



Developing the scale of measuring business literacy of Iranian managers

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Abstract: *The aim of this study is to develop the scale of measuring business literacy of Iranian managers. Methods of this study is applied in terms of purpose, and regarding implementation, it is non-experimental of descriptive type. Data of this study, which is conducted using combined qualitative and quantitative method, has been collected using a questionnaire and field method. The population at the first stage (qualitative study) was selected by judgment sampling by a group of experts, and in the second stage (qualitative method), 200 business managers of Iran were selected from unlimited population by random sampling. The validity and reliability of research have been approved, and multi-criteria decision analysis and SPSS software were used for data analysis. The results provide a scale to measure business literacy of Iranian managers and some proposals are presented based on the results.*

Keywords: *scale, business literacy, Iranian managers.*

INTRODUCTION

Unlike its simple definition, literacy does not just mean the ability to read and write, but it has a concept beyond it and more premiere goals. It is a fundamental skill to empower people in the development of reason, logic, systematic thinking and research. In fact, literacy is the main prerequisite for intellectual growth and the ability to study. Without literacy, one cannot reach human knowledge resources and use them to produce new knowledge. The progress of human civilization is supposed to be linked to levels of literacy and its development in the low level mass of society. Any research activity that relies on systematic thinking and scientific method needs literacy in its extended concept (Fattahy, 2004). People who are ignorant of the financial and economic issues i.e. do not have enough business literacy, are not familiar enough with concepts such as cost and savings, and due to this lack of knowledge, will have a lot of problems in business management and cannot survive the throes of a competitive market. Inadequacy in business literacy (BL) will affect the lives of people, family, friends and business partners as a result of making bad decisions, and this will have poor effects on the overall economy structure, will even reduce national wealth, and will ultimately reduce the welfare level. Research shows that many businesses that close in the their first few years and cannot compete with other businesses have managers and agents that do not have enough literacy in various fields of business. According to the above points, BL is essential for all people who tend to be in the field of economic activity. However, the main issue occurs when people, who tend to manage a business, do not recognize whether they have information at national or global level, and they can manage their business with their literacy. Moreover, business consultants cannot accurately determine how much of BL an entrepreneur or someone who holds a business has according to the Islamic-Iranian culture of Iran, and this becomes evident when the business fails and then it becomes clear that people holding the business do not have

enough BL. Thus, considering the above, the existence of a tool or tools that can help business managers, entrepreneurs, and economic advisers- before setting up the business- find out how much the person who wants to set up a business is aware of the business concepts and whether he can survive in the competitive world is of utmost importance. In fact, the existence of such a tool is very important to improve productivity of many businesses. Therefore, the problem of this study on the one hand refers to the importance and necessity of BL and managing the business, and on the other, building a scale for assessing BL to filter the information of managers and to improve the efficiency of enterprises. In fact, the present study seeks to answer this question: what scale is suitable to assess BL for this environment? What level of BL do Iranian business and industry managers have according to Iranian culture and its market characteristics? In this context, the main objectives of the study have been formulated as follows:

- Identifying the components and dimensions of BL of Iranian business managers
- Examining the level of BL of Iranian business managers

2. Literature Review

2-1. Business literacy (BL)

Given the importance of an organization being leading in attracting customers, managing business process is an overall management action of an organization. Although it requires an understanding of management practices and clear definition of roles and decision-making processes as a part of business management process, the existence of process-based information systems and trained personnel, as well as a culture that embraces business processes is essential. The roots of management of business processes are in a wide variety of approaches, such as business process reengineering, Total quality management (TQM) Six Sigma, MRP II, modeling of business processes, and information systems processes (Work flow management system and service-oriented architecture) (Poppelbuß, 2011). The importance of business process management becomes more evident by reviewing different places of organizations in the development of business process management. According to the definition by Elzinga, business process management is a systematic and structured approach to analyze, improve, control, and manage processes with the aim of improving the quality of services and products. Business process management (BPM) is a method whereby total quality programs are done, including methods, techniques, and tools for organizing, implementing, and measuring processes of an organization (Soleimani & Ariakhesal, 2014). Unlike the usual, some companies do not want to change the current state of business, as changing states needs to begin a series of changes.

One of the characteristics of successful organizations is constant change of implementation. Although the best mode is almost impossible, an organization can approach to business development state (Andjelković, 2004). Given the importance of process-orientation, BPM maturity allows managers to view the current status of the organization from process management maturity perspective. By analyzing the current state and the desired state, managers can identify weaknesses in the organization and improve them, and results of process improvement are customer loyalty, productivity, and business excellence (Rosemann & Bruin, 2010). With the advent of new technologies such as communication and information networks, devices and media of information storage, mobile phones, and the like in the present age took certain properties, society changed in a certain way, and members of societies faced extensive information and new and complex phenomena. This community is commonly called "information society" (Majidi & Derakhshan, 2007). The information age is one of the greatest challenges that have affected various societies.

Unpredictable growth of information and technologies related to the storage, organization, and access to information are of the distinguishing features of this period (Webber & Jonston, 2000). Today, more than 34 different types of literacy needed have been discovered and analyzed. Among useful and modern literacy cultural literacy, education, social literacy, political literacy, economic literacy, media literacy, information literacy, informing literacy, computer literacy, Internet literacy, workplace literacy, family literacy, technology literacy legal literacy, network literacy, communication literacy, tool literacy, resource selecting literacy, spiritual literacy, health literacy, art literacy, audiovisual literacy, criticism literacy, military literacy, environmental literacy (ecological) and so on can be cited.

The concept of literacy is linked with the concept of acquisition. This acquisition indicates that the skills and competencies associated with literacy are not things that are organic and are in the process of spontaneous development in humans e.g. Walking of children is a physiological issue and due to their growth in a particular time and happens regardless of education and effort. In contrast, literacy, while requiring special

growth areas is not equal to them and in addition to them, requires effort, planning, and training (Sajadieh, 2015). Herman (2007) considers literacy as a process associated with culture and purpose.

2-2. Management skills

Managers need major and fundamental skills to fulfill their role. Technical, human, and conceptual skills are the most important ones. The amount of these skills is an important step in finding the strengths and weaknesses of managers. Complexity, scope of domain, duties, and elements of schools today compared to the past schools sets the need for qualified managers at priority. Educational administration has a sensitive role in breaking adverse moral, scientific, and cultural periods in the community, and creating healthy atmosphere, and moral, emotional, physical and social growth (Behrangi, 2001). Griffith believes that for appropriate performing of their tasks, managers must have some specific skills that include 1) human skills, 2) technical skills, 3) perceptual skills, 4) diagnostic skills, 5) communication skills, 6) decision-making skills, and 7) skills in time management (Griffith, 1999). Moreover, Holly, English, and Stephan in the book *Leadership skills for successful management in the 21st century* have referred to some standards for high and excellent performance of managers: conscious leadership, planning and development, policy and governance, staff assessment and personnel management, communications and public relations, promotion and staff development, enterprise management, research, values, and leadership ethics (Ghafourian, 2001). In a study, Lusardi and Mitchell (2007) examined the effect of planning and financial and political literacy (by controlling demographic variables such as education level and race) on wealth of people during their retirement. The results showed that there is a strong relationship between political and financial literacy programs, as well as between planning and wealth, after controlling socio-demographic factors. Other results showed that people with planning for retirement enter their golden years of retirement with more wealth. Ali Bayrak and Botan San (2014) examined the ability of managers in small and medium sized businesses using financial instruments in Turkey. The results showed that financial literacy of managers has promoted compared to the past. Financial literacy of managers has increased through education. In addition, managers with higher financial levels have more participation in financial markets. However, managers who have filled in the questionnaires in this study trust financial market less. Moreover, self-confidence of managers of small and medium enterprises increases through financial education. Alena (2015) has examined the current state of financial and economic literacy in primary and secondary schools in the Czech Republic. After collecting data via the questionnaire, the results showed that students need higher levels of financial education and financial literacy in schools. Moreover, she argues that financial literacy is now a compulsory part in the primary school education and adding an introduction of financial literacy to the school curriculum is essential.

3. Research Methodology

Method

This study is cross-sectional from the perspective of study interval. In this cross-sectional study, collecting data was done on one or more industry in a period of time (one day, one week, one month, one year). Sampling is done from the population and used for two goals of description and explanation. In description level, the purpose is showing a picture of conditions or phenomena to further elucidate the status quo. The study is qualitative of grounded theory regarding the results or consequence.

Population and sample

In fact, the population is composed of two groups. The first group consists of experts from industry and academia that to identify the size and components, are interviewed and the second group includes Iranian managers. Sampling is judgment where in the first phase there are 12 people, and in the second stage, by random sampling, we selected 200 subjects.

Data collection

To collect field data, interviews and questionnaires were used for 2016 autumn and winter period. Structure of the interview is open and semi-open questions, and the researcher has studied knowledge of people to identify the indicators of BL. The responses of the people were encoded primarily and secondarily according to the quality method of this research, and then given the basic knowledge of researchers in this field from literature review, indicators of BL were extracted and finalized. In line with the objectives of the study, respondents' comments are collected through a questionnaire consisting of two parts as follows:

The first part: demographic information of the respondents including gender, age, work experience and education.

The second part: the main part of the questionnaire which contains indices and sub-indices are derived from interview results.

In this study, the criteria used to ensure the content validity of the questionnaire include theoretical studies, surveying professors, counselors, and other experts, and using questions from previous tests. Then to confirm the face validity, the problems of the questionnaire and its items in terms of being vague and ambiguous were removed through the implementation of 30 questionnaires at pretest. One of the most common methods for measuring the reliability of the questionnaire which is Cronbach's alpha test, was used to determine the internal consistency of the measure. The following table shows Cronbach's alpha and the number of questions related to the questionnaire and variables of the questionnaire. Since the entire questionnaire Cronbach's alpha value is greater than 0.7, questionnaire has acceptable reliability.

Table 1: The results of calculating the reliability of the questions of the questionnaire

Index	Number of the questions on the list	Number of questions	Cronbach's alpha
Management skills	1 to 7	7	0.745
Computer literacy	8 to 13	6	0.754
Financial literacy	14 to 17	4	0.809
Marketing literacy	18 to 21	4	0.820
Advertising literacy	22 to 25	4	0.732
Economic literacy	26 to 29	4	0.722
Information literacy	30 to 34	5	0.733
Media literacy	35 to 37	3	0.834
Moral literacy	38 to 40	3	0.806
Digital literacy	41 to 43	3	0.842
Environmental literacy	44 to 46	3	0.778
Cultural literacy	47 to 51	5	0.743
Health literacy	52 to 57	6	0.709
Political literacy	58 to 62	5	0.736
Legal literacy	63 to 65	3	0.758
Social literacy	66 to 70	5	0.719
The entire questionnaire	-	70	0.952

Data analysis

In the present study, describing demographic data of research has been done using descriptive statistics, frequency tables, and bar and pie graphs. Parametric and non-parametric statistical methods have been used to assess the literacy rate of managers. Given the average value of the measuring scale, univariate t-test is used to search for variables, Friedman nonparametric test was used to rank variables, and EXCEL and SPSS software were used to classify and analyze data.

4. Findings

4-1. Tests and analysis related to research hypotheses

Hypothesis: Industry and business managers in Iran have BL

Literacy variable mean has been compared to score 60 to investigate this hypothesis where scores above 60 is considered literate.

Table 2: Comparison of the observed means of variables of literacy with 60

Variable	Comparison of the observed means of variables of literacy with 60				
	Mean	t statistic	Degrees of freedom	Significance level	Mean difference
Management skills	80.1000	26.907	199	0.000	20.10000
Computer literacy	78.1167	17.591	199	0.000	18.11667

Financial literacy	79.8750	15.282	199	0.000	19.87500
Marketing literacy	84.3750	21.802	199	0.000	24.37500
Advertising literacy	78.9750	19.327	199	0.000	18.97500
Economic literacy	77.4500	16.356	199	0.000	17.45000
Information literacy	79.0600	13.863	199	0.000	19.06000
Media literacy	75.9000	11.788	199	0.000	15.90000
Moral literacy	78.4833	13.713	199	0.000	18.48333
Digital literacy	82.5157	13.382	199	0.000	22.51572
Environmental literacy	75.3107	9.513	199	0.000	15.31073
Cultural literacy	71.6200	9.967	199	0.000	11.62000
Health literacy	76.8167	17.372	199	0.000	16.81667
Political literacy	84.2400	27.978	199	0.000	24.24000
Legal literacy	81.8667	22.004	199	0.000	21.86667
Social literacy	75.7800	15.106	199	0.000	15.78000
BL	78.8076	24.917	199	0.000	18.80763

T test was used for a sample with the null hypothesis tests equality of means with the score 60, and the alternative hypothesis tests inequality of means with the score 60. According to t test and as the significance level is smaller than 0.05, with 95% confidence level, the null hypothesis is rejected, which means the difference between the mean scores of all variables with the number 60 is significant. With respect to the mean scores for literacy, which are above 60, business managers of Iran are literate in terms of BL.

4-2. Ranking of aspects of BL of Iranian business manager

Table 3: The results of Friedman ranking test for measuring BL

Variable	Average Rating	The dimensions compared with each other	Ranking the questions related to each dimension	
			Highest Rating	Lowest Rating
Management skills	8.26	Eighth	Perceptual skills	Communication skill
Computer literacy	8.07	Tenth	Networking skills	Knowledge of safety and support systems
Financial literacy	9.06	Fifth	Risk management	Money Management
Marketing literacy	10.98	First Place	Knowledge of marketing mix	Knowledge of competitors
Advertising literacy	8.40	Seventh	Teaching Literacy	Rhetorical literacy
Economic literacy	7.83	Twelfth	Demand	Price
Information literacy	7.96	Eleventh	Exchange (disseminating)	Evaluation of information.
Media literacy	8.08	Ninth	Skills and Abilities	Communication skills
Moral literacy	8.92	Sixth	Moral Imagination	Moral reasoning
Digital literacy	10.64	Third	Digital competence	Digital using

Environmental literacy	7.80	Thirteenth	Environmental attitudes	Environmental behavior
Cultural literacy	5.67	Sixteenth	Understanding the difference between Iranian culture with other cultures	Knowledge of the constituent elements of culture
Health literacy	6.95	Fifteenth	The ability to analyze data	The ability to extract information in different formats
Political literacy	10.75	Second place	Skills of active participate in political activities	Skills and critical analysis of the current situation
Legal literacy	9.18	Fourth	Recognition of domestic and foreign trade market rules	Awareness of personal rights and international
Social literacy	7.46	Fourteen	Recognizing the spirit of responsibility	The ability to collaborate with others
Friedman test parameters				
Frequency	Chi-square statistic	Degrees of freedom	significance level	
200	145.554	15	0.000	

According to the Friedman test and chi-square value (145.56) and as significance level is smaller than 0.05, null hypothesis is rejected. We can state that at 95% level of confidence, there is a relationship between the average rating scores of BL, and with regards to the table of average rating of the dimensions, it is specified that marketing literacy has the highest rating and cultural literacy has the lowest rank for BL of Iranian industry business managers.

Discussion and conclusion

The main goal of this research is to identify scale of BL. This goal is achieved by qualitative grounded theory method and management skills, computer literacy, financial literacy, marketing literacy, advertising literacy, economic literacy, information literacy, media literacy, moral literacy, digital literacy, environmental literacy, cultural literacy, health literacy, political literacy, legal literacy, and social literacy were approved by experts. These indices can be cited by researchers and managers. In the second phase, where quantitative methods were used, according to the average scores of literacy that are above 60, it was concluded that managers of industries and businesses in Iran are literate in terms of BL. Further investigation of the results revealed that marketing literacy has the highest and cultural literacy has the lowest rank for BL of business and industry managers in Iran.

Analyses showed that the cognitive skills have the highest rank and communication skills have the lowest rank regarding importance in management skills. Networking skills have the highest and skills of security and system support have the lowest rank of importance in computer skills. Risk management has the highest

and money management skills have the lowest rank in importance in financial literacy. Knowledge of the marketing mix has the highest rank and knowledge of the competitors has the lowest rank in marketing literacy. Advertising knowledge has the highest and rhetorical literacy has the lowest rank in the importance of literacy in advertising literacy. Knowledge in the area of demand has the highest and knowledge of the prices has the lowest rank in the importance of economic literacy. Information exchange has the highest and evaluating information has the lowest rank of importance in information literacy. Media capabilities and skills have the highest rank and skill in communication has the lowest rank of importance in media literacy. Moral analysis has the highest and moral reasoning has the lowest rank of importance in moral literacy. Two skills of digital transfer skills and digital competence have the highest and skills in digital uses have the lowest rank in importance in digital literacy. Environmental attitudes has the highest and skill in proper environmental behavior has the lowest rank in the importance in environmental literacy. The recognition of Iranian cultural differences with other countries has the highest rank and understanding the elements forming culture has the lowest rank in the importance in cultural literacy. The ability to analyze data has the highest rating and the ability to extract information in various formats has the lowest rating in importance in health literacy.

Active political participation has the highest ranking and expertise to analyze and critique the political status has the lowest ranking in importance in political literacy. Understanding the rules of domestic and foreign trade market has the highest ranking and awareness of personal and international rights has the lowest ranking in importance in and legal literacy. Recognizing the spirit of responsibility has the highest ranking and the ability to collaborate with others has the lowest rank in importance in the social literacy. It should be noted that unfortunately, there are foreign or domestic studies with these indices, so there was no possibility to compare the results of these indicators.

Suggestion deduces from research

Considering the highest rating for marketing literacy and lowest rank for cultural literacy, business managers of Iran are suggested working in preserving and promoting literacy in marketing by participating in courses and following successful people in the national and international levels and pursuing their increase of literacy with seriousness, an in today's competitive world without the benefit of cultural management, managers cannot progress. It is clear that the businesses that do not have a strong leadership in the field of culture, due to the mixture of culture today and increasing immigration and the employment of non-native people, have no way to progress. Managers should strengthen their cultural intelligence components:

1. Cognitive dimension: it is necessary to obtain information about cultural components for cultural development.
2. Physical dimension: many cultural differences are manifested in visible physical actions.
3. Emotional-motivational dimension: adapting to a new culture involves overcoming obstacles and difficulties. People are able to accomplish a task only when they have a lot of motivation and faith and believe in their abilities.

Among management skills, communication skill has the lowest rank. Therefore, managers are suggested resolve this problem by participating in training courses of communication skills. The most effective method of communication is direct or face-to-face contact. In person or face-to-face contact is effective and leads to success. Training techniques such as:

- Not interrupting the person who talks
- Strengthen mode of expression
- Communicating by looking

Obviously, in today's digital world, computer skills are very important and managers who have a low score in the field of security systems need to change insights in this field and to gain the skills required in this regard. Although getting help from computer experts is useful, information security is vital in today's competitive world, and all managers need to possess this skill.

In-service training, especially teaching methods of roles and new ways of learning where the person is engaged in learning experience directly, are recommended to promote literacy. These will be more effective than training method in which only the study of theory is addressed. Following the practices of successful countries and brands can also be useful in this regard.

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