

Identifying and Ranking Active Learning Methods in Accounting Education Using the Fuzzy Analysis Hierarchy Process¹

Navid Reza Namazi², Tabandeh Salehi³

Received: 2022/03/23

Accepted: 2022/09/14

Research Paper

INTRODUCTION

Due to the importance of the training of specialists in the field of accounting, various institutions around the world emphasize the quality of the accounting education (AE) system. For example, The American Accounting Association's Bedford Committee criticized the education system in 1986 and for improving training, the Accounting Education Change Commission (AECC) was formed. The committee's mission was to accelerate the improvement of education so that those entering the accounting profession have the skills, knowledge, and attitudes needed to succeed in it (AECC, 1990, P. 3 and 4). One of the committee's achievements was the issuance of a statement that was prepared in consultation with major US accounting firms. The statement supported significant changes in the way education is taught, in particular the use of active learning methods (ALM). Ten years after this statement, Albrecht and Sack (2000) concluded that there had been little improvement and insufficient change in education. Also, they found that there is very little active learning in AE and too much passive learning.

1. DOI: 10.22051/JAASCI.2022.39777.1684

2. Assistant Professor, Department of Accounting, Shiraz University, Shiraz, Iran. (navidnamazi2003@yahoo.com).

3. Assistant Professor, Department of Accounting, Baft Higher Education Center, Shahid Bahonar University of Kerman, Kerman, Iran. Corresponding Author. (Ta.salehi@uk.ac.ir).

Research on active learning in AE is relatively new compared to other fields. These studies usually focus on evaluating the effectiveness of a particular ALM used in a particular lesson. But despite the emergence of ALM, professors still use the lecture method. Therefore, the main purpose of this study is to determine the ALM in AE and rank them using the Fuzzy Analysis Hierarchy Process (FAHP).

Given the importance of AE in the survival of the field and the impact it has on organizations, companies, and businesses, there is a special need to do this research. The present study is the first research that examines the existing background and theoretical foundations to identify ALM in AE and its ranking, which can be a basis for familiarity and use of ALM in AE.

According to the purpose, theoretical foundations, research background, and previous studies the following hypotheses are presented:

Hypothesis 1: There is a significant relationship between the use of ALM and the effectiveness of education in accounting.

Hypothesis 2: There is a significant difference between the ranking of ALM before and after Fuzzy-AHP.

MATERIALS AND METHODS

The statistical population of the study includes professors of accounting in Iranian public universities. Data was collected through a questionnaire. Using a random sampling method, 1970 questionnaires were distributed electronically and in person in three stages. Finally, 384 questionnaires were received and analyzed. ALM in AE was identified using a library review and was classified into eleven methods and was ranked by the subjects according to the Fuzzy-AHP. Then, a comparative comparison was made between the existing rankings before and after using this process to determine possible differences.

RESULTS AND DISCUSSION

In order to investigate the effectiveness of ALM in AE, according to the type of questionnaire questions and the normality of the collected data, the one-sample t-test was used. According to Table 1, the significance level of the test in all methods is less than the error level of 0.05, so there is a significant relationship between the use of ALM and the effectiveness of AE.

Table 1. Results of the first hypothesis using one-sample t-test

ALM	Mean	t	Sig	95 % confidence interval	
				Lower	Upper
Modified lecture	3.61	12.03	0.000	0.51	0.71
Problem solving by university students individually in the classroom	3.35	6.27	0.000	0.24	0.46
Problem solving by university students individually outside the classroom	3.23	4.65	0.000	0.13	0.33
Problem solving in small groups in the classroom	3.40	6.07	0.000	0.27	0.53
Discuss case studies	3.33	5.47	0.000	0.21	0.45
Oral conferences by a team of university students	3.12	2.47	0.000	0.03	0.22
Oral conferences by a university student	3.30	5.85	0.000	0.20	0.40
Oral questions from university students	3.49	11.02	0.000	0.41	0.58
Use of accounting tools (journal book, ledger book and worksheets, etc.)	3.39	7.74	0.000	0.29	0.49
Use of accounting software related to each lesson	3.20	3.80	0.000	0.10	0.30
Class Quizzes	3.21	4.17	0.000	0.11	0.31

Also, according to the Fuzzy-AHP ranking, problem solving methods by students individually in the classroom, modified lectures, oral questions from students, class quizzes, and problem solving in small groups in the classroom have the highest rank. In addition, there is a significant difference between the ranking of ALM in AE before using the Fuzzy-AHP and after. Comparative results of Friedman ranking methods and Fuzzy-AHP are shown in Table 2.

Table 2. Ranking of ALM in AE

ALM	Ranking based on FAZZY-AHP	Ranking based on Friedman test
Modified lecture	2	1
Problem solving by university students individually in the classroom	1	5
Problem solving by university students individually outside the classroom	9	8
Problem solving in small groups in the classroom	5	4
Discuss case studies	8	6
Oral conferences by a team of university students	11	11
Oral conferences by a university student	10	7
Oral questions from university students	3	2
Use of accounting tools (journal book, ledger book and worksheets, etc.)	6	3
Use of accounting software related to each lesson	7	9
Class Quizzes	4	10

CONCLUSION

In this study, ALM in AE was classified into eleven methods using a review of related studies. It was ranked by the subjects based on the Fuzzy-AHP. Then, a comparison was made between the existing rankings before and after using this template to examine the differences between these two ranking methods.

These results can help the planning committee of the accounting field, the professors of this field, and the education committees of the universities to improve the quality of education, especially in the field of accounting. It is also expected that the identified methods in this study will improve effective education in accounting and reduce the gap between the needs of society and the skills of accountants.

These results provide an opportunity for future research to track changes and trends in AE, especially ALM.

Keywords: Accounting Education, Active Learning, Fuzzy Analysis Hierarchy Process, Education Improvement, Identify, Ranking, Lecture.

JEL Classification: M41, I23.

COPYRIGHTS



This is an open access article under the CC-BY 4.0 license.