The Role of Experiential Learning in Preparing Pre-Service Teachers for Special Needs Education

Ahmad Fahim Zulkifli[1*]

[1]Faculty of Education, Centre of Risk Management Universiti Teknologi MARA,
UiTM Puncak Alam Campus, 42300 Puncak Alam, Selangor, Malaysia
fahimzulkifli@uitm.edu.my
[*]Corresponding Author

https://doi.org/10.24191/ajue.v21i1.34

Received: 10 January 2025
Accepted: 4 June 2025
Date Published Online: 30 June 2025
Published: 30 June 2025

Abstract: Experiential learning (EL) can potentially equip pre-service teachers with higher knowledge, sports, and management skills. Utilising the post-event survey and observation analysis, this study focused on undergraduate pre-service teachers during the Oct–Feb 2025 semester integrating contents, expectations, and experiences relating to an expanded role of their pre-service teachers' training during EL. The study aimed to examine the role of experiential learning in undergraduate pre-service teachers' readiness in teaching adapted physical education (APE). This qualitative study involved 43 participants aged between 20-25 years who completed the observation analysis during and post-event survey at the end of the EL session with a group of students with disabilities at a local primary school. Additionally, a colleague of the author also participated in the EL which acted as a fidelity check for procedures and observation analysis throughout the EL. Notable findings from this study include participants reported a higher sense of confidence, engagement, and empathy throughout the intervention. Importantly, meaningful communication was considered fundamental in EL and there was strong interdependence and positive relationship between challenges and skills gained. This study highly recommends educators and practitioners shift our "safe" perceptions towards "what works for students" perception by moving from theoretical to experiential-based learning. Additionally, EL is a capable tool to inject higher-quality knowledge, skills, and experience into students' teaching and learning processes.

Keywords: Education, Experiential Learning, Inclusive, Pre-service Teachers, Special Needs

1. Introduction

Experiential learning was defined as a form of pedagogy that integrates teaching and learning processes and community service which brings meaningful impacts to students, faculty, and community (Carrington et al., 2015). Additionally, the learning approach emphasises real-life experiences which promote a higher sense of engagement and critical evaluation of the learned content (Boggu & Sundarsingh, 2019). Unlike practicum experiences, experiential learning emphasis community engagement with a clear learning purpose which aligned with the course content and reciprocity between the educators and participants (Romack & Hsu, 2011). Kolb coined the term as a process where knowledge is created through the transformation of experiences and emphasises on humanistic concept of learning (Kolb, 1984). Through this approach, pre-service teachers would have more opportunities to question, problematise, and identify

strengths and current inequalities experienced by individuals with disabilities. Through higher engagement with community partners, pre-service teachers could deepen their understanding of their roles and skills which help promote the authenticity and reciprocity of experiential learning (An & Decker, 2019). Nonetheless, it is intriguing to note that despite experiential learning and practicum experiences, physical educators still express a sense of hesitation and "no choice" when needed to include students with disabilities in general physical education settings (Piletic & Davis, 2010). Without experiential learning, pre-service teachers might even lead to negative perceptions towards people with disabilities (e.g., deficiency, abnormality, limitation) which increases the tendency of status quo, segregation, or inequity during teaching and learning (An & Decker, 2019).

1.1 Characteristics of Experiential Learning in APE

To create impactful experiential learning in APE, the teaching and learning process must be shifted into real-life environments. Involvement in APE, regular teaching and learning as well as special education sports programmes help the pre-service teachers to develop knowledge and skills in teaching students with disabilities in various aspects such as designing and implementing APE curriculum, modification of instructions, equipment, and playing area as well as positive engagement between educators and students (An & Decker, 2019). Specifically, engaging in real-life situations would positively force the pre-service teachers to perform an analysis of the PE programme and whether the programme has taken into consideration student engagement in the activities, peer interaction, content taught, age appropriateness, and student's level of performance. Consequently, the higher thinking process involving APE teaching and learning would help educators to learn more about their students' conditions and APE programme implementation (An & Decker, 2019). Another study also found that higher and more active engagement among participants with the tasks are more likely to achieve higher levels of learning (Wang et al., 2021).

Next, establishing social action groups either as a whole class or small groups would promote higher involvement and willingness among pre-service teachers to participate in planning, execution, and collecting feedback from their experiential learning. Moving as a group also reduces fear of failure due to lack of familiarity with various students' conditions (e.g., autism, cerebral palsy, down syndrome) while promoting learning ownership and responsibilities (An & Decker, 2019). The exchange of ideas process among members of the group also helps them to be inspired about teaching contents, modifications to their teaching and learning, teaching approaches with APE as well as current issues and gaps when addressing APE in learning institutions. The above idea was touted as "learning by action" whereby information continues to be built as they progress and face various challenges during EL (Afida et al., 2012). The higher degree of involvement between participants and the contents indirectly tied them to the learning process and created a stronger connection between learning involvement, practices, and reality (Bradberry & De Maio, 2019).

Besides that, the introduction of an effective teaching cycle (e.g., assess-plan-teach-reflect) in experiential learning would be valuable to help pre-service teachers practice planning their APE and conduct effective teaching and learning with higher consideration of the student's capabilities, equipment, time, instructions, and learning area (An & Decker, 2019). Kolb further specifies that experiential learning involves four cyclical main components; (1) concrete experience (CE), (2) reflective observation (RO), (3) abstract conceptualisation, and (4) active experimentation (AE) which provides the opportunity for learners to learn and immerse themselves in the experience (Boggu & Sundarsingh, 2019). Briefly, in the assessment phase, pre-service teachers would be involved in observing current APE sessions and identifying students' strengths, weaknesses, and levels of performance. Observing teachers' behaviours during the closure or debriefing process also helps educators understand what is currently happening and what can be done to improve certain aspects in future teaching and learning sessions. Next, the planning phase comprised developing lessons based on previous observations and insights, initiating team collaboration to fully utilise resources and supports, and determining peers' roles as paraprofessionals (i.e., supporting teacher's role in conducting APE).

Subsequently, in the teaching phase, educators were suggested to conduct teaching and learning using a team-teaching approach, teaching students based on their capabilities (e.g., understanding, physical, emotional) so they could receive age and skill levels appropriate from their APE sessions. Communication with stakeholders (e.g., teachers, administrators, parents) would also provide support and insights for the educators to successfully conduct their experiential learning sessions (An & Decker 2019). Naturally, the reflection phase follows post-experiential learning which involves educators critically analysing the social situations and recording their learning evidence through reflective journals, reports, portfolios, and other tools suitable for the purpose (Wang et al., 2021).

Currently, there is only one adapted physical education subject in the author's university throughout the four-year Physical Education Teacher Education (PETE) programme. The semester only spans 14 weeks, and students conduct limited peer-teaching among themselves related to the most common disabilities such as autism, attention deficit hyperactivity disorder (ADHD), and Down syndrome. As the subject was only offered in a single semester and many components (e.g., conditions, management, assessment, legal aspects) were compressed in the subject, it is fair to speculate that the pre-service teachers were still lacking in knowledge, understanding, skills, and practice to identify students' needs, strengths, and interests when participating in APE. Similarly, even in the United States, more than half (i.e., 69%) of PETE programmes at their universities offered only one APE course throughout their programme as a degree requirement while only 31% of PETE programmes offered more than one course (Piletic & Davis, 2010).

Following up on a recent study that recommended qualitative research to explore types of experiential learning activities and how they motivate students' motivation (Kong, 2021); the main aim of this qualitative study was to examine the potential impact of experiential learning on undergraduate pre-service teachers' preparedness in teaching APE. Specifically, this study's objectives include (1) to evaluate the "Arcturus Little Heroes" project on pre-service teachers' confidence in working with special needs students, (2) to identify the key skills and knowledge pre-service teachers developed through the project, and (3) to analyse how experiential learning contributes to pre-service teachers' preparedness for inclusive education.

2. Methodology

A qualitative design was adopted in this study to gain insight into participants' thoughts, experiences, and learned content from experiential learning. The interpretive approach focuses on human experiences and social phenomena rather than solely an objective approach. The design was chosen due to its ability to help researchers gain rich descriptive data which helps understand the context and depth phenomenon of experiential learning in APE (Mills, 2014). Besides that, due to the nature of this study, the flexibility offered through this approach allows for modification to methods and interventions based on the context and complexity of human experiences. Importantly, this study understands the higher subjectivity in this study where often reality is the result of social construction and hence differs greatly between individuals and groups (Mills, 2014).

2.1 Participants

The mix-gender participants in this study comprised 43 undergraduate-level pre-service physical education teachers who participated in the "Arcturus Little Heroes" project as part of their subject "Adapted physical education" assessment. The participants' ages ranged between 20-25 and were currently in their sixth semester (i.e., third year) and preparing for their teaching practical in the following semester. The majority of them reported coming from the Peninsular of Malaysia while the minority reported coming from East Malaysia (e.g., Sabah, Sarawak). The adapted physical education subject is a compulsory subject that needs to be completed by students in the sixth semester to complete the programme and graduate from the PETE course. Apart from theoretical aspects of learning about conditions, attitudes towards people with disabilities, management, and assessment of teaching and learning, the subject also required the students to involve themselves in peer-teaching and project-based learning.

Therefore, all students currently enrolled in this subject were encouraged to participate in this study as part of their learning reflection process and supporting the completion of this study. The project was conducted in the middle of the semester (i.e., week 6) to provide sufficient time for participants to familiarise themselves with the subject's expectations, explore content, and plan strategies on how best to conduct the project. Time given was also needed for them to arrange logistical matters (i.e., bus, teaching aids, food, and beverages) and practice content and pedagogy before the actual project. Nonetheless, those who wished not to participate were still required to be involved in the project as it was part of the subject assessment but excluded from the data collection process. They were also assured of no repercussions should they decide not to participate in this study.

2.2 Procedures

This research process involves several phases of (1) preparation, (2) implementation and data collection, as well as (3) data analysis. Specifically, in the preparation phase, the researcher has allocated considerable time to explore the literature review related to experiential learning in the context of adapted physical education. Articles found from various databases (e.g., ERIC, Scopus) have been scrutinised and triangulated for main ideas, challenges, and current gaps in the field to help the researcher gain insights and plan this research appropriately. Next, the researcher also opted for the active observer role in providing guidance and prompting participants to discuss the project, brainstorming the issues, questions, objectives, and concepts of the project. Project committee members were established to promote collaboration and efficiency in project implementation. Meetings were organised with the participants once a week leading to the project (i.e., Oct 2024) to discuss workflow, progress, changes, issues, and strategies to improvise content and management of the project that suits the student's needs, strengths, and weaknesses. Consent from participants was obtained at the beginning of the APE subject and the project served as one of the ongoing assessments. No additional preparation or work needs to be done by the participants apart from the regular tasks they were required to do in the subject. The participants were assured of the highest confidentiality of their identity and all data collected related to this project. Consequently, all names were replaced with anonymous ones to protect their individual and institutional privacy (i.e., ethics approval number: REC/09/2024 (ST/MR/195).

In the implementation phase, the participants arrive early at the Progress National Primary School to set up stations and teaching aids and conduct the last briefing on activities and mitigation plans (e.g., handling tantrum procedures). The whole project runs for 120 minutes involving 43 third-year undergraduate pre-service teachers (i.e., participants) and 91 students with various disabilities (i.e., autism, ADHD, dyslexia). The students were divided into three groups based on their condition, needs, and capabilities to promote higher engagement between the participants and students. The modification made to equipment, instruction, and playing area also increases the students' willingness to participate in all appropriate age levels of activities in their groups. The researcher was not directly involved in the teaching and learning session but assumed an advisory and active observer role throughout the project. The activities conducted include "ping-pong & spoon", "zig-zag ball", "clay word", "flip the marker", and "hero puzzle". Each of the games was personalised to support students with disabilities in teaching and learning while maintaining the element of fun and adding small competition to increase motivation and on-task behaviour throughout the project.

Different emphasis has been set to each group; specifically, group one activities (e.g., zig-zag ball, ping-pong & spoon) focused on locomotor skills through health and skill-related components (e.g., cardiovascular endurance, agility body coordination). Whereas group two with activities such as "clay word" and "expression game" tends to focus on the affective domain which promotes self-development through emotional recognition, non-verbal communication, creativity, and hand-eye coordination. Students in this group were given more chances to explore their interests and body capabilities through a range of stimuli with minimal interruptions from the participants. Meanwhile, group three (e.g., flip the marker, hero puzzle) provided more opportunities for students to socialise with their peers, teachers, and participants (i.e., facilitators) through material-based learning which promotes cognitive skills and teamwork. Besides

that, activities such as the "hero puzzle" helped students enhance their memories, focus, and problem-solving activities through collective efforts.

At the end of the project, the participants administered a single sheet of feedback form to students which they were allowed to answer in writing or drawing (i.e., based on their preferences). The participants (i.e., facilitators) were consistently present to all students to provide support, prompt ideas and ensure on-task behaviour among students. The students were given a minimum of five minutes to write or draw their thoughts based on simple questions such as "What have we learned in this teaching and learning session?" and "What do you want to have or play in the future class session?" set to initiate the reflection and thinking process about activities conducted throughout the project. Likewise, at the end of the project, all participants (i.e., facilitators) were also given feedback forms via an online platform to gain insights about their experiences, thoughts, challenges, and suggestions to improve future projects related to APE. Questions such as "How did the activities and content of this project help enhance your understanding or skills on APE?" and "Were there specific moments or activities that you found particularly engaging or challenging?" were meant to help the researcher understand the current confidence levels, persistent challenges, and skills development through this initiative from the lens of undergraduate pre-service teachers. The researcher stressed there were no correct and false answers to any questions nor in any way it may affect the participants' project evaluation and grade for their subject.

In the data analysis phase, the raw data extracted from the online platform were initially exported to MS Excel [Microsoft Inc.] for an overview of the data and data cleaning process (e.g., check for missing information, and redundant entries). Next, the data were transferred to NVivo software [QSR Int.] for transcription, coding, and analysis of the qualitative data. The transcription was read several times in different timeframes to help the researcher familiarise and possess a general understanding of the content. Additionally, the transcription was also shared with participants to cross-check information to be as accurate as possible to their initial answers in the feedback form. These initiatives help the researcher to establish higher levels of fidelity and credibility in this research. Once the coding process is completed, the researcher proceeds with a data analysis process comprised of word frequency searches, word clouds, and data visualization to get clearer pictures of issues discussed in this study. The processed data were then accompanied by specific sentences used in the participants' feedback to present the results with higher clarity and authenticity.

2.3 Instruments

The main instrument used in this study includes a post-event survey and observation analysis. Specifically, the post-event survey comprised three open-ended questions revolving around skills gained, challenges faced, and overall experience of experiential learning with students with disabilities. Questions such as "How does experiential learning improve your teaching and learning skills?" and "Were there any specific moments or activities you found particularly engaging or challenging and why?" were meant to be thought-provoking and encourage the participants to recall, reflect, and systematically express their thoughts. The survey was administered at the end of the experiential learning session to all participants via an online survey platform. Although the survey was compulsory to complete, there was no specific time allocated for participants to complete the survey to promote higher accuracy and integrity in responses.

Additionally, an observation analysis was also used to analyse pre-service interaction with students with disabilities in the adapted physical activities. The participants' notes, proposal, and final report were analysed to help the researcher gain a better understanding of the experiential learning process, potential behaviours change before and after the project, and participants' reflections on their experiences. Besides that, the documents also allow for triangulation of data which enhances the fidelity and rigour of the data collection. Prompts in the form of questions such as "What are the objectives of your project?", "what would you like to improve in future projects?", and "Explain each member's roles and responsibilities throughout the project" were suggested to participants to help them kickstart the thinking process and completion of proposal and report writing.

3. Results and Discussion

Figure 1

Word cloud highlighting important words associated with self-confidence and experiential learning

The word cloud focuses on terms such as confidence, self, participation, and understanding, which are central to skill development and fostering growth in pre-service teachers. These keywords suggest a strong emphasis on the emotional and social aspects of teaching, alongside fostering independence and active engagement.

3.1 Confidence and Self

Confidence is a foundational trait for pre-service teachers, especially in special needs education where they need to navigate diverse and unpredictable classroom situations. The emphasis on "self" suggests a focus on personal growth, self-awareness, and resilience. The experiential learning provided the participants with a platform for them to learn and grow through unstructured learning processes and exploration. The challenges presented to them throughout the project from the planning phase (e.g., setting up the committee, deciding job scope, identifying each member's strengths and interests), execution phase (e.g., delivering content, students and class management), and post-project phase (e.g., collecting feedback, identifying and analysing strengths, weaknesses, and potential of the project) rallied the participants to stay on-tasks, be prepared, and modified the planned activities based on students' needs, playing area, time, and equipment availability. The nature of this experiential learning project also requires higher participation and consistent commitment from all members to ensure that the project can be executed as best as possible. Therefore, this approach reduces the likelihood of "free riders" and encourages total participation from the participants. The consistent hands-on approach directly or indirectly helped them to gain self-confidence to manage themselves, working with their peers, handling pressure and expectations as well as teaching and learning students with disabilities. These values are important as they help to support psychological attachment to the learning content which makes it more meaningful and relevant to themselves (Hamzah et al., 2025). Additionally, the hands-on experience helps the participants to develop into autonomous learners (Boggu & Sundarsingh, 2019).

Additionally, the survey and observation analysis in this study also encourages the participants to engage in reflective practices, build a growth mindset, and participate in activities that boost their teaching confidence. The peer-teaching practices and peer feedback sessions before the project were also instrumental in building self-confidence, teaching tools, and approaches when dealing with students with

disabilities. Similarly, a study related to introductory courses in English with 140 students found that students viewed their instructor as responsible for their success or failure. Nonetheless, they were willing to demonstrate autonomous behaviour if they were provided with the opportunity, time, and trust of their instructor (Hussein, 2014).

3.2 Participation and Engagement

Active participation through this experiential learning is essential for learning how to create inclusive environments where all students, especially those with special needs, feel involved and valued. Engaging teaching methods foster deeper understanding and a sense of community among both the participants and the students. In each phase of this study, the participants were regularly engaged in planning, exploring, discussing, and making decisions (e.g., activities, place, time, equipment, students). Moreover, the participants were also making trips to the school to meet with the school's representative to discuss their proposed plan, and risk management as well as validating the physical activities they intend to share with the students during the project. The hands-on and consistent participation supported them in developing self-confidence and a repertoire of skills useful when teaching and learning adapted physical education. The variety of committees set up in the initial phase of the study (e.g., logistics, food and beverage, multimedia, and publicity) also encourages total participation from members while also giving them options to contribute to which committee they wish.

This study's findings also echoed past studies which suggested that higher engagement with stakeholders helps maintain the authenticity and reciprocity of experiential learning (An & Decker, 2019; Anggono et al., 2025). Therefore, experiential learning opens up an opportunity for participants to learn various aspects of adapted physical education, classroom management, and student support while also presenting them with a higher sense of ownership. In contrast, a previous study conducted with 320 students and 24 teachers revolving around learning autonomy, gender, and motivation levels found that both the students and teachers were not in favour of autonomous learning. Worryingly, students did not feel responsible for their teaching and learning process while the instructors perceived that their students were not capable of handling the responsibility for their learning (Ustunluoglu, 2009). Nonetheless, across the years the researcher believes the perception towards experiential learning is changing due to more knowledge, skills, and experience gained by the educators.

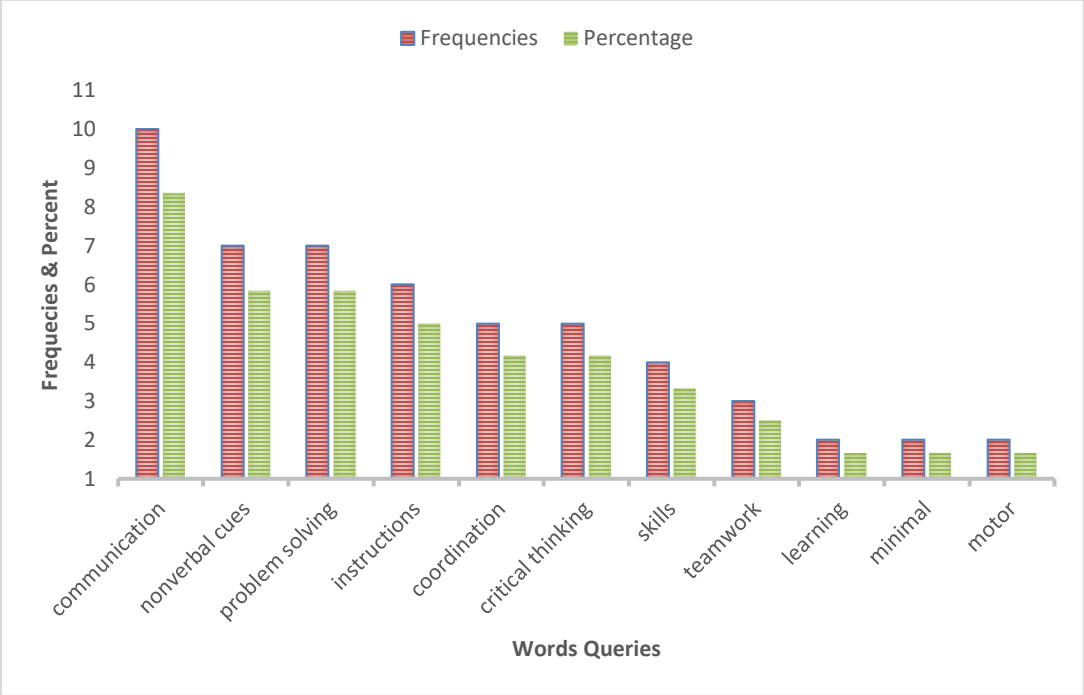
3.3 Understanding and Empathy

Self-confidence also stems from higher understanding and empathy towards the students. The values are critical for the participants to connect and develop trust with students, especially those with diverse needs. Reading, watching videos, and connecting with other educators are some strategies to build up these qualities which will help educators respond appropriately to students' emotional and academic challenges, creating a supportive and inclusive learning environment. Through practice and experience, participants would develop the self-confidence needed for them to conduct adapted physical education meaningfully. For instance, to deal with student "Yan" with attention deficit hyperactivity disorder (ADHD) (i.e., passive introvert), the participants approached him gently using simple English that he could understand. Another student "Az" with Down syndrome also reported difficulty communicating between the participants and the student. With early preparation and homework about the conditions, the participants were better prepared and able to mitigate the difficulty more calmly and professionally. When "Az" is unable to process information or instruction due to language barriers, the participants proceed with giving instructions using body gestures, and basic sign language, doing the activities together with him as well as modifying the rules, objectives, and goals to personalise the teaching and learning process for Az. These findings echo a previous study conducted in Hong Kong where the participants suggested they were aware of their role in the learning process, preferred learning styles, and clear learning goals when exposed to experiential learning and gained experiences from the process (Chan, 2010).

Besides that, experiential learning provided an opportunity for the participants to train them in emotional intelligence, active listening, and conflict resolution. Through experiential learning, we can support the participants' shift current paradigm and promote positive behaviour modification toward students with disabilities (Piletic & Davis, 2010; Perlman & Piletic, 2012; Rahmaningtyas et al., 2025). Activities such as empathy exercises, case studies of students with special needs, and reflections on personal biases can foster these skills. The constructive feedback from both the lecturers and teachers at school also promoted the words "appreciated" and "valued" in the word cloud above. Using the sandwich approach which emphasises on need for improvement when speaking to participants nurtured a higher sense of willingness to listen and improved their motivation to learn more and create a richer positive atmosphere for their students during the experiential learning. Recognition from the educators also produces a profound effect on the participants' self-value and appreciation of their experiential learning. By emphasising on role modeling approach and learning through actions we can support the participants' development of understanding and empathy towards others in adapted physical education.

Figure 2

Bar graphs depicting the different skill sets learned through experiential learning



With regard to skills, figure 2 above shows the word "communication" recorded as the most frequent word suggested by the participants (count 10, 8.33%) while words such as "learning", "minimal", and "motor" were recorded similar low frequencies and percentages (count 2, 1.67%). The word "nonverbal cues" recorded seven repetitions with 5.83% while the words "instruction" and "coordination" were both recorded (count 6, 5.0%) and (count 5, 4.17%) respectively. Skills such as nonverbal cues, problem-solving, and instructions feature prominently in the figure above indicating a balanced emphasis on both interpersonal and cognitive abilities during teaching and learning. The earlier objectives from this project consisted of psychomotor, cognitive, and affective learning domains that require the participants to engage in multi-tasking in executing the planned physical activity while simultaneously addressing the dynamic of the students with disabilities.

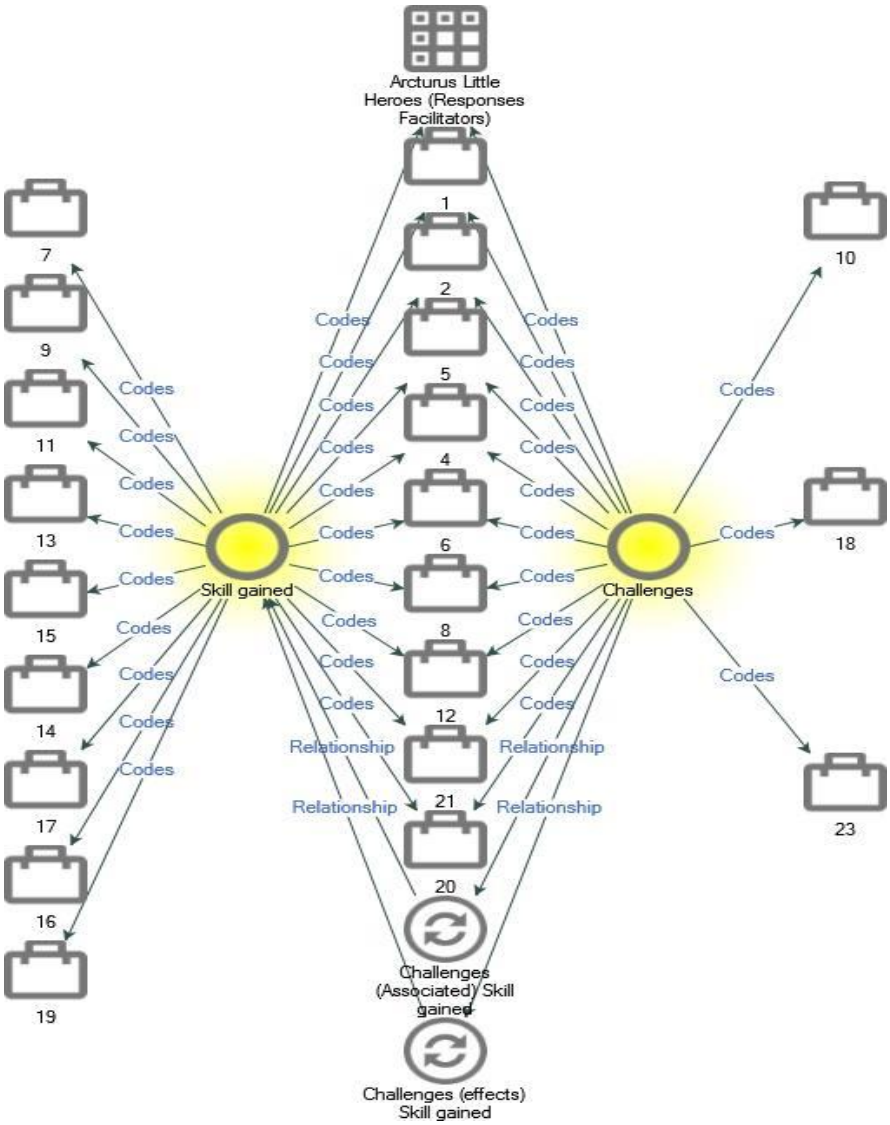
The spectrum of students' conditions during the project requires the participants to prepare in advance (i.e., reading, watching videos, and peer-teaching) and make necessary modifications to their instructions, equipment, and playing area, such as providing a variety of equipment (e.g., foam ball, markers, hula hoops), creating a safe zone (e.g., timeout zone) which also serve as a sensory stimulus zone, and provided appropriate spaces based on students' conditions and needs. The participants' engagement in a higher thinking process involved in experiential learning would help the participants learn more about the different health conditions (e.g., autism, ADHD, muscular dystrophy) and increase their preparedness in teaching and learning adapted physical education (Boggu & Sundarsingh, 2019). The need to deliver content while managing the students and class would be valuable to help sharpen participants' cognitive and interpersonal capabilities when teaching adapted physical education. These findings were similar to a past study that found that experiential learning encourages the participants to learn through mistakes which enriches the learning process and provides the experience needed to deal with students with various backgrounds and conditions (An & Decker, 2019; Rahmaningtyas et al., 2025).

Meanwhile, coordination and other supporting skills (e.g., teamwork) highlighted the collaborative nature of special needs education. On many occasions, participants have demonstrated the above skills to ensure the project was able to be performed with the highest quality, meaningful, and impactful to the students. For instance, the participants have invested some time in discussing the "tantrum procedure" in the initial phase of the project and producing a flowchart on how they should handle off-task behaviours among students based on credible sources, knowledge, and their past experiences. Besides that, the participants also demonstrated teamwork values when they initiated a series of discussions, choreographed movements, and practiced animal movements before the project and presented them during the warm-up session of the project. The movement was conducted as a group on stage while the others spread around the area and led the students by example. These findings were supported by a previous study which also highlighted the social action group promoted higher engagement, and willingness to try, and reduced fear of failure among participants to step out of their comfort zone (An & Decker, 2019). Despite the various backgrounds, religions, interests, strengths even weaknesses between participants and students, experiential learning also provided the avenue for them to embrace differences and become more culturally competent. The tolerance and acceptance mentality would then translate to positive behaviours toward students with disabilities (Cervantes & Meaney, 2013; Hamzah et al., 2025).

Nonetheless, communication as suggested by the figure above was critical and served as a prerequisite to other elements needed to perform adapted physical education teaching and learning successfully. Without communication, both class and teaching cues cannot be established, and many issues tend to be unresolved due to a lack of engagement between participants and students. Communication issues also reduce directive and meaningful efforts due to a lack of aims and objectives when conducting teaching and learning. Possibly, the issues related to "no choice" and hesitations could stem from the lack of broken communication between educators when planning their lessons in adapted physical education (Piletic & Davis, 2010). Without remedy, the sense of hesitation and lackadaisical could manifest in negative perceptions and behaviour towards adapted physical education and its students (An & Decker, 2019).

Figure 3

Diagram showing the relationship between challenges and skill development



The diagram above highlights a strong interdependence between the challenges faced by the participants and the skills they gained from the experiential learning. The presence of relationship nodes like "Challenges (Associated/Skill Gained)" and "Challenges (Effects/Skill Gained)" emphasises that overcoming challenges played a significant role in their skill development. The challenges tend to serve as both associating or mediating factors that help connect context and skill development. The challenges' degree of effect may also influence the skills levels gained and competencies at the end of the project. Challenges provide the opportunity for participants to overcome issues and gain important skills and experience along the process. Besides that, the connection demonstrated above also suggested thematic saturation in which most feedback tends to address similar core themes. This indicates that participants consistently reflected on both challenges and the skills they acquired, reinforcing the significance of experiential learning. The additional tasks such as proposals, logs, and report writing also supported the

participants' reflection on the experiential learning, critically analysing the session strengths, weaknesses, and things to improve which further enriched their learning experience (An & Decker, 2019).

Throughout the experiential learning, the participants have had the chance to meet students with various conditions and severity. For instance, "Rah" a student with an intellectual disability provided challenges for participants to understand his needs as well as manage a series of impulsive decisions and movements. The participants reported using short and simple words along with demonstrations and gestures as one of the efforts to attract the student's attention and focus on-task behaviour. Besides that, another student "Harr" with autism consistently demonstrates a burst of doing random things and movement throughout the session. To address this challenge, the participants reported using communication (e.g., asking questions) and providing options in terms of instructions and activities. The main goal is for Harr to remain active and reduce the likelihood of off-task behaviours (e.g., jumping off a fence, or disturbing others). Another skill demonstrated by the participants includes problem-solving when dealing with students. A young girl "Leh" diagnosed with Down syndrome tends to demonstrate hyper-energetic behaviour and longing for extra attention from the participants throughout the session. The encouragement from educators and availability of wide resources (e.g., Internet, case studies, newspapers) also provided them with knowledge and strategies to deal with students with disabilities. Thus, reducing dependency on their instructor for the opportunity of teaching and learning (Boggu & Sundarsingh, 2019; Anggono et al., 2025).

To address this issue, the participants resorted to using emotional support (e.g., hugs) when she requested or needed attention, providing time and space for her to do her preferred activities while still facilitating her to follow the planned physical activities occasionally. Besides that, the participants provided rewards in the form of stickers to her whenever she did something positive and kind to promote higher on-task behaviour from Leh. Consistent with past studies, experiential learning helps reduce from 40% to 34% "often" to "sometimes" students' dependency on their educators. The authors continue to suggest that participants felt more independent and capable of dealing with their academic issues (Boggu & Sundarsingh, 2019).

4. Implications for Practice

Insights from this study are valuable for many stakeholders to reflect, understand, and inform their future teaching and learning practices. Firstly, insights and challenges from this study can help provide the information needed to revise the current PETE programme design by focusing on challenges that are most beneficial for skill-building, knowledge development, and mental resilience among students. Consistent with 21st-century teaching and learning, the program design should seriously make an effort to shift from theoretical-based toward practical experiential-based learning which achieves more objectives in a shorter time while providing a sense of enjoyment in the learning process. From experiential learning, students will have more opportunities to express themselves, take learning ownership, meet people, make mistakes, and learn from the experience which enriches their whole teaching and learning process. Secondly, pre-service teachers should also reflect on this study's feedback for continuous professional development, identifying which areas needed more practice based on past studies and their challenges when dealing with students with disabilities. Activities in this study can be analysed and compared with other studies and personalised in different contexts to suit students' needs, strengths, weaknesses, and interests. Thirdly, the findings and interconnection between self-confidence, challenges, and skills development demonstrated in this study can be the foundation for policymakers to mandate more experiential-based projects in the PETE programme. Although content quantity-wise could be reduced, the application of experiential-based learning will provide students with richer experience, skills, and engagement between educators, policymakers, parents, and the community.

The limitation of the study comprised two-fold, subjectivity and generalizability. Specifically, the subjectivity stems from risks of bias either from the researcher or the participants. As this experiential learning project was partly the ongoing assessment of a subject, the participants may withhold information, provide socially desirable responses, or even behave differently in the research context. Despite the

researcher's effort to explain to them that this research outcome does not in any way affect the ongoing assessment marks at the beginning of this study, the perceptions may persist among the participants. Next, the qualitative nature of this study naturally makes it more challenging to generalise this study's results to the larger populations. Most of the time, the findings in this study were closely related to this study's context, group of participants, and time of executing this experiential learning project. Therefore, results from this study might differ from different studies due to the factors mentioned above. Nonetheless, insights from this study are still valuable to shed light on how experiential learning could increase learning authenticity and enrich both pre-service educators and students in many aspects of adapted physical education.

5. Conclusion

Within the boundaries of the methods employed and the limitation encountered, the following conclusions seem warranted: first, the pre-service teachers viewed the EL as a positive innovation, citing improvement from their initial impression towards APE, confidence in meeting, handling, and teaching students with disabilities, higher engagement between stakeholders (e.g., educators, peers, students, parents), and develop more empathy from the hands-on learning approach. Secondly, although there was a positive relationship between challenges and skills development, future research could delve into appropriate levels and types of challenges that may lead to higher or detriment pre-service teachers' skills development. Besides that, future research could also explore if the length of EL could be a pivotal factor in helping the students reap maximum benefits from the EL process. And if practicum sessions would be able to produce similar or better outcomes in pre-service teachers' training. Given the significance of these findings, researchers, policymakers, and industry leaders must collaborate to implement strategies that address experiential learning in the current public university curriculum and drive meaningful progress in teachers' readiness to teach APE beyond the PETE programme.

6. Acknowledgement

The author wishes to express sincere gratitude to both the Faculty of Education and the Centre of Risk Management, Universiti Teknologi MARA (UiTM) for providing research and publication support throughout the publication process of this manuscript.

7. References

Afida, A., Rosadah, A. M., Aini, H., and Mohd Marzuki, M. (2012). Creativity enhancement through experiential learning. *Advances in Natural and Applied Sciences, 6*, 94–99.

An, J., & Decker, J. T. (2019). Utilising a critical service-learning approach in an adapted physical education course. *Journal of Physical Education, Recreation & Dance, 90*(4), 7-14.

Anggono, Herliani, R., Nasution, S. A., Teng, S. H., Naphatthalung, N. (2025). Using the flipped classroom as a teaching model to enhance financial literacy. *Asian Journal of University Education, 21*(2), 441-450.

Boggu, A. T., & Sundarsingh, J. (2019). An experiential learning approach to fostering learner autonomy among Omani students. *Journal Language Teaching and Research, 10*(1), 204–214.

Bradberry, L. A., and De Maio, J. (2019). Learning by doing: The long-term impact of experiential learning programs on student success. *Journal of Political Science Education, 15*, 94–111.

Carrington, S., Mercer, L., Lyer, R., & Selva, G. (2015). The impact of transformative learning in a critical service-learning program on teacher development: Building a foundation for inclusive teaching. Reflective Practice, 16, 61–72.

Cervantes, C. M., & Meaney, K. S. (2013). Examining service-learning literature in physical education teacher education: Recommendations for practice and research. *Quest, 65,* 332–353.

Chan, V. (2010). Teaching in Higher Education Readiness for Learner Autonomy: What do our learners tell us? *Teaching in Higher Education, 6*, 37–41.

Hamzah, L. M., Majid, S., Yusoff, N. M., & Hussein, S. (2025). Beyond the lecture hall: Fostering soft skills in Malaysian University Students through a democratic classroom. *Asian Journal of University Education, 21*(1), 331-345.

Hussein, A. A. (2014). University EFL Learners' Perceptions of Their Autonomous Learning Responsibilities and Abilities. RELC, 45(3), 321–336.

Kolb, D. A. (1984). Experiential learning: experience as the source of learning and development (Vol. 82). Englewood Cliffs, NJ: Prentice Hall.

Kong, Y. (2021). The role of experiential learning on students' motivation and classroom engagement. *Frontiers in Psychology, 12*, 1-4.

Mills, G. E. (2014). *Action research: A guide for the teacher researcher* (5th ed.). Boston, MA: Pearson.

Perlman, D., & Piletic, C. (2012). The influence of an adapted physical education course on preservice teacher instruction: Using a self-determination lens. *Australian Journal of Teacher Education, 37*, 1–17.

Piletic, C., & Daivs, R. (2010). A profile of the introduction to adapted physical education course within undergraduate physical education teacher education programs. *ICHPERD-SD Journal of Research, 5*(2), 26–32.

Rahmaningtyas, W., Joyoatmojo, S., Indrawati, C. D. S., Murwaningsih, T. (2025).Graduate satisfaction; How experiential learning supercharges employability skills. *Asian Journal of University Education, 21*(1), 160-176.

Romack, J., & Hsu, S. (2011). Using service-learning to shape undergraduate experiences with persons having disabilities. *Palaestra, 25*(3), 32–39.

Üstünlüoğlu, E. (2009). Autonomy in Language Learning: Do Students Take Responsibility for Their Learning? *Journal of Theory & Practice in Education, 5*(2), 148–169.