The elements of the flexible curriculum planning to propose a national flexible curriculum pattern

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ABSTRACT

The main purpose of this study is to determine the elements of the flexible curriculum to give a national flexible curriculum pattern. In this study, three models of curriculum, communicative systems and studying the background, elements and extracted pattern and other suggestive based patterns were represented. The elements of the approach is including the curriculum targets, the flexible process of representing curriculum, the process of flexible curriculum, choosing materials and educational resources in flexible curriculum and finally, the process of testing and amendment in curriculum; the related pattern has been designed in a system that include in the process of interior process (data base, data resources and decision making agents), the process(the center of information and communications technology, the composition and curriculum innovative systems and creations), exterior process (Macro system of national flexible curriculum, District systemic of national flexible curriculum and micro-system of national flexible curriculum), the environment , testing and feedback. Two main composing factor of the pattern are the management information system and information and communications technology.

Key words: flexible curriculum, management information system (MIS), information and communications technology (ICT)
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INTRODUCTION

In general, curriculum is subjected to a target-based struggle of planners in relation to meet necessary backgrounds for the purposes of educational issues. Shariatmadari believes that (1996) the educational program including the whole experiences, studies, discussions and personal and group based activities which an novice fulfills them under the supervision of peers at school setting; these experiences have been designed by designers must be considered and evolved in relation to curriculum representation. curriculum planning is one of the most essential elements of education which can be achieved at any national and class settings as well; Imani et al (2010) believed that the amendment of lesson plan including the philosophy of education, values, purposes, organizational structure , educational material, teaching methods, learners experiences, measurements and other exterior learning issues can be effective in the field of the mentioned dimensions; the scientific references accept any innovative issues defined in relation to education well; Sharaitmadari (2002) states that the school plan should be coincident with the social content and personal requirements changing over the time. Therefore, the most essential issues of providing the educational planning are referred to those targets which are matched to the aims of the education. Today, the child coming to the school is seating behind the computer at home or being confronted to satellite channels following the whole personal experiences in this cyber and virtual setting; this kind of new cultural experience representing that the planners should strongly pay attention to the process of learning and teaching; hence, it is some years that the curriculum experts have been struggled in the field of representing national curriculum. The Iranian national curriculum is a kind of documentary case representing the comprehensive country's national curriculum affairs in relation to the targets of education [26]. The national curriculum has two functions; curriculum which leading to the

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national solidarity based on social values; this can cause to the representation of the curriculum processes based on national common profits. In this function, a part of curriculum is given to the states based on their conditions and abilities; this function is mostly represented based on a democratic approach leading to innovation at curriculum issues and global and national achievements [10]. It can be stated that the curriculum have both internal and external entries and the results of these both refer to the nations and their national identity considerations. The curriculum make new expectations, imaginations and modern windows as well as various tools to be effective in relation to the national affairs [11] the documents of country's curriculum representing the fact that the most countries have been considered the importance of representation a comprehensive curriculum and learning affairs to organize the related activities for four decades; also, according to the progression of the technology, different social, scientific and educational diversities have been achieved in this regard; the appearance of new demands made the related planners to consider the newest curriculum at national level for each ten years and in this kind of evaluation, the validity of the curriculum are being assessed; Sharaitmadari (2002) believes that the most affection factors should be under revised according to the extraction of lesson materials in this regard; in the field of determining the flexible elements, it should be paid attention to the changes of scientific theories in relation to the growth of personal differences, learning, and changes of education related to both learning and teaching matters; these theories should be considered through the study of the present planning and national targets; the features and social conditions are the factors of each society surrounded by national and international changes [19]. So, these changes and the determination of flexible pattern should be chosen by a correct approach based on educational needs leading to the increase of granted social targets at education affairs; through the technological new innovative tools it can be achieved the recent growth of education and make a great interaction between the elements efficiently; the term flexible has made the education too much important and using the information technology providing the learning coordination as well; the education can be very effective in this case and the institutional centers should be very conservative to make their emergence in this regard; the designers can make a vast and comprehension range of their plans for students to motivate them in the field of learning considering the high poor people increasing their accessibility in both learning and teaching affairs, too. The increase of flexibility challenges make a competence between teachers and learners; Beetham (2010) recognizes the flexibility as a key for educational centers along with innovation at their curriculum. Ho says that there are three ways for reaching to planning flexible curriculum; first, designing flexible curriculum with flexible methods along with the cooperative section at students; second, curriculum planning is considered as a path making flexible along with testing and supportive issues and third, order-based curriculum planning responding to special part of needs in a group. In the study of flexible curriculum features, the assistance of expanding the quality of teaching process and making competence among the various groups is mostly emphasized particularly at private section [15]; making help to a new based knowledge [7], changing the short term educations (Bates,2005), making simultaneous changes with global shifts [14] and tendency towards using the technological supportive issues at learning and teaching [17] are most strongly felt in this regard; in addition, making quality-based and national standard and attention to personal needs [18] is very effective in the related topic; Bell and Lefoe (1998) state that the model of designing curriculum flexible is subjected to the designing of a tool that flexible education is mostly felt for any development; the approach of education diversity and flexible learning lead to provide the accessibility of education for the vast range of students with controlling of time and place as well. The process of curriculum planning is an imperative case that should be achieved along with others due to its relationship with other cultural, social and political as a multi dimension process; during the recent years, Iran is going to fulfill supplementary issues related to the newest approaches and up-to-date technological education fields. The main purpose of the study is to review the basics of education philosophy and curriculum planning affairs at Iranian educational system to determine the flexible curriculum; in the other hand, it is going to recognize the factors of flexible learning methods along with the related indices and approaches of curriculum planning reaching to testing and curriculum planning correction revision as well; some flexible curriculum planning anticipate the more precise decisions in the field of lesson contents and assignments; while some others specify just a one method for the objective targets. The more refined plans predict a vast range of personal differences in learning groups predicting the similar curriculum planning methods in this case. There is a just one method in the field of flexibility: the patterns of curriculum planning, teaching methods and flexible testing approaches. This kind of flexibility is possible when the designers replace too many designs in this case; therefore, the choice of a correct pattern is a more complex task requiring various patterns of knowledge and the recognition of responsibility in each pattern as well. The collection of the models are divided into two groups of systematic and linear; in linear model, the whole planning process is bonded together like a chain and it is guaranteed the first steps along with evolutionary progression and no any other steps exist here; in contrast, in systematic models, the planning process is not connected together; hence, the consideration of the rankings are not imperative but any placement is possibly taken place at any step [9]. Using the systematic models cause to much success in curriculum planning. In this research, the linear models of Babitt (1918), Charters (1923), Tyler (1949), Taba (1967), Weinstein and Fantini (1970), Saylor and Alexander (1974), Maleki (2005), Leyton and Soto (1982), Olivia(1982), Doll (1982), Shariatmadari (1996), systematic models, short (1982), Sabar (1990), Mehrmohammadi (2004), Hankins (1993), Fathivajargah (1998), Johnson (1997) and Talkhabi (2005) were evaluated. Most of these curriculum patterns have

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been represented for a particular population from different educational situations. Hence, each population would have their own determining learning chance. Since the whole learning process is not determined at the same time, the pattern is not being observed immediately; the adaptation of the tricks and patterns require information from different patterns in a process but considering the lack of any information is not going to be sufficient in this case. The choice of a pattern is not easy; each pattern is a collection of hypotheses, targets and the whole purposes of education as well as learners' process and the society and their knowledge nature. In addition, the choice of the pattern and education strategy, the role of teachers and learners, education material and testing strategies are being affected in this regard [21]. Hence, the choice of a suitable pattern is a very complicated task requiring knowledge in different patterns in each method; in the end, it can be stated that modeling is an aspect of the lesson planning process. Dibavajari (2011) states that one of the most problematic issues of the education is subjected to the optimization of curriculum planning and welcoming the new territory of the scientific domain so that the educators can be trained at a suitable level than the institutional centers.

The field of changing and representation at curriculum planning is increasingly raising and the recent educational environment complexity and providing a framework along with a comprehensive application is complicated; it is obvious that, every country should pay attention to its own cultural, climate and historical circumstances to represent a special term in relation to curriculum process [24]. Dibavajari (2011) quoted of Kennedi state that the amendment of curriculum in relation to organization content is necessary in the field of social and economical terms. Wolf (2000) considers the evaluation of curriculum affiliated to increase of the curriculum quality and continuous optimization in educational progression.

MATERIALS AND METHODS

The study is an applied method and its completion is based on the field research. According to the present researches and considering the features of the study [13], have been carried out the pros and cons of the research reaching to a pattern or approach in this regard.

Data collection method and tools:
The library and documentary based as well as printed references and electronic resources, curriculum elements, related patterns and detailed literature were reviewed in all terms and then the flexible curriculum was determined and finally the case was also designed through using the same pattern.

To determine the approaches and indices in the first to fifth questions including the approach and targets of flexible **curriculum**, indices of the flexible **curriculum** representation process, the indices of the flexible **curriculum** supplementation and other materials and educational resources in flexible **curriculum** and finally testing and correction of flexible **curriculum** based on the understanding pattern (figure 1) were introduced. The related pattern was designed in a systemic method and the purpose of designing the triangle figure is that according the management information system, the levels of decision making in Iranian **curriculum** system can be divided into three group of operational, middle and superior which the categorization is strongly emphasized on the semi-centralization and flexibility itself; the point which can increase the flexibility is subjected to the establishment of the information system and information and communications technology. The internal dimension using the management information system leading to the construction of interactive regular base among the levels and the external dimension is based on the technology and media.

The present concepts in the pattern: Interior-data pattern: including three data bases, data resources and agents of decision-makers

Data base: It means the environments where the necessary data were collected for **curriculum** issues and also decision-makers are active in three related levels including: operational: educational district and school, middle: the district and state education districts and the superior level: the ministry of education. In the designed system of the country (internal environment) as the base of data has been considered.

Data resources: to collect and use of the data in **curriculum** planning these resources should be determined as well. In the pattern, the data resources are being determined by following groups, * human resources, financial and educational* fundamental and research-based data* structure and constructions*organizations*the center of technology and management information system which have been shown in tabel 1.

Table 1: Resources in flexible curriculum

			Operational level	Middle level	Superior level
Resources	Educational		Educational information, archive information		
	Material and physical		Educational and non-educational		
	Financial		Expenses and incomes		
	Human		Educational force, non-educational force, group of technology		
Fundamental data and research	Internal organization	Fundamental data	National curriculum of learning fields	National curriculum, education data and education groups data	National curriculum, public and formal education philosophy, documents of education
	External organization	Researches	Personal experiences, participate at conferences	Symposiums and results of college researches	National and international conferences, national and global changes
Structure	Construction		State education districts	State education districts	Ministry of education , education planning dept.
	Structure		Public cycle, semi expertise cycle		
Organizations	Dependent on organization		Governmental sections		
	Out of dept.		Non-governmental sections: scientific, educational, producers and educational tools and institutes and book publishers		
Management of information and communications technology	Public infrastructure		Nets	Internet-intranet-extranet	
			Software	Systemic software, applied software, instructions	
			Hardware	Educational systems, side computer devices	
	Expertise infrastructures (informational systems)		Innovative and creative systems		
			Systems of performance support	Risky cooperation systems , process control systems, process operation systems	
			Systems of management support	Executive information systems, systems of decision making support, systems of management information	

Decision making agent: Every person or a group along with his or her activity level and the degree of the information can be evolved in **curriculum** planning.

The systemic process and data processing:
In given pattern, the systemic processes and data processing include different sections which have been defined in continue.

The management information system and data base: In the section of processing, the technology is responsible for the same issue. Its different section is based on the interactive and technological section. In this part, saving and publishing the data including the sound, picture, text or number is achieved by communicative and computer-based tools; the technological parts including:

Public infrastructure (communicative technologies):
The technology meaning the whole communicative factors in meeting the data transferring issues; in fact, the column of the information technology and structural paths can be made by the way providing the communicative backgrounds in this case [1].

Supportive systems of decision making: It is a changeable system that is designed for the periodical decision making process [3]. These systems provide interactive information systems in support of management and professional activities during the process of decision making [16]. The management information systems: it provides the data as report giving to the managers and experts. It is also a formal system in an organization providing the decisions for the managers.

System of performance support: Risk-based cooperative systems: increasing the efficacy and team work issues. Systems of process control: supervision of physical control through computers connected together. Systems of operation processing: the main part of supportive systems originating from the positive executive programs being processed at every other time.

Data base:
Automation: Automation or self-regularity is called for every action being fulfilled and make the time fast in each process. The main targets are to increase the production quality and reduce the production expenditures as well as precise operational achievements along with services [1]. System of interactive communication:

It can be achieved by the fast interaction of information technology for any users through the websites and computer based affairs and it is a bilateral interaction structure.

Fields and curriculum elements: The other designed part is subjected to the country **curriculum**. The elements and targets are strongly combined together in the process of education granted for each element; the structures of the fundamentally educational affairs are as following:

Belief, religious, social, economical, biological and physical, aesthetically, artistic, professional and scientifically.

System of innovation and creation: One of the most essential applications of the system is to make an innovation and creation. Anandajayasekeram and Gebermedhin (2009) state that the innovation in the process of education is a new knowledge or a combination of the present knowledge which is not linear but the interactive relations between the science, technology, education, production, politics and demand cover the same processes in this regard. In their theory, a system of innovation has three elements: organizations or people challenging in production, publication and extraction and using the new knowledge and interactive learning leading to the construction of new processes.

The exterior-data process: This process is originated from the changes that an organization or a production line is based on that process efficiently. The given exterior data is flexible in three levels of Macro system of national flexible curriculum, District systemic of national flexible curriculum and micro-system of national flexible curriculum, The internal environment of the system is hidden in the ministry of education. The external system is also given in the exterior territories directly or indirectly influencing on the system and there may be some threatening factors for the same system such as political, economical, population, social, technological and regulations threats [20]. The data of this setting as research result give the statistical information to be applied by the process as external attractive process as well.

Testing and feedback: Testing in given process is a continuous process in relation to collect the data to study the related decisions in the flexible system relying on the level and target of testing but its method is different. In fact, in this method a comprehensive system can be considered for the system including the main national provincial and schools issues and the other interior and exterior parts as well; decisions based on the testing is devoted to three levels as mentioned before. And the results would be applied in different level. These results may be useful in national level to determine the resources, teaching methods and educational materials; in provincial level, they have been compared the schools different activities and in school level, these can be devoted to educational decisions. The main aim of the national testing is to provide the districts and state information that they may be fruitful for the policy-makers of the affairs. Testing at state level may be used for the centralization targets giving useful data in this regard. Testing at class level can optimize the given information in relation to the progression of students, parent and peers efficiently.
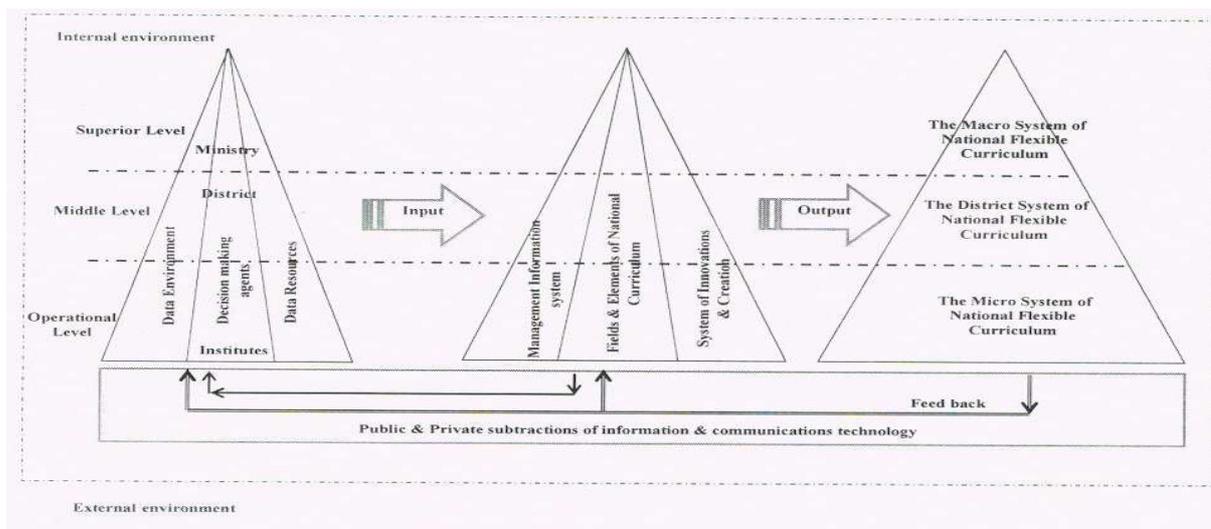
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