Design and Validation of Decentering Schemes for Decision-Making about Curriculum Based on Schwab's Theory and Features of the Curriculum Development System in Iran

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Purpose: the present study aimed to design and validate decentering schemes for decision making about curriculum based on Schwab's practical theory and features of the educational system in Iran.

Methodology: in the first step, qualitative methods of "Speculative Essay", "Evaluative Inquiry: Situational Assessment", and "Integrative Inquiry: The Research Synthesis" were employed to explain decentering curriculum according to Schwab's theory, to evaluate and analyze the characteristics of the curriculum system in Iran with regard to the decision-making structure, and to codify the first options of decentering the curriculum, respectively. To evaluate the quality of the primary scheme and codify the final one, the qualitative research approach and interviews were employed.

Findings: the findings of this study show that decentering decision making about the elements of curriculum in Iran's curriculum development system includes seven schema as follows: (a) uniform (one type); (b) multiform (four types); (c) formless (ten types); (d) a combination of uniform and multiform (four types); (e) a combination of uniform and formless (ten types); (f) a combination of multiform and formless (forty types), and (g) a combination of uniform, multiform, and formless (forty types).

Conclusion: in the designed scheme, several decision-making positions for curriculum are introduced according to various area features of the country to enable all areas to make optimal choices with regard to their capacity.

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1. Introduction

In centralized curriculum systems, the general trend is toward focused control in all steps, from the design and development of the curriculum to the implementation and evaluation of its results. In such systems, departments and head offices should manage all steps of curriculum design, coding, and notification at the national level, and teachers and instructors should implement the prescribed curricula. In Iran, the curriculum development system is mostly centralized. The central, responsible organization is a branch of the Organization for Educational Research and Planning known as the Curriculum Development Center. This center is responsible for designing curricula for all levels of elementary, junior high, and high school as well as teacher training institutes for all districts of the nation[1] (Mehrmohammadi, 2003). In such a decision-making system for curriculum, different regions of the nation are not allowed to enter the decision-making process regardless of their capabilities and capacities. Therefore, the developed curriculum is not compatible with the situations and features of different areas where it is being applied. According to the author, in the present study the problem or the problematic situation is the absolute centralization of curriculum decision-making, which relies on the belief that the central organization decision makers develop a uniform curriculum regardless of the capacities, features, and needs of different regions in the country.

There exists a difference between the difficulty or problematic situation and the research problem. The difficulty is converted into a problem when there is a relevant and innovative theoretical base. In fact, by relying on this theoretical base, the author is able to explain the problem. The innovation and originality of the research is represented when the recognized problem or difficulty is considered from that aspect which is not noticed by others. In the present study, Schwab's "practical" theory was selected as the appropriate theoretical base to investigate the decentering problem in the curriculum decision-making system. The main message of Schwab's theory is that the closer the origin of decision-making about curriculum is to the scene or stage that deals practically with it (for example school, district, city, or province), the more valid, accurate, effective, compatible and better the decisions are with the nature of nurturing (Schwab, 1983). Therefore, the decision-making process for curriculum in the framework of Schwab's practical theory is directly compatible with decision making at non-central levels. In fact, the closer curriculum decision-making is to the lower levels, the better it is. Of course, this criteria is valid when the capacity to make decisions exists at lower levels. If such a capacity is not available, the most appropriate situation is decision-making at higher levels (central organization). If the structure of curriculum in Iran is observed from the position of Schwab's theory, i.e. if the programming has a more "practical" nature and is of better accountability, a question is raised regarding the options used in decision making for curriculum. Of course, the needs and capacities of different districts in Iran enters the curriculum decision-making. Therefore, the author of this study sought to propose a plan based on Schwab's theory for decentering curriculum while considering the diverse and complicated features of the different districts in Iran with regard to their capacity for making decisions. It could be said that decentering the curriculum would not be effective without the presentation of an intelligent plan which has considered complications and diversities. The main presupposition of the scheme proposed in this study is that different districts could be empowered to make decisions based on their capabilities and potentials. Such a view regarding curriculum decision making requires different options of decision making based on the different capabilities of various environments.

Therefore, the current study first attempted to draw and explain different options of decentering decision making about curriculum according to Schwab's "practical" theory. Then, the features and conditions of education system in Iran were documented and analyzed in terms of the decision-making structure. Next, the levels or options of decentering were determined in line with Schwab's practical theory and proportional to the features of Iran's curriculum system. By going through this process, the scheme of decentering decision making about curriculum was achieved in Iran's curriculum system. Finally, the designed scheme was

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[1].Curriculum development for technical and vocational high schools is conducted in a separate central organization known as the Technical and Vocational Planning and Research Department.

validated by curriculum practitioners, and a series of do's and don'ts to reform and complete the designed scheme were proposed.

Theoretical Framework

In centralized education systems, decisions about different aspects of curriculum are mostly made in head departments; thus, different districts of the country do not enter the decision-making process, and the generated curriculum is not compatible with the conditions, features, and environments of districts where the curriculum is applied. These issues are reflected in Schwab's "practical theory" under the title of "decision making based on the features of educational situations." In general, according to Schwab's theory, decision making about curriculum should move toward practical decision making based on specific educational situations to solve the problems of this domain (Reid, 1999). In fact, the main concerns of Schwab's theory are that the originality of specific decision-making situations should not be questioned and a general and stereotypical rule should not govern all situations. This important issue is the main goal of this study.

Therefore, Schwab's theory is a suitable theoretical framework to investigate the decentering or decentralization problem in decision making about curriculum.

Research questions

The present study aimed to answer the following questions:

1. What are the peculiarities of a curriculum decentering scheme according to Schwab's practical theory and the features of Iran's curriculum system?

1.1. Based on Schwab's practical theory, how is decentering the curriculum explained?

1.2. What features does Iran's curriculum system have for the structure of decision making about curriculum?

1.3. What are the levels or options of decentralization in line with Schwab's practical theory and proportional to the features of the curriculum system in Iran? How can the current levels be reformed?

2. How valid is the designed scheme from the viewpoint of curriculum practitioners? What are the peculiarities of the final scheme?

2. Methodology

Barrow (quoted from Short, 1991) emphasizes that, in the curriculum domain, every research attempt focuses on special research questions. However, not all of these questions can be answered using only one research method; curriculum research deals with diverse options. In the present study, different methods were employed to answer the research questions. First, to explain decentering curriculum according to Schwab's theory, the qualitative methods of "Speculative Essay[2]," "Evaluative Inquiry: Situational Assessment[3]," and "Integrative Inquiry: The Research Synthesis[4]" were employed to evaluate and analyze the characteristics of the curriculum system in Iran with regard to the decision-making structure and to extract the first options of decentering the curriculum in line with Schwab's theory and proportional to the features of Iran's curriculum development system, respectively. Then, to evaluate the quality of the preliminary scheme and codify the final scheme, the qualitative research approach and focus group interviews[5] were employed. A contextual

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[2] This method is meta-analysis or synthesis of research which is used by knowledgeable researchers (instead of a collection of statistical rules) as a means of enlightenment (Schubert, 1991).

[3] This widely-used method includes a variety of evaluation activities, the common aim of which is to investigate the status of a curriculum in a specific executive situation (King, 1991).

[4] This method deals with the evaluation and combination of studies conducted in a specific domain to achieve a knowledge that is able to assist in solving current problems that require planning or making practical decisions (Marsh, 1991).

[5] Interview is not a simple conversation to collect data. Rather, it is a method that can be employed to solve problems, conduct research, and answer research questions (Seidman, 2012). It is noteworthy that focus group interviews present more documented

society was used as a sample in this study in which Schwab's scientific works along with the documents and studies related to Iran's curriculum development system were investigated using targeted sampling. Those works and documents relevant to explaining the decentering of curriculum discussions were selected. Another society participated, which included all the practitioners of curriculum who are simultaneously members of a specific study group, "Schwab and deliberation in curriculum." The sampling method in this society was targeted sampling of unique cases. In this step, nine practitioners of curriculum were selected to participate and present information in a focus group. Data collection tools included investigating the scientific contexts of Schwab's theory, high-level studies and documents about the features of the curriculum development system in Iran, and interviews with the focus group to collect data about the quality of the preliminary scheme of decentering the curriculum. To analyze the data related to the first research question, reflective analysis was employed. Reflective analysis is a method through which the researcher uses his own intuition, judgment and ability to portray events (Creswell, 2008). To analyze the data related to the second research question, thematic content analysis was used. It is the most appropriate method to recognize, analyze, and report the available schemes in qualitative data (Braun and Clarke, 2006).

Review of literature

Studies that deal with decentering or focus on aspects such as designing an optimized scheme, capacity building, and available or unavailable conditions to implement decentering, development and effects of decentering the curriculum, and accountability for curriculum were reviewed. Among them were the studies of Mehrmohammadi (2007 and 2010) and Izadi (2000) regarding designing the scheme and capacity building for applying it; Cawelti (1974), Adib Manesh et al. (2011), Arefi (2007), Fathi Vajargah (2004), and Asadi (2011) about capacity building and measuring the availability or unavailability of the conditions to apply decentering; Gunnarsson et al. (2004), Utomo (2005), Sturman (1989), and Nasr-e-Isfahani and Golkar Saberi (2008) regarding development and effects of decentering decision making about curriculum; and Hill and Bonan (1991) and Ziba (2011) regarding accountability for decentering decision making about curriculum. Notably, the studies that deal with designing a decentering curriculum decision-making scheme considered the dualist or absolute protection approach from decentralization (full decentralization) in all situations versus the absolute denial of decision-making policy in the center (at every level and measure) an irrational state, and therefore, they support different options of decentralization. Studies that deal with capacity building and measuring the availability or unavailability of conditions to apply decentering emphasized the fact that, before applying the decentering scheme, its executive essentials should be prepared. For example, enabling human resources from the aspect of their knowledge, attitudes, and skills, to participate in decision making is a basic necessity. Studies that deal with the investigation of development and effects of decentering curriculum decision making have verified its positive effect on the educational function of students and teachers. Finally, the studies that deal with accountability problems for decentering the curriculum have emphasized that the main principle in decision making for curriculum in each level of decision making is accountability for the decisions made. For example, for curriculum decisions made at the level of a specific school, that school must be accountable. Providing the mechanism and policy of accountability from diverse references is a necessity for this issue.

Although most of the reviewed studies verified the productivity of decentering decision making about curriculum, they considered this issue from a general view and did not present a scheme to make decisions about determining the details and dimensions of decentering the curriculum in different decision-making levels (central office, province, district, and school) by relying on an appropriate theoretical base and considering the features of diverse educational situations. Therefore, the current study used Schwab's practical theory that emphasizes the originality of a specific educational situation and decision making based

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information compared to individual interviews; as Morgan (1998) states, the interaction between group members (interviewees) in these interviews results in the exchange of thoughts, views, and ideas.

on it to explain the dimensions of decentering curriculum at different levels to present a reliable scheme for the curriculum development system in Iran.

3. Findings
Question 1.1: According to Schwab's practical theory, how is decentering the curriculum explained?

To answer this question, the capabilities available in Schwab's theory are mentioned and curriculum decentering is explained according to these capabilities.

Practical thinking

According to Schwab's views (1969 and 1970), thinking based on practice implies the accurate measurement of a situation and decision making and performing according to it, but without the expectation that a special decision is the only possible or correct decision to be applied. In fact, practical thinking employs the highest intellectual capacity to make decisions compatible with the specific conditions and areas. As Reid states (1999), this thinking tradition contrasts with those that claim acting based on specific principles. Systematic (linear) thinking seeks to achieve logical results through logical processes. Unlike this thinking, in thinking based on deliberation, there is doubt as to whether covering these logical processes will always lead to reality. A curriculum development system based on practical thinking is not seeking to design and codify a definitive and controlling curriculum to be applied in different environments; rather, it attempts to design and codify the curriculum in different options proportional to the features and needs of various educational environments.

Deliberation

Complexity and diversity are among the main features of a curriculum that should be considered by curriculum decision makers. This complexity and diversity originates from educational situations being specific. In this regard, Schwab (1970) stated that the curriculum deals with issues related to the student in this situation, with the management, and so forth. He has introduced a capability called "deliberation" to explain specific situations in which the curriculum decision makers should make decisions and configure the action plan according to the specific objective features of each educational situation and their importance. It should be noted that according to Schwab views, the concept of "specific educational situation" is a relative concept that does not solely include the locality or school level; rather, it starts from school level under the title of "practical" and continues toward district, city, and province levels under the title of "quasi-practical". In fact, by verifying this concept, Schwab has followed the thought of decentering and presenting decision-making authority to non-central branches in curriculum development. As he states, the closer the origin of decision making about curriculum is to the scene or stage that deals with these decisions practically (for example, school, district, city, or province), the better, more valid, more accurate, more effective, and more compatible the decisions are with the nature of nurturing (Schwab, 1983).

Milieu

Schwab does not consider the curriculum problem separated from its milieu. His statement that this student, at this school, with this management (cultural and social environment), at the time of this individual's municipality (political environment), with regard to the fact that there is a chance for him to be elected in the next term (political environment) is proof of this claim. Schwab's main objective for this delicacy about the environment is enhancing the "perception" of decision makers to understand curriculum problems better and then follow appropriate strategies to solve them. It is not possible to understand curriculum problems correctly without putting them in the social, cultural, and political context. Therefore, undoubtedly, decisions related to the curriculum cannot be made under conditions of indifference and impassibility toward the environment and the backgrounds. In decentering decision making about curriculum, an opportunity is

created to make appropriate decisions about curriculum with regard to the conditions and features of (cultural, social, and political) of different educational environments.

Commonplaces

According to this capability, the participation of practical representatives of the curriculum, including students, teachers, and individuals familiar with the conditions and environment along with subject matter specialists and curriculum specialists, in decision making related to curriculum is obligatory (Schwab, 1983). Schwab obviously holds a firm belief about democratic or anti-authoritarian decision making in curriculum development. Since he talks about decision-making elements and the representatives of five sets of experience as the necessary perquisites for deliberation in curriculum, in fact he attempts to put the "practical" representatives (teachers, students, individuals familiar with the environment and conditions) beside the theoretical representatives (curriculum and subject matter specialists), not against them, in a democratic environment for decision making about curriculum. Therefore, the curriculum development system should determine a mechanism to provide the background for the participation of beneficiary individuals (teachers, students, individuals familiar with the environment and conditions) in making decisions about curriculum, applying, supporting, and even evaluating it. This mechanism is nothing but decentering decision making about curriculum from the domination of the central organization in which a very limited number of individuals decide the curriculum without considering democratic rules and the features and needs of educational environments for curriculum all around the nation.

The Quasi-practical

Quasi-practicality means not limiting practical methods at the school level, but extending and continuing them outside the school and locality (Schwab, 1970). According to this capability, a number of schools could interact and form a complex (for example, an educational district or a province). Decisions made for the curriculum of these schools would correspond to their features. If decision making about curriculum is supposed to be conducted in different levels, it could be conducted for other levels such as the district or province level along with the school level.

The Eclectic

Eclectic capability means the service-based and pluralist application of theories in the curriculum decision-making process (Schwab, 1969 and 1970). By decentering decision making about curriculum at each level of school, district, province, and even country, a "set" of different (separate and even competing) theories are considered instead of a specific theory being relied on. However, it should be noted that all of those theories cannot be utilized because of the vast range of theories related to each learning domain. Therefore, decision makers should reflect on them after forming a set of theories and select the theory that is relevant for a specific educational situation (school, district, province, or country). The criterion for selecting theories for each learning domain is their proportionality with the conditions and features of each educational situation. When decisions for curriculum of different regions in a nation are made centrally, in many cases, the theories employed are not proportional to different educational situations. In decentering the curriculum, however, this opportunity is provided to allow all regions of the country to select the related theories for codifying the curriculum with regard to local features.

Question 1.2: What are the features of the curriculum development system in Iran with regard to the structure of decision making about curriculum?

In general, the curriculum in Iran is codified in the central organization and then schools are notified to apply it. Teachers are bound to apply the supplied curriculum according to the instructions provided. They are not allowed to make any changes in it. Students do not participate in codifying the curriculum or the infrastructures related to it. Their main role is to learn the curriculum materials. Only specialists and experts participate in curriculum development. Parents, managers, members of the local society, and regional and

school departments of education have the least impact on curriculum preparation (Fathi Vajargah et al., 2002). Therefore, prescriptive thinking dominates decision making about curriculum in Iran. Recently, some notes and annexes in some high level documents have been considered (National Curriculum Document of the I.R. of *Iran*, 5th Edition, 2012) for reducing centralization[6]. However, in practice, the centralized nature of curriculum is still maintained. The results of the studies are proof of this claim. For example, in their study, Khandaghi and Goodarzi (2012) concluded that Iran's curriculum development system is beyond expectations with regard to centrality. They have pointed out the following cases in explaining the details of this situation: 1- Currently, the curriculum development system of the country is performing quite centrally; 2- A centralized curriculum system has little accountability for the needs of society in different dimensions; 3- In macro-management of the country, there is little orientation and tendency toward decentralization; 4- The systematic movement toward decentralization is less evident in different decision-making levels of the education system; 5- Little tendency or systematic movement toward decentralization in the nation's curriculum development system can be seen; 6- In the nation's curriculum development system orientations or practical movements toward decentralization are scarce; 7- Currently, no rules or regulations exist that are required for decentralization in the nation's curriculum development system; 8- Currently, the distribution of specialized human resources knowledgeable in decentralized curriculum development is different around the country, such that some regions lack specialized resources and some regions have enough; 9- Currently, the required capacity for a decentralization movement is not provided in the society; 10- In the current curriculum development system, the required needs assessment to become aware of the needs of the country is not conducted; 11- In the current curriculum development system, the required needs assessment at the district level is scarcely enough to provide an awareness of the needs of a particular district; 12- In the current curriculum development system, specialists and experts do not actively participate in planning; 13- No opportunity is provided teachers at the province and district level to participate in curriculum development activities; 14- The authorities and those involved in education in provinces, cities, and districts do not participate significantly in the nation's curriculum development issue; 15- In the nation's curriculum development system, other beneficiaries of the education department, i.e. parents, employers, specialized groups, and others, are given no opportunity to actively participate; 16- The participation and cooperation of official decision-making centers located in cities and provinces, including executive managers of higher levels in provinces and cities, in curriculum development is scarce; 17- In the current situation, provinces and cities have little participation in the preparation of curriculum content; 18- Materials and teaching aids are supplied centrally by the central organization; 19- Provinces and cities have little authority over codifying learning and teaching methods; 20- Districts and provinces play a minor role in codifying assessment methods of curriculum development; and finally, 21- Provinces have little freedom of action in providing educational resources.

Field studies[7] revealed little evidence of reducing centralization in decision making about curriculum in Iran. In some learning domains, including technical and vocational, Arabic, and studies of provinces, only learning resources are produced. It should be mentioned that the authority of producing these learning resources is provided according to the curriculum guidelines by the central organization (Curriculum Development Center, 2015).

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[6] In this document, limited and similar authority are given sporadically to the lower levels of decision making all around the nation without considering the complicated rules of reducing centralization or the capacities of different regions of the country. For example, one of the notes included in the national curriculum is delegating the codifying of 20% of the materials and curriculum contents to the provinces. This view of delegating a fixed value (20%) of decision-making authority about curriculum to all provinces does not lead toward decentralization, since some provinces may not have the capacity, facilities, infrastructure, human or executive capabilities to determine the specified amount (20%) of curriculum content. Conversely, other provinces may have the capacity to determine more than the specified value (20%).

[7]. These studies are based on reports of the Deputy of the Curriculum Development Center.

Based on what is mentioned above, it could be generally said that Iran's curriculum development system currently lacks sufficient information on the measurements conducted in practice to reduce centralization of decision making for curriculum, and the centralized nature of decision making about curriculum remains the same. Despite the diverse features and capacities of provinces and different regions of the country, the current curriculum development system is mainly centralized except for some limited cases, and the curriculum development center is responsible for codifying the curriculum. Even if different regions have the capability, they are not able to enter the process of producing curriculum. Therefore, the curriculum provided is not compatible with the conditions and features of different regions of the country and is not as effective as required.

Question 1.3: What are the levels or options of decentralization in line with Schwab's practical theory and proportional to the features of curriculum system in Iran? How could the current proposed levels be reformed?

Based on the above explanation of curriculum decentering based on Schwab's theory and the features of Iran's curriculum development system, the framework of decentering decision making about curriculum in Iran takes multiple options. This framework is shown in Table 1 and Figure 1.

Table 1: Preliminary framework of decentering decision making about curriculum elements based on Schwab's theory and the features of Iran's educational system

Levels of decision making	options, elements and pillars of decentralization		Central office	Province	District	School
First option	Decision making for the curriculum elements in a way of totally prescriptively		Forth priority	Third priority	Second priority	First priority
Second option	Decision making for curriculum elements in a totally semi-prescriptive way		Forth priority	Third priority	Second priority	First priority
Third option	Decision making for curriculum elements in a totally non-prescriptive way		Forth priority	Third priority	Second priority	First priority
Fourth option	Decision making for curriculum elements as a combination of:	Prescriptive	Forth priority	Third priority	Second priority	First priority
		Semi-prescriptive	Forth priority	Third priority	Second priority	First priority
Fifth option	Decision making for curriculum elements as a combination of:	Prescriptive	Forth priority	Third priority	Second priority	First priority
		Non-prescriptive	Forth priority	Third priority	Second priority	First priority
Sixth option	Decision making for curriculum elements as a combination of:	Semi-prescriptive	Forth priority	Third priority	Second priority	First priority
		Non-prescriptive	Forth priority	Third priority	Second priority	First priority
Seventh option	Decision making for curriculum elements as a combination of:	Prescriptive	Forth priority	Third priority	Second priority	First priority
		Semi-prescriptive	Forth priority	Third priority	Second priority	First priority
		Non-prescriptive	Forth priority	Third priority	Second priority	First priority
	First state	Totally prescriptive	-	Third priority	Second priority	First priority
	Second state	Totally semi-prescriptive	-	Third priority	Second priority	First priority
	Third state	Totally non-prescriptive	-	Third priority	Second priority	First priority

| Eighth option	Decision making for curriculum elements (except learning standards) in a totally decentered way	Forth state	Prescriptive	–	Third priority	Second priority	First priority
			Semi-prescriptive	–	Third priority	Second priority	First priority
		Fifth state	Prescriptive	-	Third priority	Second priority	First priority
			Non-prescriptive	-	Third priority	Second priority	First priority
		Sixth state	Semi-prescriptive	-	Third priority	Second priority	First priority
			Non-prescriptive	-	Third priority	Second priority	First priority
		Seventh state	Prescriptive	-	Third priority	Second priority	First priority
			Semi-prescriptive	-	Third priority	Second priority	First priority
			Non-prescriptive	-	Third priority	Second priority	First priority
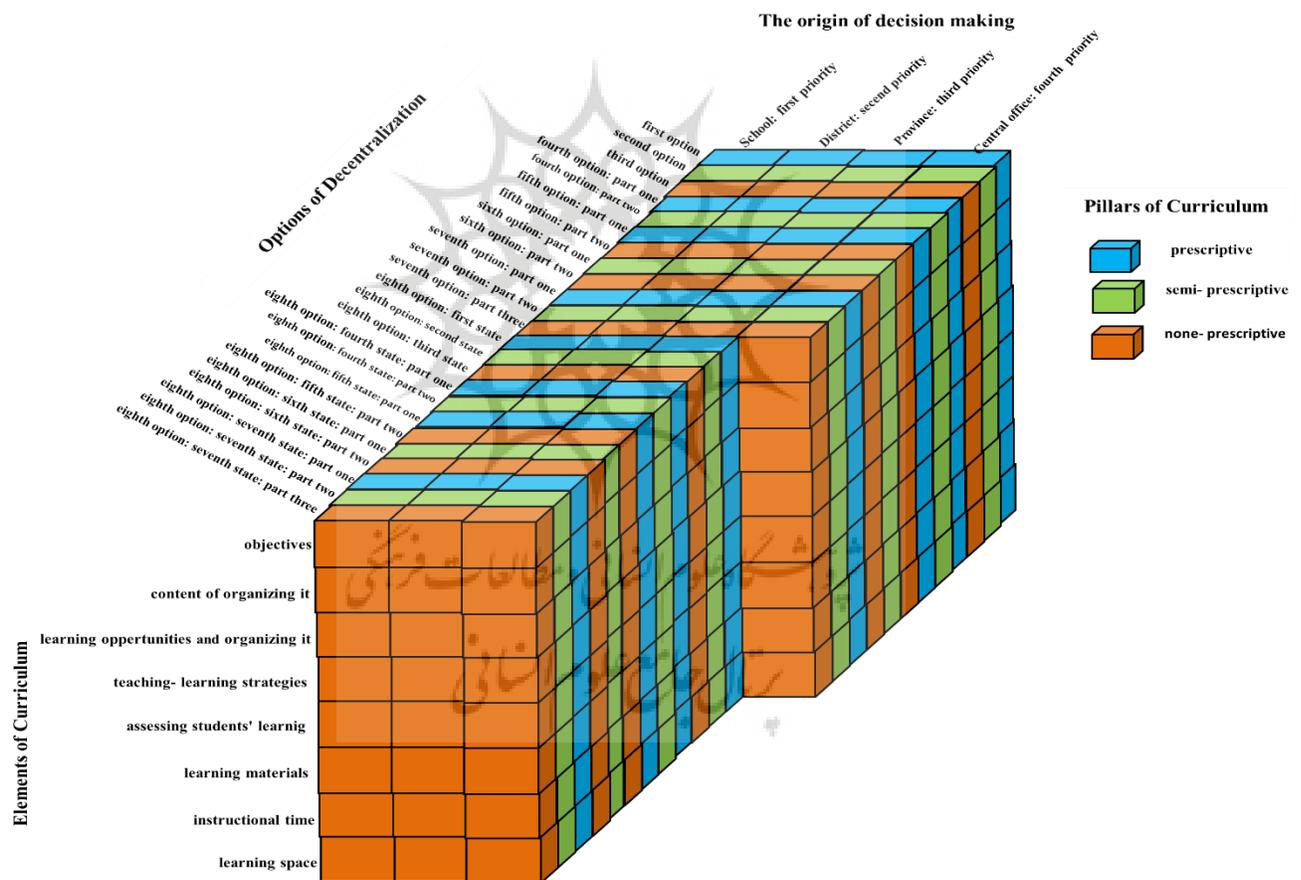
Figure 1: Preliminary options of decentering decision making about curriculum elements based on Schwab's theory and the features of Iran's educational system

Three variables are presented in Table 1 and Figure 1: 1- Components of decentering the curriculum; 2- Elements of curriculum; and 3- Decision making or deliberation levels. Components of decentering include three prescriptive (core), semi-prescriptive (core/elective), and non-prescriptive (elective) facets in decision

making about curriculum. The prescriptive component points to decision making about curriculum elements at every decision-making level uniformly without giving the right of selection to lower levels. For example, the central office level produces only one type of content for a learning domain, and lower administrative levels must use that same content. According to this component, even when decision making is delegated to a lower level, that level should determine the elements of curriculum uniformly. The semi-prescriptive component implies that decision making about elements of curriculum at each decision-making level gives the right of selection to lower levels. For example, the province level produces several learning resources instead of one for the learning resources element on a learning domain to allow lower administrative levels to choose from among them. Finally, the non-prescriptive component points to decision making for curriculum elements at each level of decision making as giving the right for authority or freedom to lower levels. For example, if the central office level makes decisions for the elements of curriculum in the non-prescriptive option, the lower level is free to face this element according to its needs. The elements of curriculum include minor goals, content and organizing it, teaching-learning strategies, evaluation, learning opportunities and organizing them, learning materials and resources, educational space, and educational time. Decision-making levels include central office, province, district and school levels.

As can be seen in Table 1 and Figure 1, there are 8 different options for decentering curriculum decision making in Iran's curriculum development system: 1- decision making for curriculum elements in a totally prescriptive way; 2- decision making for curriculum elements in a totally semi-prescriptive way; 3- decision making for curriculum elements in a totally non-prescriptive way; 4- decision making for curriculum elements as a combination of prescriptive and semi-prescriptive ways[8]; 5- decision making for curriculum elements as a combination of prescriptive and non-prescriptive ways; 6- decision making for curriculum elements as a combination of semi-prescriptive and non-prescriptive ways; 7- decision making for curriculum elements as a combination of prescriptive, semi-prescriptive, and non-prescriptive ways; and 8- decision making for curriculum elements totally freely. In options one through seven, decision making about curriculum occurs at all four decision-making levels (central office, province, district, and school). In the last option, nothing happens in the central office level; all decision-making authority regarding curriculum is delegated to lower levels. Of course, when the decision-making authority over curriculum is delegated to lower levels, the issue of national standards for the learning function of students is raised, and these standards should be considered when the curriculum is being codified. Therefore, by producing these standards, a kind of intelligent supervision is applied upon decentering the curriculum to make the developed curriculum as valid as possible.

It should be noted that in the presented framework for decentering curriculum decision making according to Schwab's theory, the first, second, third, and last priorities are given to the school, district, province, and central office level, respectively. In fact, the general rule which could be inferred from Schwab's "practical" theory is that in the first degree, whenever the capacity and conditions are available, there occurs the decentering of decision making. If this capacity is present at school, the school level is given first priority for decision making; if not, decision making is delegated to the district. Similarly, if the district has this capacity, decision making occurs there and if not, it is delegated to the province. Similarly, if the province has the capacity, decision making occurs there, and if not, it is delegated to the central office[9]. An important note here is that, although the priorities show the desirable situation of curriculum decision making according to Schwab's theory, the optimum curriculum decision-making situation for each level (i.e. provinces, districts, and schools of the nation) is determined in practice and with regard to the capacities and conditions of different educational situations in the country. Another important issue is that the designed framework does

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[8] This occurs in such a way that at each level of decision making simultaneously, part of the curriculum elements are codified prescriptively and the other part semi-prescriptively.

[9] Generally, according to Schwab's theory, decisions are more effective and desirable if they recede from the center and approach the school level. Therefore, in prioritizing, the first priority is given to schools.

not dictate a special situation as desired by all provinces, districts, and schools of the nation, but each province, district, and even each school can select its desired situation for curriculum decision making in each learning domain with regard to its features and special capacities. A final note is that the framework presented here for decentering the curriculum is a preliminary framework; therefore, it should be validated to determine its strong and weak points and to suggest complementary strategies to optimize it. To this end, the author formed a focus group of specialized individuals who have the ability to judge the issue of decentering curriculum according to Schwab's theory and the features of Iran's education system with the intent of critiquing and evaluating the proposed framework. In this report, the details of evaluations conducted by the focus group for the preliminary framework of decentering the curriculum along with reforming it are presented.

Question 2: How valid is the designed scheme from the viewpoint of curriculum practitioners? What are the peculiarities of the final scheme?

To answer this question, the first scheme was validated by a group of selected curriculum practitioners. Some aspects of the preliminary scheme validated by these practitioners are as follows:

1- Adequacy of the variables curriculum components, curriculum elements, and decision-making levels to recognize different stages of decentering;

2- Adequacy of the number of curriculum elements in the scheme and the usefulness of the collective form in presenting these elements in the framework to prevent its complexity;

3- The four levels of decision making about curriculum being rational and its conformity with Iran's education system;

4- Rationality of the first through seventh options of decentering the curriculum inserted in the scheme, since with logical rules, decisions could be made about curriculum elements in seven options: 1- prescriptive; 2- semi-prescriptive; 3- non-prescriptive; 4- a combination of prescriptive and semi-prescriptive; 5- a combination of prescriptive and non- prescriptive; 6- a combination of semi-prescriptive and non-prescriptive; and 7- a combination of prescriptive, semi-prescriptive, and non- prescriptive.

5- Prioritizing decision making about curriculum elements based on Schwab's logic;

6- Noticing the judgment and value aspects of the decentering scheme of curriculum decision making by prioritizing decision making, and noticing its descriptive aspect by recognizing different types of decentering; and

7- Proportionality of the proposed decentering options with the education system of Iran in terms of noticing diversities.

In addition to the mentioned aspects, other aspects were identified as negative points of the scheme by the curriculum practitioners, and they should be reformed. These aspects include:

(1) Using the "prescriptive" concept in the curriculum components variable, which recalls the centrality at the highest possible level (i.e. central office), and it could not be used for lower levels (for example, the school level). This concept is mostly related to centralization and creates some ambiguities. Therefore, it would be better to use the "uniform[10]" concept instead of "prescriptive". To coordinate the "uniform" concept with the "semi-prescriptive" and "non-prescriptive" concepts, it would be better to employ "multiform[11]" and "formless[12]" concepts, respectively.

(2) The eighth option of decentering decision making about curriculum, known as full decentering, is presented at its best in the third option (central office level). This means that when no decision for the elements of curriculum is made at the central office level, the central office treats the elements of curriculum in a non-prescriptive option (formless). Therefore, to prevent repetition and increased complexity of the scheme, it is better to cancel the eighth option.

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[10] Decision making for curriculum elements is coordinated at a level of decision making without giving the right of selection to lower levels.

[11] Decision making for curriculum elements at a level of decision making gives the right of selection to lower levels.

[12] Decision making for curriculum elements is totally delegated to the lower decision-making level.

(3) In decentering options proposed in the preliminary scheme, decisions about curriculum made at different decision-making levels are independent and have no logical relationship. For example, in the proposed framework, when decisions for the curriculum elements are made at the central office level non-prescriptively (formless), this formlessness is not determined at lower levels. Therefore, the current matrix should be reconstructed with regard to these relationships. As a result of these relationships, new options are created for decision making about curriculum elements.

With regard to validation results, the preliminary scheme of decentering curriculum decision making is reformed and finalized. There are three classes of variables in the final scheme framework: 1) components of decentering curriculum; 2) elements of curriculum; and 3) levels of decision making. Components of decentering curriculum include three facets: "uniform", "multiform", and "formless". The elements of curriculum include minor goals, contents and organization, teaching-learning strategies, assessment, learning opportunities and organizing them, learning materials and resources, educational space, and educational time. Levels of decision making are four: central office, province, district, and school levels. Options of decentering decision making for curriculum elements are obtained by multiplying the matrix of decentering components and decision-making levels. The details of the new scheme are presented in Table 2 and Diagram 1. The seven options of decentering are determined along with the types of their subsets[13] to make decisions about curriculum elements to allow different regions of the country to select the optimum option of decision making for each learning domain. The valuation of any option and the type of its subsets, as seen in Figure 2, is conducted according to Schwab's practical theory so that the closer to the school level the options and types of decision making for curriculum elements are, the more desirable they are, and the closer an option is to the central office level, the less desirable it is.

Table 2: Final framework of the options of decentering decision making about curriculum elements

The origin of decision-making	options of decentering decision making for curriculum elements		Central office	Province	District	School
First option	Decision making for curriculum elements uniformly		Uniform	Uniform	Uniform	Uniform
Second option	Decision making for curriculum elements multiformly	First state	Multiform	Uniform	Uniform	Uniform
		Second state	Multiform	Multiform	Uniform	Uniform
		Third state	Multiform	Multiform	Multiform	Uniform
		Forth state	Multiform	Multiform	Multiform	Multiform
Third option	Decision making for curriculum elements formlessly	First state	Formless	Uniform	Uniform	Uniform
		Second state	Formless	Multiform	Uniform	Uniform
		Third state	Formless	Multiform	Multiform	Uniform
		Forth state	Formless	Multiform	Multiform	Multiform
		Fifth state	Formless	Formless	Uniform	Uniform
		Sixth state	Formless	Formless	Multiform	Uniform
		Seventh state	Formless	Formless	Multiform	Multiform
		eighth state	Formless	Formless	Formless	Uniform
		Ninth state	Formless	Formless	Formless	Multiform
		Tenth state	Formless	Formless	Formless	Formless
Forth option	Decision making for curriculum elements by a combination of:	Uniform	Uniform	Uniform	Uniform	Uniform
		Multiform — First state	Multiform	Uniform	Uniform	Uniform

[13] First option: uniform (one type); second option: multiform (four types); third option: formless (ten types); fourth option: a combination of uniform-multiform (four types); fifth option: a combination of uniform-formless (ten types); sixth option: a combination of multiform-formless (forty types); and seventh option: a combination of uniform-multiform-formless (forty types).

				Central office / Second state etc.			
			Second state	Multiform	Multiform	Uniform	Uniform
			Third state	Multiform	Multiform	Multiform	Uniform
			Forth state	Multiform	Multiform	Multiform	Multiform
		Uniform	Uniform	Uniform	Uniform	Uniform	Uniform
Fifth option	Decision making for curriculum elements by a combination of:	Formless	First state	Formless	Uniform	Uniform	Uniform
			Second state	Formless	Multiform	Uniform	Uniform
			Third state	Formless	Multiform	Multiform	Uniform
			Forth state	Formless	Multiform	Multiform	Multiform
			Fifth state	Formless	Formless	Uniform	Uniform
			Sixth state	Formless	Formless	Multiform	Uniform
			Seventh state	Formless	Formless	Multiform	Multiform
			Eighth state	Formless	Formless	Formless	Uniform
			Ninth state	Formless	Formless	Formless	Multiform
			Tenth state	Formless	Formless	Formless	Formless

Table 2 (continued): Final framework of the options of decentering decision making about curriculum elements

The origin of decision–making / options of decentering decision making for curriculum elements				Central office	Province	District	School
Sixth option	Decision making for the curriculum elements by a combination of:	Multiform	First state	Multiform	Uniform	Uniform	Uniform
			Second state	Multiform	Multiform	Uniform	Uniform
			Third state	Multiform	Multiform	Multiform	Uniform
			Forth state	Multiform	Multiform	Multiform	Multiform
		Formless	First state	Formless	Uniform	Uniform	Uniform
			Second state	Formless	Multiform	Uniform	Uniform
			Third state	Formless	Multiform	Multiform	Uniform
			Forth state	Formless	Multiform	Multiform	Multiform
			Fifth state	Formless	Formless	Uniform	Uniform
			Sixth state	Formless	Formless	Multiform	Uniform
			Seventh state	Formless	Formless	Multiform	Multiform
			eighth state	Formless	Formless	Formless	Uniform
			Ninth state	Formless	Formless	Formless	Multiform
			Tenth state	Formless	Formless	Formless	Formless
Seventh option		Uniform		Uniform	Uniform	Uniform	Uniform
		Multiform	First state	Multiform	Uniform	Uniform	Uniform
			Second state	Multiform	Multiform	Uniform	Uniform

	Third state	Multiform	Multiform	Multiform	Uniform
	Forth state	Multiform	Multiform	Multiform	Multiform
	First state	Formless	Uniform	Uniform	Uniform
	Second state	Formless	Multiform	Uniform	Uniform
	Third state	Formless	Multiform	Multiform	Uniform
	Forth state	Formless	Multiform	Multiform	Multiform
	Fifth state	Formless	Formless	Uniform	Uniform
Formless	Sixth state	Formless	Formless	Multiform	Uniform
	Seventh state	Formless	Formless	Multiform	Multiform
	eighth state	Formless	Formless	Formless	Uniform
	Ninth state	Formless	Formless	Formless	Multiform
	Tenth state	Formless	Formless	Formless	Formless
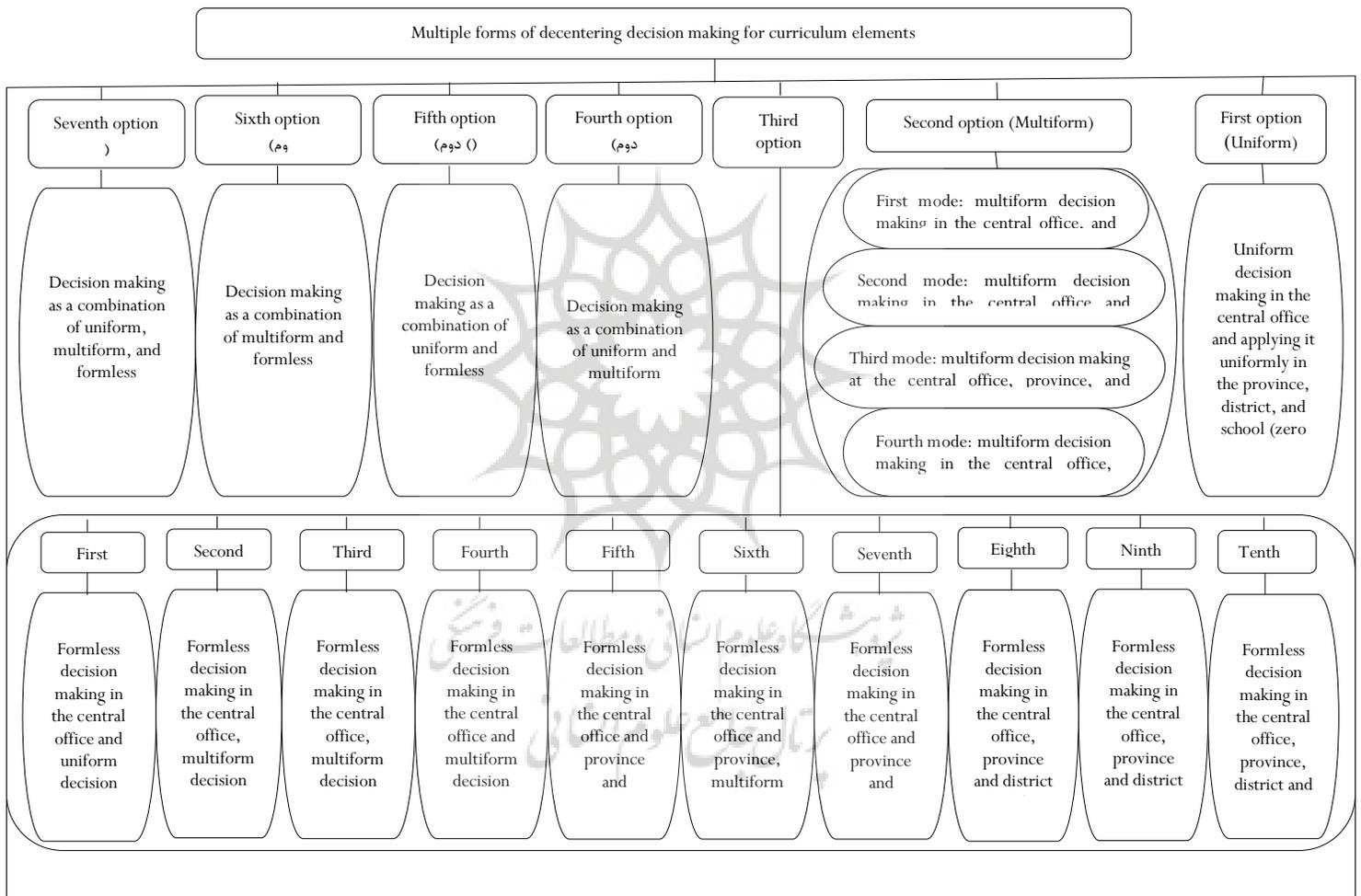
Diagram 1: final scheme of decentering decision making about curriculum elements in Iran
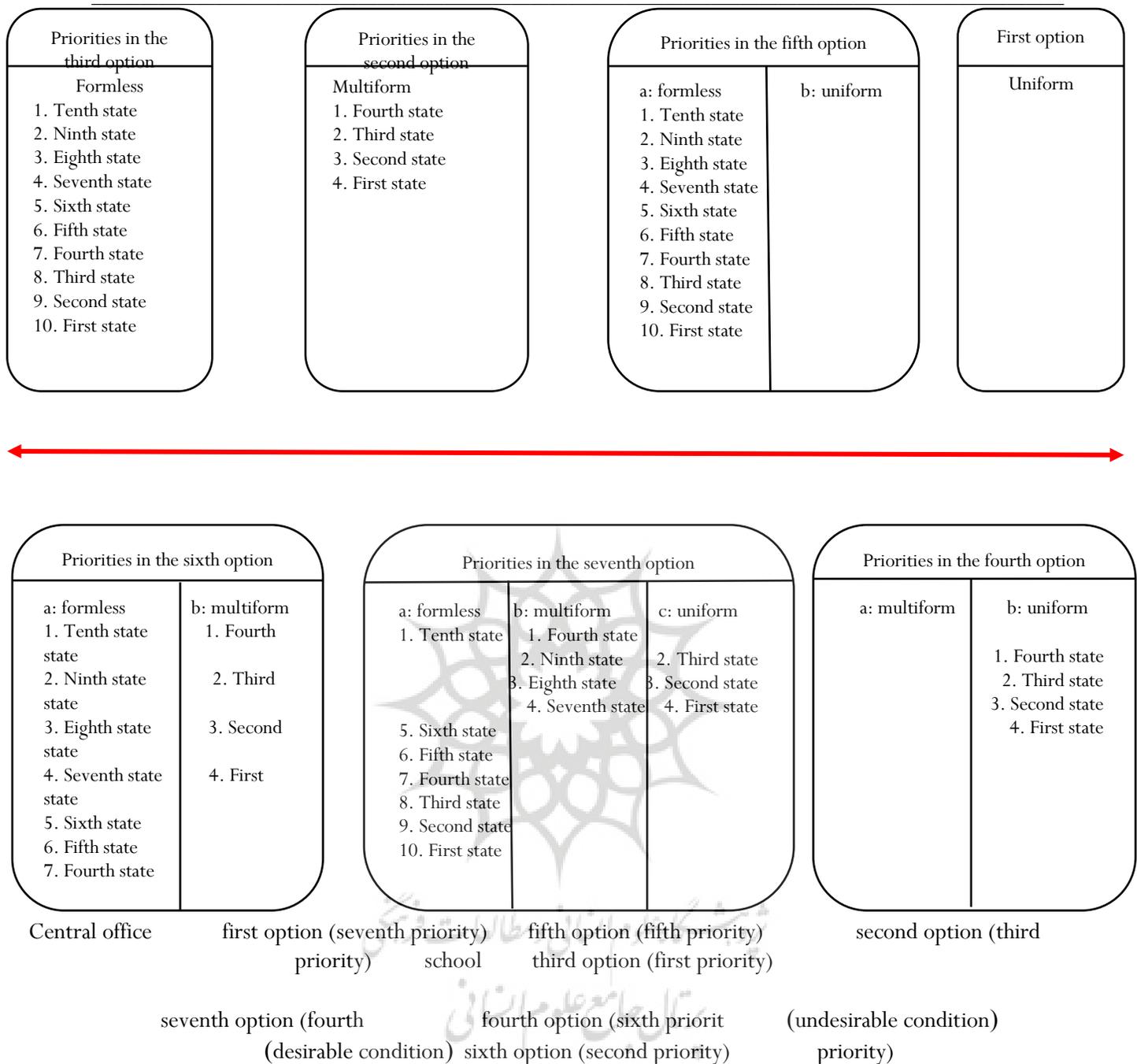
Figure 2: Prioritizing decentering options of decision making about curriculum based on Schwab's theory

4. Conclusion

The final scheme proposed in this study for decentering curriculum decision making is designed based on a noetic plan based on local aspects of Iran. In this scheme, considering the diverse features of a milieu in the country to identify the options of curriculum decision making is necessary. Since regions in Iran differ in cultural-social backgrounds (culture, specialized agents situation, teachers' situations, students' situations, and so on), the curriculum decision making scheme should not dictate only one specific decision making situation in learning domains as the desirable situation for the whole country, province, district, or school. Rather, several decision-making situations should be introduced proportional to the conditions of different regions in the country to allow each region to select the optimum situation with regard to its capacity for curriculum

elements in each one of its learning domains. Of course, the acting mechanism is such that the nation's education system recognizes local capacities and aspects of different regions by creating a provincial headquarters in the central curriculum development organization and answers the requests of provinces by considering them to use the defined options and types in the scheme in order to develop the curriculum elements in different learning domains.

One main capability of the final scheme of decentering decision making about curriculum is that it focuses on decision making based on the different capabilities of different educational environments by avoiding the principle of absolutism and upholding the principle of pluralism. Therefore, this scheme is consistent with the scheme proposed by Mehrmohammadi (2011) for decentering curriculum development, and it is inconsistent with the decentralizing idea proposed in the National Curriculum Document (2012).

Delegating a specified value (20% at most) of decision-making authority about designing and producing curriculum to the provinces proposed by the National Curriculum Document is not compatible with decentering values, since it represents that type of decentering in which curriculum decision-making authorities are applied for all regions of the country regardless of the facilities, infrastructures, human and executive capabilities of each region; it relies on the all-or-none law. Logical decentering of curriculum from central organization dominance is such that freedom of action and authority in each learning domain of each province is delegated according to decision-making capacity. It is possible that, in a specific learning domain for one province of the nation, no authority or freedom is considered to forcibly codify curriculum of that learning domain and as a result of the lack of decision-making capacity (facilities and human and executive capabilities), and the curriculum produced in the central office level is used as the desirable curriculum. There is also the possibility that, in another province, curriculum is produced by the executive agents of that province based on the required conditions in one or several specific learning domains. Therefore, in such cases, the central organization should delegate the required authority to this province. Of course, it should be reminded that the presupposition of the final scheme of decentering curriculum does not mean that in the decentering process every region of the country can act arbitrarily and no scale, criteria, or national standard is present for learning in a specific curriculum domain at different educational levels. Rather, it is necessary to pay attention to the codifying and applying of functional and learning standards. These standards should be generated in the central organization to maintain educational justice for all learning domains.

Measuring the amount of their progress should be conducted by the central organization. For example, the central organization generates functional and learning standards to determine how much students all over the nation should know about high school math and what skills they should master. Evaluating how much of high school math students all over the country learn according to these standards should be conducted in the central organization as well. This fact is verified in studies conducted by some authors, namely Mehrmohammadi (2007 and 2010), Schubert (1993), and Ziba (2011).

In conclusion, applying the designed scheme for decentering curriculum decision making by Iran's education system requires the consideration of some requirements, as follows:

- First, a headquarters of the curriculum decision-making system according to the scheme proposed in this study should be established in the central curriculum organization, to provide coordination, guidance, and supervision of curriculum development activities and to evaluate the performed activities at the province level.

- Second, development committees should be established at the province, district, and school levels to make decisions about different curricula after qualifications, coordination and licensing are obtained from the central organization.

- Third, executive and regulatory plans should be codified by the central curriculum organization in which the qualifying conditions of provinces for employing decentering options and types are determined. By codifying and managing such a program, the central organization supervises the function of each province in selecting and implementing suitable options of decentering.

- Fourth, support programs (such as meetings, conferences, training courses and so on) should be provided by the curriculum authority of the country to enhance the professional development of decision-making groups at lower levels. In this regard, the central organization should determine the types of scientific, cultural, and executive support and protection that should be presented in the design and application process after identifying the situation and capacity of provinces (in terms of specialized manpower, teachers' situations, students' situations, universities' and schools' situations, facilities, cultural environment, etc.).

- Fifth, individuals involved in the implementation of the proposed scheme should not fear the scheme's complexity. This complexity is related to the inherent complexity of education. Therefore, to apply the scheme proposed in this study, the central organization should attempt to establish a management system based on recognizing the complexities and functioning according to them at the central office, province, district, and school levels.

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