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Evaluating Current Status of MS Educational Technology Curriculum in Iran from Viewpoint of Experts and Professors in Order to Offering a Desirable Curriculum

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Abstract

The aim of this research is evaluating status of MS field of educational technology in Iran. This research is qualitative and it is conducted based on survey method. The statistical community of this research is expert professors in educational technology area. Accordingly, 15 persons were chosen among this statistical community as statistical sample using objective sampling of desirable cases. Used tool was semi-structured interview. Questions of the interview were determined based on research questions and five expert professor confirmed its content and apparent validity. The interview was conducted face-to-face during 30 to 60 minutes. Collected information was initially classified and then it was analyzed by category method. Results of the research indicated that from viewpoint of professors, the 'current' curriculum does not meet the needs and expectations of students in scope of objectives, content and topics, strategies of learning-teaching and assessment methods. Results that are more precise showed a minimum attention of current curriculum to 'empowerment' and 'attitude' of students in this field. The offered curriculum of professors for more desirable status emphasized on entrepreneurship and empowerment objectives of students and various, student-oriented educational strategies and practical combined assessment methods.

Keywords: educational technology, curriculum, current status, desirable curriculum, Iran

1. Introduction

Curriculum is always considered as an important element of any educational system (Bobbitt, 1929; Campbell, 1957; Doll, 1993; Smith, 1990; citation from Hosseini, 2009; Rahmanpour & Nasr, 2014, p. 125) and there are various definitions and utilizations for it (Tyler, 1949; Goodlad, 1959; Taba, 1963; Pinar, 2000; Eisner, 1983, recited from Norouzzadeh, 2006; Hussain, Hussain Dogar, Azeem, & Shakoor, 2012, p. 263). According to Zais (1976) and Fthi-Vagargah (2010, p. 14), the word curriculum is extracted from Latin root (Race Course) meaning race field or space and extent of a way which people should pass to achieve a defined goal. In educational system, schools and universities prepared such a race field for students to make them compete with each other above passing curriculum and achieving objectives. Curriculum is a relatively new topic in higher education environment that recently got attention of experts and scientific cliques (Diba-Vagari et al., 2011, p. 49). Nevertheless, management of university curriculum (codification and evaluation) was always important in higher education institutes (Stevenson et al., 2011). Therefore, nowadays, following dynamism of social changes and properties of education innovation all over the world and in response to expectations of the society and in order to more accountability of higher education to increasing effectiveness and efficiency, curriculums of universities are faced to serious challenges during few past decades (Ibiwumi, 2011, p. 325; Brittion et al., 2008, p. 3). Curriculum, which is often considered as a synonymous of planning of curriculum and planning of educational material, includes studying and codifying objectives, content, implementing and assessing an educational system. Planning of curriculum concentrates on this matter that what kind of knowledge, skills and values should students learn, what educational experiences should be offered regarding targeted educational outcomes and how we can plan, measure and evaluate learning and teaching in universities or educational systems (Aimin & Yan, 2011, p. 4). In this regard, curriculum of educational technology is one of curriculums of universities, which has

an especial condition and situation in this field due to having two dimensions of technology and education. Educational technology is defined as a study field, which is looking for facilitating education process through forming, applying and managing technological processes and procedures (Richey, 2009, p. 25). Based on necessity, in higher education level, curriculums of educational technology have an important role in fostering technological capabilities and skills and technology knowledge in students and they are considered as a determinant factor in advancement and achieving educational objectives (AlAmarry, 2013, p. 249). In other word, curriculum of educational technology is referred to a set of educational experiences and official learning that is planned and codified by planners to expanding digital, technological and instrumental capabilities of students (Vanderlinde et al., 2008, p. 23). Therefore, in order to achieving such an objective and increasing efficiency and quality of curriculums, we should qualify and evaluate curriculums of this field based on appropriate criteria or standards (Boonyeun, 2008, p. 60). In addition, curriculum of this field should be performed with an especial accuracy and delicacy. In viewpoint of experts, the elements of curriculum are variable from 1 to 9; but most of experts are agreed in four elements of objective, content, method (of implementation) and assessment. These four elements are considered as criteria of analysis and evaluation in most studies and evaluations of university curriculum. Perhaps approval of law of establishing the central council in universities in 1965 can be assigned as the first activity of comprehensive curriculum in Iran. The supreme council of higher education curriculum was established in 1984 order to evaluating and approving curriculums besides determining titles of fields and educational degrees in professional committees and planning groups. Therefore, in May 1984, the mentioned council approved that councils of those universities which have verification board or those universities which are executives in PhD fields or at least have graduates in 3 courses of MS are allowed to basically plan 20 to 24 units in BS, 18 to 26 units in MS and all units in PhD (Nasr, Etemadi-Zadeh, & Nili, 2011, pp. 24-26). Field of educational technology, which is entered to Iran for the first time as a MS course, is one of the youngest fields. Topics of lectures of this field were approved by planning council of cultural revolution staff, branch of educational technology committee in august of 1984 and then these topics were announced to those universities which declared their preparation to implementing this course (Fathi-Azar, Badri-Gargari, & Ghahreman-Zadeh, 2012, p. 11). What matters is simply announcement of the mentioned field curriculum and it implementation in universities will not be enough. Assessment and evaluation of this curriculum is essential to offering a proper and desirable curriculum (Kazempour & Ghafari, 2009, p. 90).

Hussein et al. (2012) defined evaluation as the process of collecting information in order to judging about value of a curriculum (p. 265). Maybe many of members of faculties imagine that what they are teaching is consistent with anticipated content; but often it is difficult to determine what, how and when curriculum content is implemented and how we can measure advancement of students and it requires expert evaluation (Graciela, Armayor, & Leonard, 2011, p. 1). The important objective of evaluating curriculum is assessing elements of curriculum according to condition of students, facilities, limitations and level of meeting expectations (Maleki, 2011, p. 130).

2. Literature

Conducted evaluations after 30 years of implementing educational technology field show that no serious review in curriculum of this field is performed in MS and Bs degrees. In addition, curriculum of educational technology needs continuous review and evaluation according to increasing needs and advancements in education, educational techniques and tools (Rezaie-Bagher et al., 2009, p. 84). The results of conducted researches in this regard indicate issues and inefficiencies in some dimensions of this field curriculum especially in MS degree.

In an article, Armand (2001) evaluated curriculums of educational technology in BS degree. Obtained results indicated that in some lectures, there is not essential consistency between content and topic and it damages other elements of curriculum. In a research titled as ‘analytical evaluation of MS curriculum of educational technology in order to offering an appropriate plan’, Zareie-Zavaraki (2007) showed that the general objective of the course should be concentrated on training professionals in educational technology and specific objectives should be concentrated on supplying professional man labor in domain of educational technology for other organizations. In addition, the present curriculum needs review in topics and content. In research titled as ‘evaluating curriculum of MS and BS courses in educational technology field in viewpoint of faculties and students’, Rezaie-Bagher et al. (2009) obtained these results that objectives of curriculum of MS and BS courses are proper in viewpoints of most of faculties and students. In addition, objectives of curriculums of MS and BS courses are fitted with offered related lectures (one exception is recognizing and discovering educational issues in some lectures). In his research titled as ‘reviewing curriculum of pedagogy science field branch of educational technology’ which was performed by librarian method, Aliabadi (2013) found that lectures of this field need reviewing according to changes in curriculum of this field all over the world. He showed that existence of some

pre-university lectures such as mathematics, English language in this field is not much practical and beneficial, and announcement of some lectures as arbitrary lectures seems absurd according to being prerequisite of other lectures. Finally, according to Aliabadi (2013), since many specialized lectures overlap with each other in content and topics and their resources and content are not up to date, they were reviewed.

In abroad, there are some performed researches in this regard. In a research on assessing technology program in online classes, San Jose State University (2001) found that students were consent about enrollment in educational technology program and education quality or offered lectures. Students agreed with applying web oriented classes and video produced lectures. In addition, students offered that the faculty should put more efforts on more affrication of theory and practice in all-level lectures especially in productive classes. In a research titled as 'technology 1, 2, 3: criteria for understanding improvement of action scope of educational technology', Mcdonald and Gibbons (2009) found that there should be a change in curriculum of educational technology in regard of meeting students' needs. In this research, one of the most important approaches for achieving this target was emphasis on problem-oriented methods. in a research titled as 'media education as a part of curriculum of higher education, Harro-Loit and Ugur found that in technology-oriented curriculums in higher education, elements of curriculum including content and education methods should be in such a way that they foster technical and technological capabilities of students. They believe that combined content (combination of knowledge and practice of technology) and active and hybrid methods of implementing technology-oriented curriculum should be used.

The accurate evaluation and discovering inefficiencies can approach curriculum of this field to its objectives and meet needs of three categories of students, local society and universities, so an ideal and desirable curriculum can be offered. Therefore, the problem of this research is evaluating the present status of MS curriculum of educational technology in the state in meeting needs of students (knowledge, empowerment and attitude) from viewpoint of faculty members and experts of this field in order to offering a desirable curriculum. Since analysis framework of curriculum is usually four main elements of curriculum including objectives, content and topics, learning-teaching methods and assessment methods, criteria of evaluating MS curriculum of educational technology in this research are mentioned elements. It is promising to offer a desirable curriculum from viewpoint of related experts by accurate identification and evaluation in this field.

3. The Research Questions

1) From viewpoint of professors and experts, in what extent, can objectives of MS curriculum of educational technology meet needs and expectation of students?
2) From viewpoint of professors and experts, in what extent can present content and topics of MS curriculum of educational technology meet needs of students?
3) From viewpoint of professors and experts, in what extent can learning-teaching methods of MS curriculum of educational technology meet needs of students?
4) From viewpoint of professors and experts, in what extent can assessment methods of MS curriculum of educational technology meet needs of students?
5) From viewpoint of related experts, what is the desirable MS curriculum of educational technology?

4. The Research Method

This research is a qualitative-applied according to type that is conducted using survey method. The statistical community of this research consists of professors and experts who are teaching curriculum of this field in MS degree of governmental universities depended to ministry of science, research and technology or those who studied the mentioned curriculum and have expert opinions in this regard. These people are working in universities of Allameh Tabatabaie, Arak, Khwarizmi, Bu-Ali Hamadan, Tarbiat Modarres and Isfahan. Interview with professors and experts was conducted using targeted sampling method of desirable cases (due to having rich information) and it continued to reaching saturation of information. Sufficiency of information was obtained using 15 cases of interviews and then, no new information was obtained. Frequency distribution of interviewees is showed in table 1 based on university:

Table 1. Frequency distribution of interviewees in terms of university

University	Frequency of interviewees	Number of interviewees
Bu-Ali Hamadan	3	1-2-3
Arak	3	4-5-6
Isfahan	2	7-8
Allameh Tabatabai	3	9-10-11
Khwarizmi	2	12-13
Tarbiat Modarres	2	14-15

Used tool in the present research is a semi-structured interview, which has a combination of depth and structure. Questions of the interview were set based on the main questions of the research and advisor professors and counselors confirmed the interview apparent and content reliability. According to this, initially general questions about the research question were asked; then based on procedure of conducting interview, specific questions were examined and required information was gathered. The interview was conducted face-to-face during 30 to 60 minutes. The obtained information was classified and then analyzed by categorizing method.

5. Findings

In this section, the findings obtained from interviews are analyzed based on the research questions. In order to facilitating procedure, categorizing method is used and in this way, first main categories and then sub-categories related to each one are analyzed.

The first question of the research: in what extent, can objectives of MS curriculum of educational technology meet needs and expectation of students?

Findings of analysis related to this question in offered in frame of main categories (the role of objectives of curriculum in meeting needs of students) and its sub-categories (the role of objectives of meeting knowledge, empowerment and attitude needs of students).

1) Extent of securing needs and expectations of students by objectives of curriculum: according to most professors, objectives of MS curriculum of educational technology do not completely meet needs and expectation of students. Almost more than 77% (11 persons) of professors believed that objectives of curriculum do not meet necessary universality and clarity that meet needs of students and most of them are old. Interviewees of number 14 and 12 believed that “objectives of this field curriculum remained such an old document and there is no change about it.” In addition, interviewee of number 9 stated, “objectives of curriculum are not fitted with present need of work market and student and they are not meeting needs of technology era.”

1-1) Extent of attention to dimension of knowledge: most of professors believed that objectives of MS curriculum of educational technology emphasize on improving dimension of knowledge (theory). 13 interviewees explicitly confirmed this claim and stated that the present curriculum mostly emphasizes on scope of knowledge and information and it targets theory knowledge of this field. Two interviewees pointing out to dominance of knowledge section emphasized that there is some inefficiencies in this section:

> "While objectives of curriculum often cover knowledge scope, but this cover is inefficient in some cases and it is not up to date and appropriate for mission of the field." (Interviewees of number 6 and 13)

1-2) Extent of attention to empowerment dimension: almost all of interviewees (15 persons) emphasized that the present curriculum cannot meet needs of students in empowerment section and it cannot empower necessary applied capabilities for entering to work market and appropriate usage of technological tools in students. In fact, the present curriculum does not meet applied capabilities and powers of students appropriately.

These objectives were belonged to a time that work market was not spread and specialized as much as today.

> "Objectives of this field curriculum seem nice on the paper but in practice, they do not enforce applied skills and empowerments of students. These objectives are old and they are fitted to a time that technology and new tools of technology did not develop such as today and work market was not spread as present conditions." (Interviewees of number 3, 6 and 14)

1-3) Extent of attention to dimension of attitude: the results of information analysis showed that from viewpoint of professors, neglecting attitude dimension of students in objectives of curriculum f educational technology is counted as a challenge. About 8 persons (65%) of professors pointed out to this matter. Of course, attitude dimension is slightly dependent on richness of curriculum in terms of knowledge and empowerment and when these two dimensions are rich and consistent with requests of students, dimension of attitude in students will be enforced. Also, some of interviewees emphasized on this point.

> "While we should not neglect importance of attitude dimension of students, but if knowledge and empowerment dimension of student are enforced through objectives of curriculum, their needs and expectations will be naturally enforced." (Interviewees of number 3, 9 and 10)

The second question of the research: in what extent, can content and topics of MS curriculum of educational technology meet needs and expectations of students?

In this question, initially results of related analysis to the main category (content and topics) and then related results to sub-categories (extent of meeting students' needs and expectations in knowledge, empowerment and attitude dimensions) will be offered.

2) Extent of meeting students' needs and expectations by content and topics of curriculum: the related results of this part showed that collectively, content and topics of MS curriculum of educational technology do not completely meet needs of students due to oldness and lack of universality and lack of emphasis on applied dimension in this field. The needs of students are beyond the present status of content and topics and professors have less power to interference on it:

> "the content of this field is so old and it is meaningless that after 30 years, there is no change or a slight change in topics and content. Demand of the present society is beyond of present status; therefore, a serious review should be conducted with accurate measuring demands." (interviewee of number 14) another interviewees believed that "the present content is old and also, it has not enough enrichment and it has a specific framework that put professors in bottleneck for its inflexible offering." (Interviewee of number 9)

2-1) Extent of attention to knowledge dimension: obtained information from interview showed that the present curriculum pays an extensive attention to knowledge and theories in section of content. 7 persons (about 49%) of professors explicitly emphasized that such a content is simply codified in terms of topic scope and present knowledge. Of course, 5 persons (35%(of professors announced that the present knowledge and theory content is not sufficient, up to date and specialized, too. In other word, the present knowledge in content of curriculum is not completely in regard of the field mission and it does not cover all specialties. Therefore, new lectures and new scopes should be contained in curriculum and repetition of lectures of BS course in MS course should be avoided and the if it is possible, MS course should have branch:

"the content of this field is so old and it is meaningless that after 30 years, there is no change or a slight change in topics and content. Demand of the present society is beyond of present status; therefore, a serious review should be conducted with accurate measuring demands." (interviewee of number 14) another interviewees believed that "the present content is old and also, it has not enough enrichment and it has a specific framework that put professors in bottleneck for its inflexible offering." (Interviewee of number 9)

"We cannot contain all knowledge scopes of educational technology in the present content and topics. Some of lectures should be eliminated in order to replacing new lectures which offer new knowledge." (Interviewee of number 8) "

"in order to completely covering of knowledge scope of this field, this field should turn to a branch field and repetition of learnt knowledge in BS level should be avoided, because some of lectures are repetition of BS course." (Interviewees of number 3, 6, 10 and 12)

2-2) Extent of attention to empowerment dimension of students: the present curriculum is quite unable to supply needs of students in section of empowerment. According to majority of professors (13 persons from 15 persons), the present content is old and theory-oriented and most of lectures are unnecessary and inappropriate for needs of students; therefore, this content has not enough efficiency to preparing students for entering to work market:

"The present content is quite unable to foster empowerment of students. If a student wants to enter to work market with learning this content, he/she is definitely out of necessary efficiency; because he/she has not essential skill and technique." (Interviewee of number 2)

One of interviewees believed that being applicable for educational technology is the spirit of this field and unfortunately, the present curriculum does not meet this requirement: “the spirit of educational technology is being applied and technique of being learnt that the present content does not make it in students. Educational technology should finally lead to a technique or a technical person and it is impossible in current situation. For example, a educational technologist must be able to design but he/she is unable to do it and just studied some theory and material about design and these materials do not make him/her an entrepreneur or a technical person.” (Interviewee of number 9)

2-3) Extent of attention to attitude of students: information of interview showed that extent of attention to attitude of students in curriculum is neglected and this subject is not explicitly mentioned in content or framework of approved topics. 6 persons (about 42%) of professors in this field believed that the present content is not codified according to meeting needs and expectations of students and therefore, it does not enforce their attitude toward this field; also, it leads to feeling regret and dissatisfaction of them. In this regard, interviewee of number 4 stated “the present content has no attraction for student due to oldness and its theory nature, therefore it does not supply their attitude. Even some of students felt regret about studying in this field and they stated too many times “we did not learn anything to offering later”. As mentioned before, attitude is heavily dependent on empowerment and knowledge and we should enforce this attitude by practical lectures and not just theory and unapplied lectures: “knowledge, empowerment and attitude are quietly dependant on each other. The present content has no attraction for students due to its dead and unapplied nature and it does not enforce their attitude too much. Attitude cannot be formed by theory and useless lectures.” (interviewee of number 11)

The third question of the research: in what extent, can learning-teaching strategies of MS curriculum of educational technology meet needs and expectations of students?

In order to answering this question, initially information of the main category (learning-teaching strategies) and then related information of sub-categories (extent of meeting expectations of students in knowledge, empowerment and attitude dimensions) are offered.

3) Extent of meeting expectations of students by learning-teaching strategies: related information of this question showed that from viewpoint of professors, learning-teaching strategies or educational methods are not appropriate for this field and they cannot meet expectations. About 70% of professors believed that current educational methods are not in regards of meeting needs and expectations and they are offered conventionally. In

this regard, some of professors stated, “the current educational methods cannot meet expectations of students and most of professors are not satisfied about them, but they have to use them due to nature of content and current topics.” (Interviewees of number 15 and 3)

3-1) Extent of attention to knowledge dimension: in viewpoint of professors, the current educational methods are more related to meeting knowledge needs and theory scope of educational technology. About 56% of professors (8 persons) believed that learning-teaching strategies put their main emphasis on this dimension and transfer of theory knowledge in this field is in top priority of educational methods. The interviewee of number 1 states: “the current methods which are conventional and direct methods put more emphasis on transferring content and theory foundations and therefore, they are concentrated on knowledge needs of students; however there is some inefficiency in knowledge dimensions, too and professors are not predominant in some important scopes of educational technology.” In this regard, another professor believed that:

> "learning and teaching methods are related to each other. Education methods are conventional and there is not enough support and encourage for new methods. Therefore, students simply learn a series of old and memorable materials and they do not understand necessity of leaning high-level materials." (interviewee of number 6)

3-2) Extent of attention to empowerment dimension: according to obtained information from viewpoint of professors we can state that MS curriculum of educational technology in learning-teaching strategies do not supply needs of students in empowerment dimension. In this category, more than 90% of professors believed that educational method of professors is in such a way that student does not enjoy essential skills and capabilities in this scope. The interviewee of number 12 states: “the nature of this field implies to using practice-oriented methods but unfortunately, teaching methods of professors have not any kind of diversity and each one use conventional methods based on their opinion, even for practical lectures. This is a massive stroke to students’ learning. For example, in lecture of educational movies, students should be able to make an educational movie but in practice, it does not happen and professors do not teach it properly.” Of course, one of responders has a different opinion in this regard:

> "in educational technology field in scope of learning-teaching methods, there are some essential problems. First, approved content somehow destroyed necessary inflexibility for applying practical methods. Second, most of professors have not enough expertise and skill in specialized scopes such as educational design and educational movies. Finally, current hardware and software facilities make it hard to offering practical lectures in a proper and desirable way. Therefore, students are not trained with an entrepreneur spirits." (the interviewee of number 2)

3-3) The extent of attention to attitude dimension: the opinions of professors in this dimension showed that current learning-teaching strategies are not consistent with meeting real needs and expectations of students. The majority of professors (11 persons) believe that educational methods of professors in educational technology field are conventional and common and students are familiar with them so these strategies are not attractive to them anymore. In addition, students use inappropriate and old methods for leaning lectures and topics then they are not really satisfied about their learning method. I this regard, the Responder of number 10 states: “in present world, new and active methods should be used in technology-oriented fields, but unfortunately, it does not work this way in our country and old and conventional methods lead to inefficiency of students and their dissatisfaction. Students have to use inappropriate learning methods and they do not consider their learning as an interesting learning.” The responder of number 1 states: “when there is no diversity in educational methods and when these methods are old, we cannot hope to significant change in students’ learning and this reality leads to their dissatisfaction and negative attitude, which is harmful for future and mission of educational technology field.”

The fourth question of the research: in what extent, can assessment methods of MS curriculum of educational technology meet needs and expectation of students?

In order to answering this question, we initially offer results of the main category (extent of meeting needs and expectations of students by assessment methods) and then sub-categories (extent of meeting needs and expectation of students in knowledge, empowerment and attitude).

4) Extent of meeting needs and expectation of students by assessment methods: obtained information from opinions of professors showed that needs and expectations of students are not met in a proper way by assessment methods. About 70% of professors (10 persons) believed that the current assessment methods can somehow meet needs of students and evaluation of their learning but this supply is not in a proper and desirable way. In other word, all learned stuff of students is not assessed properly and present methods are insufficient. In this regard, the responder of number 6 states: "the current assessment methods for evaluating learning stuff of students are insufficient and if professors do not act headstrong, it is possible that these current methods be not even responders to minimums." Of course, most of professors believed that assessment methods could not be separated from content and educational methods. When content and educational methods are insufficient and inefficient, then assessment methods are concentrated on the same insufficient contexts and outlines. The responder of number 9 believes that "when the content is determined and educational methods are not no varietal and repetitive, we can expect a special innovation in assessment methods or a huge and desirable work because assessment should be conducted on what is taught not anything else."

4-1) Extent of attention to knowledge dimension: in regards of extent of attention to knowledge dimension in assessment methods of MS curriculum of educational technology it should be said that the current methods put their main concentration on this dimension, so extent of attention to this dimension is high. About 84% of professors (12 persons) stated that assessment methods often emphasize on theory knowledge, and in this dimension, curriculum cover is relatively good in assessment section. However, there are some challenges in this basis. The responder of number 5 states: "the main emphasis of current assessment methods is on knowledge dimension. While this is necessary but maximum emphasis on this dimension can be considered as a serious challenge. The more serious challenge is that theory knowledge is not the same as appropriate, needed knowledge of students. So, we assess something which may have less value for offering."

4-2) Extent of attention to empowerment dimension: pluralizing opinions of professors showed that extent of attention to empowerment dimension in assessment methods is insignificant and it is not in a satisfactory level. More than 50% of professors (8 persons) stated that most of current assessment methods pay less attention to empowerment dimension and there is a kind of negligence here. The responder of number 2 believes that "current assessment methods are not proportional with applied capabilities and skills of students. Most of professors insist on measuring practical and technological skills of students by common and conventional methods which is considered as a mistake." Of course, two professors believed that

> "assessment methods are up to professors and there are some good professors in some universities who consider practical dimension and empowerment of students in their assessments. Good professors can compensate some of inefficiencies. Of course lack of preparedness of necessary condition and facilities in all universities which are executers of educational technology is a challenge." (interviewees of number 11 and 15)

4-3) Extent of attention to attitude dimension: the results of analysis showed that from viewpoint of professors, the extent of attention to attitude dimension of students has a lower level in assessment methods of professors. 9 professors (about 63%) explicitly stated that current assessment methods are not looking for evaluating attitude of students toward the field. In other word, attitude dimensions of students are neglected in assessment methods of a basis. The responder of number 4 states: "the attitude dimension of students is an important element but there is not a lot attention toward it in curriculum and there is no place and score for it in assessment methods of professors." Of course, according to some professors, attention to attitude dimension is heavily related to knowledge and specially empowerment dimensions of them:

> "in my opinion, assessment is dependant to implementation and content. If qualified content is offered with proper educational methods, assessment methods can drive attitude of students faster and better; because assessment is performed on things which are requested and needed by students." (Interviewees of number 9 and 6)

The fifth question of the research: what is the desirable MS curriculum of educational technology in viewpoint of professors?

For answering this question, we initially offer related findings to viewpoint of professors about each element of

analyzed curriculum and then we offer a desirable curriculum based on pluralizing opinions of professors in form of a table.

5-1) The objectives of a desirable curriculum: the related results of analyzing this question showed that most of professors considered current curriculum in objectives' scope as a curriculum, which needs to be reviewed according to meeting needs and expectations of students and nature of current knowledge. 13 professors (more than 90%) clearly pointed out to this matter. From their viewpoint, desirable objectives of MS curriculum should be codified in regard to make students entrepreneur and enforce them for entering to work market. The responder of number 6 states: "at the present, some objectives are followed that are not dealing with work market. Desirable objectives must look for evolution in students to entering to work market and coordinate them with advanced needs of nowadays." In this regard, the responder of number 5 believes that "the provision of desirable curriculum in objective section is enforcing its theory foundations and emphasizing on its technology dimension and relation of theory with practice." From viewpoint of the responder of number 9: "in objectives of a desirable curriculum, the main emphasis should be put on understanding technology which is neglected so far. Understanding technology leads to happening of pragmatics of educational technology for professors and students.

5-2) Content and topics of desirable curriculum: according to the results, the desirable curriculum of educational technology needs an essential and continuous review in current curriculum. Almost all of interviewed professors pointed out that the current content is not consistent with mission of the field and needs of students and needs of digital era knowledge and it should be reviewed. The responder of number 10 states: "desirable content in this field needs to be reviewed according to advancements in technology scope. The reviewed content should be in regards of work market needs, preparing students for virtual environment and make them independent." The responder of number 12 emphasized "the desirable curriculum codifies its content according to new needs specially solving problems, lifetime learning, technologic skills and entrepreneurship." According to responders of 2, 3, 4, 5, 6, 11, 14 and 15, the main provision of regarding these cases is make branches for the field and emphasis on specialized lectures (instead of general lectures), accurate and continuous measurement of needs, coordination between executive universities and using expert professors. For example, the responder of number 14 emphasized that reviews should be performed every 4 or 5 years.

5-3) Learning-teaching strategies of desirable curriculum: the results of analysis showed that most of professors offered using new and active methods of educational methods instead of current and conventional methods for desirable implementation of MS curriculum of educational technology. More than 70% of professors (11 persons) stated that current methods should be evolved and diversified. The responder of number 3 states: "in order to desirable implementation of new curriculum, there should be a change direction from professor-oriented methods toward student-oriented methods and from theory-based toward practice-based methods". The responder of number 2 believes that: "while desirable educational methods are dependent to subject of the lecture, but they should be driven toward construction approach-oriented methods which engage students and take the responsibility of learning by themselves besides increasing their information literacy." The responders of number 6, 7, 9 and 13 identified outfitting universities by workshops with hardware and software equipments, using expert professors especially for practical lectures and localizing new methods for desirable implementation as necessary cases. Finally, the responder of number 15 stated that: "the majority of problems for professors is lied In implementation section. Professors should put most of their concentration on practical lectures, but practical lectures need fundamental effort of professors and they should spend time and energy for that. Professors should teach less lectures but offer different methods and approaches and it means as combination of theory and practical methods."

5-4) Methods of assessing desirable curriculum: the related results of this part showed that most of professors offer hybrid and performance assessment methods for desirable curriculum. More than 60% of professors (9 persons) believed that various and learner-oriented methods and learner activities should be used. the interviewee of number 11 believed that "using practical and student-oriented methods should be considered. Justification of such methods is that students in MS degree should earn a stable and applicable dominance on practical and skill scope in real situations." In this regard, the responder of number 5 offered a (individual or group) project, seminar or work unit using qualitative and descriptive methods. the responder of number 2 offered that we should not be heavily dependent on paper test. It is better to pay attention to practical and project tests. For example, we can divide the score of lectures to 10 theory scores and 10 practical scores and practical scores should be assigned based on capabilities of students in skill of using hardware and software, articles and conferences. The interviewee of number 14 stated, "practical scores should be actually assigned to practical activities. For example, in lecture of educational design, the score should be assigned to manner of student

designing in different environment including virtual environment. The score should not be assigned to theoretical information of student about designing. It means the real design of student should get score."

Based on frequency and emphasis of interviewed professors, we can offer contents of desirable MS curriculum of educational technology as below. Since studied curriculum in this research had 4 elements, the offered curriculum is provided in form of 4 elements and extent of emphasis and frequency of interviewees' opinions.

Table 2. The desirable curriculum which is offered based on interviewed professors

Curriculum objectives	Content and topics	Instructional Strategies	Assessment methods
Make students entrepreneurial-being skilled in using new technology-fostering students as dynamic and independent persons to success in work market, producing and triggering kinds of educational media and dominance on them- educational designing in usual and virtual environment-dominance on the scope knowledge-supplying human labor of education organization in sections of educational designing and technology-understanding and using technology in real situations, -codifying and compiling articles and books about educational technology-designing and implementing and supervising on training projects pivoting educational technology-education in higher education centers by offering last technological achievements-managing sections and centers of technology-oriented learning in schools and universities	Advanced technological tools-educational design principles-producing educational media and movies-producing educational materials-designing and producing educational video games-computer programming-designing learning centers-theoretical and practical principles of educational technology-advanced, active and interactional teaching methods-philosophical and scientific principles of education technology-lecture planning-learning and teaching theories-pedagogy and development psychology-behavior in technology-comparative studies on educational technology-English language in educational technology-electronic learning-technology-oriented strategies and educational methods-seminars	A combination of student-oriented methods, practical work-work in practical situations-video conference-experimental-self learning-independent study- scientific visits-discovering-group discussion and verbal presentation	A combination of objective and subjective methods-paper tests-diagnostic assessment-verbal tests-field practical works-individual and group projects-seminars-article and research works-final thesis

As it is obvious, the offered MS curriculum of educational technology is enriched in four examined dimensions. In section of objectives, there is a special emphasis on entrepreneurship and practical skills (empowerment) of students, which is an important matter according to nature and mission of the field. In addition, in section of objectives, there is an emphasis on training specialized man labor in scope of technology for other institutes especially education and university. According to viewpoints of some professors, specialized human labor or

so-called educational technologists who are dominant to their scope are the most important factor of advancement and they can compensate some of inefficiencies (interviewees of number 1, 2, 9). In section of content, professors expected a considerable quality and quantity. This is necessary according to nature of the field and anticipated objectives. Of course, quantity of content is in such a way that it cannot be proposed in form of a MS course. Therefore, most of interviewed professors are willing to make branches for this field. Of course, what makes the field a successful field is using expert professors and active, student-oriented educational methods. some of lectures and activities play supportive soles. For example, according to interviewee of number 6, since most of new texts in this field is in English, it is necessary that capabilities of students in English be enforced by containing this lecture in curriculum. One of the other important supports is accurate and continuous measuring needs of students and work market and conducting comparative studies and periodic review of curriculum.

6. Conclusions

The results of analysis showed that MS curriculum of educational technology field in Iran has some inefficiencies and insufficiencies in regard of meeting needs and expectations of students and professors. The related results of the first question of the research indicated insufficient and inefficient objectives of curriculum and needs of student and work market had less appearance in it. Also, the expert human power of the present age is not supplied by these objectives. This result is consistent with Zareie-Zavaraki (2007) and it is not consistent with Rezaie-Bagher et al. (2009). The first research considered the present objectives as insufficient objectives regarding supplying expert human power, but the second research identified the present objectives as appropriate objectives. It seems that nature of educational technology is in such a way that proportional to each age, needs and necessities are mentioned which should be considered in curriculum of this field in order to change it coordinated with these changes.

The results of second question showed that professors do not consider present content and topics in a consistent way with supplying needs of students and present knowledge. According to these professors, the present content has more emphasis on knowledge scope, it has a low emphasis on enforcing empowerment of students, and it neglected emphasis on attitude scope of students. Of course, emphasis on the present knowledge in not consistent with up to date content and what is implemented in other countries and according to some professors, it is a serious challenge. These results are consistent with Armand (2001), Zarei-Zavaraki (2007) and Aliabadi (2013) but they are inconsistent with results of Rezaie-Bogher and San Chose University (2001). In research of the first section, researchers found the present content of educational technology as an inappropriate content, which needs reviewing. Many professors in this research emphasized this review, too. It is important that expert professors in each scopes of this field curriculum start to continuous and accurate review of content and topics of this field to making a desirable content regarding needs of students, work market and the present knowledge. As Mcdonald and Gibbons (2009) and Harro-Loit and Ugur (2009) believe, the desirable content should be in regard of needs of students and enforcing technical and technological skills of students using hybrid curriculum. The results of third question of this research showed that learning-teaching strategies of the present curriculum are unable to meet the needs and expectations. According to professors, these methods are more conventional and professor-oriented and they engage student less, while the nature of the field implies to using active and student-oriented methods. Nowadays, using active and dynamic methods in university curriculum found a special place, because such methods make opportunities for interaction of students with professors and other students and it makes a proper substrate for active and stable learning, meanwhile they engage students. In addition, in field of educational technology, active learning and teaching methods facilitate transferring leant stuff to actual situations and work market. Active and hybrid educational methods are specially emphasized by Harro-Loit and Ugur (2009).

The results of fourth question of this research indicated relative dissatisfaction of professors from current assessment methods of curriculum of educational technology. The current methods are inappropriate from viewpoint of 70% of professors (10 persons); because they assess students conventionally and based on memorized stuff and they less evaluated practice and empowerment leant stuff of students. What makes curriculum of this field as a successful field is hybrid usage of subjective, objective and practical methods. the objective and paper methods are used to evaluating knowledge scope in low and high recognition levels and practical methods are used to evaluating practical and skills and empowerment of students. In practical section, we can mention to many methods that professors mentioned to them in proposed curriculum.

Finally, the results of fifth question showed that MS curriculum of educational technology, which is proposed by professors in its appropriate status, can be enriched in objectives, content and topics, learning-teaching strategies and assessment methods to meeting needs of students and even professors. In appropriate curriculum in objective

section, there is a special emphasis on entrepreneurship and practical skills (empowerment) of students, which is an important matter according to nature and mission of the field. In addition, in section of objectives, there is an emphasis on training expert human power in technology scope for other institutes specially education and university. In content section, professors mentioned to a considerable quality and quantity. This is necessary according to nature of the field and anticipated objectives. Of course, quantity of the content is in such a way that we can offer that in MS course and therefore, most of the interviewed professors asked for making branches in this field. Of course, what brings success to this field is using expert professors and active, student-oriented educational methods. Continuous and precise measuring of needs is always settled on all steps of curriculum as an umbrella. Measuring needs should be performed continuously and after some years in first degree and it should be performed according to opinions of all beneficiaries such as students, expert professors and employers of work markets in second degree. The curriculum, which is codified this way, can meet needs, expectation only if expert, and committed professors will be used so they can implement this curriculum using various and active methods and evaluate it by appropriate assessment methods which are combination of practice and theory. Finally, it should be always noted that there is no curriculum without inefficiency and insufficiency and educational planners and professors should always review curriculums proportional with international changes in technology and work market. Asking opinions from students and professors and conducting comparative studies in this regard can facilitate procedures of reviews.

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