

Integration of Experiential Learning into Project-based Learning to Enhance Teamwork Skills for Vocational Education

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ABSTRACT: *The Integration of Experiential Learning into Project-based Learning to Enhance Teamwork Skills for vocational learners is a process that allows learners to learn and practice independently. This can be achieved through the workplace by incorporating classroom activities that enhance student learning. It may also be beneficial in learners develop creative teamwork skills to meet the needs of learners in the age of technology and vocational education courses. It can help learners develop the knowledge and skills necessary for their future careers. The purpose of this research was to: (1) design project-based learning management of experiential learning to strengthen teamwork skills for vocational learners and (2) evaluate project-based learning management of experiential learning to strengthen teamwork skills for vocational learners. The results showed that the outcome of the research is deemed to be at the most suitable overall level (Mean = 4.79, S.D. = 0.35). Based on the above findings, it can be concluded that this approach is appropriate and can be used as a guide for learning management to encourage learners to seek knowledge and build their own knowledge effectively.*

Keywords: Vocational Curriculum, Project-Based Learning, Experiential Learning, Teamwork Skills

1. Introduction

Higher Diploma Program 2024 offers a curriculum developed for use in the management of professional education. The aim is to raise the level of professional education of individuals to a higher level in line with the National Strategy for Economic and Social Development Plan. This plan targets industries for national development as part of the National Education Plan, which considers the needs of the workplace. It includes proposals from the Joint Public-Private Sector Subcommittee to produce and develop vocational education manpower. The curriculum follows the National Qualifications Framework and the ASEAN Reference Qualifications Framework, the National Education Standards and National Vocational Education Qualification Framework, Vocational Standards, Labor Skills Standards, and other standards. It considers the situation both domestically and internationally to focus on putting learning into practice in such a way as to develop the capacity of skilled manpower, including morality, ethics, professional ethics, and appropriate work habits in line with the manpower needs of the labor market. Society and the community are involved in coordination and cooperation to manage education and develop joint curricula between vocational education institutions, educational institutions, agencies, establishments, and organizations at the community, local, and national levels (Office of the Vocational Education Commission, 2024)

Project-based learning is a learning model that operates outside the classroom and focuses on learners. It emphasizes that learners can learn on their own by choosing what they are interested in and in line with their own aptitudes and abilities. By using the knowledge and experience they have learned to apply in practice, learners will carry out all stages of learning from defining topics, learning about planning, learning about design, creating and applying systematic outputs, engaging practical actions, and evaluating performance (Nilsook et al., 2021) Project-based learning management will help students obtain knowledge through collaborative research in a step-by-step manner. There is a clear process. There is a plan to use artificial intelligence technology, information search and creative initiative, together with problem solving. This helps students improve their skills in such a way as to use knowledge in real life, such as by creating a work or a piece that develops and shows the ability of the learner to make a presentation (Wongkumsin & Singhwee, 2020)

Experiential learning is a learning model that encourages learners to learn on their own by doing, so that they can take on challenges and encounter real experiences. This results in creating new knowledge by building on existing knowledge which is in line with the development of education. The highlight of action learning is to encounter challenges or real experiences in order to create a crystallization of thoughts in the perception of new knowledge gained as a continuation of existing knowledge or thinking that can be applied in other contexts for oneself (Kingkaew et al., 2023)

Teamwork Skills refer to the ability of a group of individuals to come together with a shared commitment and common objectives to achieve a specific goal or complete a task successfully. A formal team is characterized by strong relationships, a structured system, and an organized framework. The team leader encourages members to participate in management, and every member shares responsibility for the outcomes. Therefore, the results belong collectively to all members, and operations follow an established plan. (Siburom, 2021). These competencies align with current labor market requirements and the objectives of modern vocational education curricula. (Klinmalee, 2022)

Based on the above principles, theories, and reasons, the research team developed a design concept. The Integration of Learning into Project-based Learning to enhance teamwork skills for vocational education is to be used as a guide for learning management relating to the transfer of knowledge within the class. It aims to encourage learners to develop teamwork skills and can use information technology and media in an understanding and creative manner that can be applied in practical work situations.

2. Purpose of Research

2.1 To design the Integration of Experiential Learning into Project-based Learning to Enhance Teamwork Skills for Vocational Education

2.2 To evaluate the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education.

3. Literature Review

3.1 Higher Vocational Curriculum 2023

The Higher Vocational Curriculum 2023 is a curriculum developed for use in the management of professional education. The aim is to raise the level of the professional education of individuals to a higher level in line with the National Strategy, the National Economic and Social Development Plan, and to target industries for national development. The National Education Plan requirements of the workplace include proposals from the Joint Public-Private Sector Subcommittee to produce and develop vocational education manpower. The curriculum is following the National Qualifications Framework and the ASEAN Reference Qualifications Framework, National Education Standards, the National Vocational Education Qualification Framework, Vocational Standards, Labor Skills Standards, and other standards both domestically and internationally. The focus is on putting learning into practice in order to develop the capacity of skilled manpower, including morality, ethics, and professional ethics and appropriate habits at work in line with the manpower needs of the labor market. Society in general and the community need to encourage coordination and cooperation to manage education and to develop joint curricula between vocational education institutions, educational institutions, agencies, establishments, and organizations. This is essential at the community, local, and national levels (Office of the Vocational Education Commission, 2024).

3.2 Project-Based Learning

Project-based learning is a learning model that operates outside the classroom and focuses on learners. The emphasis is on learners to help them develop both knowledge and skills through collaborative research and the use of knowledge in real life (Sriprapai & Cheausuwantavee, 2022). This approach lets learners learn on their own by choosing what they are interested in, and according to their aptitude and ability, using the knowledge and experience they have obtained to apply it in practice. Learners are the ones who are involved in all stages of learning. By defining headings, planning, and issuing the work, systematic application has been put into practice together with the presentation and evaluation of the work (Nilsook et al., 2021). Project-based learning management will help students gain knowledge through step-by-step research. There is a process of planning supported by the use of artificial intelligence technology in terms of information retrieval and thought processes associated with problem solving. It helps students improve their skills allowing them to use knowledge in real life by creating a work or a piece that develops and shows the ability of the learner to make a presentation (Wongkumsin & Singhwee, 2020).

3.3 Experiential Learning

Experiential learning is a learning style that encourages students to learn by taking on challenges and encountering real experiences, creating new knowledge by building on existing knowledge. This is in line with the development of education. The highlight of the action is to encounter challenges or real experiences in order to crystallize ideas in terms of recognizing the new knowledge obtained, and to build on the existing knowledge. In addition, it can be applied in another context for itself (Kingkaew et al., 2023). In order to apply this theory to learning, it is necessary to go through a 4-step learning cycle entitled Kolb's Experiential Learning Model. This involves 1) Concrete Experience 2) Reflective Observation of the New Experience 3) Abstract Conceptualization 4) Active Experimentation (Chatwattana et al., 2023).

3.4 Teamwork Skills

Teamwork Skills refer to the ability of a group of individuals to come together with a shared commitment and common objectives to achieve a specific goal or complete a task successfully. A formal team is characterized by strong relationships, a structured system, and an organized framework. The team leader encourages members to participate in management, and every member shares responsibility for the outcomes. Therefore, the results belong collectively to all members, and operations follow an established plan. (Siburom, 2021). Successful teamwork depends on several supporting factors, including effective communication, shared goals, interpersonal interactions, positive relationships among members, technological proficiency, team structure, work planning, task allocation, conflict management, expertise, and active participation in decision-making, task execution, and evaluation. These competencies align with current labor market requirements and the objectives of modern vocational education curricula. (Klinmalee, 2022)

3.5 Conceptual Framework with regard to the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education.

The study, analysis, and synthesis of documents and research related to the design of the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education was used to guide the conceptual framework for the research. The process is as shown in Figure 1.

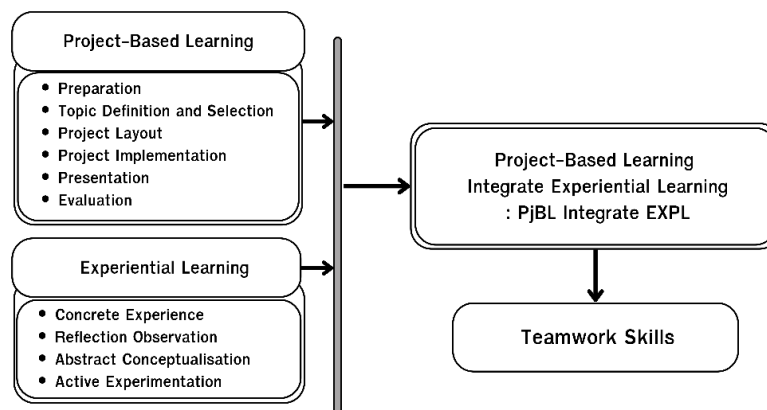


Figure 1. Conceptual Framework for the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education

4. Methodology

In terms of its design, the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education is a teaching technique that focuses on learning in the classroom and in the workplace. The emphasis is on helping develop both knowledge and skills on the part of learners through collaborative research and the use of knowledge in real life. Synthetic Integration of Experiential Learning into Project-based Learning to Enhance Teamwork Skills for Vocational Education can be divided into 5 parts in the synthesis table as follows:

4.1 Process synthesis project-based learning.

Table 1. Process synthesis project-based learning

Project-Based Learning	(Rupavijetra et al., 2022)	(Sriprapai & Cheausuwantavee, 2022)	(Klahan & Ponegm, 2021)	(Nuangjamnong et al., 2020)	(Detphiphatworakul et al., 2020)	(Nilsook et al., 2021)	(Rupavijetra et al., 2022)	(Wongkumsin & Singhwee, 2020)	(Poonputta, 2023)	Synthesis results
1) Preparation	✓	✓	✓	✓		✓		✓	✓	✓
2) Topic Definition and Selection	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3) Project Layout	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4) Project Implementation	✓	✓			✓	✓		✓	✓	✓
5) Presentation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
6) Evaluation	✓	✓	✓	✓		✓	✓	✓	✓	✓

In Table 1 dealing with the process synthesis project-based learning in this research, the researchers have summarized the steps and methods into 6 steps as follows:

Step 1 Preparation The instructor will arrange the assignment of the project to meet with the needs of the learners. The details are specified in the lesson plan. The instructor will align the scope of the project so that it is suitable for the course content and the students' aptitude. In addition, relevant sources and examples will be provided to guide further research.

Step 2 Topic Definition and Selection. Students will have the opportunity to design ideas and create options for their own projects in order to promote the research and development with regard to innovative knowledge. Learners study and consider relevant documents or theories. This is to be used as a guide for deciding on the right topic. This process also promotes teamwork with an emphasis on brainstorming to develop critical thinking skills. Related to this is effective communication and building good cooperation within the group.

Step 3 Project Layout. Learners will create a document that summarizes the main concepts. The Project Layout and the sequence of steps of the project should be clear. This document helps those involved to understand the workload. Roles, duties, and time frame for the work will be made clear. As a result, the implementation of the project will be systematic and efficient.

Step 4 Project Implementation. Learners will begin to follow the work plan outlined in the project layout, and each student will clearly know their own roles and responsibilities. In addition, they can pursue their work without the need to ask the instructor at any stage. However, during the learning activities, the instructor may provide close counseling or help solve problems in order to support the students and allow the project to run smoothly and efficiently.

Step 5 Presentation. Learners will summarize the results of the project in various forms such as writing reports, presenting in front of the class, organizing an exhibition, submitting work through a website, or participating in a contest or competition. These methods help to stimulate enthusiasm and strengthen learners' confidence.

Step 6 Evaluation. The evaluation will take the form of self-evaluation. It focuses not only on the final product, but also on the process that led to that result, revealing the true development and ability of the learners.

4.2 Process synthesis experiential learning.

Table 2. Process synthesis experiential learning

<i>Experiential Learning</i>	(LeBrasseur, 2023)	(Kingkaew et al., 2023)	(AbuKhousa et al., 2023)	(Chatwattana et al., 2023)	(Trongtorsak et al., 2021)	(Fioravanti et al., 2023)	(Hulaikah et al., 2020)	(Salinas-Navarro et al., 2024)	(Poonputta, 2023)	Synthesis results
1) Concrete Experience	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
2) Reflection Observation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
3) Abstract Conceptualization	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4) Active Experimentation	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

In Table 2, Process synthesis experiential learning relating to this research, the researchers summarize the steps and methods involved. There are 4 steps as follows:

Step 1: Concrete Experience. The instructor will organize activities for the students. The details are specified in the lesson plan. It will involve the simulation of real work situations, including preparation for action in real work situations. Learners will participate in challenging and interesting activities or in real-life situations.

Step 2 Reflection Observation. Students will have the opportunity to design ideas and create options for their own projects. Learners study and consider and then observe and reflect on the experience that has occurred. This is to be used as a guide for deciding on the right topic, to allow them to understand what is happening.

Step 3 Abstract Conceptualization. Learners will create a document that summarizes the main concepts. The Project Layout and the sequence of steps of the project will be clear. Learners analyze and summarize with regard to principles or theories based on the experience they have obtained. The learners will be able to understand the workload. The roles, duties, and time frame for the work will be clear.

Step 4 Active Experimentation. Learners will begin to follow the work plan outlined in the project layout, and each student will clearly know their roles and responsibilities. They will be able to continue their work without the need to ask the instructor at any stage. Learners will be able to apply the knowledge or theory they have obtained, allowing them to experiment in new situations in order to improve and develop themselves.

4.3 Process synthesis with regard to the integration of experiential learning into project-based learning.

Table 3. Process synthesis with regard to the integration of experiential learning into project-based learning

Project-Based Learning	Experiential Learning		Concrete Experience	Reflection Observation	Abstract Conceptualisation	Active Experimentation
	Classroom	Workplace				
Preparation	✓	✓	✓	✓		
Topic Definition and Selection	✓		✓	✓		
Project Layout	✓	✓	✓	✓		
Project Implementation		✓	✓	✓	✓	✓
Presentation	✓		✓	✓	✓	✓
Evaluation	✓		✓	✓	✓	✓

In Table 3 Process synthesis with regard to the integration of experiential learning into project-based learning the integration of experiential learning and project-based learning creates a comprehensive learning experience that encompasses both theoretical understanding and practical application. experiential learning serves as a form of experience-based learning, enhancing project-based learning by fostering deeper thinking, analysis, and reflection. Meanwhile, project-based learning provides a structured framework for organizing activities that translate experiential learning into tangible outcomes and the development of essential skills. In this research, the researcher has summarized the steps and methods in 6 steps as follows:

Step 1: Preparation. Learning can take place both in the classroom and in the workplace. The instructor will arrange a project assignment for students to specify the details of the class lessons and learning in the workplace to create concrete interactions and reflect ideas from observation.

Step 2: Topic Definition and Selection. This involves learning in the classroom. Students will have the opportunity to design ideas and create options for their own projects. This is to be used as a guide for deciding on the right topic. The instructor should encourage team collaboration and should focus on brainstorming to develop critical thinking skills and encourage effective communication and collaboration.

Step 3 Project Layout. This aspect can be learned both in the classroom and in the workplace. Learners will create a document that summarizes the main concepts. The Project Layout and the sequence of steps of the project should be clear. It will help those involved to understand the workload. The roles, duties, and time frame for the work will be clear.

Step 4 Project Implementation. This involves learning in the workplace. Learners will begin to follow the work plan outlined in the project layout. Each person will clearly know their roles and responsibilities. in addition, they can continue their work without the need to ask the instructor at any stage.

Step 5 Presentation. This involves learning in the classroom. Learners will summarize the results of the project in various ways, such as by writing reports or making a presentation in front of the class. This will strengthen the confidence of the learners.

Step 6 Evaluation. This involves learning in the classroom. The evaluation will take the form of self-evaluation, peer evaluation, and third-party evaluation, with the aim of determining the true development and ability of the learners.

4.4 Synthesis of activities with regard to the integration of experiential learning into project-based learning.

Table 4. Synthesis of activities with regard to the integration of experiential learning into project-based learning

Project-Based Learning Integrated with Experiential Learning	Instructor Role	Learner Role
1) Preparation 1.1) Concrete Experience 1.2) Reflection Observation	Classroom: The instructor informs the learners about the teaching and learning within the course. Explains the operation so that learners can prepare before starting the project. Offers an example in the form of a piece that the instructor gave, and the results of the piece	Classroom: The learners listen to the instructor explain the course. This involves doing projects within the course and preparing for the project
	Workplace: The instructor gives examples and explains examples of the work carried out in the facility for the learners in the room to understand and give them the opportunity to ask questions	Workplace: Learners look at detailed examples of work provided by the instructor and start talking or asking questions about operations within the establishment
2) Topic Definition and Selection 2.1) Concrete Experience 2.2) Reflection Observation	Classroom: The instructor asks the learners to work in groups of 5-8 per group to carry out the project according to the prescribed course plan The instructor explains the selection of appropriate topics, the analytical thinking behind the topic, the feasibility and background of the topic, including its name.	Classroom: Learners gather in groups of 5-8 and prepare for the project The learners listen to the instructor with regard to the selection of project topics, the need for analytical thinking, the feasibility of project implementation and jointly propose project topics
3) Project Layout 3.1) Concrete Experience 3.2) Reflection Observation	Classroom: The instructor explains the writing of the project, the origin and importance of the project, the determination of the objectives, and the scope of the work. This will include how it works and the expected results and Project Layout.	Classroom: The learners listen to the instructor explain the guidelines for writing the project, then proceed to write the project according to the topic explained by the instructor. Alternatively, the instructor may assign tasks to the members of the group and inform them who is responsible for which duties
	Workplace: The instructor introduces the preparation for writing the project by referring to the workplace Preparing documents for permission to survey to collect data for design or development, including improving the workplace	Workplace: The learners listen to the instructor's advice and begin to contact the company. They collect information from the company and notify the instructor. They then inform the members of the group about the day and time.
4) Project Implementation 4.1) Concrete Experience 4.2) Reflection Observation 4.3) Abstract Conceptualisation 4.4) Active Experimentation	Workplace: Instructors provide opportunities for consultation between students to carry out projects within the workplace.	Workplace: All learners in the group carry out projects within the workplace. Discussions, work plans, conclusions, and solutions with regard to the company are carried out within the specified period

5) Presentation 5.1) Concrete Experience 5.2) Reflection Observation 5.3) Abstract Conceptualisation 5.4) Active Experimentation	Classroom: Instructors give advice. Preparation for project presentation, Explaining the conclusion, Documentation of the project, Pictures	Classroom: Learners receive advice and practice presenting in front of the instructor and listen to data corrections in preparation for the presentation. They evaluate the project results from the 4 competency teachers, who are as follows: Competency Advisor, ICT Advisor, Personality Advisor, and English Advisor—those who assisted in the project
6) Evaluation 6.1) Concrete Experience 6.2) Reflection Observation 6.3) Abstract Conceptualisation 6.4) Active Experimentation	Classroom: Teachers and teachers of 4 competencies, who are as follows: Competency Advisor, ICT Advisor, Personality Advisor, and English Advisor—those who assisted in the project. They participated in the evaluation of the students' projects presented in front of each class group. Evaluation scores were based on performance and provided recommendations for improvement with regard to the project	Classroom: Learners receive a project evaluation from a teacher in 4 areas of competency, together with their classmates, and receive suggestions for correcting the project in such a way as to make the project more effective.

4.5 Synthesis teamwork skills.

Table 5. Synthesis teamwork skills

<i>Teamwork Skills</i>	(Cima et al., 2025)	(Fernandez Bernaola, 2023)	(Karabulut-Ilgü et al., 2024)	(Thunyaham et al., 2024)	(Siburo, 2021)	(Klinmalee, 2022)	(Shofiyah et al., 2022)	(Lipatova & Khokholeva, 2021)	(Syahril et al., 2021)	Synthesis results
1) Defining Roles and Responsibilities of Team Members	✓	✓	✓	✓	✓	✓	✓	✓		
2) Setting Team Goals and Objectives		✓	✓	✓	✓	✓	✓	✓	✓	
3) Planning Collaborative Activities	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
4) Sharing Opinions Within the Team		✓	✓	✓	✓	✓	✓	✓	✓	
5) Team Members Adherence to Team Agreements	✓	✓		✓	✓	✓	✓	✓		
6) Effective Communication	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
7) Team Adaptability	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
8) Collaborative Problem-Solving Discussions	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
9) Enthusiasm in Participating in Team Activities		✓		✓	✓	✓	✓	✓		
10) Timely Completion of Assigned Tasks	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

From Table 5 Synthesis Teamwork Skills. In this research, the researcher summarized the procedures and methods in 5 areas as follows:

Side 1 : Planning Collaborative Activities. There is an appropriate division of roles and duties for learners within the team, including responsibility for their personal assignments. The aim is to promote collaboration in the form of teamwork, including brainstorming.

Side 2 : Effective Communication. Learners should be able to communicate well within the group and with others. They need to be able to explain the information and explain the solution to the problem clearly. This includes listening to the opinions of team members and others to improve the efficiency of work within the team.

Side 3 : Team Adaptability. Learners should be able to adapt and be flexible in their work, including concerning the duties that they are responsible for when faced with new problems. They should be able to get along well with others to improve the efficiency of work within the team. This includes accepting change and adjusting the work plan according to the situation.

Side 4 : Collaborative Problem-Solving Discussions. Learners should have the ability to make decisions together by taking into account the goals of the team. They should be able to use information and offer reasons for decision-making during the implementation of the work plan specified in the project. Each person should be able to present their opinions as to how to think at work in such a way as to find a conclusion when it comes to solving a problem together. In addition, they should be able to continue their work without the need to ask the instructor at any stage.

Side 5 : Timely Completion of Assigned Tasks. Learners are responsible for collaborating within a team and for implementing the plan. They should be able to carry out the procedure within the group to an agreed timescale. The aim will be to strengthen individual skills with regard to responsibility for duties and for working to time.

5. Results

5.1 Synthesis of Student Relationship Management Approaches with the use of Adaptive AI

Design of the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education.

In terms of the synthesis effect the research led to the creation of a conceptual framework for instructional which consisted of inputs, processes, and outputs to further develop the teaching and learning approach.

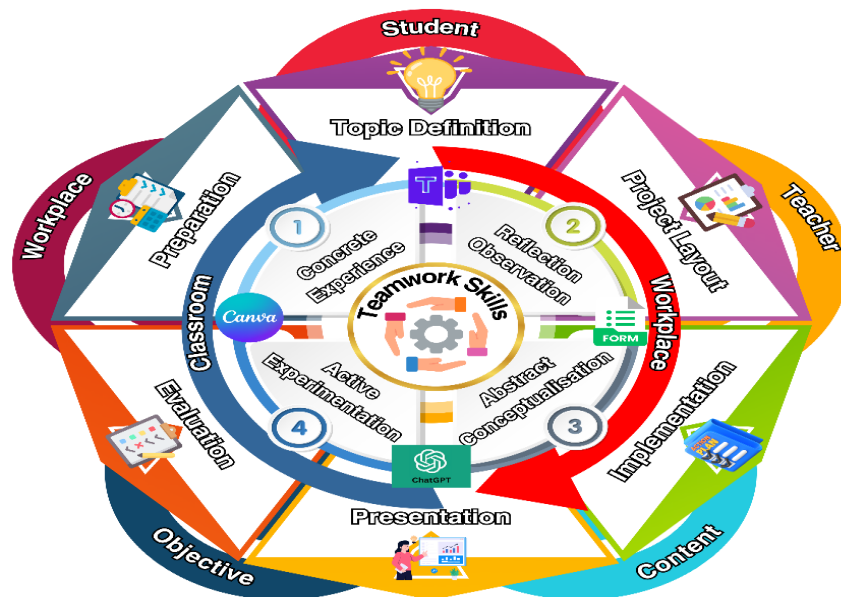


Figure 1. The integration of experiential learning into project-based learning

Figure 1 shows the integration of experiential learning into project-based learning. It consists of 4 main components as follows:

1) Input. This is divided into 5 stages as follows: Step 1) Student, Step 2) Teacher, Step 3) Objective, Step 4) Content and Step 5) Workplace

2) The integration of experiential learning into project-based learning is a process which is detailed as follows:

2.1) The Project-Based Learning is divided into 6 stages as follows: Step 1) Preparation, Step 2) Topic Definition and Selection, Step 3) Project Layout, Step 4) Project Implementation, Step 5) Presentation and Step 6) Evaluation.

2.2) Experiential Learning is divided into 4 procedures as follows: Step 1) Concrete Experience, Step 2) Reflection Observation, Step 3) Abstract Conceptualisation and Step 4) Active Experimentation.

3) Output. This is a product that occurs directly from the teaching and learning approach. It is divided into 5 areas as follows: 1) Planning Collaborative Activities Side 2) Effective Communication Side 3) Team Adaptability Side 4) Collaborative Problem-Solving Discussions 5) Timely Completion of Assigned Tasks Side.

4) Feedback. This uses the results of collecting data and analyzing the results with regard to learner feedback and opinions from experts, together with the results of the learning process, these are reflected back to the teaching and learning approach to improve and correct it to ensure that it is appropriate for use in the teaching and learning situation and to maximize benefits.

5.2 Results of the assessment of the suitability the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education on the part of 5 experts.

The experts involved possess qualifications in terms of knowledge, skills, and educational expertise, specifically in the following areas: Curriculum and Instruction, Vocational Education Administration, and Computer Education.

Table 5 Results of the assessment of the suitability of the design and development model.

Assessment Issues	Evaluation Results		Results
	Mean	S.D.	
1. Input			
1.1 Students	4.80	0.45	Highest
1.2 Teacher	4.80	0.45	Highest
1.3 Objectives	5.00	0.00	Highest
1.4 Contents	4.80	0.45	Highest
1.5 Workplace	4.80	0.45	Highest
2. Process			
2.1 Project-Based Learning			
2.1.1 Preparation	4.80	0.45	Highest
2.1.2 Topic Definition and Selection	4.60	0.55	Highest
2.1.3 Project Layout	4.60	0.55	Highest
2.1.4 Project Implementation	5.00	0.00	Highest
2.1.5 Presentation	5.00	0.00	Highest
2.1.6 Evaluation	5.00	0.00	Highest
2.2 Experiential Learning			
2.2.1 Concrete Experience	4.60	0.55	Highest
2.2.2 Reflection Observation	5.00	0.00	Highest
2.2.3 Abstract Conceptualisation	4.80	0.45	Highest
2.2.4 Active Experimentation	4.60	0.55	Highest
3. Output			
3.1 Planning Collaborative Activities	5.00	0.00	Highest
3.2 Effective Communication	4.80	0.45	Highest
3.3 Team Adaptability	4.60	0.55	Highest
3.4 Collaborative Problem-Solving Discussions	4.60	0.55	Highest
3.5 Timely Completion of Assigned Tasks	4.60	0.55	Highest
4. Feedback			
4.1 Result of Evaluation on Teamwork Skills	4.80	0.45	Highest

Overall	4.79	0.35	Highest
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Table 1 displays the results of the assessment of the suitability of the design and development aspects in the opinion of experts. The integration of experiential learning into project-based learning to enhance teamwork skills for vocational education was deemed to be at the most suitable overall level (*Mean* = 4.79, *S.D.* = 0.35) It can be concluded that the design this teaching and learning approach is appropriate, and can be used as a guide for learning management to encourage learners to seek knowledge and use it to build on their existing knowledge.

6. Discussion

This approach aims to ensure that teaching and learning are effective and aligned with current technologies, while also meeting the demands of the labor market and vocational education curricula. It is implemented through a combination of Project-Based Learning and Experiential Learning from the design results it can be seen that the learning approach is divided into 6 stages, namely 1) Preparation Step 2) Topic Definition and Selection Step 3) Project Layout Step 4) Project Implementation Step 5) Presentation and Step 6) Evaluation (Rupavijetra, Nilsook, Jitsupa, & Nopparit, 2022) and Divide Experiential Learning into 4 stages, namely 1) Concrete Experience Step 2) Reflection Observation Step 3) Abstract Conceptualisation Step 4) Active Experimentation Step (Trongtorsak et al., 2021) As a result, a teaching and learning model for learners suitable for the vocational education curriculum has been obtained. It also meets the needs of the workplace learning institutions, as it can be used to promote effective learning.

This is because it is a knowledge-based or skill-based learning technique that is appropriate for both the classroom and the workplace, serving as a means of fostering interaction between learners and others. It also results in the development of teamwork skills (Nilsook et al., 2021; Klinmalee 2022; Chatwattana et al. 2023) to ensure that teaching and learning are effective and in line with current technology. When combined with the integration of experiential learning into project-based learning (Poonputta, 2023), this approach will help learners learn and engage in practice in the workplace. Given that the instructor determines the suitability of the course content, this is in line with the statement of (Rupavijetra, Nilsook, Jitsupa, & Nopparit, 2022) and (Kingkaew et al., 2023) To enable learners to develop teamwork skills it can be seen that they can make decisions together and solve problems encountered in those case. This teaching and learning approach will be beneficial for both learners and instructors in vocational education courses and will be appropriate for the modern context and in terms of current technology, as well as helping to promote more effective learning.

7. Conclusions

In terms of the appraisal of the integration of experiential learning into project-based learning to enhance teamwork skills for vocational education, it can be seen to be effective in terms of managing learning by using experts to evaluate the teaching and learning approach and to provide design recommendations for researchers. The results of the research show that this learning style strengthens teamwork skills on the part of vocational learners, encouraging such learners to collaborate effectively. Moreover, it benefits both learners and instructors in vocational education programs, aligning well with current contexts and technologies while also enhancing more effective learning.

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