



Research Paper

## Financial Assessment using a Fuzzy Analytical Hierarchical Process Method

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### ABSTRACT

One of the basic priorities of any country is to designate an appropriate financial strategy to reach an optimized education system to tenure different jobs. The goal of this research is to determine criteria of importance and skills and knowledge ranking needed by Accounting graduates in order to achieve future financial success. To have access to the research goal, accounting education skills related variables recognized and categorized into 7 principal components (strategic management, analysing skills, leadership skills, increasing capabilities skills, general skills of Accounting, communication skills, and personality skills) are selected and the fuzzy AHP is utilized to data analysis. Research results show that strategic management is placed as the first priority and communication skills are considered as the last one according to professionals' points of view.

## 1 Introduction

Training qualified accountants is one of the most important concerns of the educational and professional systems of countries that can lead to strengthening the position of accounting as an academic science [1-4,7]. Recognizing the importance of proper training of human resources as an axis of development, countries have made many efforts and activities to improve the efficiency of university education for the proper training of this capital and have paid special attention to this issue in recent years. The main mission of universities in any country is to train and prepare specialized manpower and the needs of different jobs in the labor market, and for this purpose, they must first identify the needs of labor market expertise in their field of activity and in the next stage with the program.

Proper and calculated planning to guide students to learn the expertise required by these markets [17-19,26]. Unfortunately, studies on most disciplines show that university education has not been able to fulfill its mission by distancing itself from the real needs of the labor market, and in most cases, students in these disciplines are ready to graduate after graduation. Acceptance and acceptance of assigned tasks require additional training, which is often time consuming [37,38] and this is much more evident in

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some academic disciplines such as accounting [23,24,30,32]. A historical review of the university accounting education program in Iran over the past fifty years shows the fundamental point that in the general framework of formal accounting education, due to changes in the economic environment of the accounting profession, there has been no fundamental change. Accordingly, many experts in the accounting profession in Iran claim that accounting graduates do not have the necessary knowledge and skills to respond to the accounting and auditing profession [31,32]. Today, in the global market, there is a highly competitive environment, and people who enter the profession as accountants play a role far beyond what was assigned to accountants in the past; Like strategic management and risk or change management [26,27]. In fact, the trend of globalization and advancement in technology has destroyed the traditional bookkeeping and changed the role of accountants to business consultant. Although technical knowledge and practical skills are still vital in this field, instead of being accountants only as reporters of accounting information, they are recognized as reliable information interpreters and consultants. The change in the role of senior financial managers is a clear example of these changes and managers are in charge of strategies and operations by passing through the previously defined roles [14,15]. It is clear that the result is a change in the set of accounting skills and requires the development of individual and interpersonal skills that reduce traditional concerns such as bookkeeping and tax rules (so-called technical skills) and increase the desire to acquire skills.

Soft includes improving communication skills, leadership skills, critical thinking, problem solving skills (so-called general or non-technical skills) [10,11]. Despite many efforts to improve the employment skills of accounting graduates, the development of these skills remains a problem [12,13]. Knowing that the only factor in the optimal functioning of capital markets is the proper flow of financial information about the financial situation and performance of companies in those markets is the importance of the accounting system in preparing and reporting accounting information to feed these markets on the one hand and provide the training of specialized human resources required by the accounting departments of companies is revealed on the other hand [9,25]. Examination of research records on this issue shows the fact that the urgent need of the country's economy and industry for trained and experienced accountants depends on the appropriate and effective educational system of universities, while the inability of universities to prepare graduates to enter Professional work and having more comprehensive skills have caused a lot of controversy in this area. In order to improve the quality of education and reduce the gap between expectations related to the demand of the employer, university accounting education needs to be modified to determine the necessary skills and include them in the subject of accounting courses to facilitate the entry of graduates into the labor market. Therefore, the importance of the present study is to determine these skills and rank them, which can provide useful information for education decision makers and compilers of accounting topics, so that university education is provided to students based on the needs and demands of the labor market. Therefore, the purpose of this study is to determine the importance and ranking of knowledge and skills required for accounting graduates from the perspective of professionals in order to succeed in the future career of accounting graduates. Therefore, the theoretical foundations and empirical background of this study are reviewed and after referring to the research methodology based on the technique of hierarchical analysis of research findings are presented and finally the results and suggestions of the research are expressed.

## **2 Theoretical Foundations and Research Background**

### **2.1 Accounting Knowledge and Skills Training; Challenges and Expectations**

Numerous studies have been conducted in recent years in the field of causes of inefficiency of university

accounting education to prepare its students for the assigned tasks. The relevant results often emphasize that firstly, accounting has not been able to keep pace with other sciences, Appropriate education and transfer of the same accounting information to students in universities There are also tangible gaps [9,25]. In other words, while on the one hand we are facing a surplus of people with a university degree in accounting, on the other hand our employers in the labor market are complaining about the lack of specialized accountants. Accordingly, and due to the importance of this category, several studies have been conducted in recent years to identify these shortcomings and fill the relevant gaps [10]. However, a special and different feature of accounting from conventional and technical sciences such as medicine, dentistry and mechanics goes back to the model of providing services to graduates of this field. For example, while graduates of these technical and basic fields only need to apply their university education in the job market and often do not require any additional skills, accounting graduates who major in university education They are limited to proper bookkeeping, they are expected to manage, in addition to the above, challenges related to databases, computer software, tax laws, insurance, landlord and tenant, and import and export, and so on. While everyone agrees that he has not been adequately trained in universities in relation to recent cases [3].

Due to changes in the business environment, including the rapid advancement of technology and the globalization of markets, the role of current accountants has changed from providing financial information to preparing and interpreting various information, both financial and non-financial, for internal and external users [17]. Such changes in the business environment require that accounting graduates have the knowledge and skills needed to meet the changing expectations of the business community. Since the main purpose of accounting training programs is to prepare students to acquire the necessary conditions to enter the accounting profession, in recent years in order to train accountants who meet the needs of society, several studies have been conducted to assess the need and The importance of modifying the accounting education program is one of the topics of this research [34]. The International Accounting Standards Board's Standard 2, "Content of Vocational Accounting Training Programs," emphasizes that students must have professional knowledge, professional skills, and ethics and practice. They need to be able to integrate these factors, and in this way, members of the accounting profession can also be used to develop professional skills. Basic knowledge that should be part of an accounting program includes:

- 1- Accounting, financial affairs and related information (financial accounting and reporting, management and control accounting, taxation, commercial and commercial laws, auditing, financial and tax management, and professional values and ethics).
- 2- Business and organizational knowledge (economy, business environment, corporate governance system, business ethics, financial markets, quantitative methods, organizational behavior, strategic decision-making and management, marketing and international trade activities).
- 3- Knowledge and capabilities of information technology (general knowledge of information technology, knowledge of information technology control, ability to control information technology, competence to use information technology and competence to perform management plans, evaluation and design of information systems).

The skills to be developed by accounting professionals are discussed in International Standard for Education (No. 3), which includes:

- 1- Mental skills (acquiring and organizing information, analytical and critical thinking, solving potentially unstructured problems).
- 2- Intellectual and functional skills (decision modeling and risk analysis, measurement, reporting in accordance with legal requirements).

3- Personal skills (personal management, motivation, influences and self-learning, prioritization, anticipation and adaptation to change, applications of professional values, ethics and attitudes in decision making).

4- Social and communication skills (teamwork, negotiation of acceptable solutions, effective activity in the field of culture and measuring several dimensions of communication).

5- Organizational and business management skills (strategic planning, project management, human resource management, decision making, organizing and organizing tasks, persuading and developing people, leadership, insight and professional judgments) (auditing organization [5]).

## 2.2 Research Background

Dolce et al. [21] in a study examined the soft skills of accounting graduates and divided accounting skills into two categories: soft and hard. The results showed that graduates underestimated the importance of soft skills (including individual skills of thinking, leadership, problem solving, decision making, time management, concentration, planning, organizing and supervising) compared to companies. And overestimated other difficult (technical) skills. Yang et al. [38] in a study examined reform and innovation and manual accounting training. The results of their research show that the education of students should first be in accordance with the needs of society and by doing internships and continuous training, they should be allowed to simulate the real financial process of large companies until after graduation. Students have the ability to do financial work. In a study, Wang et al. [35] examined the innovation and practical method of teaching accounting talents in local colleges and universities based on supply-side modifications. The results of their research show that local colleges and universities should be geared towards social needs and develop the skills needed by the community, because only in this way can intense competition be developed.

Vocational knowledge and some practical skills are acquired mainly through classroom learning, while mastery of professional knowledge and the development of profound innovation abilities will be achieved through participation in high-level discipline competitions. This competition not only helps to increase students' professional skills, but also improves their core competition in practice and helps to provide more options for the development of students' careers. Karr [27] states in his research that accounting graduates should have strong educational characteristics and sufficient communication skills. In his research, he concluded that professionals place great emphasis on graduate reporting skills. Ashiabor et al. [19] examined the perspectives of practitioners, university professors, and accounting graduates in order to determine the basic skills of graduates in the field. The results showed that despite the emphasis on the importance of the skills mentioned by the three groups, there were differences between their views. Professionals with intellectual and interpersonal skills, accounting graduates with communication and interpersonal skills and university professors with intellectual, self-management, communication and interpersonal skills were highly emphasized. Gene [24] in her research on the difference in educational priorities in the content of undergraduate accounting courses states that financial managers and professionals are very dissatisfied with the low skill performance of accounting graduates and this dissatisfaction can be caused by There is a perceptual gap between professionals and university instructors and dissatisfaction of both groups with their jobs. The researcher suggested that university professors and professionals should constantly consult with each other in order to review accounting courses and ensure that the content of the courses meets the needs of students and employers. Ahadiat and Martin [16] in their research, examined the skills and characteristics required for accounting graduates from the perspective of those working in the accounting profession. Findings showed that skills

related to personal characteristics of accountants such as: trustworthiness, honesty, public relations and accuracy in work are more important than other skills. Pretama [31] examines the importance of the role of international accounting training standards as a bridge between the profession and the university in the field of accountants' competencies and states that international accounting training standards are important and addresses the expectations gap between professors and members of the profession. He concludes that there are expectations about gaping professional skills.

The view of professors is based on theory and the view of members of the profession is based on the needs of the market and practice. Fakhari and Dadgar [23] in a study on the issue of "expectation-practice gap" in the development of professional skills based on international standards of accounting education in Iran at the undergraduate level and have examined the angles of this gap. The findings of this study showed that the professional skills of International Accounting Education Standard No. 3 are also important for accounting graduates in Iran. There is also no "expectation gap" in accounting education, but there are "constraints gap", "practice gap" and "expectation-action gap" in undergraduate accounting education. Zia Kamali [8] in a study examined the importance and adequacy of knowledge and skills required for accounting graduates and its importance from the perspective of university professors, professionals and accounting students. The results of the research using one-way analysis of variance at the semantic level with 0.05 show that between the views of the three groups (university professors, professionals and accounting students) on the importance of some of the knowledge and skills There is also a significant difference in the adequacy of their presentation by current accounting training programs. Khani and Taybi [28] in a study examined the skills required in the accounting training program and determined the difference between prioritizing the skills required for graduating in accounting from the perspective of employees of auditing firms. The results showed that communication skills and mastery of information technology, respectively, have the highest priority for partners and employees of auditing firms. Also, using the analysis of variance, the opinions of the two groups were compared and the test results showed that there was no significant difference between the opinions of the two groups. Salehi et al. [6] in a study entitled "Challenges of Accounting Education in Iran from the perspective of professionals and academic authorities to identify the major educational deficiencies that create a gap between the needs of the labor market and university education in Iran." The results showed that from the point of view of the respondents, the current system of accounting education has not been able to fulfill its mission to adequately educate and equip students with accounting concepts for proper activity in the labor market in four of the five areas studied.

Further studies revealed that the respondents reported the current situation of "insufficient attention to students' familiarity with new information technology tools", "insufficient attention to proper legal education required by the world of practice" and "lack of sufficient practical skills of students", respectively. Compared to cases such as "failure to convey ethical concepts and teachings to students" and "insufficient compliance of educational materials with accounting standards," they complained more. Bashirimanesh et al. [1] in a study evaluated the perception of accounting students of the experience of learning university courses. For this purpose, a questionnaire was designed in three areas of accounting learning, the characteristics of the accounting profession and the skills necessary for success in the accounting profession. The results of the research showed feedback for rescheduling accounting undergraduate curricula and changing the curriculum to enhance students' learning experience at this stage. Rahnamaye Roodpashti et al. [4] in a study to examine and determine the views of students, university professors and professionals in the priorities of specialized accounting trends, the content of specialized accounting courses, the number of specialized courses and the most effective teaching method Accounting in order to develop a framework for planning accounting at the undergraduate, graduate and doctoral levels using the statistical method of factor analysis with the help of fuzzy data. The results of their

research show that there is a significant difference between the views of the statistical population in relation to the five components studied above. Auditing issues have been mentioned as a priority of educational issues in order to meet the needs of the Iranian financial community. Mashayekhi et al. [12] address the expectation gap between faculty and students regarding the quality of accounting education at the graduate level and state that a "expectation gap" should be identified to reveal issues in curricula and Need to be highlighted. The results of the research show that there is an expectation gap in the field of accounting for the respondents in terms of teaching professional skills.

### 3 Research Methodology Based on the Fuzzy AHP Method

The present research is applied in terms of purpose and descriptive in terms of method. In this research, to collect information in the field of theoretical foundations, the library study method including the study of books, articles, journals, dissertations and scientific resources in universities and scientific centers has been used. Data collection To answer the research question, field method and questionnaire tools were used. In order to collect the required data from the questionnaire, including 34 questions related to the required accounting skills, which are mainly from the international standards of accounting training and research, Awayiga et al. [20] and Edgard [22] Adapted, used.

#### 3.1 Analysis of Linguistic Variables

Linguistic variables are the variables whose defining terms are not numerical values but rather sentences or words in a natural or artificial language. This kind of variable can well be represented by triangular or trapezoidal fuzzy numbers. For the study of linguistic variables, readers are referred to Mohammad-doost et al. [29], Rebele et al. [33], Rostamy-Malkhalifeh et al. [34], and Zhang et al. [39]. Linguistic variables can be stated as various kinds of fuzzy numbers. In this work, the parametres are considered as triangular fuzzy numbers as Table 1.

**Table 1:** Linguistic Variables and their Associated Triangular Fuzzy Numbers

Linguistic variables	Triangular fuzzy numbers (TFN)
Very low	(0,0,0.1)
Low	(0,0.1,0.3)
Medium low	(0.1,0.3,0.5)
Medium	(0.3,0.5,0.7)
Medium high	(0.5,0.7,0.9)
High	(0.7,0.9,1)
Very high	(0.9,1,1)

The rule of conversion between linguistic variables and triangular numbers is shown in Fig. 1.

#### 3.2 Analytic Hierarchy Process

The Analytic Hierarchy Process is a mathematical method to define priorities and support complex decision which developed by Saaty [41]. In fact, that is a measurement method via pair-wise comparisons and relies on the judgments of experts to derive priority scales. It has been used by several researchers and decision makers due to mathematical properties of the method. In fact, the hierarchical structure of AHP methodology is able to provide a comprehensive framework for making multi-criteria decisions by organizing problems into a hierarchical structure.

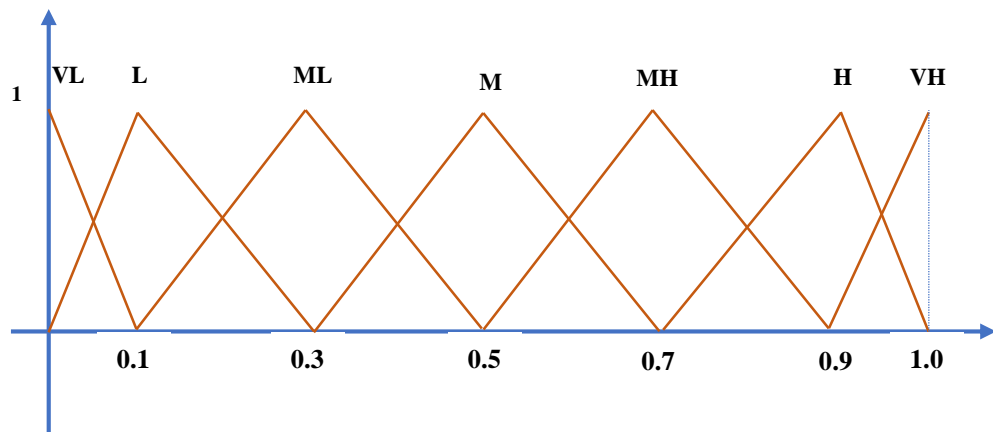


Fig. 1: Linguistic Variables as Triangular Numbers

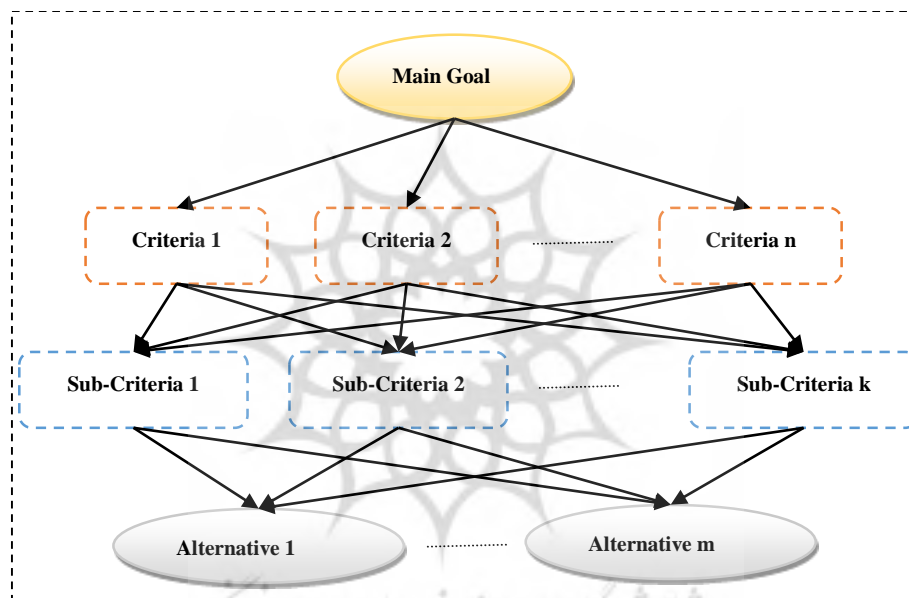


Fig. 2: General form of Hierarchical Structure

AHP methodology involves four main steps; create structure the decision hierarchy, construct matrices, calculate weight of the elements to each level and finally, check and balance of decisions which explain below:

**Create Structure the Decision Hierarchy:** You can define of a structure hierarchy as a pyramid that the goal of the decision is on the top the criteria is graded in several successive steps. Therefore higher levels control lower levels of the hierarchy and alternatives are seen at the lowest level. The decision hierarchy must be extensive enough to include the main concerns of the decision makers and small enough to allow timely changes.

**Construct Matrices for Calculate a Set of Pairwise Comparison:** To compare the elements, for each criterion in the upper level, one matrix must be built which is calculated by comparing the relative importance of the criterion  $y_i$  to versus the criteria  $y_j, j = 1 \dots n$  with respect to the criterion or property of them. For the measurement and compare of quantitative as well as qualitative criteria a verbal scale is used. In other words, the ratio  $a_{ij}$  is inferred of the weights  $w_i$  and  $w_j$

$$a_{ij} = w_i/w_j \quad (1)$$

The values of  $a_{ij}$  (or  $a_{ji}$ ) are allowed to be integers in the range of 1 to 9, corresponding to the intuitive judgement scale given in Table 2.

**Table 2:** Corresponding to the Intuitive Judgement Scale in AHP

$a_{ij}$	Definition
1	The criteria $y_i$ and $y_j$ are equally important
3	The criterion $y_i$ is slightly favored over $y_j$ in importance
5	The criterion $y_i$ is strongly favored over $y_j$ in importance
7	The dominance of the criterion $y_i$ over $y_j$ is affirmative
9	The importance of the criterion $y_i$ is an order of magnitude higher than that of $y_j$
2, 4, 6, 8	Intermediate values used when compromises are needed between the aforementioned values

**Calculate Weight (Priority) of the Elements to Each Level:** To calculate the relative contribution of each element into hierarchical structure relative to the upper goal or criterion and in relation to the main goal, first, the calculation regarding the weight of each element in relation to its immediately upper element (criterion) is made, and the local mean weight of the element is established. Then we calculate the global weight (regarding the main goal) of the respective element, multiplying its local average priority by the local average priorities of the hierarchically superior criterion. Thus, the final weights of alternatives can be obtained according to the following relation.

$$w = W^3 \times w^2 \times w^1 = \begin{pmatrix} w_1 \\ w_2 \\ \vdots \\ w_n \end{pmatrix} \quad (2)$$

**Ranking options:** Based on the resulting weights, the weight of the options is calculated in terms of the main goal and with the help of them, the options will be compared and ranked. In other words, any option that weighs more will rank better.

### 3.3 Data Analysis

The statistical population in this study includes members of the Iranian Society of Certified Public Accountants who have the following characteristics: At least 7 years of teaching experience at the university, having at least a master's degree in accounting, at least 10 years of professional activity in accounting and financial management. According to the restrictions, 30 eligible questionnaires were selected as a statistical sample and examined. In this research, AHP technique has been used to analyze the data. The method of "Analytic Hierarchy Process" as one of the multi-criteria decision making methods by Saaty is provided. The purpose of the hierarchical analysis process is to create or form a hierarchy of complexity of the problem through classified categories from large to small or from general to specific and economic topics so that more understanding can be achieved according to the understanding of the subject.

To perform the hierarchical analysis process, the first step is to draw the hierarchical tree of the problem. In the next step, paired comparison tables of criteria and sub-criteria should be prepared to be available to participants in the study. In the third step, tables completed by individuals should be reviewed for incompatibility rates, and tables with incompatibility rates greater than 0.1 should be returned to individuals for reconsideration of their judgments that have incompatibilities, or those opinions due to high incompatibility rates. Be omitted. Finally, the opinions of the people are combined with the geometric



mean, and the final ranking of the criteria will be obtained.

**Table 3:** Components and Sub-Components

Component	Sub-Component
Strategic management	Strategic planning
	change management
Ability to increase capabilities	creativity
	Continuous learning
	Intellectual independence
	Critical Thinking
	Flexibility
analysis skills	Financial management
	resource management
	Read specialized articles
	Research
	Economic knowledge
	Awareness of different scientific disciplines
	analyze
Leadership skills	Leadership Power
	Ability to make decisions
Personality Skills	Job Commitment
	Ethical awareness
	Stubbornness and perseverance
	Social values
	Problem Solving
Normal project	management accounting skills
	Accounting software skills
	English language
	Business Law
	Risk-taking
	tax laws
	Computer knowledge
	Specialized skills and accounting bookkeeping
Public Relations	Communication Skills
	Intercultural communication
	Written communication
	relations management
	Teamwork

This step is done using expert selection software [13]. Questionnaire design in the technique of hierarchical analysis process requires a special design to compare factors that is different from ordinary questionnaires. The components and sub-components of the present research questionnaire, which is a pairwise comparison based on the AHP technique, are as Table 3. The validity of this questionnaire depends to a large extent on the validity of the hierarchical analysis process technique, which is also determined by the rate of inconsistency in pairwise comparisons. Incompatibility rate is an indicator that measures the compatibility of experts' responses to evaluations and pair comparisons. In other words, with the help of the incompatibility rate index, it can be found out whether there is a difference between the two-

pair and even comparisons in the compatibility questionnaire [13]. Considering that the incompatibility rate calculated in this study is less than 0.1, it can be said that the questionnaire is valid.

## 4 Research Findings

Given that the main purpose of the research; Determining the importance and ranking of knowledge and skills required for accounting graduates using fuzzy hierarchical analysis method is in the view of members of the Iranian Society of Certified Public Accountants, therefore, pairwise comparison questionnaires using expert analysis software Were analyzed and in order to integrate the respondents into a part of the questionnaire questions, the importance factor of each of the respondents was considered the same with the help of software. Finally, the integration weight of each criterion was calculated based on the selected view of the Iranian Society of Certified Public Accountants, the results of which are given in Table 4.

**Table 4:** Scores and Prioritization of Components

No.	Component	Weight	Score	Preference
1	Strategic management	0.516	0.243	1
2	Ability to increase capabilities	0.383	0.157	4
3	analysis skills	0.489	0.214	2
4	Leadership skills	0.428	0.186	3
5	Personality Skills	0.297	0.094	6
6	Normal project	0.363	0.146	5
7	Public Relations	0.287	0.090	7

According to the weight and score of the indicators, strategic management with a score of 0.243 is in the first priority and communication skills with a score of 0.090 has the lowest priority among the seven indicators presented in Table 4. Also, from the selected point of view of the Iranian Society of Certified Public Accountants, analysis skills, leadership skills, skills enhancement skills, normal accounting skills and personality skills are in the second to sixth priority, respectively. After collecting the data and transferring them to the software, the weight of each option relative to the criteria is obtained. After combining the weight of the options with the criteria, the relative weight of the options of each criterion is given in Table 5.

According to the above table and based on the hierarchical analysis process, the following results were obtained:

- In scoring and prioritizing the strategic management index options, strategic planning with a score of 0.238 was the first priority and change management with a score of 0.231 was the second priority. Creativity, flexibility, continuous learning, intellectual independence and critical thinking ranked first to fifth in scoring and prioritizing the skills index options, respectively.
- In scoring and prioritizing the analysis skills index options, respectively, financial management, resource management, analysis, economic knowledge, research, reading specialized articles and knowledge of different scientific disciplines gained the first to seventh rank.
- In scoring and prioritizing the Leadership Skills Index options, leadership ability with a score of 0.232 was the first priority and decision-making ability with a score of 0.210 was the second priority.
- In scoring and prioritizing the options of personality skills index, work commitment, problem solving, tenacity and perseverance, moral awareness, and social values ranked first to fifth, respectively.
- In scoring and prioritizing the options of ordinary accounting skills index, respectively, project management, specialized skills and accounting bookkeeping, accounting software skills, English language,

business law, tax law, computer knowledge and Risk-taking ranked first to eighth.

**Table 5:** Scores and Prioritization of Sub-Components

Component	Sub-Component	Weight	Score	Preference
Strategic management	Strategic planning	0.494	0.238	1
	change management	0.479	0.231	2
Ability to increase capabilities	creativity	0.428	0.206	1
	Continuous learning	.315	0.186	3
	Intellectual independence	0.283	0.161	4
	Critical Thinking	0.182	0.106	5
	Flexibility	0.366	0.199	2
analysis skills	Financial management	0.325	0.197	1
	resource management	0.311	0.189	2
	Read specialized articles	0.213	0.122	6
	Research	0.260	0.151	5
	Economic knowledge	0.267	0.158	4
	Awareness of different scientific disciplines	0.199	0.111	7
	analyze	0.273	0.166	3
Leadership skills	Leadership Power	0.488	0.232	1
	Ability to make decisions	0.463	0.210	2
Personality Skills	Job Commitment	0.386	0.193	1
	Ethical awareness	0.372	0.138	4
	Stubbornness and perseverance	0.341	0.162	3
	Social values	0.296	0.107	5
	Problem Solving	0.267	0.178	2
Normal project	management accounting skills	0.363	0.179	1
	Accounting software skills	0.310	0.143	3
	English language	0.288	0.128	4
	Business Law	0.249	0.112	5
	Risk-taking	0.174	0.089	8
	tax laws	0.212	0.103	6
	Computer knowledge	0.191	0.094	7
	Specialized skills and accounting bookkeeping	0.355	0.170	2
Public Relations	Communication Skills	0.255	0.143	3
	Intercultural communication	0.244	0.111	4
	Written communication	0.255	0.097	5
	relations management	0.269	0.157	2
	Teamwork	0.284	0.168	1

In scoring and prioritizing communication skills index options, teamwork, relationship management, public relations, intercultural communication, and written communication ranked first to fifth, respectively. Fig. 3 illustrates the prioritization of components. For this purpose, the average of weights of sub-components are considered for each component.



**Fig. 3:** Scores and Prioritization of Sub-Components

## 5 Discussion and Conclusion

Developments in recent decades have led the accounting profession to redouble its efforts to adapt to the conditions around it so that it can be considered as a specialized knowledge. These developments are due to changes in the needs of society, and failure to respond in a timely manner to changes in the needs of society will have devastating consequences. The purpose of accounting training is not only to train human resources aware of accounting rules and regulations, but also to train people with power and creativity. People who have the power to analyze accounting problems and the ability to solve problems. Training of qualified accountants, in addition to meeting the needs of the accounting profession and science, can lead to its strengthening and promotion.

Accordingly, the study of educational needs from the perspective of those in charge of accounting education can be very important in the development of this scientific field. Therefore, the survival and richness of accounting and auditing services requires appropriate and timely professional response to society's expectations. To this end, professionals in this profession must have sufficient knowledge and skills. Therefore, the main purpose of this study is to identify and prioritize the skills required by accounting graduates from the perspective of the Iranian Society of Certified Public Accountants (selected experts) in this profession. In order to achieve this goal, after studying the literature and research background, 34 variables related to accounting training skills were identified and divided into 7 main components through a questionnaire to 30 members of the Iranian Society of Certified Public Accountants who have characteristics Such as having at least 7 years of teaching experience at the university, having at least a master's degree in accounting, and having at least 10 years of professional activity in the field of accounting and financial management. The results of the study showed that strategic management with a score of 0.243 is in the first priority and communication skills with a score of 0.090 has the lowest priority among the seven indicators. Also, from the point of view of certified public accountants, analytical skills, leadership skills, skills enhancement skills, normal accounting skills and personality skills are in the second to sixth priority, respectively. Also based on the process of hierarchical analysis, strategic planning, creativity, financial management, leadership ability, work commitment, project man-

agement and teamwork, respectively, the most important and first priority indicators of strategic management, skills enhancement skills, analysis skills, Leadership skills are personality skills, normal accounting skills and communication skills. Due to the results of the research on the special importance of strategic management, it is suggested that more attention be paid to this factor in updating the topics of accounting courses. The use of strategic management accounting practices increases the focus on accountability, productivity and effectiveness and improves corporate governance. Therefore, strategic management accounting practices are a new method and have been developed to help companies perform better.

However, despite the support of strategic management accounting practices, there is little empirical evidence on the prevalence and success of strategic management accounting practices in companies. In addition, due to the importance of strengthening the analysis skills from the selected perspective of the Iranian Society of Certified Public Accountants for success in the profession and considering that this issue is currently less considered in accounting training, to accounting students and graduates who apply Entering the labor market, it is suggested that they take appropriate action to strengthen this skill. Also, in order to solve the inability of teaching the skills expected by professors to accounting students, the necessary investment should be made in the educational system of the country's universities and professional skills training should be included in the undergraduate courses. Also, by creating internships, the practical skills of accounting graduates can be improved and the views of academics and the accounting profession about the practical ability of accounting graduates can be approached. Considering that the research questionnaire has been completed by a selection of the Iranian Society of Certified Public Accountants based on the listed characteristics of this research, future researchers can increase the generalizability of the questionnaire among newly graduated students, corporate accountants. Distribute to private companies and their employers.

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