International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 3: May-June 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

The Effects of Experiential Learning Approach on Accounting Ability of First-Year Students at Zhengzhou University of Science and Technology

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Received 30/09/2024 Revised 02/10/2024 Accepted 02/11/2024

Abstract

Background and Aim: This experimental research aimed to 1) compare accounting ability before and after learning through the Experiential Learning Approach, 2) compare accounting ability with the determined criterion of 70 percent, and 3) assess students' satisfaction after learning through the Experiential Learning Approach.

Materials and Methods: The Sample of this study was 30 first-year students (1 classroom) from Zhengzhou University of Science and Technology in Henan province, the People's Republic of China, derived by the cluster random sampling method. The research instruments were as follows: 1) the appropriateness of lesson plans were using Experiential Learning Approach on Accounting Course was at very high level (M=4.63, SD= 0.49), 2) students' accounting ability test divided in 2 parts: Part I was multiple choice test with a difficulty (p=0.43-0.70) and discrimination (r=0.20-0.47) with reliability index of .82 and Part 2 was practical skill test with reliability index of .83, and 3) student satisfaction questionnaire with a reliability index of 0.72. The statistics used to analyze data were mean, standard deviation, t-test for dependent samples, and t-test for one sample.

Results: The results revealed that 1) the students' accounting ability after learning through Experiential Learning Approach on Accounting Course was higher than before at statistically significant level of .01 ($t = 11.40$, $p < .001$), 2) the students' accounting ability after learning through Experiential Learning Approach on Accounting Course was higher than the determined criterion of 70 percent at a significance level of .01 ($t = 3.62$, $p < .001$), and 3) the students' satisfaction after learning through Experiential Learning Approach on Accounting Course was at a very high level (M=4.59, SD=0.53).

Conclusion: The knowledge gained from the research is a 5-steps using the Experiential Learning Approach in Accounting Course, which consists of (1) Introduction and preparation, (2) Facilitating case studies, (3) Guiding conceptualization and simulation internship, (4) Practical exercises, and (5) Summary and reflection. It has been found to enhance students' accounting ability of students.

Keywords: Experiential Learning Approach; Accounting Ability; Students' Satisfaction

Introduction

Experiential learning plays a vital role in deepening student understanding by actively engaging them in real-world tasks and reflective processes. U-senyang (2024) emphasizes that experiential learning enhances critical thinking, problem-solving, and the ability to apply knowledge in practical contexts, leading to more meaningful and lasting educational outcomes. Complementing this, Jantanukul (2024) explores how immersive technologies such as AR, VR, and mixed reality further enrich experiential learning by creating interactive and engaging environments that simulate real-life scenarios. These approaches not only boost student motivation and participation but also foster deeper cognitive and emotional connections to the learning content. Together, the studies highlight that experiential learning—especially when supported by immersive technology—transforms traditional education into dynamic, student-centered experiences that better prepare learners for complex, real-world challenges.

Accounting education plays a vital role in developing the requisite skills for financial, auditing, and business management fields. Nevertheless, first-year accounting students often face numerous challenges that negatively impact the accumulation of fundamental concepts and their application in real environmental circumstances for completing required learning objectives (Makovec Danijela, 2018). The educational environment of the accountants' education in school is defined by a wide array of challenges

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that range from both teaching methods and learner competence. One of these challenges is the varying educational backgrounds possessed by students, which lead to differences in earlier foundational knowledge and skill sets. While this diversity is enriching, it becomes a challenge for educators who have to develop ways of teaching through diverse variations in readiness and understanding so that every student can enjoy equal learning opportunities. Accounting education largely relies on didactic lectures and passive theories of learning, traditional pedagogical techniques for which are failing to engage the student and create a deep understanding. The static nature of these instructional techniques does not accommodate the dynamics that underlie accounting practices, so graduating students are shown to be ineffective at solving problems and thinking critically.

In addition, time constraints and other curricular pressures make the issues that first-year accounting students have even worse. The amount of material that needs to be taught under time constraints puts pressure on students to only memorize and reproduce any information. This preoccupation with rote learning not only denies the very essence of education but also diminishes students' analytical and effective thinking, both of which are needed in accounting (Pathirage et. al., 2019). To address these challenges, an innovative paradigm of experiential learning is proposed as a potential alternative that potentiates accounting competency and learning performance among first-year students (Daniëls et. al., 2019). An Experiential Learning Approach is informed by theoretical frameworks such as Kolb's Experiential Learning Theory, or Dewey's theory of Inquiry, which suggest that the process of gaining knowledge develops in active participation with true, stirred observations, abstraction, and application.

One of the basic objectives of teaching accounting to first-year students can cause the following problems. One of the first reasons is the fact that accounting concepts can be abstract and intricate for beginners to understand, and this brings subsequent difficulties in comprehension. Many students will likely find it difficult to grasp the main pillars and norms of accounting because of its technical character. First of all, traditional teaching methods often involve rigorous lectures where students are bombarded with theories and concepts that do not effectively retain the students' attention, nor do they fit well into various learning styles. A passive learning environment puts students on the side and fails to challenge them to apply accounting principles to practice. On the other hand, poor instructor-student communication and feedback tools can limit misunderstanding addressing, and understanding by students without personalized orientation and help, students can become either detached or demotivated, which in turn will impact their learning outcomes. Besides, restricted possibilities for practical workplace training and useful work experience may limit students in developing effective skills for accounting practice. Unless the curriculum is accompanied by real-world applications and practical exercises, students might find it difficult to bridge the gap between theoretical knowledge and practical application, and this will ultimately affect their understanding of accounting and their capabilities as accountants.

As argued by Roberts et. al. (2022), providing appropriate accounting education for students must be made as one of the main tasks, as there are quite a few issues. For instance, financial literacy is crucial as it comes in handy in both our personal lives, handling the financial obligations of the property, and at the business level, where bookkeeping and accounting are vital for the proper functioning of the organization. Accounting literacy can comprise documenting personal expenditures and reconciliation of banking statements, or analyzing accounts and issues in a corporate setting. Accounting skills are among the foundations that provide individuals with the tools to make educated financial decisions. Beyond this, solid grounds in accountancy have the chance of increasing the individual's employment chances in addition to enhancing career prospects across many industries. Employers will always seek the finance team to be fully competent with all accounting principles and skills, as they play the role of steering an organization towards its strategic ambitions through the management of the financial resources.

Moreover, enhancing accounting competence not only contributes to the development of critical thinking and problem-solving skills but also assists in making necessary decisions even under pressure. Analyzing financial data helps students be able to see some patterns, interpret trends, and make decisions based on data, These are among the skills that are useful in different kinds of circumstances, which are significant for accounting as well. Moreover, the strengthening of accounting skills leads to

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substantial economic substantially, which in turn ratchets up financial literacy and accountability of the society as well as individuals, thereby promoting economic growth and financial stability at the levels of individuals and society. Experiential learning bypasses the limitations of traditional classroom teaching, providing rich experiential platforms that allow students to engage in authentic accounting engagement and problems. Through activities, such as simulation of finance analysis, audits, and costing, students learn to practically apply theoretical concepts that fill the gap between textbook learning events. Additionally, experiential learning promotes the acquisition of important intellectual skills such as critical thinking and analytical capacities, along with teamwork, that are necessary for a diverse accounting environment. Considering the complex nature and transformation potential of experiential learning, this research tries to explore the impact of Experiential learning on accountants' abilities. In summary, the researcher wants to study the effects of the Experiential Learning Approach on the Accounting Course of First-year students at Zhengzhou University of Science and Technology in Henan Province, the People's Republic of China.

Objectives

1) To compare accounting ability before and after learning through the Experiential Learning Approach.

2) To compare accounting ability with the determined criterion of 70 percent.

3) To assess students' satisfaction after learning through the Experiential Learning Approach.

Literature review

Experiential Learning Approach

Meaning of Experiential Learning Approach

Experiential learning, supported by various educational theorists such as David Kolb and John Dewey, is a pedagogy that uses practical experience to involve students in hands-on activities that eventually promote reflective practice. This strategy promotes real involvement and self-reflection, as learners should act based on what they are doing by performing tasks that present them with such challenges to their lives. Students are involved in real-life experiences, learning practical skills, getting a better understanding of theoretical concepts, and acquiring critical thinking.

Daniëls et al. (2019) emphasize that experiential learning has an exceptional transformative potential that produces holistically developed people and fosters lifelong habits of study. Students get a sense of knowledge through experiential learning that includes meta-cognitive ability, emotional intelligence, and interpersonal skills required for life in various personal situations, as well as the working environment.

The cyclical feature of experiential learning that includes the process pursued by Lavy (2020), a stage where actions are performed, then followed by reflection and creating concepts to experiment with, is stressed in this work. This recursive procedure is for students to be able to read the meaning from their own experiences, connect theory with practice, and improve competence through perpetual self–evaluation and correction.

Components of the Experiential Learning Approach

Experiential learning incorporates several essential components that help in knowledge attainment and implementation in a real environment. These elements comprise concrete experience, reflective observation, abstract conceptualization as well as active experimentation. These constitute circles of learning, allowing students to be involved in their studies, engaging deeply in the process, and relating it to theory and practice.

Concrete experience is characterized by real-life engagement with phenomena in the form of practical activities, outdoor learning, or role-play. This part offers concrete activities that facilitate their learning as well, which means they are practicing skills and competencies.

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Through reflective observation, the students are compelled to critically analyze their experiences, thoughts, and feelings, culminating in self-consciousness. Challenges faced by the students are better understood, and areas of improvement are identified through reflection. With such identification, meta-cognitive skills can be learned to improve results from learning.

Abstract conceptualization refers to the process of bestowing meaning from concrete realities and experiences, analyzing them in comparison with target ideas. Abstraction may also mean other forms, such as describing a situation or experience instead of reporting on it. This aspect, through his method, enables the student to abstract their learning, find patterns and principles, as well as delve deeper into understanding underlying concepts.

Active experimentation encourages the student to engage with out-of-text material and apply what they have learned, and try different approaches in testing their hypotheses. This module enables the students to perfect their skills, implement alternative solutions, and learn by building up a successful practice that boosts work-readiness.

Steps of Teaching of Experiential Learning Approach

The experiential learning teaching process synthesized from Woodside & Mendoza (2023), Brian (2023), Rai (2018), and Kolb (1984) were as follows: Step 1: Introduction and preparation: start the lesson with an introduction of the theme and aims so that students will be interested to learn. This could take different forms, such as asking thought-provoking questions, sharing relevant news articles, or showcasing interesting case studies. Step 2: Facilitating case studies: students can either work individually or in groups to analyze and discuss real cases that are set for them. And investigate financial statements, apply accounting principles, or assess internal controls during these cases, step 3: Guiding conceptualization and simulation internship: students would be put in a simulated bookkeeping setup where they perform hands-on accounting tasks. Students can take up accounting functions, process financial statements of companies, categorize, summarize, and analyze them. Step 4: Practical Exercises: set such hands-on exercises that students must apply their accounting knowledge and practice acquired in class. Accordingly, the tasks could be such that preparing the company's balance sheet or income statement would be required, and step 5: Summary and reflection: ask the students to summarize and reflect on what they have learned in the class. This will be achieved through sharing personal learning experiences or group discussions to exercise knowledge.

Students' accounting ability

Meaning of Accounting Ability

Accounting ability means the expertise and skill people have in the basic know-how and use of accounting principles, concepts, and tools (Andiola et. al., 2020). It is both theoretical and practical knowledge and skills that are required to accomplish accounting tasks. Accounting skills are not limited only to the understanding of accounting principles; they involve their actual utilization in the real world to analyze financial statements, make educated decisions, and represent the data correctly (Zhu et. al., 2021).

Components of Accounting Ability

Drawing from insights provided by educators and scholars, accounting ability can be summarized into two dimensions: theoretical knowledge and applied skills.

1. Theoretical Knowledge: Understanding Accounting Principles: Becoming efficient in the basic accounting principles, concepts, and standards lies at the heart of accounting skills. Knowledge of accrual accounting, revenue recognition, expense matching, and accounting equations is some of the concepts (Pereira et. al., 2020). Interpretation of Financial Statements: Accounting methods, including balance sheets, income statements, and cash flow statements, are the basis of the organization's financial management. Financial ratios and metrics are the indicators that are used for calculating the entity's financial status (Triventi, 2020). Knowledge of Accounting Standards: Having a grasp of the underlying accounting standards of the GAAP and IFRS is vital to accomplishing the requirements of compliance and uniformity in financial reporting.

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2. Practical Skills: Financial Analysis and Reporting: Expertise in the analysis and presentation of financial data, and preparation of the financial reports are the requirements for doing such a job. The function of this module is to determine the financial proportions, review trends, and create the values financial report (Andiola et. al., 2020). Accounting Software Proficiency: This can be done by applying competent accounting software and technology tools when performing accounting tasks, and, hence, the productivity and accuracy of the performance will be enhanced. With software like QuickBooks, SAP, and Excel, business owners can automate accounting and admin tasks as well as facilitate their growth (Lipscomb et. al., 2022). Problem-Solving and Decision-Making: It is important to have well-developed problem-solving skills for dealing with complex accounting issues and for making thought-out decisions. That means critical thinking, analytical reasoning, and synthesis in applying accounting principles to tackle problems qualitatively.

Students' satisfaction

Meaning of satisfaction

Student satisfaction can be defined as the fulfillment and happiness that students receive from the whole educational path that is based upon different factors of their academic, interpersonal, and personal development within the environment of study. It reveals how much students' aspirations, needs, and wishes are met by educational institutions, programs, and services. Satisfaction may be affected by variables such as teaching quality, curriculum relevance, support services, the quality of the campus facilities, extracurricular activities, and institutional reputation (Alqasa & Afaneh, 2022).

Components of satisfaction

Student satisfaction, which is composed of many elements, cumulatively forms the students' experiences and perceptions regarding their education process.

1. Academic Dimension:

1) Quality of teaching: The effectiveness, experience, and engagement of instructors in providing course content, facilitating discussions, and giving feedback.

2) Curriculum relevance: The correlation of learning objectives, learning outcomes, and instructional materials with students' academic interests, career goals, and industry job requirements (Ainsworth, 2021).

3) Learning resources: Access to up-to-date textbooks, online databases, academic journals, laboratory facilities, and technology-enhanced learning tools that promote student learning and research.

2. Social Dimension:

1) Peer relationships: Student engagement through collaborative learning, group projects, study groups, and social engagements to promote friendship, teamwork, and a sense of belonging.

2) Campus community: Campus life that is filled with diversity, inclusivity, and vibrancy, including extracurricular clubs, student organizations, cultural events, and recreational facilities that enhance socialization and personal development. (Routh, 2023).

3. Institutional Dimension:

1) Student support services: Availability and effectiveness of support services, including academic advising, counseling, tutoring, career services, health services, and disability accommodations to meet the needs of students with diverse backgrounds and different challenges. (Alqasa & Afaneh, 2022).

2) Administrative efficiency: Ensuring promptness, transparency, and efficiency in operational processes that include enrolment, registration, financial aid, billing, and graduation requirements to prevent administrative hurdles and delays.

Conceptual Framework

The conceptual framework of this thesis was composed of three variables: one independent variable was the implementation of the Experiential Learning Approach in the Accounting Course, and the other two dependent variables were students' accounting ability and students' satisfaction.

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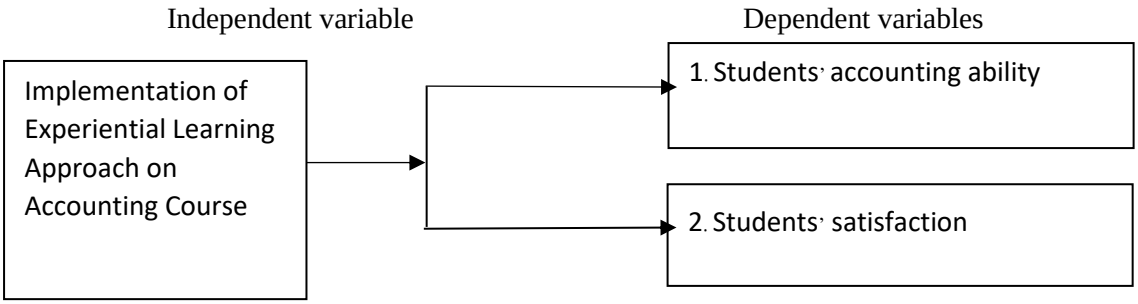

Figure 1 Conceptual Framework

Methodology

The chapter details the research design and methodology model of the study. The research seeks to examine the impact of experiential learning on accounting knowledge and learning results of first-year students. To achieve this objective, different components of the research methodology, such as population and sample selection, experimental design, research instruments, data collection, and data analysis, are explored.

1. Population and samples

The population of this study was 150 first-year students (5 classrooms) from Zhengzhou University of Science and Technology in Henan Province, the People's Republic of China.

The sample of this study was 30 first-year students (1 classroom) from Zhengzhou University of Science and Technology in Henan Province, China, derived by the cluster random sampling method

2. Experimental design

This study used a one-group pretest-posttest design (adapted from Campbell& Stanley, 1963), shown in the figure below:

Group	Pre-test	Treatment	Posttest
Experimental	O_1	X	O_2

O_1 was the measurement of the accounting ability before the experiment

X was the implementation of using Experiential Learning Approach

O_2 was the measurement of the accounting ability and students' satisfaction after an experiment

3. Research instruments

Research instruments were the tools for collecting data. The research instruments that were used in this study were:

Instruments for the experiment

Lesson plans: There were six lesson plans allocated with twelve hours of teaching.

Instruments for collecting data

1) An accounting ability test

2) A questionnaire for students' satisfaction.

Construction and examination of the quality of research instruments.

1. Lesson plans

There were six lesson plans allotted with twelve hours of Experiential Learning Approach. The lesson plans for using experiential learning in accounting were constructed as follows:

Step 1: Studying the construction of the lesson plan and the relevant documents. Consideration was focused on teaching content, teaching purpose requirements, teaching key and difficult points, teaching methods and means, teaching process, discussion, thinking questions, and homework of the lesson plan. The construction of the lesson plan involved item analysis to clarify the validity of the lesson plan.

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Step 2: Constructing 6 lesson plans. The teaching time of each lesson plan was two hours, totaling twelve hours. These six topics of lesson plans each taught chapters on different topics.

Step 3: The draft lesson plans mentioned earlier were assessed by 5 experts regarding the appropriateness of each component of the draft lesson plans. The instrument used for evaluating appropriateness was a five-point rating scale that ranged the level of appropriateness from a very high level, high level, moderate level, low level, and very low level. This step is to check content validity by experts. Analyze the appropriateness of the lesson plan by calculating the mean score (M) and standard deviation (SD). Assign the interpretation of the appropriateness level as follows:

Table 1 Interpretation of appropriateness level (Best, 1977)

Mean scores	**Interpretation**
4.51 – 5.00	Very high level
3.51 – 4.50	High level
2.51 – 3.50	Moderate level
1.51 – 2.50	Low level
1.00 – 1.50	Very low level

If the lesson plans evaluated by the experts have a level of appropriateness higher than 3.51, meaning the lesson plans were appropriate. After obtaining the result from the curriculum evaluation by experts, the draft lesson plan was revised according to the experts' recommendations for improvement.

Data collection

The researcher contacts and offers evaluation forms to five experts to evaluate the appropriateness of the lesson plans. Use the evaluation form to collect data from the experts' evaluation of the appropriateness of the lesson plan. If the lesson plans evaluated by the experts have a level of appropriateness higher than 3.51, meaning the lesson plans were appropriate. The appropriateness of overall lesson plans was at a very high level (M=4.63, SD=0.49).

2. An accounting ability test

Step 1: Reviewing relevant documents. Study existing materials related to accounting and students' accounting ability assessment. Focus on the purposes, types, and contents of accounting and students' accounting ability tests. Consider item analysis to understand item discrimination, item difficulty, and the overall validity and reliability of the test.

Step 2: Analyzing curriculum contents and learning objectives. Examine the curriculum to identify objectives and content related to accounting and students' accounting ability. Construct an analysis table of the curriculum to guide test creation. Identify cognitive domains (Revision of Bloom's Taxonomy) relevant to accounting and Students' accounting ability, remembering, understanding, applying, and analyzing (Anderson & Krathwohl, 2001).

Step 3: Constructing the accounting ability test. The test is divided into 2 parts. The first part is a multiple-choice test in theoretical knowledge. The second part is a practical test scored using a rubric.

Part 1: Develop theoretical knowledge tests focusing on specific themes or topics related to accounting and Students' accounting ability. Use multiple-choice questions, with each question having four alternatives and one correct answer. Ensure test items reflect the cognitive domains identified in Step 2.

Part 2: Develop a practical skills test focusing on specific themes or topics related to skill accounting. And design rubric scored for accounting skills.

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Step 4: Expert review and revision. Present the draft accounting ability tests to accounting and education experts for feedback. Receive advice on appropriateness, precision, accuracy, ambiguity, and wording of the tests. Revise the tests based on the advisors' suggestions.

Step 5: Content validity and reliability check. Offer the revised tests and evaluation forms to three experts for a content validity check. Evaluate the quality using the Index of Item Objective Congruence (IOC) obtained from the test evaluation form. Apply the IOC index formula to ensure the appropriateness and consistency of each test item. If the Index of Item Objective Congruence (IOC) of each item of the test is higher than 0.5, that means it can be used in the test. The result of analyzing the IOC index showed that all test items were appropriate and could be used in the test. (IOC between 0.80-1.00)

Step 6: Revision based on expert comments and suggestions. Revise the tests according to the comments and suggestions provided by the experts.

Step 7: Try out an item analysis. Administer the tryout accounting ability test to students who have learned the relevant content. Measure item difficulty (p) and item discrimination (r) for each test item.

Step 8: Item difficulty and discrimination analysis. Analyze each test item to determine item difficulty (p) and item discrimination (r). Ensure item difficulty ranges from 0.20 to 0.80, and item discrimination is more than 0.20.

Step 9: Compute the reliability of the accounting ability test. The researcher out the draft test to 30 students who were not in the sample for this research

Part 1 Compute the reliability of the theoretical knowledge test using appropriate formulas, Kuder and Richardson formulas 20, part 1, with a target reliability was 0.82, more than 0.70.

Part 2 Analyzing each topic of the practical skills test to find out the inter-rater reliability by using two specialists to mark the scores of 30 students after calculating the value of the scores to get inter-rater reliability for rubric assessment (Reddy, Y. M., & Andrade, H., 2010) using Pearson correlation coefficient formula. The reliability coefficient value indicates that the reliability quality of the study data was very high. So, the test was appropriate for collecting data. Part 2 with target reliability was 0.83, more than 0.70.

By following these steps, the accounting ability tests are systematically constructed, reviewed by experts, and validated to ensure their effectiveness in measuring students' accounting knowledge and practical skills.

3. A questionnaire for students' satisfaction.

The purpose of this questionnaire is to gather valuable data on students' opinions regarding the instruction, including curriculum content, learning activities, and instructional materials. The feedback obtained will inform improvements in the curriculum, lesson plans, and instructional materials.

Step 1: Reviewing relevant documents. Study existing documents related to constructing satisfaction questionnaires. Focus on best practices, formats, and types of questions suitable for assessing students' opinions on instruction.

Step 2: Constructing the questionnaire

Section 1: Record students' personal information.

Section 2: Utilize a five-point Likert scale with options ranging from very high to very low. Comprising 15 questions or statements adapted from the student opinion questionnaire.

Section 3: Include open-ended questions for additional opinions or suggestions on curriculum content, learning activities, instructional materials, assessment, and evaluation.

Step 3: Expert review and revision

Present the draft questionnaire to the thesis advisors for feedback. Revise the questionnaire based on the advisors' suggestions. Offer the questionnaire and evaluation form to three experts for a content validity check and feedback. Evaluate the quality using the Index of Item Objective Congruence (IOC).

Step 4: Content validity analysis. Analyze the IOC index of the questionnaire items using the formula:

$$IOC = \Sigma R / N$$

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Where IOC means Index of Item Objective Congruence
ΣR means the Summation of the experts' opinion marks
N means the number of experts.

If the IOC of each questionnaire item is higher than 0.5, it indicates suitability for inclusion in the questionnaire. For this study, IOC had between 0.80-1.00.

Step 5: Revision based on expert comments. Revise the questionnaire according to the comments and suggestions provided by the experts.

Step 6: Reliability analysis. Analyze each item of the questionnaire to determine reliability. Compute the reliability using Cronbach's Alpha formula. Set a criterion of more than 0.70 for satisfactory reliability. The reliability of the satisfaction questionnaire was 0.72.

Data collection

The procedures of data collection were as follows:

1. The sample was given the pretest by measuring accounting ability
2. The sample was taught by using the Experiential Learning Approach in the Accounting Course with 6 lesson plans and 12 total hours.
3. After finishing the instruction, the samples received the posttest by using the same instrument that was used in the pretest.
4. The sample was given the students' satisfaction questionnaire.

Data analysis

In this study, data were analyzed as follows:

1. Compare the students' accounting ability before and after learning through experiential learning by using a t-test for dependent samples.
2. Compare the students' accounting ability with the determined criteria set at 70 percent by using a t-test for one sample.
3. Assess the student' s satisfaction with the Experiential Learning approach by using the arithmetic mean and standard deviation.

Results

The findings of this research were as follows.

1. The result of comparing students' accounting ability before and after learning through the Experiential Learning Approach in the Accounting Course.

The result of comparing the students' accounting ability before and after learning through the Experiential Learning Approach in the Accounting Course. The table below shows descriptive statistics and the t-test. This table aimed to answer the research objective about whether the implementation of the Experiential Learning Approach in the Accounting Course teaching method was able to enhance students' accounting ability.

Table 2 The result of comparing the mean score of students' accounting ability before and after learning through the Experiential Learning Approach in the Accounting Course.

Group	Full scores	n	Pre-test scores		Posttest scores		t	p
			M	SD	M	SD		
Experimental group	90	30	52.07	10.21	68.20	7.86	11.403**	.001

**p<.001

As presented in Table 2, the mean scores of pretests of students' accounting ability were 52.07 (SD = 10.21), and the posttest of students' accounting ability was 68.20 (SD =7.86). On average, post-test scores were 16.13 points higher than pretest scores. Posttest scores of students' accounting ability were higher

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than pretest scores at a .01 level of statistical significance (t =11.403, p < .001). The average scores of the study developed increasingly higher than the pretest.

2. The result of comparing the mean score of students' accounting ability of students after learning through the Experiential Learning Approach in the Accounting Course with the determined criterion set at 70 percent.

The result of comparing the mean score of students' accounting ability of students after learning through the Experiential Learning Approach in the Accounting Course with the determined criterion set at 70 percent. The table below shows descriptive statistics and t-tests for one sample as analyzed, aimed to answer the research objective about whether the implementation of experiential learning in Accounting courses was able to enhance students' accounting ability.

Table 3 The result of the average score of students' accounting ability after learning with the Implementation of experiential learning in Accounting courses, with the determined criterion set at 70 percent of full scores. (Full score = 90).

Group	n	Full score	criterion score	M	SD	t	p
Experimental group	30	90	63	68.20	7.86	3.624**	0.001

* p < 0.001

According to the research results, we can draw the following conclusions: The average score and standard deviation of the First-Year Students at Zhengzhou University of Science and Technology who adopted the implementation of Experiential Learning Approach on Accounting Course were 68.20 points (out of 90 points) and the standard deviation was7.86 points, which was higher than the standard of 70% at the level of statistical significance of .01. It can be seen that the students' accounting ability of the students who learning through Experiential Learning Approach on Accounting Course are higher than 70%.

3. The results of research to assess the students' satisfaction with the implementation of the Experiential Learning Approach in the Accounting Course.

The result of comparing the mean score of satisfaction after learning through the Experiential Learning Approach in the Accounting Course. The table below shows descriptive statistics and the t-test as analyzed. This table aimed to answer the research objective about whether using the Experiential Learning Approach in Accounting Courses was able to enhance students' satisfaction.

Table 4 The results of students' satisfaction after learning through the Experiential Learning Approach on the Accounting Course.

Items	M	SD	Satisfaction level
1. How satisfied are you with the organization and content of the course?	4.60	0.55	Very high level
2. Did the course cover relevant topics that align with your interests?	4.60	0.55	Very high level
3. Were the course materials presented and easy to understand?	4.40	0.55	High level
4. To what extent did the course challenge your understanding of daily routines?	4.60	0.55	Very high level
5. How effective were the context-setting activities and conceptual explanations?	4.20	0.45	High level

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International Journal of Sociologies and Anthropologies Science Reviews
Volume 5 Issue 3: May-June 2025: ISSN 2985-2730
Website: https://so07.tci-thaijo.org/index.php/IJSASR/index

Items	M	SD	Satisfaction level
6. Did the accounting principles activities enhance your learning experience?	4.60	0.55	Very high level
7. How well did your understanding of activities deepen your comprehension?	4.60	0.55	Very high level
8. Did the instructor actively encourage participation and engagement during class sessions?	4.60	0.55	Very high level
9. How clear were the course contents as explained by the instructor?	4.80	0.45	Very high level
10. What is your opinion on the variety and usefulness of multimedia resources provided?	4.60	0.55	Very high level
11. Did the recommended textbooks and supplementary readings contribute to your learning?	4.80	0.45	Very high level
12. How well did the course materials support your understanding of daily activities and routines?	4.60	0.55	Very high level
13. How clear were the project evaluation criteria?	4.60	0.55	Very high level
14. Did the assessments accurately reflect the course content and learning objectives?	4.60	0.55	Very high level
15. How valuable was the feedback provided on your assignments in improving your understanding of the subject matter?	4.60	0.55	Very high level
Overall	4.59	0.53	Very high level

As shown in Table 4, the overall results of students' satisfaction after learning through the Experiential Learning Approach in the Accounting Course were at a very high level (M=4.59, SD=0.53).

Conclusion

Through the comparative analysis of the results of the pretest and post-test of the first-year students using the teaching method. The conclusions were as follows: 1) the students' accounting ability after learning through Experiential Learning Approach on Accounting Course was higher than before at statistically significant level of .01 ($t = 11.40$, $p < .001$), 2) the students' accounting ability after learning through Experiential Learning Approach on Accounting Course was higher than the determined criterion of 70 percent at a significance level of .01 ($t = 3.62$, $p < .001$), and 3) the students' satisfaction after learning through Experiential Learning Approach on Accounting Course was at a very high level (M=4.59, SD=0.53).

Therefore, the implementation of experiential learning in accounting courses is feasible for teaching in the accounting course, which helps to improve the learning effectiveness and students' accounting ability of students. The experimental results validated the research objectives.

Discussion

Impact on Accounting Ability

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1. Students who learn through the Experiential Learning Approach in Accounting Courses have higher scores on students' accounting abilities than before. The reason is that Experiential Learning actively engages students in the learning process, allowing them to apply theoretical knowledge to real-world scenarios. This hands-on approach enhances understanding and retention of accounting concepts, as students are not merely passive recipients of information but active participants in problem-solving activities. Experiential Learning also fosters critical thinking and practical skills by immersing students in situations that mimic actual accounting tasks. According to Kolb's experiential learning theory, learning is most effective when students go through a cycle of concrete experience, reflective observation, abstract conceptualization, and active experimentation. This cyclical process ensures that students can understand and apply accounting principles in various contexts, thereby improving their accounting abilities (Kolb, 1984).

Moreover, research indicates that students engaged in experiential learning develop better problem-solving skills and are more adept at applying their knowledge in practical situations compared to those who learn through traditional methods. This approach not only increases their accounting skills but also boosts their confidence in handling accounting tasks, ultimately leading to higher academic performance.

2. Achievement of Learning Criteria

Students who learn through the Experiential Learning Approach in Accounting Courses have higher scores than 70 percent. This is because Experiential Learning methods not only enhance students' understanding of accounting principles but also significantly improve their ability to apply these principles in practical contexts. The active engagement in learning activities, such as case studies, simulations, and real-world problem-solving tasks, allows students to internalize the material more effectively than through traditional lecture-based methods. Experiential learning also promotes deeper cognitive processing, as students are required to analyze, evaluate, and synthesize information to solve complex accounting problems. This depth of learning leads to better retention and application of knowledge, resulting in higher academic performance. A study by Wurdinger and Carlson (2010) found that students who engage in experiential learning activities tend to perform better academically, often surpassing the 70 percent threshold in assessments because they are better prepared to tackle both theoretical and practical aspects of the subject matter.

Additionally, the collaborative nature of many experiential learning activities, such as group projects and peer reviews, fosters a supportive learning environment where students can learn from each other, further enhancing their understanding and performance. This collaborative aspect is crucial in accounting education, where teamwork and communication are key skills (Wurdinger & Carlson, 2010).

3. Increased Students' Satisfaction

Students' satisfaction was higher after learning through the Experiential Learning Approach in the Accounting Course. The implementation of the Experiential Learning Approach in Accounting Courses significantly increased students' satisfaction. This approach transforms the traditional classroom into an interactive, engaging learning environment where students are actively involved in their education. Instead of passively receiving information, students participate in hands-on activities such as case studies, simulations, and role-playing, which makes the learning process more enjoyable and meaningful. One of the key reasons for increased satisfaction is that experiential learning aligns with students' needs for practical, real-world applications of accounting concepts. When students see the relevance of what they are learning to their future careers, their motivation and interest in the subject matter increase (Kolb, 1984). Furthermore, experiential learning allows students to immediately apply what they have learned, receive instant feedback, and make adjustments, which enhances their confidence and competence in the subject.

Moreover, the collaborative nature of experiential learning fosters a sense of community and support among students. Working in teams, students develop stronger interpersonal skills and build relationships that enhance their overall learning experience. According to research by Kolb and Kolb (2017), students who engage in experiential learning report higher levels of satisfaction because they feel more engaged, supported, and capable of mastering the course content. Overall, the hands-on, practical

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focus of experiential learning not only improves students' academic performance but also boosts their satisfaction by making learning more relevant, interactive, and enjoyable. In summary, the implementation of the Experiential Learning Approach in Accounting Course significantly enhances students' satisfaction by promoting active engagement, demonstrating the real-world relevance of accounting concepts, providing immediate feedback and skill development, fostering collaboration and interpersonal skills, and increasing students' confidence and self-efficacy. These factors collectively create a more enriching and fulfilling learning experience, leading to higher levels of satisfaction among students.

Recommendation

1. Recommendation for implementation

Based on the findings from the study, the following recommendations are made for the implementation of Experiential Learning aimed at enhancing the accounting ability of first-year students: 1) Integrate Experiential Learning into curriculum design: Educational institutions should systematically integrate experiential learning into the accounting curriculum. This can involve incorporating case studies, real-life business scenarios, and hands-on projects that simulate the challenges faced in the accounting profession. This integration will bridge the gap between theory and practice, providing students with a more comprehensive understanding of accounting principles. 2) Provide continuous professional development for educators: Instructors should receive ongoing training on experiential learning methodologies to ensure they are well-equipped to facilitate such learning experiences. Workshops, seminars, and collaborative sessions can help educators stay updated with the latest teaching strategies and technological tools, which can be effectively applied in accounting courses.3) Develop assessment methods aligned with Experiential Learning: Traditional assessment methods may not fully capture the benefits of experiential learning. Therefore, it is recommended to develop assessment tools that evaluate students' problem-solving skills, ability to apply knowledge in real-world situations, and reflective learning processes. This could include project-based assessments, peer evaluations, and reflective journals. 4) Encourage reflective practices among students: Students should be encouraged to regularly reflect on their learning experiences. Reflective practices can help students internalize the knowledge gained through experiential learning and understand their strengths and areas for improvement. This can be facilitated through reflective essays, discussions, and self-assessment exercises.

2. Recommendation for Further Research

Future research on Experiential Learning aimed to enhance the accounting ability of first-year students should focus on the following areas: 1) Explore the Long-Term impact of Experiential Learning: Future research should focus on the long-term effects of experiential learning on students' career success and professional development. This could involve tracking graduates to assess how experiential learning has influenced their job performance, career advancement, and satisfaction in the accounting field. 2) Investigate the role of technology in Experiential Learning: Further studies are needed to explore the potential of emerging technologies, such as artificial intelligence, virtual reality, and blockchain, in enhancing experiential learning in accounting education. Research could examine how these technologies can be effectively integrated into teaching and the impact they have on student engagement and learning outcomes. 3) Examine the impact of Experiential Learning on diverse student populations: Research should investigate how experiential learning affects students from different backgrounds, including those with varying levels of academic preparedness, socioeconomic status, and cultural backgrounds. This can help in identifying strategies to ensure that experiential learning is inclusive and equitable. And 4) Assess the effectiveness of Experiential Learning in different accounting disciplines: While experiential learning has shown promise in general accounting education, further research is needed to assess its effectiveness in specialized areas such as auditing, tax accounting, and forensic accounting. This can help in tailoring Experiential Learning Approaches to the specific needs of each discipline.

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