5] generating knowledge and methods; and [6] completing the challenge, and 17 subcategories, which revealed the developmental process of students' self-authorship. This development was shaped by their perception of self-differences, efforts to achieve goals through trial and error, recognition and fulfillment of roles, and the self-confidence they gained throughout this journey.

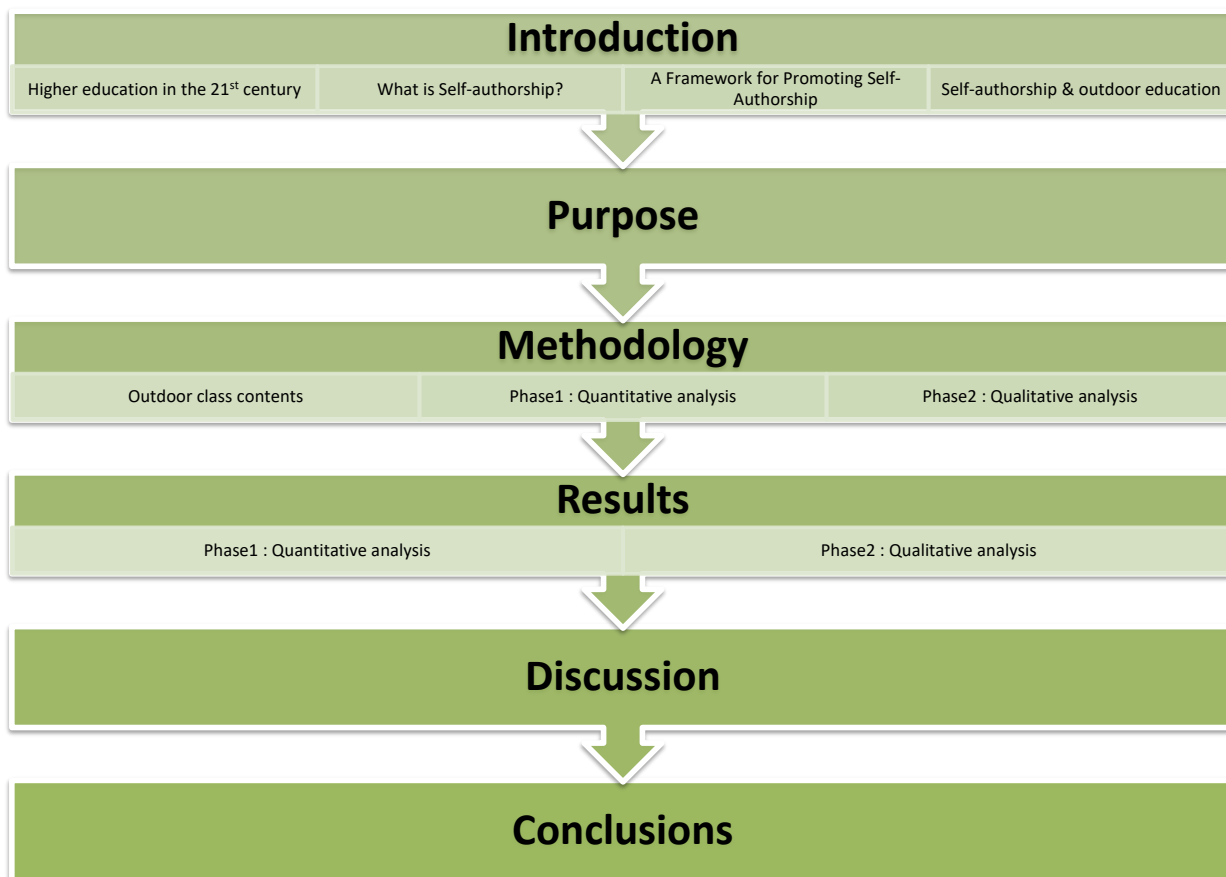
佐藤冬果(東京家政学院大学・助教)

体育授業として実施される野外教育プログラムを通じた大学生のセルフ・オーサーシップの育成

セルフ・オーサーシップ(SA)は、21世紀型の高等教育において育成が望まれる能力の1つである。本研究では、野外教育プログラムの1つであるASE(Action Socialization Experience)を用いた体育授業が大学生のSAに与える影響、およびSAの発達に関連する要因やプロセスを明らかにするために、日本語版SA評価尺度を用いた量的分析(研究1)と学生が提出したレポートの質的分析(研究2)による混合研究を行った。まず、ASE群と2つの対照群の学生(113名)のSAスコアを比較した結果、ASE群のみ授業後にSAスコアが有意に向上した($F(1,110)=12.79, p<.01$)。さらに、ASEクラスの学生が提出したレポートの内容分析から、学生がSAを発達させたプロセスとその要因を示す6つのカテゴリー(未知の課題と対峙する、課題解決に向けて試行錯誤する、グループを信頼する、他者との関わりを通して自己理解を深める、知識や方法を生み出す、課題を達成する)と17のサブカテゴリーが抽出された。この発達は、他者との差異を認識することや、目標達成に向けて試行錯誤すること、役割を認識して遂行すること、そしてこの過程を通して得た自信によって形づくられていた。

Developing Self-Authorship of University Students through Outdoor Education Programs as Physical Education Classes

Fuyuka Sato (Tokyo Kasei Gakuin University)



VUCA

Volatility Uncertainty
Complexity Ambiguity

Contemporary Social Issues

(Globalization, Industrial Revolution,
Global Environmental Issues, etc.)

Challenges for
Today's Japanese
College Students
**Deficiency in
Initiative**

Some students are so concerned about what others think of them that they feel it is a burden and avoid engaging with others (Takahashi, 2010)

Some students don't have the initiative to take action to solve problems (Kawakami, 2013)



Higher education is required to cultivate 21st-century capabilities for cooperating with a diverse range of other people to handle challenges with no precedent or absolute solution.

Essential Learning Outcomes (ELOs)
AAC&U(2008)

"gakushi-ryoku" (Graduate Attributes)
Japan's Central Council for Education (2008)

Self-authorship(SA)

SA is a concept expanded by Baxter Magolda from Kegan's constructive developmental theory as a developmental theory for university students.

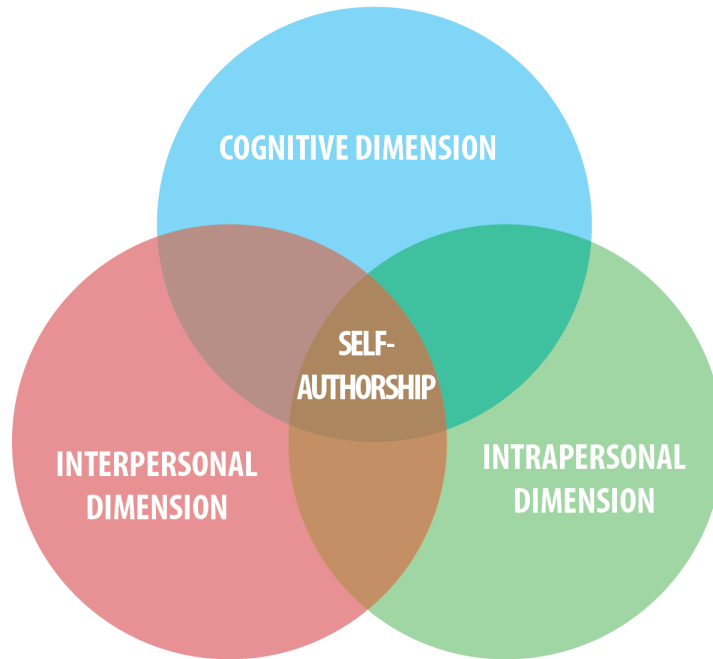
SA is "the internal capacity to define one's beliefs, identity and social relations."
(Baxter Magolda, 2001)

"the ability to self-author— to write one's own life."
(Patton, et al., 2016)

"Self-authorship is a foundation for achieving many college learning outcomes."
(Baxter Magolda & King, 2007)

"A theory that integrates the psychosocial and cognitive structural growth of college students and views growth holistically."
(Kawai, 2020)

Self-authorship(SA)



<https://selfauthorshipcmu.wordpress.com/what-is-self-authorship/>

Self-authorship(SA)

	SA	Intrapersonal Dimension	Interpersonal Dimension	Cognitive Dimension
Lack of SA	Value judgments are based externally and uncritically follow external rationales	Lack of awareness of own values and social identity	Relationships are sources of identity and needed for affirmation	Views knowledge as certain Relies on authority for right/wrong answer
SA	External evidence can be objective; internal criteria are the main source of meaning making	Choose own values and identity in crafting internally generated sense of self that regulates interpretation of experiences and choices	Capacity to engage in authentic, interdependent relationships with diverse others	Views knowledge as contextual Evaluates and interprets judgments in light of available evidence

SA describes **the ability to make meaning of things or experiences** according to **one's own internal authority**, without blindly following the external influences of society or other people.

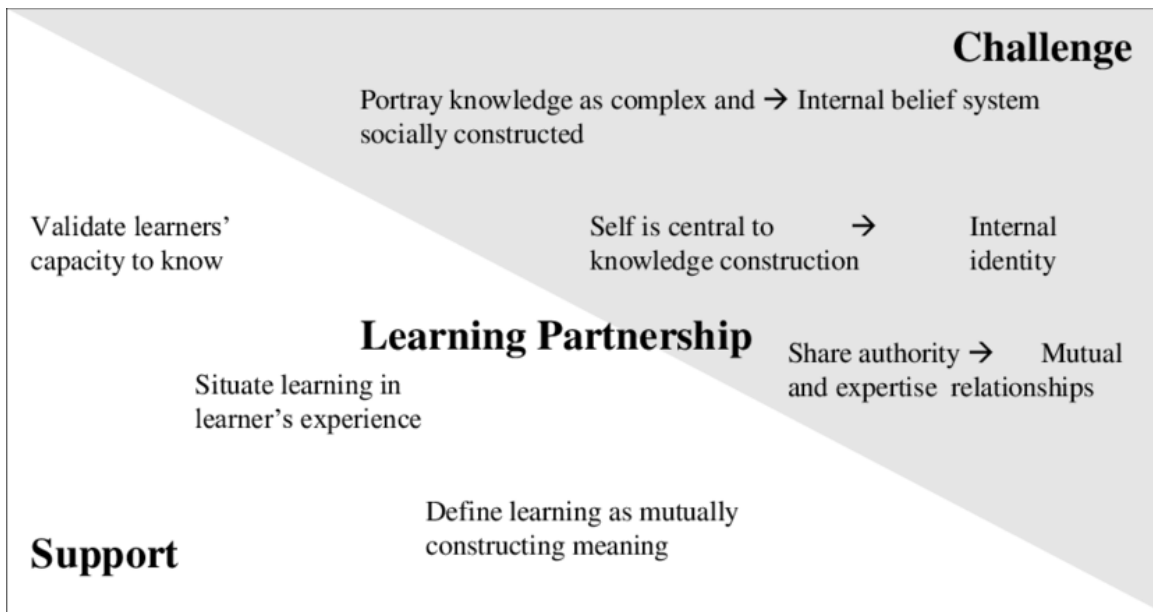
<https://selfauthorshipcmu.wordpress.com/what-is-self-authorship/>

INTRODUCTION

A FRAMEWORK FOR PROMOTING SELF-AUTHORSHIP

<5>

The Learning Partnerships Model (Baxter Magolda, M. B. & King, P. M. (2004))



Constructivist experiential learning is effective

→ Physical education classes could be an effective SA developing opportunity

INTRODUCTION

SELF-AUTHORSHIP & OUTDOOR EDUCATION

<6>

Gass, M. (2003)

"WILDERNESS ORIENTATION PROGRAM...these experiential learning opportunities in a non-traditional setting served as the very catalyst toward the process of SA."



Ferencevych, T.(2004)

"SA and OUTDOOR EDUCATION share common pedagogical approaches which incorporate critical thinking, problem solving, interpersonal skill development, empowerment, and making meaning of one's experience. "

McGowan, A. L. (2016)

"(•••)measured by the Self-Authorship Questionnaire (SAQ). Participants (n = 26) included students from 10th- and 12th-grade one-semester outdoor education programs. Analysis of paired t tests of the intervention phase showed gains in three of four SAQ dimensions (situational coping, interpersonal leadership, and self-efficacy) as well as in overall SAQ scores.

Physical education classes which have adopted outdoor education are considered effective in stimulating the development of SA.



[1] To assess the impact of **physical education classes** which have adopted **outdoor education structure** on the **Self-authorship** of Japanese university students.

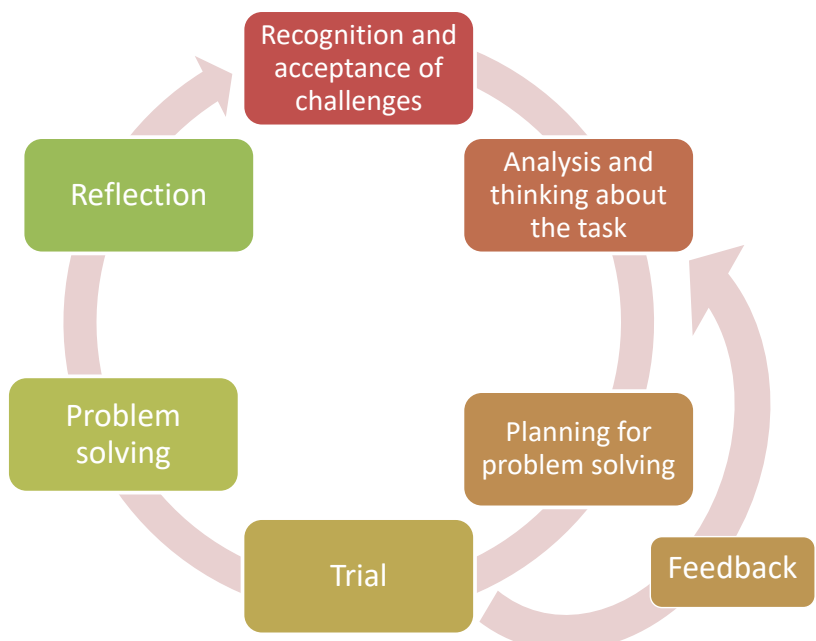
[2] To investigate the factors and processes related to self-authorship development.

ASE (Action Socialization Experience)

similar concept ; Initiative game, Project adventure, Team building game...



ASE is the activities ... each member of the group brings his or her abilities together to solve mental and physical problems ...that problems cannot be solved by one person alone.



The First Day

Challenge : Everyone must be on a stump and two small boards



The Last Day

Challenge : Everyone must climb to the top of the wall.



Quantitative analysis

Study Design— Controlled Before(April,2019) and After(June, 2019) Study

Questionnaire— Japanese Self-Authorship Scale (JSAS) (Sato&Sakamoto, 2020)

Factor1 Self-Congruence 12-items

The item questioning the degree to which behavior follows one's internal foundation

“My actions are congruent with who I really am.”

“My decisions represent my most important values and feelings” etc...

Factor2 Interpersonal Independent 10-items

The item testing the impact of external influences

“I would describe myself as someone who tends to follow the crowd.”

“I have trouble making decisions that go against what people expect of me.” etc...

Data Analysis—Two-factor mixed variance analysis of Time (pre, post) × Class-type (outdoor, individual sports, and Gymnastics).

Participants : **Second-year students** participating physical education class (75 mins, once a week, for 10 weeks) in Japanese National University.

Outdoor Program

69 students

(Age M=19.32、SD=0.50)



Students were divided into small groups of 10, and tried Initiative Game.

Individual Sports

19 students

(Age M=19.53、SD=0.61)



Students competed Individual match.

Gymnastics

25 students

(Age M=19.24、SD=0.52)

Students practiced trampoline with group member .



Total Participants :

113 students (60 men, 53 women, Average Age:19.34 years)

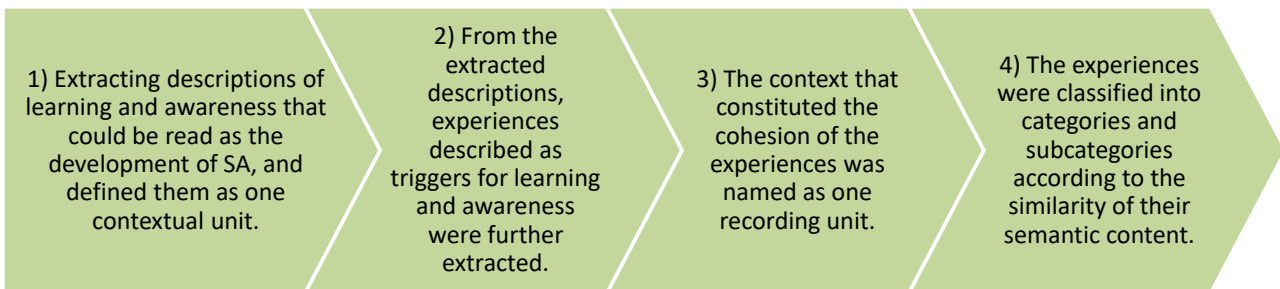
Qualitative analysis

Data collection— Reflection reports submitted by 80 students from the outdoor education class after all classes are completed

Reflection report— The report required the students to write;

- 1) List three things you learned from the class, and
- 2) Explain the above three points with examples of specific situations.

Data Analysis— Content analysis (Berelson, B., 1957)



RESULTS

PHASE I : QUANTITATIVE ANALYSIS

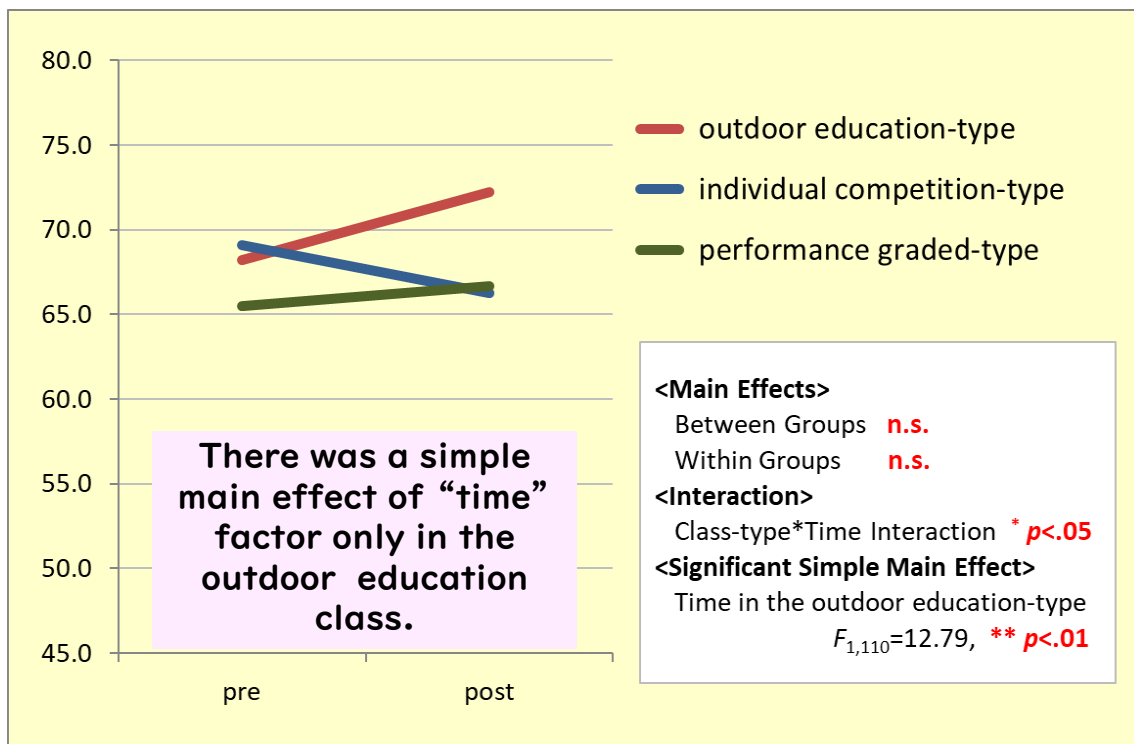


Fig. 1. The Total Score of JSAS

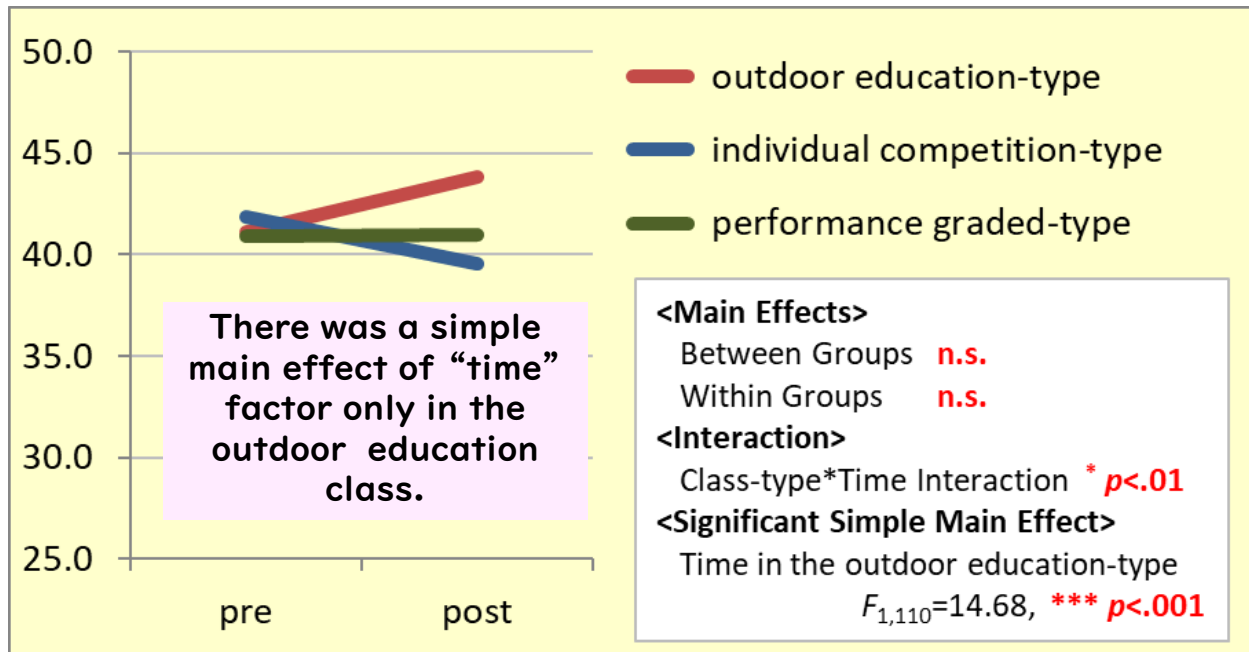


Fig. 2. The Score of Factor 1

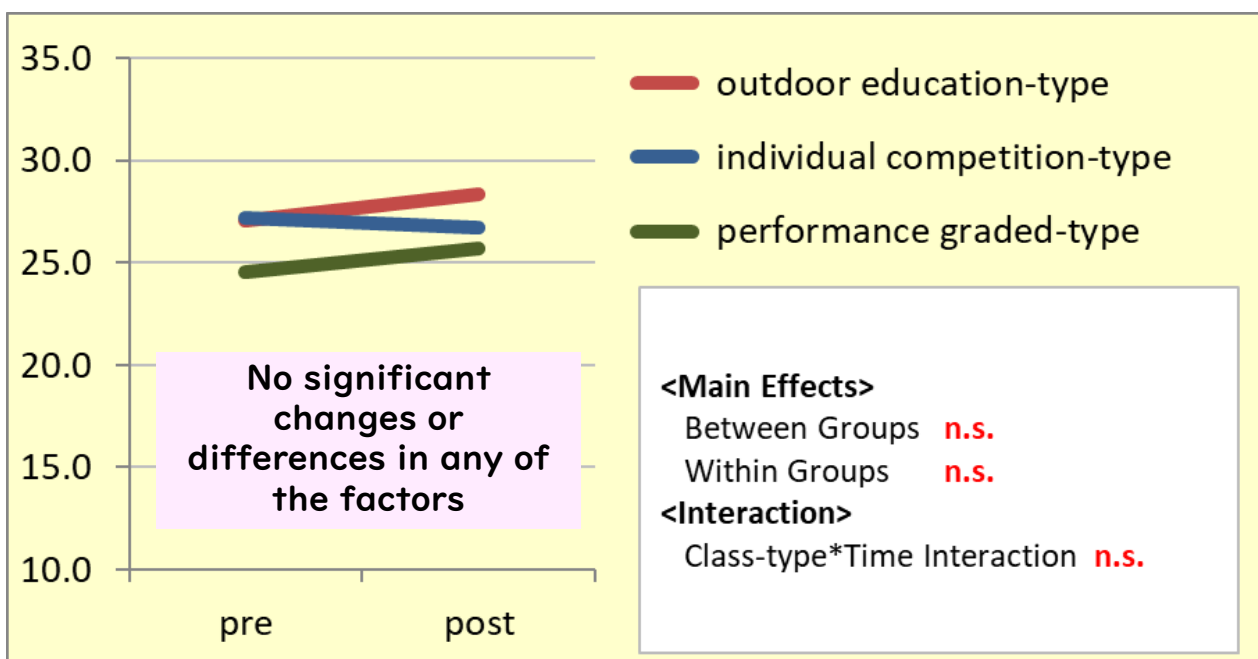


Fig. 3. The Score of Factor 2

A total of 94 context units were extracted from 71 students (88.8%) as descriptions that matched the SA scale questions.

【 Factor 1 (Self-Congruence) 】

57 context units from 54 students (67.5%)

- ➔ "I think I can derive solutions to problems that concern me"
- ➔ The development of independent problem-solving skills

【 Factor 2 (Interpersonal Independence) 】

37 context units from 36 students (45.0%)

- ➔ "It is better to conform to others' opinions than to assert one's own opinion (inverted item)"
- ➔ The development of the ability to assert oneself appropriately

290 experiences that triggered developing SA were extracted and classified into 6 categories and 17 subcategories

[1] Confronting the unknown challenges

[2] Doing trial and errors for problem solving

[3] Building a trusting relationship with group members

[4] Self-understanding through interacting with others

[5] Generating knowledge and methods

[6] Completing the challenge

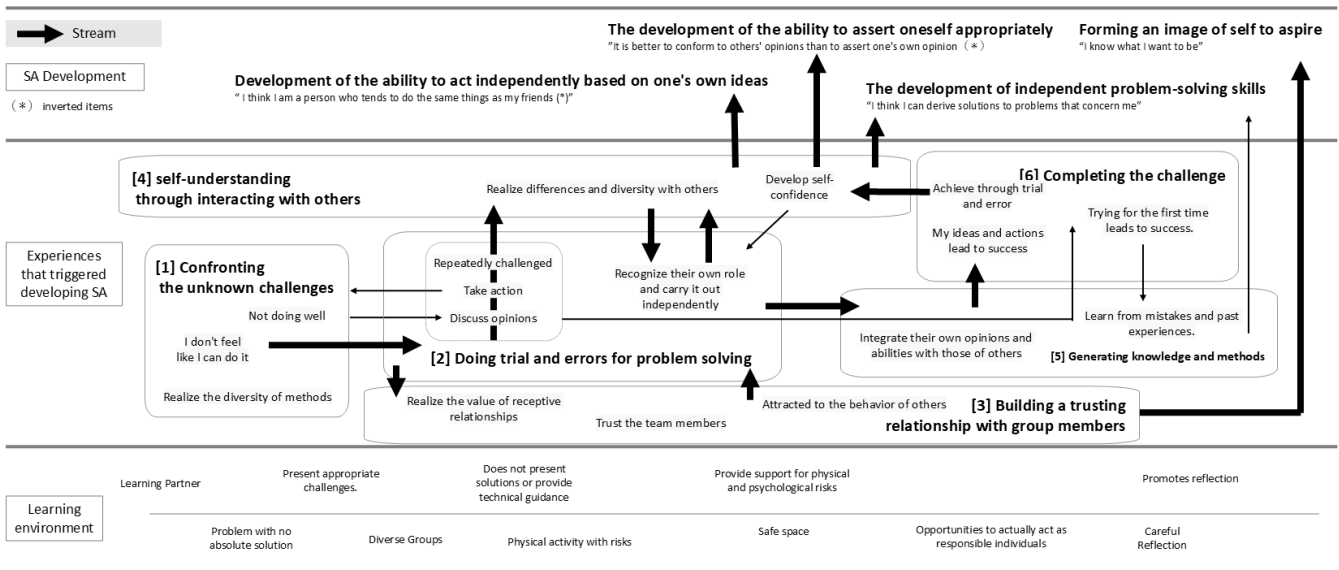


Fig. 3. Experiential processes leading to SA development in outdoor education class

Phase 1

Scores on the factor1 in the outdoor education class group improved after the class.

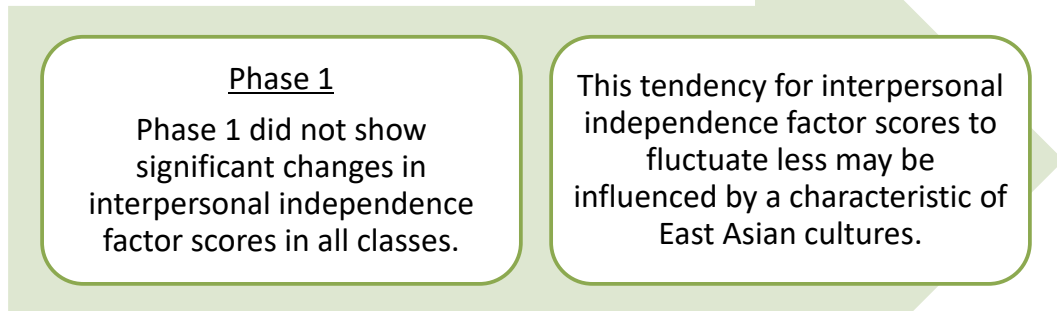
Phase 2

54 (67.5%) students described their learning on the factor1

Many of the students in the outdoor education class had more SA learning about the factor1

The students in the outdoor education class experienced a situation in which they could not rely on an external source, the teacher, and were forced to solve problems through thoughts and actions generated in the interaction between themselves and their group members. ASE as a college physical education class is thus characterized by its ability to allow students to learn primarily from their own bodies.

➡Barr & Tagg "From teaching to learning"



People in East Asian cultures, including Japan, are said to predominantly hold a “reciprocal cooperative view of self” based on the assumption that the self is fundamentally connected to others, and it has been pointed out that “familiarity” and other feelings generated by mutual cooperation between self and others correlate more strongly with pleasant feelings than feelings such as “pride” caused by self-independence. (Kitayama, 1995)

➔ **SA development of college students in East Asia may have different mechanisms than that of college students in the U.S.**

- Outdoor education PE class accelerate SA development through constructivist composition.
- The ASE, an unusual experience, elicited positive attitudes and interest among the trainees.
- The wide variety of assignments in the ASEs provided a diverse experience for the learners.
- Students also carry out reflective self-assessment without simply being treated as evaluators.
- The instructor's receptive and supportive involvement created a sense of psychological and physical safety, and encouraged active exchange of opinions and challenges by the students in such a protected environment.
- When these experiences responded to the characteristics of each individual student, effective interactions occurred for each, which may have led to the development of SA.

- However, the survey in this study was limited to a small number of physical education classes at a single university and did not allow for a comparative study with group events in particular.

- It is necessary to conduct a survey of a wider range of subjects and examine the impact of university physical education on university students' SA in more detail.



This presentation is based on the following research paper;

Sato Fuyuka, Otomo Akane, Komiyama Saki, Kanaya Mariko, Sakamoto Akihiro. (2022). Fostering Self-Authorship through University Physical Education Using “Action Socialization Experience” Program : Examination of the Development Process and Factors Using Mixed Methods. *Japan Outdoor Education Journal*, 25, 37-54.

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2025.2.13Thu, 13:30-14:10 (presentation 30min., Q&A 10 min.)

siu-Wei Yang/ Lecturer, Doctoral Candidate, National Taiwan Normal University/
Department of Physical Education & Sport Science

Deng-Yau Shy/ Associate Professor, National Taiwan Normal University/
Department of Physical Education & Sport Science

Implementing Assessment for Learning in Taiwanese Higher Education Physical Education (PE): Action and Reflection from Badminton Courses.

In recent years, the importance of embedding assessment into curriculum and instruction has been increasingly recognized. With the growing emphasis on assessment for learning (AfL), several operational frameworks have been developed. However, there remains a lack of concrete evidence demonstrating the benefits of AfL and the challenges it presents in practice. This study enacted and supported a structured scaffolding process within a higher education PE badminton course to effectively enhance student learning. The approach aimed to create opportunities for sustained learning, fostering students' self-awareness and self-regulation abilities. The research involved a higher education instructor and 70 university students. Data collection included focus group interviews, instructor reflection journals, student post-class reflections, and learning portfolios. Row data were analyzed through open coding and constant comparative methods. Findings revealed that students initially encountered challenges in engaging assessment, as it diverged from their accustomed method of passive learning—where instructors teach skills, and students are assessed at the end. Over time, however, as students were given more autonomy and responsibility through learning tasks, they began to visibly observe and recognize improvements in their self-awareness and self-regulation abilities. This provided concrete evidence of the benefits AfL offers. In conclusion, this study highlights that AfL is an effective approach to help students visualize their learning and understand how to learn. Nonetheless, it also underscores the role of students' assessment literacy as a critical factor influencing the successful implementation of AfL. Future research should continue to validate the concept of AfL and explore strategies for improving students' assessment literacy to support effective practice.

Keywords: Assessment for Learning, Physical education, Higher education



Implementing Assessment for Learning in Taiwanese Higher Education Physical Education (PE): Action and Reflection from Badminton Courses

Hsiu-Wei Yang | Deng-Yau Shy

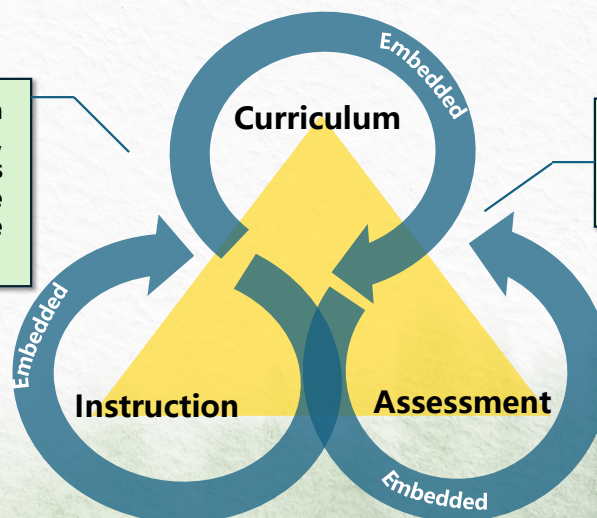
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Background



“ Based on the Social Constructivism Theory

The alignment between assessment, curriculum, and instruction is insufficient because the relationship between these three is not linear.



Assessment, curriculum, and instruction have an **interactive** and **dynamic** relationship.

(Kniffin & Baert, 2015; MacPhail, et al., 2013; Salom, 2019)

“ Learning-oriented assessment

The manifold nature of assessment, in terms of its conceptual application, suggests that the term "assessment" does not have a standard definition or usage. In different contexts, there are various interpretations and purposes associated with it.

(Zhen, 2008)

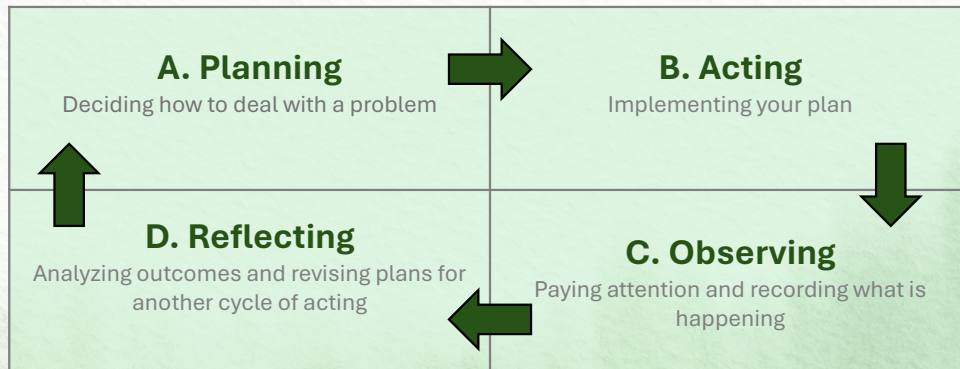
目的	取徑	評量者	評量者
Placement, certification, etc.	Assessment of learning	Instructor	Earl, 2003; Black et al., 2009; Wiliam, 2011
Promote learning	Assessment for learning	Instructor	Earl, 2003; Black et al., 2009; Wiliam, 2011
Develop students' self-monitoring and self-regulation	Assessment as learning	Learner	Earl, 2003;

(Carless, 2015; Zeng et al., 2018)

Purpose

This study enacted and supported a structured scaffolding process within a higher education PE badminton course to effectively enhance student learning.

“ Action research



(Kuhne & Quigley, 1997)

“ Research design

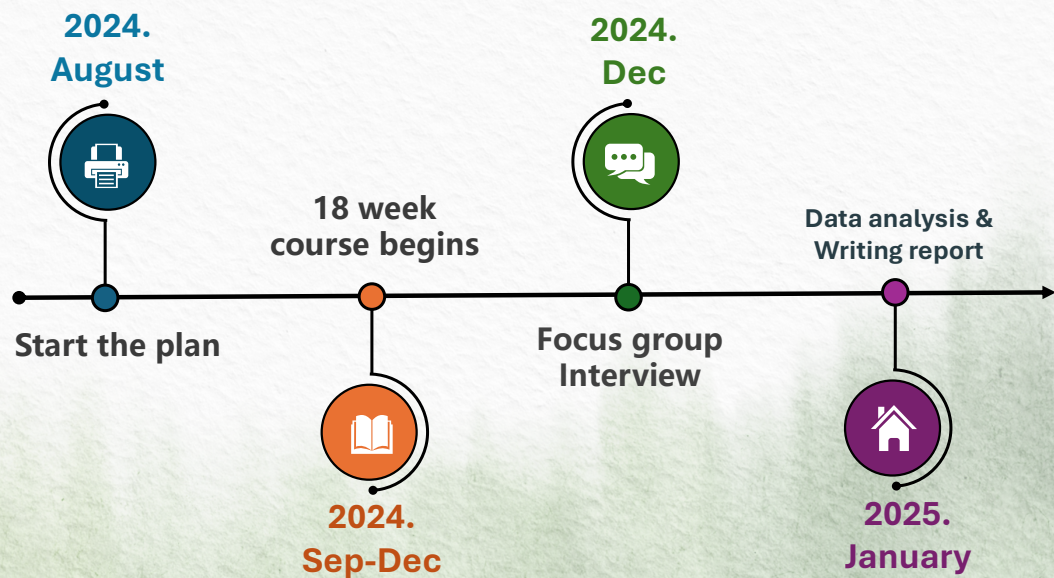
5 Teaching experience **70** students **16** weeks

Group Interview

Instructor reflection journal

Students post-class reflection

Learning portfolio



“ Implementing AfL strategy

- STEP 1** Decide the **learning outcome** that is to be aligned with the overall goal of the unit.
- STEP 2** Determine meaningful, relevant and worthwhile **learning intentions** related to the aim/learning outcome.
- STEP 3** Determine the **success criteria** that is to be shared with the students to inform them of what successfully achieving the specific learning intentions looks and feels like.
- STEP 4** Consider **how** the success criteria **are to be assessed** and **by whom** (i.e. teacher, individual student or student peer).
- STEP 5** Consider the **most appropriate pedagogical strategies** that will allow the teacher to scaffold learning experiences related to the learning intentions that, in turn, will allow students to participate in, and assess their achievement in, specific learning intentions

Planning

Part 1 (Week 1-9)

Badminton Skills & Tactics

- Preseason practice (as a player)
- Preseason practice (as a coach)
- Making organizational decision
- Working as a member of a team.

Psychomotor > Cognitive > Affective

Part 2 (Week 10-14)

Competitive game (regular season)

- Making organizational decision
- Working as a member of a team.
- Learning duty roles (umpire, scorekeeper, trainer...et al.)
- During competitive games (as a player/as a coach)

Cognitive > Affective > Psychomotor

Part 3 (Week 15-16)

Competitive game (Grand Finals)

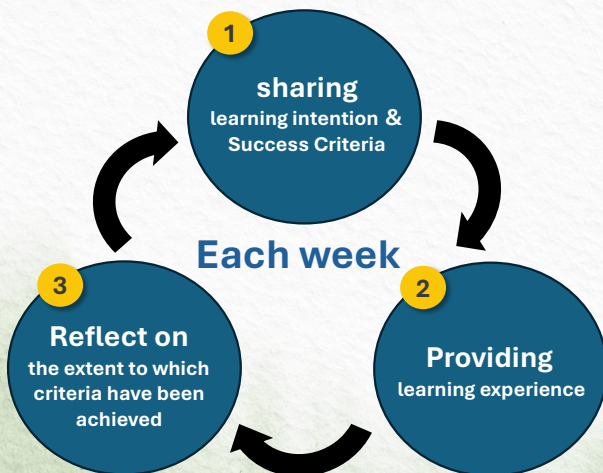
- Working as a member of a team.
- Making organizational decision
- Learning duty roles (umpire, scorekeeper, trainer...et al.)
- During competitive games (as a player/as a coach)

Affective > Cognitive > Psychomotor



Sport Education

Planning

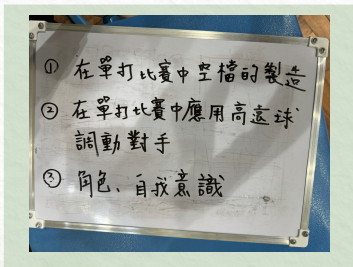


End of the course





Sharing learning intention & Success Criteria



Example.

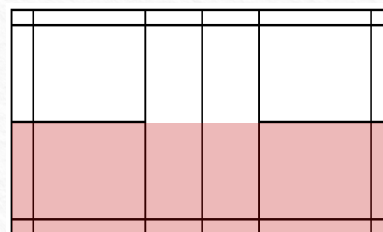
Sharing learning intention	Sharing Success Criteria
<p>Cognitive: Understanding how to create space in the game.</p> <p>Psychomotor: Executing clear skills to create space in the game.</p> <p>Affective: Demonstrating cooperation and interaction with others</p>	<p>Cognitive: The shots landed in either the frontcourt or backcourt of the opponent's side.</p> <p>Psychomotor: During the match, the opponents needed continuous movement to return shots effectively.</p> <p>Affective: Teammates assumed their respective roles and worked collaboratively to accomplish tasks.</p>



Providing learning experiences- Badminton Skills & Tactics (week1-9)

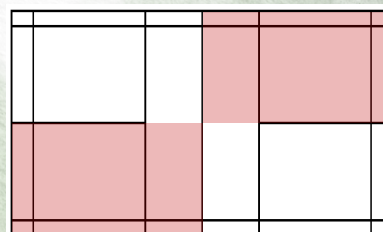
Learning Task 1- Drive shot

- **Activity:** Each group, consisting of two players, practiced flat drives within a single half-court.
- **Rotation:** Players alternated on the court following the instructor's command.
- **Shot Directions:** The drills emphasized straight shots and cross-court shots.



Learning Task 2- Drive shot

- **Activity/ Rotation/ Shot Directions:** Same as above
- **Video Recording:** Players not on the court assisted with video recording using their phones.



Learning Task 3- Drive shot

- **Activity/ Rotation/ Shot Directions/ Video Recording:** Same as above
- **Observation and Feedback:** The coach provided feedback based on the observational aspects discussed during the lesson.

Providing learning experiences- After class

Providing peer feedback based on rubric descriptions

Skill	Exceeding	Meeting	Developing	Struggling
Badminton smash*	<ul style="list-style-type: none"> The smash shots travel on a powerful and downward trajectory to the opponent's side. The performer hits the shuttle at its highest point and performs a full swing. 	<ul style="list-style-type: none"> The smash shots are executed from the front court and travel with moderate pace and downward trajectory to the opponent's side. The performer varies in hitting the shuttle at its highest point and performs a full swing. 	<ul style="list-style-type: none"> The smash shots are inconsistently executed from the front court and travel with slow pace and an inconsistent downward trajectory to the opponent's side. The performer inconsistently hits the shuttle at points high and mid chest and inconsistently performs a full swing. 	<ul style="list-style-type: none"> The smash shots are contacted with slow pace on an inconsistent trajectory that varies in placement with respect to the opponent's side of the court. The performer hits with an immature swing motion and does not follow through. The contact point is inconsistent from the extension of the arm to mid-chest.
Badminton high serve*	<ul style="list-style-type: none"> The high serves must have the shuttle dropping steeply downward at the back end of the court and can demonstrate a variance of placement or speed. 	<ul style="list-style-type: none"> The high serves must have the shuttle dropping steeply downward at the back end of the court but without variance of placement or speed. 	<ul style="list-style-type: none"> Simply gets the shuttle in play. The high serves have the shuttle dropping downward at the forecourt. 	<ul style="list-style-type: none"> The high serve is put in play less than 50% of the time. The high serves have the shuttle dropping downward at the forecourt.
Badminton low serve*	<ul style="list-style-type: none"> The low serves always have the shuttle flying just above the net with a variance of placement and speed from trial to trial. 	<ul style="list-style-type: none"> The low serves sometimes have the shuttle flying just above the net without variance of placement and speed. 	<ul style="list-style-type: none"> The server simply gets the shuttle in play but it is often high enough without placement and speed. 	<ul style="list-style-type: none"> The low serve is put in play less than 50% of the time.
Badminton clear shot*	<ul style="list-style-type: none"> The clear shots consistently drop steeply to the baseline. 	<ul style="list-style-type: none"> The clear shots are sometimes dropped steeply toward the baseline and at times contacted flat. 	<ul style="list-style-type: none"> The shuttle travels flatter toward the baseline, making it easy to intercept by the opponent. 	<ul style="list-style-type: none"> The shuttle is inconsistently placed in the court.
Badminton drop shot*	<ul style="list-style-type: none"> The shuttle barely clears the net, landing on the opponent side of the court near the net all the time. 	<ul style="list-style-type: none"> The shuttle is consistently hit over the net but lands consistently further away from the net. 	<ul style="list-style-type: none"> The shuttle is hit over the net at times in error, either hitting the net and falling short or contacted too deep, allowing for an easy return. 	<ul style="list-style-type: none"> The shuttle is inconsistently and randomly contacted, resulting in a high error rate.
Shuttle placement*	<ul style="list-style-type: none"> Uses a combination of angles and controlled power from contacting the shuttle to place it in accurate locations in either the corners of the front court or the back court. 	<ul style="list-style-type: none"> Places the shuttle in general locations directed away from the opponent. 	<ul style="list-style-type: none"> Returns the shuttle without recognizing accuracy or placement. 	<ul style="list-style-type: none"> Simply aims to contact and return the shuttle. This action is performed inconsistently.
Central court position and movement*	<ul style="list-style-type: none"> Uses pre-cutting to aid in understanding where the opponent will return the shuttle. Quickly moves with proper racquet readiness to make the appropriate shots during game play and returns to base position after executing various shots. 	<ul style="list-style-type: none"> Waits for opponent to contact shuttle to initiate movement to return shuttle. Moves at moderate speed and racquet readiness to make appropriate return of the shuttle with moderate speed returning to the center of the court. 	<ul style="list-style-type: none"> Waits for shuttle to cross the net prior to initiating movement toward shuttle. Does not return to center court, but maintains position after striking the shuttle. 	<ul style="list-style-type: none"> Does not move to initiate a hit on the incoming shuttle. Does not understand the concept of repositioning oneself in the center of the court.
Anticipation skills*	<ul style="list-style-type: none"> Consistently predicts the precise direction that the opponent's shuttle will move based on anticipating arm and upper body movements of opponent. 	<ul style="list-style-type: none"> Waits for opponent's shuttle to be contacted after observing arm and upper body movements of opponent. 	<ul style="list-style-type: none"> Sporadic anticipation of arm and upper body movements of opponent. 	<ul style="list-style-type: none"> Performer does not anticipate any bodily movement and solely reacts to the flight of the shuttle.

(Casebolt et al., 2020)



13

Providing learning experiences- After class

Learning Task- Peer assessment

- **Video Upload** to the discussion board.
- **Feedback Allocation:** Ensuring that every group member both gives and receives feedback.
- **Rubric-Based Feedback:** Feedback providers should provide comments based on the criteria described in the Rubric.

回應: 蔡亞倫同學
由41323284 王聖恩發表於2024年10月24日(四) 20:19

互評：發短球
發短球3 發短球2 擊過球3 球的位置3 **Level comments**
在正式比賽中沒有發到短球，發球刁鑽，下次要記得發球也要發給對手。
發短球擊過球的部分很棒，有成功將球入擊到對手，接著再發一短球，漂亮的拿下這一分！ **Describe comments**

回應: 蔡亞倫同學
由41283190 翁志祥發表於2024年10月24日(四) 22:21

互評: 發短球
發短球1 發短球2 擊過球1 球的位置2
發短球的次數則減少，之後或許可以多練習多發幾發短球部分，但至於短球的部分，發發得不錯，有調到對手，很棒!
發短球擊過球的部分，可以考慮從調整拍面的角度和握拍的位置去加強，讓在擊球的時候可以更加穩定!

回應: 蔡亞倫同學
由41151025 劉明倫發表於2024年10月25日(五) 08:43

互評：陳美君 (影片2)
發短球- 發短球4 擊過球4 球的位置3
短球發的動作很厲害，擊過球飛行的弧度也很漂亮，是值得學習的對象，可以隨時配合正手發球做運用，也可以多做空閒運用來調動對手，自己也會輕鬆許多

回應: 蔡亞倫同學
由41342215 劉明倫發表於2024年10月25日(五) 02:06

互評：林均倫 (第一部影片)
發短球4 發短球4 擊過球4 球的位置3
發短球、各動作都非常的標準 (有達到上課所學)，是很好可以好學習的對象，可惜的部分是有短球的位置可以再調整，讓對手沒有那麼好擊球，相信這樣可以多拿一分數，繼續表現很棒!

14



Providing learning experiences- Competitive game (week10-16)



Badminton Team Record Sheet

羽球比賽團隊記錄表

組別: 7 週次: 13 隊名: 動起來, 動起來

This Week's Team Goal (at least two)

全員到齊, 人人有球打, 至少贏三場

Practice activities

- 雙打練習 (兩兩練習, 高遠球, 吊球, 來回對打)
- 以實戰為練習 (隊內模擬雙打小比賽, 暖身練習比賽, 並增加隊員默契)

Post-competition review

- 回遠球時, 不要再往後跑一點, 才較容易接到, 接完後再回位。
- 切忌 (心態穩定): 在發球或攻擊時不要太高, 準備好或接球。
- 發球時不要失誤: 在比賽時要全神貫注, 時機後再打。

盡量把握每一顆能接到的球, 進攻的練習

Team goal : 非常低 1 2 3 4 5 非常高

achievement level

Team score

場次	對手	第一點	第二點	第三點	第四點	勝/負	總分
4	G3	6	9	11	12	勝	38

Discussion on Revising Game Rules

Teacher's Version	consensus version
<ul style="list-style-type: none"> 一局分數 15 分, Deuce 連續兩分才獲勝, 最多打到 20 分 以積分制, 五個點全部都要打完 每位選手都必須出賽 一位選手最多只能上場 2 次 每個小隊都需要分配攝影人員及裁判 點次: 單、雙、單、雙、三對三 	不變

Order of participation in the game

場次	對手	player	Video	Referee
G6		第一點: 廖子編	杯	李
		第二點: 林政佑, 陳其豐	何	李
		第三點: 何德源	陳	廖
		第四點: 李勁丞, 陳其豐	何	林
		第五點: 林政佑, 廖子編, 何德源	李	陳



Reflect on the extent to which criteria have been achieved

Part 1 (Week 1-9)

- What do you think the learning intentions of today's lesson were?
- To what extent do you think you achieved the objective? (Rate on a scale of 1-10)
- Please explain why you gave yourself this rating.
- What adjustments or efforts do you plan to make for the next lesson?
- Any feedback or comments you would like to share with the instructor?

羽球初級 G-week7 課後反思

各位同學好

上完今日的課程, 老師希望你以回顧一下這節課你做的事情, 並就這節課的學習進行反思, 同時這也是老師與你的另一個對話空間, 如果你有任何問題與回饋歡迎在這個地方留下你的想法。

授課教師 瑪佳

sheery963741@gmail.com 切換帳戶

未共用的項目

* 表示必填問題

姓名 *





Reflect on the extent to which criteria have been achieved

Part 2-3 (Week 10-16)

- **What were your team's goals for today?**
- To what extent do you think you achieved the goals? (Rate on a scale of 1–10)
- Please explain why you gave yourself this rating.
- What adjustments or efforts do you plan to make for the next lesson?
- Any feedback or comments you would like to share with the instructor?



Reflect on the extent to which criteria have been achieved

Part 2-3 (Week 10-16)

- What level do you think you are at?

Component	Exceeding	Meeting	Developing	Struggling
High serve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Low Serve	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Clear Shot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Drop shot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Shuttle placement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Central court position & movement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>





Student post-class reflection

Learning intention

Cognitive:

Understanding how to create space in the game.

Psychomotor:

Executing clear skills to create space in the game.

Affective:

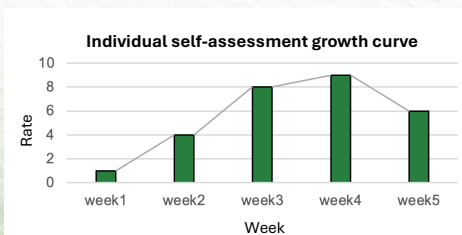
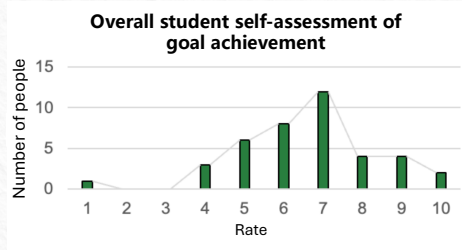
Demonstrating cooperation and interaction with others



What do you think the learning intentions?	Rate?	why you gave yourself this rating?	What adjustments do you plan to make for the next lesson?
1-1 你認為今天的課程的目標是什麼?	2-1 你認為	2-2 請描述為什麼你達成的程度是這個數字? (至少30字)	3-1 你認為為下一節課你會做哪些調整或努力?
高遠球	5	有時打的出去有時打不出去	練習揮拍
正手打高遠球、比賽練習	4	對打的比賽表現不太好, 高遠球掌握不夠	調整自己的姿勢
長球的架拍姿勢	6	動作可以更準確	加油
長球	7	有遠但不夠高, 即球能夠飛到後場, 但是高度不太行。	增加力量訓練
長球練習和將長球應用在比賽中	7	有時候球會打太高導致不遠	接球再更積極一些 避免球拍放下來 嘗試讓高球飛的更遠
學會打長球	7	在與隊友的練習過程不太順利, 有時可能無法打高球, 但比賽的過程中我認為我打的算還可以。	繼續努力, 讓自己更接近理想狀態的長球
正手高球	6	對於球的位置無法準確掌握	揮拍時的軌跡要調整
學會發長遠球	7	一開始打的很不順, 但在經過老師的示範調整之後, 跟同組的夥伴的練習就順暢許多, 所以我給自己的分數是這樣。	發球跟接球要再更注意
練習長球	6	覺得自己還不是很清楚也沒辦法完全做出動作, 比賽的時候也沒有運用到, 所以給自己六分。	複習之前所學並運用
高遠球的熟悉	7	有時候抓不到揮拍時機	球來之前就把手的姿勢架好
發長球、學會轉身回擊球	6	因為我覺得我在練習的時候有記得自己的手要太高預備, 而且真的有打出比我之前打過都高的球, 但是在比賽的時候手會忘記要架起來, 動作也會跑掉。	在球過來的時候就要記得把手架起來 自己的動作應該要怎麼擺, 嘗試再
學習高遠球的擊球姿勢、技巧並加以運用	10	雖然剛開始步驟練習時身體不太協調, 但多次練習後, 分解步驟逐漸變成熟悉的連貫動作, 球的飛行路徑也越來越高、遠。	讓球不僅飛高, 更能飛的更遠
練習高遠球	1	揮拍動作還是很卡, 球的落點還有打點也都抓不準, 導致腳步會亂	多練習
學會高遠球、單打規則	8	我覺得我今天比較可以控制球的走向, 對打時也可以抓到空檔。	擊球時多使用手腕
長遠球及單打比賽	5	長球不夠深遠還要多加練習, 還有揮拍的角度	繼續做揮拍的調整擊球的時



Student post-class reflection



10 In terms of progress, I feel like I've improved by 10. In the beginning, I couldn't execute high clears at all; my shots were flat and lacked distance. Later, the team leader advised me This made a noticeable improvement, and my clears became smoother...

1 My swing still feels pretty stiff, and I can't quite get the shuttle's landing spot or the contact point right, which messes up my footwork.

week1 I'm still not very good at it.

week2 My backhand serve isn't stable yet.

week3 I think I'm good at hitting drive shots.

Week4 My forehand serve is quite smooth.

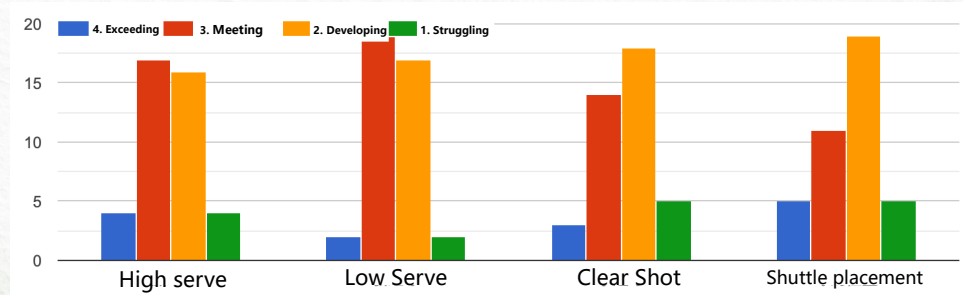
week5 I have trouble accurately judging the shuttle's position.

Students' self-assessment results are based on the rubric

羽球初級 G-week7 課後反思

4-1 請就下面的等級表為自己給分 *

項目	4 優越	3 有信心	2 發展	1 初學
發高球	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
發短球	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
擊過球	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
球的位置	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



- Students initially encountered challenges in engaging assessment, as it diverged from their accustomed method of passive learning—where instructors teach skills, and students are assessed at the end.
- Students were given more autonomy and responsibility through learning tasks, they began to visibly observe and recognize improvements in their self-awareness and self-regulation abilities.
- This provided concrete evidence of the benefits AfL offers.

Reflecting



- This study highlights that AfL is an effective approach to help students visualize their learning and understand how to learn. Nonetheless, it also underscores the role of students' assessment literacy as a critical factor influencing the successful implementation of AfL.
- Future research should continue to validate the concept of AfL and explore strategies for improving students' assessment literacy to support effective practice.



Thank you

2025.2.13Thu, 14:40-15:20 (presentation 30min., Q&A 10 min.)

Jongho Lee*/Ducksu Middle School

Euichang Choi/ Professor, Seoul National University

Exploring Physical Education Teachers' Perceptions on Sustainable Development in PE: Implications for PE Teacher Education

The purpose of this study was exploring physical education (PE) teachers' perceptions of Sustainable Development in PE. This study adopted qualitative content analysis as the research method. The participant groups were selected through purposeful sampling and were divided into a group of 100 secondary PE teachers and a group of 16 secondary PE experts. To collect data, an online survey for teachers and in-depth interviews with experts were conducted. Data was inductively analyzed through a process of open coding, grouping, categorization, and abstraction. Key findings are as follows: (a) Participants viewed Education for Sustainable Development (ESD) as an essential and societal imperative, yet an unfamiliar and peripheral area to their practice, which was related to limited access to ESD information. (b) Perspectives on the relationship between PE and ESD fell into three categories: the subset perspective, the intersection perspective, and the coevolution perspective. (c) Teachers prioritized societal goals in relation to PE and identified K-SDGs such as "3. Good Health and Well-Being," "4. Quality Education," and "16. Peace, Justice, and Strong Institutions" as most relevant, while perceiving environmental and economic goals such as "2. Zero Hunger," and "14. Life Below Water" as less significant. (d) Both groups emphasized integration and collaboration as key values, advocating for integrated problem-solving and collaborative competencies, as well as experiential learning methods. Based on the findings, suggestions include aligning Physical Education Teacher Education curricula with ESD competencies and empowering PE teachers through professional development for effective ESD implementation.

Key words: Sustainable Development, Education for Sustainable Development, Physical Education Teacher, Content Analysis

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Exploring Physical Education Teachers' Perceptions on Sustainable Development in PE

Implications for PE Teacher Education

Jongho Lee and Euichang Choi

Ducksu Middle School and Seoul National University

The 7th East Asia University Physical Education Research Forum

2025.02.13.

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Introduction

Sustainable Development
Education for Sustainable Development
Research Trends
Purpose and Questions

01

I. Introduction

1. Sustainable Development

2. Education for SD

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4. Purpose and Questions

● Current Global Efforts to Address Issues: Sustainable Development



Anthropocene Epoch

- Highlighting humanity's environmental degradation and societal challenges
- From 1880 to 2012, global average temperatures rose by 0.85°C, and sea levels increased by approximately 19cm (Pachauri & Meyer, 2014)
- Environmental pollution and climate change emphasize the urgency of protection

Social Issues

- Social issues that we must address continue to arise persistently
- Social inequality caused by polarization
- Low birth rate and aging population, etc.

Sustainable Development

- "Meeting the needs of the present without compromising the ability of future generations to meet their own needs" (UN, 1987)
- Discussions led by international organizations have established sustainable development as a universal developmental strategy for the 21st century

I. Introduction

1. Sustainable Development

2. Education for SD

3. Research Trends

4. Purpose and Questions

● Education for Sustainable Development



ESD

Changing society
Protecting the planet

- ESD advocates for learning which is:
- Cognitive: Improving how we think and understand information
- Socio-emotional: Building social skills, empathy and emotional intelligence
- Behavioral: Encouraging positive actions and behaviors (UNESCO, 2024)

Curriculum

- Korea: emphasis has gradually increased in subsequent curriculum revisions (Ministry of Education, 2021)
- Subject-specific contexts: Science, Social Studies, and Environmental Studies

Sustainability

Sustainable environment

Sustainable sport

Ecological culture

<Terms presented in the 2022 Revised Curriculum for PE>

2007
Cross-curricular themes

2009
Cross-curricular themes

2015
Related subjects

2022
All subjects

<The extent of integration in the Revised Curriculum for PE>

I. Introduction

1. Sustainable Development

2. Education for SD

3. Research Trends

4. Purpose and Questions

● Research Trends in PE

● Research Trends in ESD



Discussing the value of PE from the ESD perspective (Baena-Morales & González-Villora, 2022; Lundvall & Fröberg, 2022)

Exploring the effects of models designed for ESD (Baena-Morales et al., 2021; García-Rico et al., 2021)

Developing and implementing ESD programs (Kang & Son, 2016; Olsson et al., 2016)

Analyzing curriculum and textbook from the ESD perspective (Osman et al., 2017; Park, 2022)

Analyzing PE teachers' perceptions of ESD (Baena-Morales et al., 2022; Méndez-Giménez et al., 2023)

Analyzing curriculum for PE from the ESD perspective (Fröberg et al., 2022; Fröberg & Lundvall, 2022)

Analyzing teacher, student perceptions and experiences (Cebrián & Junyent, 2015; Kim et al., 2012)

The concept of ESD, Its relationship with subject (Boeren, 2019; Lim & Lee, 2016)

Exploring strategies to promote ESD (Bae et al., 2022; Kwon et al., 2021)

The necessity of research in PE

- Research on ESD in the context of school PE tends to be conducted in Europe
- In Korea, there are limited studies except for:
- Theoretical exploration of ecological PE (Kim, 2023, 2024)
- Theoretical exploration of Leisure Education within PE for SD (Park, 2024)

● Purpose and Research Questions

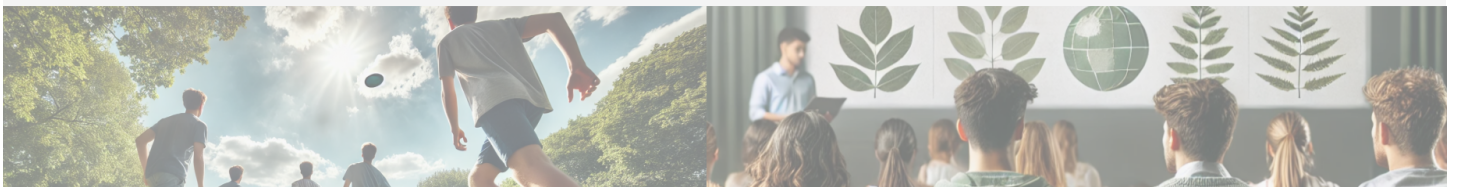


Purpose

- Exploring secondary school Physical Education Teachers' Perceptions on Sustainable Development in PE
- Suggesting Implications for PE Teacher Education

Research Questions

- How do secondary school PE teachers understand ESD?
- What are secondary school PE teachers' perceptions of the connections between PE and the Korean Sustainable Development Goals (K-SDGs)?



Exploring Physical Education Teachers' Perceptions on Sustainable Development in PE

Methods

Participants
Data Collection
Data Analysis and Trustworthiness

02

II. Methods

1. Participants

2. Data Gathering

3. Data Analysis and Trustworthiness

Participants



<Secondary PE teachers>

	Category	Number of P	Sum
Gender	Male	68	100
	Female	32	
Age	20s	30	
	30s	56	
	40s	12	
	50s	2	
Teaching Experience	5 years or less	38	
	6~10 years	38	
	11~20 years	18	
	Over 21 years	6	
School Level	Middle school	65	
	High school	35	
Region	Metropolitan Cities	75	
	Small and Medium-Sized Cities	20	
	Rural Areas	5	

<Secondary PE experts>

No.	Name	Job	T.E.	S.L.	Gender	Region	Practical Experience
1	Simin	Teacher	15y	Middle	M	S	Curriculum Development
2	Yeoil	Teacher	14y	High	M	G	Teacher Community
3	Young	Inspector	15y	-	M	S	Democratic Education
4	Jooan	Principal	31y	High	M	S	Teacher Community
5	Sedong	Teacher	8y	High	F	JB	Conference Presentation
6	Josung	Teacher	13y	Middle	M	B	Article Publication
7	Seon	Teacher	12y	Middle	M	JB	Textbook Publication
8	Byum	Teacher	10y	Middle	M	S	Article Publication
9	Haesoo	Teacher	15y	High	M	CB	Curriculum Development
10	Minju	Teacher	5y	Middle	M	G	Conference Presentation
11	Mirae	Teacher	14y	High	M	CN	Article Publication
12	Sungoo	Teacher	14y	Middle	M	U	Conference Presentation
13	Soryun	Teacher	24y	High	M	I	Curriculum Development
14	Jawon	Teacher	26y	Middle	M	S	Curriculum Development
15	Beejo	Teacher	15y	Middle	M	CN	Article Publication
16	Jinha	Teacher	13y	High	M	G	Curriculum Development

II. Methods

1. Participants

2. Data Gathering

3. Data Analysis and Trustworthiness

Data Gathering



Online surveys

- For 100 secondary PE teachers
- Participants' background, Perceptions of ESD, Current practices of ESD, and Challenges and improvement measures for ESD

How would you define sustainable development?

What teaching-learning methods do you think are suitable for ESD?

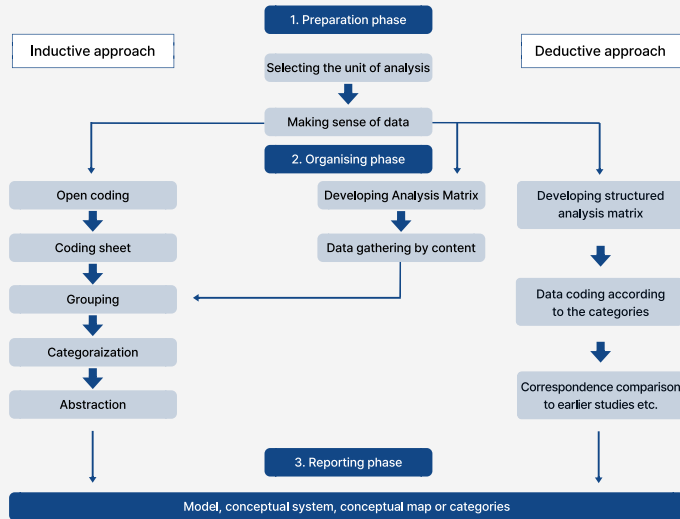
In-depth interviews

- For 16 secondary PE experts
- Participants' background, Perceptions of ESD, Practices and possibilities of implementing ESD, and Challenges and improvement measures for ESD

What do you think is the relationship between PE and ESD?

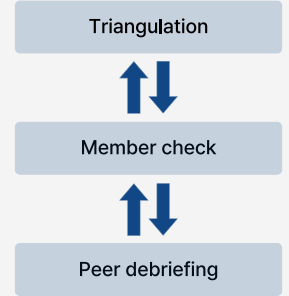
What were the educational effects when implementing Sustainability-Oriented Physical Education (SOPE)?

Data Analysis



<Process of Qualitative Content Analysis (Elo & Kyngäs, 2007)>

Trustworthiness and Research ethics



- Inductive approach: online surveys, in-depth interviews
- Completed the CITI Research Ethics Education Program (2023.04.18)
- IRB No. 2307/004-001 (2023.07.10. ~ 2024.07.09.)

Exploring Physical Education Teachers' Perceptions on Sustainable Development in PE

Findings

ESD and its relationship with PE
Linkage between K-SDGs and PE
Goals, competencies, and methods



III. Findings

1. ESD and its relationship with PE

2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

● ESD and its relationship with PE



✓ A societal imperative: Future and inclusion, life and ecology

- Experts also recognized ESD as tasks related to the future, inclusion, ecology, and life

<Survey results on the definition of ESD>

Category	Number	Responses (partial)
Future-Oriented	16	Preparation and investment for the future, Education evolving to match change, Considering future society, Responding to change
Inclusive	14	Education for All, Inclusive Education, Community-oriented education, Education of values such as cooperation
Essential	7	Essential, Mandatory
Ecological Transition	6	Ecological education in nature, Consideration of ecosystems, Interest in nature and the environment
Life	6	Application of learning to life, Life and experience
Unknown	5	Unknown, A topic for joint reflection, An unexplored area
Other Categories	9	Lifelong Education (n=3), Physical Education (n=2), Knowledge Education (n=2), Holistic Education (n=1), Value Education (n=1)

"Frankly, this term felt too difficult to grasp, so I thought of it as 'How should we approach future education?' I believe ESD is about teaching children the skills they need to live well in an ever-changing society." – Teacher Sedong, In-depth Interview

"I think ESD is about approaching all aspects of life—environment, ecology, economy, society, and culture—in a way that enables humanity to live a better life through education." – Principal Joaon, In-depth Interview

"I view ESD as basic literacy education, similar to how we teach fundamental etiquette. It would be ideal if these concepts naturally permeate lessons and everyday guidance." – Teacher Haesoo, In-depth Interview

III. Findings

1. ESD and its relationship with PE

2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

● ESD and its relationship with PE



✓ Ambiguous perception: An unfamiliar and peripheral area

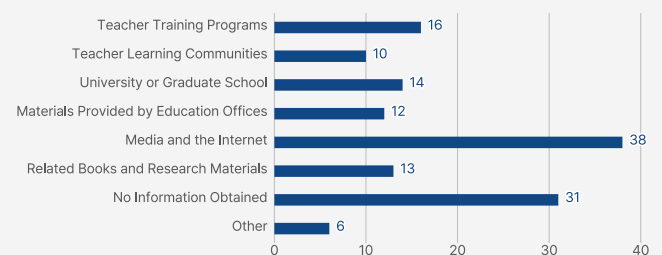
- Both teachers and schools showed low levels of interest
- "Very Low" and "Low": "Unfamiliar concept" (n=10), "Inappropriate or difficult to link with PE" (n=6)
- "High" and "Very High": "Interested in societal changes" (n=3), "Indirectly understood through graduate-level research" (n=2)

<Survey results on the levels of interest in ESD>

	Very Low	Low	Moderate	High	Very High	Mean	SD
Teacher	14	31	32	19	4	2.68	1.06
School	15	27	37	18	3	2.67	1.03

"I've participated in a PE teacher learning community, and I'm in national PE teacher chat rooms and forums, right? But I've never seen ESD discussed in any of those spaces." – Teacher Sungoo, In-depth Interview

- Survey responses on information sources were similar to the results on interest levels
- 31% stated they had never obtained information about ESD through any channel



<Survey responses on the information sources> (Multiple Responses)

III. Findings

1. ESD and its relationship with PE

2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

● ESD and its relationship with PE



✓ Relationship with PE: Subset and Intersection

- Survey results showed two main perspectives:

1. PE can contribute as a subset of ESD
2. We should focus on the intersection of PE and ESD



<Survey responses on the relationship between PE and ESD>

- This division into relationships 1 and 3 was also observed in the in-depth interviews
- Some participants saw relationship 4 as *"the co-evolution of PE and ESD"*

"They partially overlap. It's less about being logical and more about a practical necessity. (...) The idea of PE being subsumed into ESD seems unreasonable and inappropriate. PE might contribute to ESD to a certain extent." - Teacher Jawon, In-depth Interview

"It's a mutually developing relationship. The concept of sustainability isn't fixed. (...) Even within PE, you see changes influenced by ESD. Conversely, PE can also contribute to evolving the concept of sustainability." - Teacher Byum, In-depth Interview

III. Findings

1. ESD and its relationship with PE

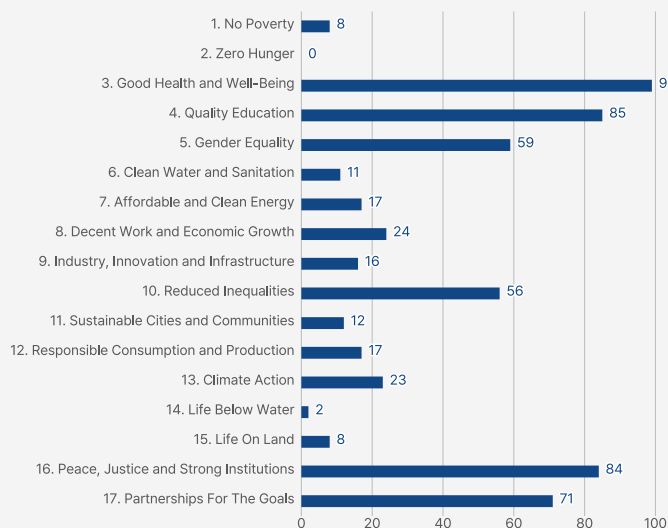
2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

● Linkage between K-SDGs and PE: Social > Economic > Environmental



✓ Highly Linked K-SDGs in PE



<Survey responses on the K-SDGs Most Linked to PE>

- **Key Features regarding Social Domain K-SDGs**
- K-SDG 3: Frequently equated with the primary goal of PE
- K-SDG 4: Central to arguments about Quality PE (QPE)
- K-SDG 16: Directly linked to K-SDG 4 and K-SDG 10
- K-SDG 17: Transcending language barriers through sports
- K-SDG 5, 10: Contrasting arguments regarding PE goals

"Physical Education largely involves sports, right? Within sports, there are always dilemmas—what constitutes the most just action? This opens avenues for extensive inquiry." - Teacher Byum, In-depth Interview

"The failure to build a PE environment that satisfies disabled individuals, as well as addressing gender inequality has persisted for decades. While requiring research, I believe they are difficult to position as the primary goals." - Participants 36, Survey

III. Findings

1. ESD and its relationship with PE

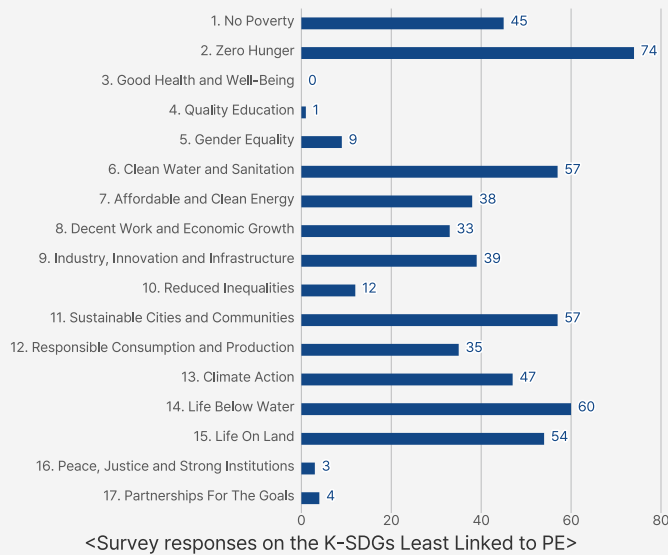
2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

● Linkage between K-SDGs and PE: Social > Economic > Environmental



✔ Weakly Linked K-SDGs in PE



- **Key Features regarding Economic Domain K-SDGs**
- Economic domain evoked more skepticism and criticism about their relevance to PE
- K-SDG 2: Difficulty in connecting this goal with PE
- K-SDGs 8, 9: Centered around the sports industry
- K-SDG 12: Both economic and environmental issues.

"In the future, sports and industry will become more closely intertwined, expanding the scope of PE and increasing its relevance." - Participant 1 (Survey)

"Quality jobs, economic growth, and sustainable consumption feel like economic issues. Personally, I couldn't find a clear connection with PE." - Participant 23 (Survey)

"SDG 8 and 9 are somewhat distant goals, and they are more aligned with the overall economic development of businesses or nations." - Teacher Jinha, In-depth Interview

III. Findings

1. ESD and its relationship with PE

2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

● Linkage between K-SDGs and PE: Social > Economic > Environmental



✔ Weakly Linked K-SDGs in PE

- **Key Features regarding Environmental Domain K-SDGs**
- K-SDG 14 (60%), 15 (54%):
- Skeptical: Challenges such as the effectiveness and pollution caused by sports
- Optimistic: Physical activities like jogging on beaches as a way to raise environmental awareness

"Marine and terrestrial ecosystems can also be addressed through activities like hiking or jogging. However, such activities are feasible in all subjects, not just PE." - Participants 9

- K-SDG 13 (47%):
- Skeptical: Forcing connections between PE and climate change
- Optimistic: Emphasized the role of PE in addressing climate and weather-related issues

- K-SDG 6 (57%): Discussions did not align with the core aspects of K-SDG 6 but rather focused on water safety and accident prevention

"Safety is one of the most important factors in physical education. Preventing accidents related to water activities is also part of the curriculum." - Participants 76, Survey

- K-SDG 11 (57%): Participants struggled to connect this goal with PE, often focusing on housing contexts
- K-SDG 7 (38%): Direct connections to energy were minimal

"Sustainable consumption of energy. For instance, using bicycle can contribute to ecological preservation, aligning with Goal 7." - Teacher Beejo, In-depth Interview

III. Findings

1. ESD and its relationship with PE

2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

Goals, Competencies, and Methods: Integration and Collaboration



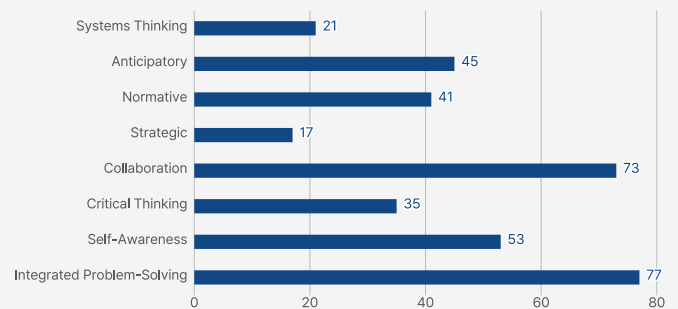
Goals and Competencies

- 32 participants (32%) responded that they had experience implementing ESD
- 68 participants (68%) who responded that they had no experience suggested goals they would set in the future

<Survey results on the goals of ESD in PE>

Category	Number	Responses (partial)
Community Awareness and Collaboration	8	Conflict resolution, Collaboration and coexistence, Interpersonal competence
Climate Action and Ecosystem Conservation	8	The value of nature, Ecological awareness, Addressing the climate crisis
Healthy and Happy Life	5	Healthy and happy life
Everyday Practices	4	Application in daily life
Inclusive Education	3	Education without exclusion, Holistic education for all
Future Prediction	3	Consideration for future generations, Visions related to the future
Other Categories	3	Norms and reflection (n=1), Self-directedness (n=1), Fostering student interest(n=1)

- **"Integrated problem-solving"** (77%) and **"Collaborative competency"** (73%) were the most frequently selected
- In-depth interviewees also focused on problem-solving, collaborative, and self-awareness competency



<Survey responses on the competencies> (Multiple Responses)

III. Findings

1. ESD and its relationship with PE

2. Linkage between K-SDGs and PE

3. Goals, competencies, and methods

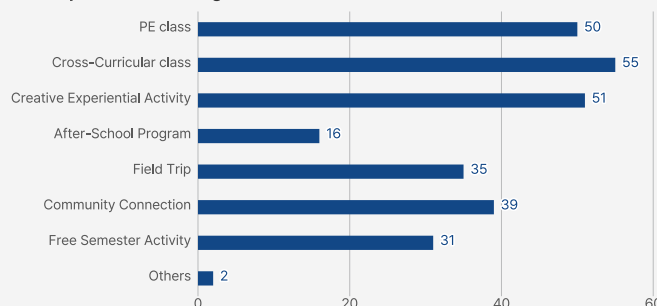
Goals, Competencies, and Methods: Integration and Collaboration



Goals and Competencies

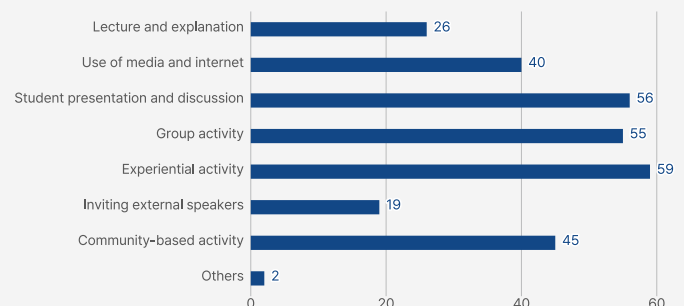
- The response rate for **"cross-curricular class"** was the highest at 55%
- The response rate for **"creative experiential activity"** (51%) slightly surpassed that of **"PE class"** (50%)

<Survey results on the goals of ESD in PE>



<Survey responses on the implementation methods> (Multiple Responses)

- 59% selected **"experiential activity such as field trip"** as the most suitable method
- **"lecture and explanation"** (26%) and **"inviting external speakers"** (19%) were perceived as unsuitable approaches



<Survey responses on the teaching-learning methods> (Multiple Responses)

Conclusion

Key Findings and Discussions
Suggestions

04

IV. Conclusion

1. Key findings and discussions

2. Suggestions

● Key Findings



ESD in PE PE-ESD Relationship

- **Essential and future-oriented but unfamiliar and peripheral**
- **Subset Perspective:** PE as part of ESD
- **Intersection Perspective:** Shared goals between PE and ESD
- **Coevolution Perspective:** Mutually beneficial evolution

Prioritization of K-SDGs

- **Most relevant:**
- "3. Good Health and Well-Being," "4. Quality Education," "16. Peace, Justice, and Strong Institutions"
- **Less relevant:**
- "2. Zero Hunger," "14. Life Below Water," "11. Sustainable Cities and Communities"

Integration and Collaboration

- **Top goals:** Community awareness and Collaboration, Climate action and Ecosystem conservation
- **Top competencies:** Integrated problem-solving and Collaborative competency
- **Top methods:** Experiential activity, Student presentation, and Group activity
- **Least effective methods:** Lecture and Inviting external speakers

Discussions



Unrecognized Implementation

- Teachers perceived themselves as **lacking knowledge** about SD and ESD in this study
- In fact, a number of teachers **may already be practicing ESD in PE** (Lee, 2024)
- The possibility that responses regarding ESD implementation **may not be entirely accurate**
- Kim et al. (2012), Lee et al. (2010) reported these **even in Environmental Education settings**

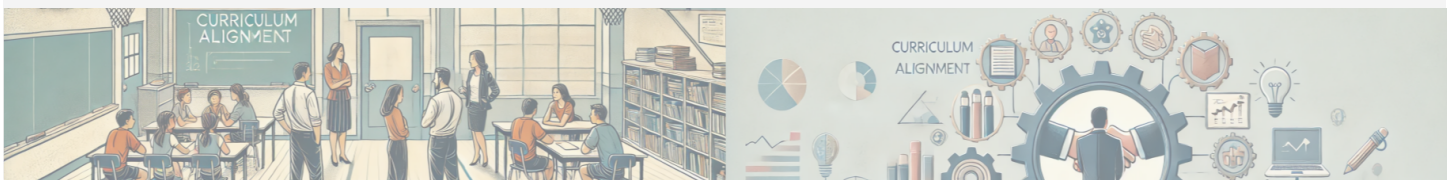
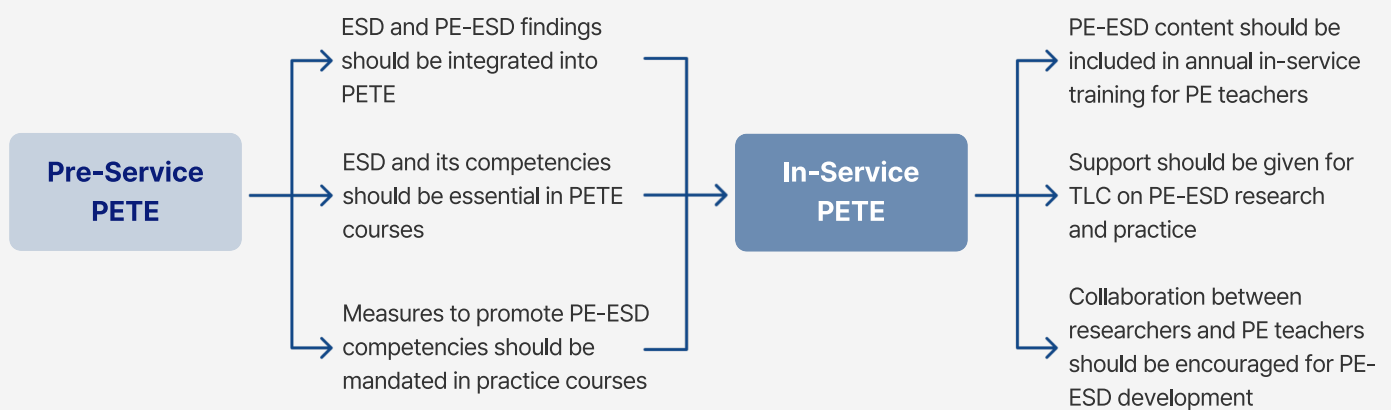
Conflicting Viewpoints

- **The social domain:** Swedish in-service teachers (Fröberg et al., 2022), and Spanish pre-service PE teachers (Merma-Molina et al., 2023) were also highly similar (SDG 3, 5, and 10)
- **The environmental domain:** conflicting viewpoints, both in this study and in previous research (Kim et al., 2012; Merma-Molina et al., 2023).

Curricula and Practices

- **Perceptions:** "social>economic>environmental" ≠ **Curricular:** "social>environmental>economic"
- **Perceptions ≠ Practices:** "social>environmental>economic"
- **Possible reason 1.** the 2022 PE curriculum has not yet been reflected currently
- **Possible reason 2.** the current 2015 PE curriculum notably lacked an environmental dimension
- **Possible reason 3.** the PETE courses also lacked an environmental dimension

Suggestions



Thank you for listening

The 7th East Asia University Physical Education Research Forum

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Ducksu Middle School and Seoul National University

2025.2.13.



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