



Presenting accounting literacy model based on grounded theory

Manouchehr Rahmati Ghourouli

Ph.D. Student, Department of Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran
mrahmati2011@gmail.com

Rasoul Abdi

Assistant Professor, Department of Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran.
(Corresponding Author)
abdi_rasool@yahoo.com

Yaghoub Aghdam Mazrae

Assistant Professor, Department of Accounting, Sofyan Branch, Islamic Azad University, Sofyan, Iran.
aghdam.acc@gmail.com

Nader Rezaei

Assistant Professor, Department of Accounting, Bonab Branch, Islamic Azad University, Bonab, Iran.
Naderrezaeimandoab@gmail.com

Submit: 17/09/2021 Accept: 25/10/2021

ABSTRACT

Accountants with specialized knowledge and skills influence information transparency and economic development of society. The aim of this study was to present accounting literacy model with grounded theory method. The aim of this study was to present accounting literacy model with grounded theory method. The statistical population of the study consisted of professional experts who are members of the society of official accountants in Iran. 13 persons were selected by snowball sampling method. Data collection tools, semi-structured interviews with experts and data analysis method, content analysis using three stages of coding and using Maxqda software have been done. In this regard, macro categories, main and minor categories were extracted from research data (interviews). Causal conditions have three main categories and eight sub-categories, the pivotal phenomenon which is accounting literacy has two main categories and five sub-categories, Interfering conditions with two main categories and five sub-categories, Background conditions with three main categories and six sub-categories, Strategies with three main categories and six sub-categories and finally the outcomes with three main categories were obtained. The results indicate that accounting literacy can differentiate data and information from each other, proper classification of financial and accounting instruments, effective analysis and efficiency of financial information of companies and provide accurate financial statements and transparent, effective use of financial knowledge and market and ultimately the development and improvement of the quality of the profession and the success of accountants and auditors is effective.

Keywords: financial and information literacy, accounting literacy, grounded theory.

1. Introduction

Accounting literacy can include concepts such as financial awareness, literacy and financial knowledge, knowledge and science about financial products, financial institutions, financial and non- financial reports or concepts such as financial skills such as the ability to calculate combined interest payments and generally financial ability in the field of money management and financial planning that in practice these concepts overlap and are in common [1]. The importance of improving accounting literacy has increased due to factors such as the development of new financial products, the complexity of financial instruments and markets, political changes and economic factors [2]. In general, accounting literacy improves one's abilities to understand information related to personal finance, company, business and informed decision making. However, the description of this concept and its related components has evolved over time [16]. From the organizational point of the organization, accountants with knowledge and experts pay close attention to areas such as accounting and internal audit and have careful supervision in carrying out these duties. This oversight may also uncover methods contrary to the principles of accounting used by other managers [4]. Knowledge, skills and financial knowledge increase the ability of accountants and managers in the face of complex accounting issues and reduce the percentage of errors committed, estimation and misjudgment. This ability reduces the preparation time of the owner's accounting documents and reduces the time required to conduct the audit, as fraud and errors are reduced [10]. The necessity of being up-to-day with changing accounting conditions has led accountants and financial managers to look for new specialties. Therefore, education and empowerment, followed by literacy and skills, can affect the success of accountants and directly companies [11].

In scientific literature, especially in financial and economic literature, several concepts of literacy have been introduced and each of them has been considered necessary for human beings in some way, but unfortunately, despite the fact that accounting knowledge is directly or indirectly related to almost all sectors of society, appropriate attention has not been paid to the conceptualization of accounting literacy [14]. Therefore, it seems that accounting knowledge has not been considered as a public knowledge and in fact accounting knowledge has not gained its public

and social status [7]. The present study seeks to explain and present a new concept called accounting literacy in financial and public literature, this can help people in organizing their financial and personal activities and, in a simpler sense, manage and organize the financial situation and profits and losses of daily personal, organizational and business market information in the best possible way. Considering the increasing importance of issues related to financial knowledge and accounting literacy and its tremendous impact on information transparency and financial reporting, financial well-being of individuals and households, investment, growth and economic development, unfortunately this issue has not been seriously addressed in the country so far. According to the studies, accounting literacy as well as education and promotion of literacy concepts in the field of accounting and finance, economics, trade, stock exchange, insurance, bank and other markets, even in academic societies and academic researchers have been less considered. However, some developed countries, even for high schools, have made codified headlines under the title of personal finance, accounting knowledge and investment thinking. It seems that the suitable point for starting research in this field is providing a suitable model for accounting literacy. Because there is no suitable model for this in our country and without studying the current status of accounting literacy in the country, any claim will be dream and without backing [9].

Also, due to the differences between financial and economic structure of developed countries and Iran, using standard questionnaires or questionnaires of these countries to assess accounting literacy is not suitable. As a result, using qualitative methods such as the grounded theory-based approach instead of validity and reliability criteria, i.e. acceptability criteria will have better results. Because by acceptability criteria, the findings show how reliable the experiences of participants, researchers and readers about the studied phenomenon are reflected. And it's believable. Therefore, the aim of this study was to present a model for accounting literacy based on grounded theory approach using experts' opinions and seek to answer this question: What is the appropriate model of accounting literacy model and its consequences?

2. Theoretical Fundamentals and Research Background

• Accounting Literacy

Nowadays, due to the complexity of new business environments and the variety of services and products provided by credit institutions, obtaining financial well-being requires proper understanding of financial issues and topics. This need has long been understood in most modern societies and has been raised since the early 1990s and has added to its importance over time, so that today its related concepts in countries such as the United States and The United Kingdom are considered as part of the headings of high school courses and different academic disciplines. In these countries, numerous nonprofit foundations are responsible for developing literacy and financial knowledge [13]. Technological advances have changed the ways of doing things in the field of accounting activities, and the implementation of accounting-related exchanges through electronic intermediaries have begun. The rapid growth and development of information technology has led to a digital revolution in the economic, social and cultural spheres [21]. Accounting and its concepts are of particular importance to individuals because financial decisions made by them have an important impact on their financial situation. From the individual's point of view, if accountants are not financially literate, they will not be able to choose a suitable savings or investment plan for themselves and may be exposed to the risk of a hatter, but if they have financial knowledge, it will be more likely that in addition to being able to analyze the information provided in the market, savings and financial services providers will be persuaded to develop products that are more appropriate to their needs. This has positive effects on both the level of investment and economic growth. Therefore, accounting literacy is one of the solutions that can be used to improve economic security both from individual and organizational and macro [17].

Therefore, accounting literacy is an issue that has been less important in the past, but in the present world, due to the existing necessities, it has a special place. Accounting literacy is an education related to financial fields such as accounting, management and economics and the ability to take advantage of it properly, and if people who have studied in these fields have the ability to analyze financial

information, familiarize with accounting standards and policies, and be able to better monitor the disclosure of financial information, it may be said that they have a good literacy [8].

The developments of the last few decades have prompted the accounting profession to quickly adapt to time conditions Gives and be considered as a specialized knowledge. These developments are due to changes in the needs of the society and the lack of timely response to the changes that are made to the needs of the society will result in devastating results [15]. The survival and richness of accounting and auditing services requires an appropriate and timely reaction of the profession against the expectations of the society. For this purpose, professionals in the profession must have sufficient knowledge and skills [26]. Accountants and auditors who hold a CEO position with good literacy and financial skills offer more detailed tips in profit guidance to analysts compared to their counterparts who do not have significant financial knowledge, and are less likely to hand over profits. In addition, these managers are more likely to understand the role of financial disclosure in reducing information asymmetry between companies and investors and helping market participants assess the value of the company. Also, having financial ability and knowledge can overshadow the behavior and type of decisions they make in the organization and the way it influence financial reporting transparency [19]. Considering that due to economic and financial changes, it is necessary for individuals to have special knowledge and capabilities to deal with the complexity that has a result. In such situations, despite the diversity, complexity of financial markets and rapid developments in it, having financial management skills and methods will be necessary for collecting, analyzing and using financial information and, in a word, having accounting knowledge [18]. In poor countries, financial development is much more limited. And specialized and advanced products are somehow available to a very small percentage of the population, and for this reason, the role of accounting literacy in increasing the level of access and financial services has been considered more than ever [26]. Individuals and institutions with accounting literacy and knowledge have the ability and confidence to manage personal finances as well as companies through making favorable decisions and long-term

planning in line with financial matters, which is not possible regardless of events and changing economic conditions, so financial knowledge is of considerable importance for accountants and institutions [5].

The issue of accounting literacy and the necessity of its investigation is important because the lack of financial and accounting dashes overshadows the lives of individuals, family, friends, companies and their business partners due to inappropriate financial decisions and this has inappropriate effects on the society and even reduces national wealth and ultimately reduces the level of financial welfare in the society. Due to the ever-financializing of different aspects of social life, individuals are inevitably able to have financial knowledge [16]. Therefore, it can be said that illiteracy (lack of skills and expertise) in the field of accounting, participants in a variety of markets, especially financial markets, violates the condition of information symmetry and can affect the performance of those markets [6]. Therefore, financial skills and accounting knowledge are one of the main issues in optimal performance and financial market performance. Also, on the other hand, policy makers who, based on market economics theories, try to develop financial markets, should know in advance what the lowest level of financial knowledge is necessary for people who are supposed to be participating in financial markets in order to achieve the desired goals. It is necessary to use the right financial decisions except through the financial knowledge level of the participants in the financial markets [12]. It is not possible to have a suitable level of literacy and knowledge in the financial, economic and even commercial spheres. Therefore, accountants are inevitably having knowledge, skills and all kinds of literacy due to financialize of different aspects of social life [14]. Due to factors such as increasing complexity and diversity of financial products and services, complex financial decisions facing investors as well as changing demographic and economic factors, attention to financial knowledge and accounting expertise has grown increasingly. Due to the complexity of markets and their competitiveness and privatization, one of the needs of the organization is the existence of strong human resources, especially in the order of account and books. Also, the most important issues in accounting knowledge and literacy include tax management, budgeting, and liquidity management, use of credit card, borrowing, important

expenditures, risk management, investments, retirement plans and housing and real estate purchase plan [11]. The historical study of the accounting university education program in Iran over the past 50 years indicates that there has been no fundamental change in the overall framework of formal accounting education, due to the changes in the professional economic environment of accounting. Accordingly, many accounting experts in Iran claim that accounting graduates do not have the necessary knowledge and skills to respond to the accounting and auditing profession [22]. The importance of improving and developing accounting literacy has increased due to factors such as the development of new financial products, the complexity of financial markets, changes in economic, political and demographic factors. Many discussions have been raised about the role of knowledge and accounting skills, for example, the gap between theoretical knowledge and the fundamental relationships between literacy, education and expectation of literacy is evident [2]. On the other hand, researchers do not have appropriate data and perhaps few studies have been able to create high-quality accounting knowledge and literacy criteria to express causal communication between education, knowledge, skills and literacy and even the behavior of accountants [10].

3. Literature Review

Liu and Zhang [28] in their study examined financial literacy, self-sufficiency and risk-taking behaviors. Results of these researchers article showed that people with high financial literacy often have risk-averse behaviors and try to manage risks. However, people with lower financial literacy are more satisfied with their behaviors and pose a lot of risk without considering risk management.

Yamori and Yuama [24] examined whether there was a relationship between presence of Japanese householders in the capital market and financial literacy. Using empirical data from Japan, researchers found that more financially literate housewives were more likely to participate in stock market, and less financially literate people less likely to enter the market, and in many In some cases, they even opposed the presence in stock markets.

Corsini and Giannelli [27] in a study entitled economic education and financial literacy, examined whether participation in financial and accounting as

well as economic courses leads to increased financial literacy in different individuals or not. This study was conducted experimentally among students of Frenzy University of Italy. Results indicate that presence of students in financial and accounting as well as economic courses has a significant effect on their financial literacy.

Kazempour Dizaji and et al [9] provided a model for teaching financial literacy using the grounded theory method in Iran. According to the research results, the main categories include training in general topics, income and savings management, risk management and expenditure management, which can be used to design, develop and implement a financial literacy training program in Iran.

Mirmohamdi Sadrabadi and Shakerian [13] examined the moderating role of risk perception on the relationship between financial literacy and financial knowledge with the decision of investors of Yazd Stock Exchange. The results show that financial literacy, financial knowledge and perceived risk have a significant effect on investment decisions.

Shirazian [19] examined the role of financial literacy and money management on the personal financial management of Tehran Stock Exchange investors. The findings of this study confirm positive and significant effect of financial literacy and money management and their components on the personal financial management of investors of Tehran Stock Exchange.

Taher abed et al [22] examined impact of CEOs' financial ability and knowledge on financial reporting transparency. The results showed that the ability and financial knowledge of CEOs simultaneously have a positive and significant effect on the transparency of financial reporting. Jamei [6] examined the appropriateness of the content and methods of accounting education at the master's level with the skills required in the labor market. The results show that the educational content of the accounting program is suitable for preparing graduates to perform the basic accounting tasks of companies. However, this content is not sufficient to prepare students for tasks with higher level skills such as auditing, system design, and decision making.

Nouri at al [15] in a descriptive survey study entitled effect of financial training in the workplace on personal financial management and job performance of employees tried to investigate the effect of financial

training in the workplace on personal financial management and employee performance in Alborz Economic Control Bank Check. Research findings show that financial education in the workplace affects personal financial management and employee performance in the workplace.

Ettredge et al [2] was concluded that executives with accounting experience and knowledge use this experience and knowledge to reduce information asymmetry in initial public offering, which leads to lower pricing at the time of initial public offering. The results also showed that executives with accounting-based experience perform better in the long run after the initial public offering.

Wayne et al [23] in a study, examined the innovation and method of applied training of accounting talents in local colleges and universities based on supply side modifications. Their research results show that accounting colleges and universities should be geared towards social needs and develop the skills needed by society, because only in this way can intense competition be developed.

Mwathi [16] in a research titled the effects of financial literacy on individual financial decisions, he examined the relationship between the components of financial literacy and indicators related to individual financial decisions. Findings of this study show that financial knowledge and financial skills have been the determinants of individual financial decisions.

Shen et al [18] in a study titled relationship between financial disputes and financial literacy, the impact of financial literacy on financial disputes is critical for observers. The results showed that financial literacy can reduce financial disparities and lead to economic growth in society.

Zakaria [26] in a research, the skills and characteristics required for accounting graduates were examined from the perspective of those employed in the accounting profession. Findings showed that skills related to personal characteristics of accountants such as: trustworthiness, honesty, public relations and punctuality are more important than other skills.

The results of research by Razia et al [17] showed that specialized knowledge and literacy are strongly related to an individual's ability and expertise. Also, the results showed that people with higher levels of financial knowledge and skills are more likely to use corporate financial information.

Research Methodology

The present study is a developmental-applied research in terms of purpose and descriptive survey research in terms of data collection method. Also, from the perspective of data collection, according to the nature of the research, qualitative research is a type of research and the grounded theory has been used as a research method. Grounded theory is a qualitative research method by which, using a data category, a theory is developed so that it explains a process, action or interaction at a large scale. In this method, research never starts from a theory and then proves it, but the research starts from a study course and is given the opportunity to show what is appropriate and relevant [20]. On the other hand, the present study, like many researches in the field of humanities, is an exploratory research because it seeks to study the nature of the role of accounting literacy. This research is considered as a developmental research in terms of results because it seeks to present accounting literacy model. In this research, in order to solve the shortcomings of past researches, with a qualitative approach and using the grounded theory, a comprehensive model including causal factors, pivotal factors, intervening factors, underlying factors, strategies and consequences of accounting literacy has been developed. Also, this research was cross-sectional from the perspective of time because interviews were conducted in 2020.

- **Data collection**

The present study was conducted in the framework of qualitative approach using grounded theory. Therefore, the required data were collected using semi-structured interviews. In qualitative research, data collection is stopped when information about all categories is saturated and this occurs when the theory or subject is completed and new information related to the subject is not obtained. Therefore, in qualitative researches, the sample size is synonymous with data completeness or data saturation, the main method for data collection in this study was semi-structured individual interview. Face-to-face interviews. The interviews were immediately implemented and coded and analyzed. The average duration of interview sessions was nearly 60 to 90 minutes. The interview questions were open and were conducted during the interview, and the answer to a question might have raised another question, but in order for the interview

process not to be out of the interviewer's control, the following key questions were asked alongside other questions that emerged during the interview. Considering that this research has been done qualitatively, there is no hypothesis in the qualitative section that has led to the use of grounded theory. As a result, the present study answers the following questions: What is your definition of literacy? And what are the characteristics of literate people? What are the components of accounting literacy? What is appropriate model of accounting literacy model? What are Casual conditions? What are the Background conditions for accounting literacy? What are the Interfering components in accounting literacy? What are the strategies? What are the outcomes of accounting literacy?

In collecting the information, the following considerations have been taken in selecting participants, having professional accounting experience, whether in terms of academic education or practical conduct or cooperation or guidance as supervisor, consultant and arbitration of at least two qualitative researches based on the two criteria stated, first a list of available researchers was prepared. Then, through telephone, face-to-face and email negotiations, the research objectives were explained and they were invited to conduct interviews. In this study, 13 interviewees were selected.

- **Sampling procedures**

Due to the wide range of statistical population, it is not possible to identify and interact with everyone in the society. Therefore, it is inevitable to select a statistical sample as a representative of the society. According to the purpose of the research, the data through interviews were unstructured and gathered with an exploratory approach. Sampling continued until a class was saturated. Also, for the richness of the research, it was tried to interview people who have personally experienced the subject of research and have a high level of knowledge and experience in this field. According to the Grounded theory considered by Strauss and Corbin [20], the appropriate sample number is 10 to 25, which depends on the theoretical saturation stage, i.e. until new information and data from interviewees is obtained, the data will continue [3]. In this study, 13 subjects were selected by snowball sampling method as a sample for interviewing (in interview no. 13, objects were

selected). In the snowball sampling method, after identifying or selecting the first sampling unit, it is used to identify and select the second sample, so other people will be identified and selected. In fact, in this method, participants are asked to refer their matched people to the researcher, and the next sample does the same to form a chain.

- **Analysis of data**

Coding is called the heart of the Grounded theory. Coding is a basic way to specify the categories in the data, which is the symbol or acronym used to categorize the words or expressions of data. Coding aims to facilitate data parts recovery [3].

Open coding: In open coding, a set of conceptual categories of interview texts (here interviews form data) are discovered. In fact, open coding is part of the data analysis process that deals with crushing, comparing, naming, conceptualizing and categorizing data [3].

Axial coding: In the second step of data analysis, axial coding has been performed in which the main categories derived from open coding are linked together. In axial coding, internal communication is established between the basic categories that are expanded in open coding. In the pivot coding, the link between categories is as follow [3].

Causal conditions: There are categories (conditions) that affect the main category and lead to the occurrence or spread of the desired phenomenon. Causal conditions in data are often expressed with words such as when, while, since, because and because of reason [3].

Background conditions: A specific set of conditions that are gathered at a specific time and place to a set to bring about situations or issues that people respond to by their own action [20].

Pivotal phenomenon: The pivotal phenomenon is the core of the study, which in this study is "accounting literacy".

Interfering conditions: Structural Conditions That Belong to Phenomena They affect action and reaction strategies. They have strategies within field certain people ease or limit them [20].

Strategies: Strategies are based on actions and reactions to control, manage and deal with the desired phenomenon. Strategies are purposeful, purposeful, and are carried out for a reason [3].

Outcomes: results that emerge due to strategies.

Outcomes are the results of actions and reactions.

Selective coding: In the selective coding stage, the categories are linked to the central category and form the theory. One or two main categories to which all categories return will form the basis of the theory framework. Establishing some kind of integration in codes and categories is useful for integration in the final theory. Selective coding: In the selective coding stage, the categories are linked to the central category and form the theory. One or two main categories to which all categories return will form the basis of the theory framework. Establishing some kind of integration in codes and categories is useful for integration in the final theory. In this research, the Corbin and Strauss [20] paradigm model is used for axial coding. In this model, concepts are centered on central category, causal conditions, governing context, intervening conditions, actions and interactions (practical strategies), and outcomes. Data analysis was performed according to the grounded theory after the interview, in three stages of open coding, axial coding and selective coding using Maxqda software.

In the present study, to ensure acceptability, the findings of the research were presented to the interviewees, who were experts and knowledgeable people in the subject, after the end of each interview, and its components were discussed and exchanged. In this study, the following items have been used for the criterion of acceptability to improve scientific accuracy, validity and reliability: the sensitivity of the researcher in methodological coherence, fitting the sample, repetition of a finding and using informed feedback. In order to validate the findings, the results of analysis and coding were provided to 7 people (including 4 participants in the study) and 3 people outside participants. Achieving theoretical saturation (no addition of new concepts and categories of data collected and finally in recent interviews) is a testament to validity of research findings.

Research Findings

In this study to codify, after conducting interviews; the interviews were written and after reviewing and re-reading, the concepts were extracted. Due to the nature of the grounded theory and how it is conducted, in this research, a code is assigned for each statement that included the interviewees' concepts. Attempts have been made to select the codes with the aim of explaining the subject of the research while

being careful. And coding should be done as much as possible with the advice of the interviewees. At this stage, the goal is to create an organized set of codes and basic concepts that are the result of a thorough and detailed examination of the statements of each interview. According to the interviews conducted with experts in this study, the interviews were identified using line-by-line content analysis, phrase by phrase and general concept of review, conceptualization, categorization, and based on similarities, concepts and commonalities between open source, concepts and categories. At this stage, codes and concepts were identified and classified and macro categories were formed.

Causal conditions: refers to events, happenings and happenings that lead to the occurrence or development of a phenomenon. A phenomenon is an idea, incident, event, or main event about which a set of actions or reactions are directed to manage it or a set of actions is related to it. In this study, according to Table 1, the main category of causal conditions is financial behavior, which was classified into three sub-categories: financial attitude, personal characteristics and motivational factors.

According to Table 1, subcategories in causal terms each include concepts such as financial cognition and professional understanding for financial attitudes, personality traits, intelligence traits, and acquisition of financial knowledge for individual traits and empowerment, commitment, and satisfaction for motivational factors.

Pivotal phenomenon: Axial coding involves determining the patterns in the data. At this stage, the main axis categories and sub-categories related to the main axis of the research are formed. Given that all research questions referred to accounting literacy, and all strategies are aimed at paying attention to literacy and its importance in accounting, so the central phenomenon of accounting literacy is described in Table 2.

According to Table 2, the first major category of central categories is accounting knowledge and skills, which has three sub-categories of accounting and financial skills and expertise, knowledge and expertise, as well as information literacy and communication skills. The second major category is general literacy, which has two sub-categories: general literacy and digital literacy.

Background conditions: The context is a specific

set of properties related to the phenomenon. That is, the location of events or happenings related to a phenomenon during a limited period. In this study, the factors related to education, organizational factors constitute the background conditions, which are described in Table 3.

According to the table of contextual conditions, the first sub-category of contextual conditions is related to educational factors, which consists of categories such as general and vocational education and vocational restrictions. The second sub-category of organizational factors includes organizational management and organizational culture.

Interfering Conditions: General conditions that affect how processes and strategies work. Conditions that exacerbate or weaken phenomena. The Interfering conditions in this study have two categories: macro and micro. The first category is environmental factors and the second main category is related to organizational capital factors, which is described in Table 4.

According to Table 4, interfering conditions are sub-categories for environmental conditions, including social, cultural and economic factors. Organizational capital also has two sub-categories of human-social capital and organizational structure.

Strategies: Strategies Specific actions or interactions that result from the central phenomenon. In fact, strategies are to provide a solution to deal with the phenomenon, that is, to manage, deal with and accomplish the main phenomenon. In this research, strategies have main categories such as decision making, leadership and knowledge management, which are described in Table 5.

According to Table 5, strategies consist of three main axes, each of which has sub-axes of decision-making at the organizational and individual level, leadership and management and leadership style, as well as the creation of knowledge and transformation and awareness.

Outcomes: outcomes refer to the outputs or results of the interaction. In this study, the outcomes were classified into three main categories: individual and organizational development, financial and economic development of the country and increasing and improving the quality of the profession, which is stated in Table 6.

According to Table 6, the Outcomes of accounting literacy can be beneficial for organizations, individuals

and society. In fact, the position that each person has in the organization and the role that the organization plays in society can be effective in the quantity and quality of tasks. Accounting literacy can also play a better role in increasing and improving the quality of the accounting profession and its services.

Selective coding: The third stage of coding in grounded theory method is selective coding. This

method is the process of selecting the main category and systematically linking it to other categories. In this study, taking into account the initial studies and opinions of the interviewees and analyzing the data collected by the data theorizing method, the basis of the proposed model was obtained by enumerating the main concepts; It was drawn in Figure 1.

Table 1: Open codes and categories related to causal conditions

The main category	Subcategory	Components	Concepts
financial behavior	Financial attitude	Financial knowledge	Information and digital structure and business knowledge, knowledge of investment opportunities, stock market knowledge, knowledge of advantages and disadvantages of securities, creation of participation bonds, knowledge of investment and tax funds, understanding and knowledge of income tax and wages tax and tax and insurance management
		Professional understanding	Job inference and perception, striving to achieve individual and organizational goals, understanding of the job and professional and social responsibility, seriousness at work, desire for innovation, striving to solve job problems, discipline in pursuing organizational tasks and goals, skills in Duties
	Individual factors	Personality factors	Mental stability, Emotional stability, Realistic, Seeker, Social, Stable, Pragmatic, Adaptable, Conscious, Self-centered, Self- efficacy, Curious, Analyst, Stubborn, Egyptian, Sensitive, Accurate, Sensitive, Creative and Innovative, Rational, Ambitious, Incentive, Efficient , Idealistic, optimistic, interactive, gender, age, education, sense of responsibility
		Intelligence factors	Intellectual intelligence, spiritual intelligence, communication, analysis tools, reporting systems and effective decision making, emotional intelligence, elf-motivation, self-management, financial intelligence, logical and mental intelligence
		Acquisition of financial knowledge	Accounting, financial, economic and business and risks, savings, investments, retirement accounts, credit card activities, good financial performance and financial flexibility, savings accounts, current accounts, goodwill, asset sales, land sales, housing, cars .
	Motivational factors	Empowerment	Psychological potential, passion, flexibility, interaction between environment and behavior, diversity at work, creativity and innovation, spirit of cooperation, ability in interpersonal interactions, ability to convey information and communication, ability to pursue and achieve goals, belief in ability, ability to do customer work, physical and mental ability, ability to effectively organize and plan the financial and accounting process, ability to interpret statistics and financial and non-financial information
Commitment		Moral Commitment, Social Commitment, Job Commitment, Emotional Commitment, Professional Commitment, Professional Courage, Hard Work, Feedback, Professional Belief, Work Ethics, Observance of Professional Conduct, Professional Commitment	
Satisfaction		Job desire, job satisfaction, job enthusiasm, co- worker satisfaction, management and organization satisfaction, salary and benefits satisfaction, reward and leave satisfaction	

Table2: Open codes and categories related to the pivotal phenomenon

pivotal phenomenon	The main category	Subcategory	Concepts
		Accounting and financial skills and expertise	Information retrieval, knowledge of internal and external control, accounting software, mastery of professional conduct, complete, knowledge of the rules of auditing institutions, interpretation of statistics and financial and non-financial information, sufficient familiarity of information technology in accounting
Accounting Literacy	Knowledge and skills of accounting	Knowledge and expertise	Personal knowledge, personal finance, tacit knowledge, explicit knowledge, dash sharing, mastery of accounting and auditing software, mastery of accounting and auditing standards, mastery of professional conduct, sufficient knowledge in the field of accounting and auditing, complete mastery of the

pivotal phenomenon	The main category	Subcategory	Concepts
			rules of regulatory bodies Profession, knowledge in the field of industry and economic and commercial activity, Mastery of IFRS
		Information literacy and communication skills	Ability to effectively access information, ability to determine the scope and nature of information, ability to critically evaluate information, ability to use information purposefully, ability to understand the legal and economic aspects of using information, correct use of grammatical rules, logical reasoning, taking notes, editing, summarizing and reporting. Oral skills, teamwork skills, critical thinking skills
	general literacy	Individual literacy	Preservation and development of individual wealth and society, the subject of individual livelihood, avoidance of idleness and unemployment; Entrepreneurship, avoiding wastage of personal and organizational resources, paying attention to career change, teaching and learning media literacy, financial literacy, financial literacy training
		digital literacy	Internet literacy, sociability, media literacy, access to TV and radio news, watching movies, Internet access, public interest and sensitivity to digital responsibilities, personal advancement and continuity of digital learning, digital output reliability,

Table 3: Open codes and Background conditions categories

	The main category	Subcategory	Concepts
			Continuing professional and general learning and training, job training, information technology training, legal training, training related to the application of accounting and auditing standards, low knowledge and skills of university graduates in the
Background conditions	Educational factors	General and vocational education	profession
		Profession Restrictions	Complexity of corporate environment, market constraints, product development, homogeneous and heterogeneous diversity, professional constraints, inherent complexity of the profession, occupational labor market constraints, audit training and fraud inspection constraints, training constraints and guidelines for applying accounting and auditing standards based on international standards, Restrictions on preparing financial statements based on international financial reporting standards
	Organization a factors	Organizational management	Manager's capability, level of management vivacity, level of employee participation, level of management support for employees, level of support for staff thinking, recruitment, talent and succession, existence of highly skilled and knowledgeable forces in the organization, existence of specialized forces in the organization, existence Competent staff in the organization, writing and administrative correspondence, property management regulations of the organization
		Organizational Culture	Culture of paying attention to independence and impartiality in the institution, the organization's view of meritocracy, the importance of honesty and impartiality, ethical culture of the institution, professionalism in the institution, culture of teaching

Table 4: Open code and categories related Interfering conditions

	The main category	Subcategory	concepts
			Level of people's culture, level of culture of accountability in people, existence of culture of accountability and resignation in society, social problems, daily problems, mental concerns, social conflicts, violations, moral and social challenges of
Interfering Conditions	Environmental factors	social factors	society, competition for possibilities in society, how to deal with corruption and Profiteers in the country, political and cultural environment, social and individual identity
		cultural factors	Organizational cultural environment, audit environment, legal environment, financial reporting environment, characteristics of employers and employees,

	The main category	Subcategory	concepts
			pressure culture of regulatory bodies, auditing companies' financial statements, stakeholder expectations and cost pressures, leadership culture, time management
		Economic factors	Sanction conditions, differences between public and private conditions, economic conditions of the society, financial problems, multi-occupation, full-time employees, insufficient wages and income, material needs, economic stability,
	Organizational capital	Human-social capital	Existence of highly skilled and knowledgeable personnel in the institute, Existence of specialized personnel in the institute, Existence of competent personnel in the institute, Job security
		Organizational Structure	Specialized work environment, meritocracy, freedom of expression policy, organizational policies, compliance with rules and regulations, salaries and benefits, employee value, organizational appreciation of vocational training, professional development rate, coherent organizational structure, formality

Table 5: Open code and categories related to strategies

	The main category	Subcategory	Concepts
		Organizational level	Accepting and observing the code of professional behavior at all levels and pillars of the organization, focusing on the interests of stakeholders, the reputation of the organization, the organizational culture of the organization, providing quality services to stakeholders, management philosophy and ethics,
Strategies	Decision making	professional level	Pride of being an auditor, feeling more attached to the auditing profession, equating personal success and professional success, accepting the requirements of independence and true commitment to it, true adherence to the ethical values of the profession, adopting pride and satisfaction, professional behavior, social identity
	leadership	Management and identity	Social identity, professional identity, passing and ignoring the auditor's superficial errors, avoiding verbal conflicts, avoiding tension in the workplace, trying to create a calm and stress-free environment, playing a mediating role
		method of leadership	Development of communication, using previous successful experience, beautifying the atmosphere of the environment, diversifying the atmosphere of the organization, perceptual skills, human and technical skills, competence and merit
	knowledge management and knowledge	Creating knowledge	Verbal skills, virtual communication, communication with different types of customers, induction of a sense of calm and mutual cooperation of social interactions, communication with other employees
Transformation and awareness		Self-awareness, awareness of others, interaction with work environment, management and institution, cost of living management, non-interference of personal problems at work, management of problems and problems, present life	

Table 6: Open codes and outcomes categories

	Outcomes	Categories
Outcomes	Individual and organizational	Improving job performance and reducing job leaving, increasing personal success, improving quality of work life, receiving more social support, improving mental and behavioral health, increasing family peace, increasing vitality in family and work environment, increasing family satisfaction
Outcomes	Development Financial and economic development	money budgeting, increasing innovation and creativity, developing social capital, improving the effectiveness and efficiency of the company, increasing customer satisfaction, developing competency and competency, increasing social interactions, knowledge sharing and organizational dynamism, strategy formulation Applied, Improving team performance
Outcomes	Increase and improve the quality of the profession	Improving the level of transparency, increasing the culture of accountability, effectively combating corruption and money laundering, the ability to respond to stakeholders, the ability to defend and support the documents and evidence collected, promote accountability

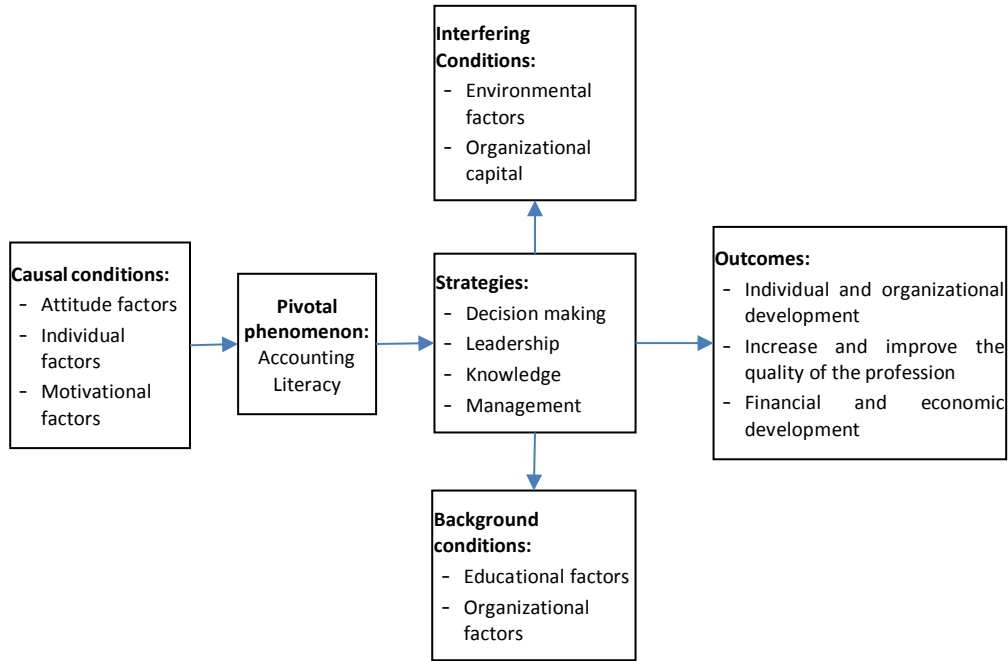


Figure 1: The proposed research model

Discussion and Conclusions

The purpose of this study was to present a model for accounting literacy of qualitative approach based on grounded theory. Data collection is semi-structured interview with 13 experts. The pivotal phenomenon is accounting literacy which was developed according to causal conditions, background conditions, Interfering conditions, strategies and outcomes and the final model was presented. Data collection, semi-structured interviews with experts were selected by snowball sampling method and the method of content analysis was analyzed using coding and Maxqda software. In this study, the results of data analysis were coded in three stages. In this regard, macro categories, main and sub-categories extracted from research data (interviews) were analyzed. Considering the concept of literacy in accounting from the participants' point of view, the accounting literacy model was presented in the form of a paradigm model that includes causal conditions, background conditions, Interfering conditions, strategies and outcomes.

Today, the business world is changing rapidly,

accountants should, in addition to coordinating and keeping up with these changes, have the necessary educational skills, specialized knowledge skills and professional knowledge in order to be able to effectively and efficiently use extensive information related to their field of work. Especially when technology alone is for creation. Competitive advantage in today's digital economy is not enough. Therefore, it is essential that accountants acquire skills that enable them to successfully manage information and use financial literacy and knowledge and accounting in workplaces and improve their performance. According to the above preliminaries main factors of grounded theory in accounting literacy are discussed. Causal conditions in this study were factors that had an impact on accounting literacy from the experts' point of view and based on grounded theory. It was categorized in the form of financial behavior and its main concepts are financial and professional attitudes, individual factors and motivational factors. It can be said that financial behavior and attitude, the ability of accountants to understand and understand the complexities of the

environment in regulating executive activities for realization improves defined goals and strategies. Success in finance requires special psychological and attitudinal characteristics. In addition to having financial knowledge, individuals should have the necessary motivation and control their feelings and ultimately trust their decision. In the field of behavioral finance, intelligence is one of the factors affecting accountants' decision-making. Considering the role of accountants' personality traits as intrinsic dimensions and its impact on decision making, the role of intelligence characteristics and individual characteristics for accounting literacy seems to be important. Motivation due to having knowledge and skills begins with changes in the beliefs, thoughts and attitudes of employees, which means they must believe that the ability and competency necessary to perform successfully. They use their duties and can do their activities with freedom of action and independence and have the ability to influence and control job outcomes. Therefore, they pursue meaningful and valuable job goals. This finding is in line with the results of the findings of [22].

The pivotal phenomenon in this research is the pivotal phenomenon of accounting literacy, which consists of two main axes: the first axis of accounting knowledge and skills includes accounting and financial skills, knowledge and knowledge, as well as information literacy and communication skills, and the second axis of general literacy includes general literacy and digital literacy. It can be said that increasing professional skills, specialized knowledge, i.e. adequate literacy, increases professional competence and competence. The literate accountant must also have a field of public knowledge and a deep understanding. From the accounting and reporting process and the financial market and the subject to be dealt with, as well as international standards from which the information has been extracted. In addition, the accountant must have a good level of experience and expertise. Auditors and accountants are now in an inclusive position that has expanded their role to effectively provide information. Therefore, auditors and accountants have shifted from accounting user to professional accountants, which in this direction change, the need to recognize and acquire new skills is felt for them. On the other hand, the growing use of computers in everyday affairs and the increasing development of computers in accounting and the

creation of various accounting software that has made manual accounting obsolete, has doubled the importance of using and learning specialized and lateral software in accounting. It is important to note that financial knowledge and accounting, due to the capabilities it creates in the individual, allows him to know more accurately about the calculations related to financial management and the principles related to risk diversity, and accordingly, the individual can make decisions more efficiently in the face of situations that require financial selections. On the other hand, making decisions with high investment requirements depends on having financial knowledge. In general, knowledge and literacy for accountants indicates that they know about finance or money and its values or have learned enough about finance and money. In order to select and select a subject, an accountant must provide a relevant background to meet expectations. Therefore, the individual chooses a practical path that has provided the necessary backgrounds and components for it to a high level. In this way, the high knowledge and knowledge of accountants in the field of digital, internet and information and communication technology can be very valuable. Also, in addition to general literacy and specialized and academic skills, a set of other skills is needed which is known as specialized and technical literacy. These skills actually increase accountants' ability to face the conditions and issues they deal with in the workplace. This finding is in line with the results of the findings of [2, 15, 18].

Based on the obtained results, the background conditions are educational and organizational factors and the interfering conditions are organizational capital factors and environmental factors. It can be said that during the last fifty years, all industrialized countries and consequently successful developing countries, recognizing the important and decisive role of education and removing educational restrictions and coordinating education with the labor market and capital of countries, focus their attention on. They have spent various educational indicators to strengthen and improve the level. On this basis, it can be safely argued that there is a direct relationship between vocational training and the labor market, as well as innovation and, consequently, the rate of real progress in each country. On the other hand, the development and evolution of accounting in any society is subject to environmental, social, economic and environmental factors governing that society and organization, as well

as assets such as social and organizational capital. The first step is to prepare training programs for human capital development and to determine the training needs of accountants. The result of the training process is expected to be a set of new skills, knowledge and attitudes that employees need for their professional responsibilities. Therefore, it can be said that the training and professional needs of achieving accurate and realistic goals in the process of training accountants are accountants. Although technical knowledge and practical skills are still vital in the field of accounting, it is clear that instead of being accountants only as reporters of accounting information, they are known as interpreters of information and consultants based on that information. And it is interpersonal, educational and capital. This finding is in line with the results of the findings of [9, 17, 23]. Based on the coding results of the interviews, strategies have three main categories including leadership, decision making and knowledge management. Traditional theories, on the other hand, believed that based on rational approaches and normative models, optimal decisions should be made based on the step-by-step decision-making principles. Behavioral approaches believe in the influence of complex environments on decision-making processes; So that the internal forces of accountants, both from an individual and professional perspective, consider the power of intuition and cognition as the basis for decision making. In fact, decision-making shifts from a step-by-step process to judgmental processes based on personal perception and behavior using literacy and skill, and focuses more on the practical aspects of decision-making. Evaluation and perception of one's job takes place during the process of education, knowledge management and internship. When people enter the workplace, they have a personal definition of their profession, which includes their awareness of the duties and responsibilities they owe to their clients. Existing theories about the growth of knowledge management also show that experience, activities and work commitment play a double role in knowledge management of individuals. People need to be able to properly manage their knowledge in order to succeed in different life or work situations and deliver optimal performance. In the same way, training programs develop leadership identity and decision-making. On the other hand, the influence of effective leaders is often clearly shown on a national scale and at the local

level in the past of each organization.

Managers manage their organizations in some way, but today, with the increasing complexity of skills, success in accounting is not possible without the use of proper decision making. . This finding is in line with the results of the findings of [9, 25].

Regarding the consequences of accounting literacy, it can be said that in terms of accounting literacy, it is one of the areas of personal development for accountants. In fact, individual development is an agreed document between employees and managers of the organization in which the planning of annual goals and programs with the focus on individual development of employees is specified. Believing in the vital role of knowledge in achieving sustainable competitive advantage, organizations try to systematically control the value of their knowledge assets in order to achieve strategic goals by using new systems and use these assets to optimize their performance. The existence of transparent and comparable financial information, as a result of competent literacy and sufficient skills and knowledge, is one of the important pillars of accountability and informed decision-making and is effective in economic growth and development. It is natural that financial information of good quality has a positive effect on decisions and the optimal allocation of resources and market efficiency, which in turn leads to growth, development and social welfare. In this regard, one of the important solutions is to have accounting literacy and high skills and a principled approach of accountants and auditors to accounting standards and its possible effects on the quality of accounting information. It is expected that increasing literacy and accounting and financial knowledge in accountants and auditors will improve the quality of accounting, which the preference for a literacy-based approach in accounting can be a symbol of. In general, the effectiveness of accounting literacy is expected to increase the valuable content of corporate accounting information. Sufficient literacy and financial expertise an accountant will give management very little opportunity for any fraud, and good quality accounting information will be reported with minimal error. Therefore, it increases the reliability of financial statements and increases the value of the company. As a result, the quality of accounting information improves and the valuable content of information increases. . This finding is in line with the results of

the findings of [9]. In fact, having a lot of knowledge and specialized skills is essential for accountants at the level of the latest standards and regulations and information technology.

According to the research findings, the lack of effective and constructive interaction between research, education and accounting profession is one of the reasons for adverse outcomes in accounting, so it is suggested to solve this problem with practical planning. Changes in the business environment, including rapidly advancing technology, require that accounting graduates have the knowledge and skills needed to meet the changing expectations of the business community. Therefore, it is recommended that auditors specialize in information and communication technology, ability Strengthen the resolution of unknown issues. It is also recommended for future research to identify the underlying factors of accountants' success with the obtained model. One of the most important limitations of this research is related to the research method, which of course is a kind of inherent limitation. Although grounded theory is very useful for indigenous theories, like other qualitative research methods, it faces limitations of generalization; this means that the results of this study are not necessarily suitable for other environments and the environment of other countries.

References

- * Bay, C., Catusus, B., & Johed, G. Situating financial literacy. *Critical Perspectives on Accounting*, 2014. 25(1).
- * Ettredge, S., Charles D. and Sprenger, C., Discounting financial literacy: Time preferences and participation in financial education programs", *Journal of Economic Behavior and Organization*, In Press, Corrected Proof, Available online. 2019.
- * Danaeifard, H and Emami, M (2013). Grounded theory strategy in organizational and management studies. (Chapter 4 of the book *Qualitative Research Methodology in Management: A Comprehensive Approach*). Saffar Publications. second edition.
- * Dianti, Z. and Hanifehzadeh, M, A Study of Financial Literacy of Tehran Families and Related Factors, *Financial Knowledge of Securities Analysis*, 2015, 8 (26), (In Persian).
- * Fazlzadeh, Financial Literacy: Concept, Measurement and Function, Fourth National Conference on Management, Economics and Accounting, Tabriz, East Azerbaijan Industrial Management Organization, University of Tabriz, 2016, (In Persian).
- * Garshasbi, H, Khodaei, V, and Gholam, Financial Knowledge and Capital Markets Participation, Annual Conference on Management and Business Economics. 2015 , (In Persian).
- * Hastings, J. S., Madrian, B. C., & Skimmyhorn, W. L. Financial Literacy, Financial Education and Economic Outcomes. Nber Working Paper Series. National Bureau of Economic Research, 2012. Retrieved from <http://www.nber.org/papers/w18412>.
- * Jamei, R,. A study of the appropriateness of content and methods of accounting education (M.Sc.) with the skills required by the labor market: From the perspective of students, university professors and members of the Iranian Society of Certified Public Accountants, *Journal of Teaching Research*, 2018, 6(5), (In Persian).
- * Kazempour Dizaji, F, Khan Mohammadi, M., and Moinuddin, Mahmoud, Presentation of Financial Literacy Education Model, *Quarterly Journal of Financial Engineering and Securities Management*, ready for publication. 2020, (In Persian).
- * Khani, A and Taybi, J, Determining and Prioritizing Accounting Training Skills Based on Hierarchical Analysis Model, *Accounting Knowledge*, 2015, 6(33), (In Persian).
- * Klapper, L. Lusardi, A. Oudheusden, P.V. Financial Literacy around the world. World Bank Development Research Group, 2018. available at:<http://www.jumpstart.org/guidehtml>. 18.
- * Lusardi, A.
- * Mitchell O.S. and Curto
- * Lusardi, A., Mitchell, O. S., & Curto, V. Financial literacy and financial sophistication in the older population. *Journal of Pension Economics and Finance*, 2014. 13(4), 347-366.
- * Mir Mohammadi, S, and Shakarian, H ,The role of financial literacy and financial knowledge in investors' decision to invest, *Business Management Quarterly*, 2019, No. 43. , (In Persian).
- * Moradi, J and Izadi, M, Investigating the Impact of Investors' Financial Literacy on Investment Decision in Tehran Stock Exchange, *Investment*

- Knowledge Research Quarterly, 2015, 4(13). (In Persian).
- * Nouri, P., Jalili, M., Ahmadi, Eftekhari Parsa, A. The effect of financial training in the workplace on personal financial management and job performance (incoming staff (2012), New research in management and accounting, , 2015, second year, third issue. (In Persian).
 - * Mwhati, A. Measuring Financial Literacy: Results of the OECD / International Network on Financial Education (INFE) Pilot Study, OECD Working Papers on Finance, Insurance and Private Pensions. OECD Publishing, 2017.
 - * Raisya Zenita , Ria Nelly Sari , Rita Anugeraha, Jamaliah Said. The Effect of Information Literacy on Managerial Performance: The Mediating Role of Strategic Management Accounting and the Moderating Role of Self Efficacy, *Procedia Economics and Finance* ,2013.
 - * Shen, Chung-Hua, Shih-Jie Lin , De-Piao Tang, The relationship between financial disputes and financial literacy, 2016
 - * Shirazian, Z , The role of financial literacy and money management on personal financial management of investors in Tehran Stock Exchange, *Financial Knowledge of Securities Analysis*, 2018, 11 (38) , (In Persian).
 - * Strauss, A. and Corbin, J. (1998) *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, Thousand Oaks: Sage Publications.
 - * Yaqubunjad, A., Nicomram, H., Presenting a model for measuring the financial literacy of Iranian students using the fuzzy Delphi method, *Journal of Financial Engineering and Securities Management*, 2011, No. 8. , (In Persian).
 - * Taheri Abed, R., and Faghani Makrani, Kh, Ability, Managers' Financial Knowledge and Financial Reporting Transparency, *Journal of Financial Accounting Knowledge*, 2018, 5 (17), (In Persian).
 - * Wayne Finley, & Tammy Waymire, Information Literacy in the Accounting Classroom: A Collaborative Effort, *Journal of Business & Finance Librarianship*. 2015.
 - * Yamori, Nobuyoshi, Ueyama, Hitoe (2021) Financial Literacy and Low Stock Market Participation of Japanese Households, *Finance Research Letters*, 5(6), 102-121,
 - * Yang, L. H., Zhang, C., Liang, X. T. Research on Reform and Innovation of Accounting Manual Training. In 4th Annual International Conference on Management, Economics and Social Development, 2019.
 - * Zakaria, Z., Mohamad., N, Siti Maisarah., R, Financial Literacy and Risk Tolerance Towards Saving and Investment: A Case Study in Malaysia. *International Journal of Economics and Financial Issues*. *International Journal of Economics and Financial Issues*, 2017, 7(4), 507-514.
 - * Corsini, Lorenzo, Giannelli, Gianna Claudia (2020) Economics education and financial literacy acquisition: Evidence from a field experiment, *Journal of Behavioral and Experimental Finance*, Volume 32, 45-58.
 - * Liu Liu, Zhang, Hua (2021) Financial literacy, self-efficacy and risky credit behavior among college students: Evidence from online consumer credit, *Journal of Behavioral and Experimental Finance*, Volume 32, 58-74.