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WHAT ARE THE MAJOR CURRICULUM ISSUES?: THE USE OF MINDMAPPING AS A BRAINSTORMING EXERCISE

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Abstract. Curriculum development is a problem solving process and it involves the consideration of the needs and problems for the improvement of the programs and the implementation of solutions and alternatives for learners and their contexts. Curriculum is a reflection and a product of the society and can contribute to the change in the society. It is necessary to reflect on the issues to reach decisions in a dynamic and responsive curriculum development process. The purpose of this paper is to identify the major curricular issues in Turkey and to relate them to the universal context in an integrative and collaborative manner. The issues were established in a graduate program through a brain mapping process to specify the key issues in five major areas and also to evaluate the program.

1 Introduction

Change is an important component of curriculum dynamics and we have to study and manage change for a better future. In order to cope with change and the emerging problems, we have to accept a contemporary and proactive conception of problem solving in a life-long process, predicting future problems, thinking of their solutions and the actualization of these processes for the betterment of individuals, society and culture. Curriculum development as a problem solving process involves the critical consideration of resources, needs and problems for improvement purposes. Curriculum is a reflection and a product of the society and can contribute to changing the society. In this respect it is necessary to reflect on the issues to reach decisions in a dynamic and responsive curriculum development and education process.

Cognitive mapping gives us an opportunity to do this during the instruction process in training future leaders. A critical component of students' cognitive understanding is the negotiation among the many concepts and ideas they are continually processing (Ayersman, 1995). Graphical representations of the knowledge structures that exist in the students' cognitive understandings are called concept maps and concept maps (or "cognitive maps") are "the spatial representation of ideas and their interrelationships that are stored in memory" (Jonassen, 1993, as cited in Oughton and Reed (2000). It is necessary to find out whether following a conscious and intense instruction process of cooperative learning and critical thinking certain conceptions and their interrelationships are established and how this is related to developing a vision and a problem solving strategy for the future. This is a constructivist view of concept mapping which involves a dynamic process and the use of mapping as an instructional tool. In this sense mind mapping is used to demonstrate and facilitate concept mapping process through technological contexts to create solutions for the existing and future curricular issues. There are several studies using concept or mind mapping in the instruction process. Oughton and Reed (2000) carried out a study with 21 graduate students to examine the concept maps they constructed in relation to their learning styles and levels of hypermedia knowledge. Findings indicated that assimilators and divergers were the most productive on their concept maps. In addition, students with higher levels of hypermedia knowledge had deeper levels of processing on their concept maps.

McAleese (1998) view mind maps synonymous with concept maps and defines it as the external mirror of one's own radiant thinking which allows us to implement the thinking potential. Jonassen (2003) has strongly argued the need to study the efficacy of cognitive tools and models for supporting problem solving process through the externalization of learner's internal representations of the problems. Farrand et al (2002) have recommended mind mapping as a study technique within medical curricula suited to problem based learning and using effective training for encouraging and motivating students to adopt a deeper level of learning. All et al (2003) have discussed the role of "concept mapping" as a useful tool in critical and analytical thinking. In the same line, curricular research has to involve some key questions related to human development and real problems in life within a humanistic, experiential and reflective perspective. Moreover, educational leadership has to be developed to take the responsibility for dealing with problems and continuously developing reflective solutions. It is necessary to reflect on the issues and relate theory to practice in different contexts. Within the light of these, the purpose of this paper is to identify the major curricular issues in Turkey using mind mapping through the perceptions and experiences of future curriculum experts and to relate them to the universal context in an integrated and collaborative approach.

2 Method

For the examining the curricular issues, a mind mapping process was actualized with a small group of six graduate students in the doctorate program carried out at Middle East Technical University, Department of Educational Sciences. The students who took part in the process were registered to the "Curriculum: Theory and Research" course which was offered to curriculum and instruction majors who will be future experts in the field. The course mainly involved the study of various theoretical perspectives, research opportunities and their implications for practice in a seminar mode. Throughout the course, the students were expected to conduct a curriculum analysis project by making use of the ideas and theoretical background covered during the course. At the end of the term a brain storming activity took place, which aimed to discuss and identify the major curricular issues in Turkey. During the brainstorming activity, the students first individually and then as a group produced 12 curricular issues. The issues were reflected upon in an integrative manner by using a computer based mind/brain mapping program which was called Mind Mapper Professional v3.4 Standard Edition. During the activity, the issues were discussed both from local and global points of view. The 12 issues that emerged were visually observed on the screen using the Mind Mapper software and were increased to 16 main issues first and then were increased to 136 through the use of continuous discussion and decision making skills. This software with its flexible nature enabled the students to reflect, make changes and develop relationships in line with their thinking process. At the end of the process 136 issues were organized under five major areas and the issue statements on the mind map were transformed into questions to emphasize the critical inquiry dimension necessary for studying the issues. The activity took 12 course hours, and after the activity was completed the reflections of the students related to their experiences with the software and the identification of the issues throughout the mind mapping and brainstorming processes were also recorded.

3 Results

The 16 curricular issues, which were produced through the brainstorming process, were demonstrated on the mind map in Figure.1. After the discussions and through reaching the group consensus, the issues were reduced to the following five major areas and each area consisted various issues each of which posed prioritized problems for the researchers, decision makers, curriculum developers and practitioners in Turkey. Five selected issues from each area are given below:

3.1 Holistic curriculum conception (planning, implementation, evaluation)-total 36 issues

1. How can we improve the evaluation of short-term field testing and curriculum implementation?
2. How can we involve the teachers in the curriculum planning process and what types of competences should the members of the curriculum planning teams possess?
3. Why is curriculum planning not actualized fully and effectively in the schools by teachers and professionals in a bottom to top approach?
4. Are teachers equipped with the necessary competencies to implement learner-centered curricula?
5. In what ways do the curriculum models interact with existing instructional practices? Why should we consider the reflection of curricular changes on the staff?

3.2 Continuous professional development of curriculum experts-total 38 issues

1. How can we motivate individuals for self-improvement in curriculum and instruction?
2. To what extent does classroom based curriculum development incorporate with continuing professional development of teachers?
3. How can we manage effective and continuing professional development?
4. Are university-school partnerships established?
5. Is there a reward system established to increase the motivational level of teachers who professionally develop themselves on a regular basis?

3.3 Relating Curriculum Theory to Research and Practice-total 10 issues

1. How can we establish standards for curricular research and practice?
2. How can we involve and coordinate different groups(students, parents, teachers, political powers)?

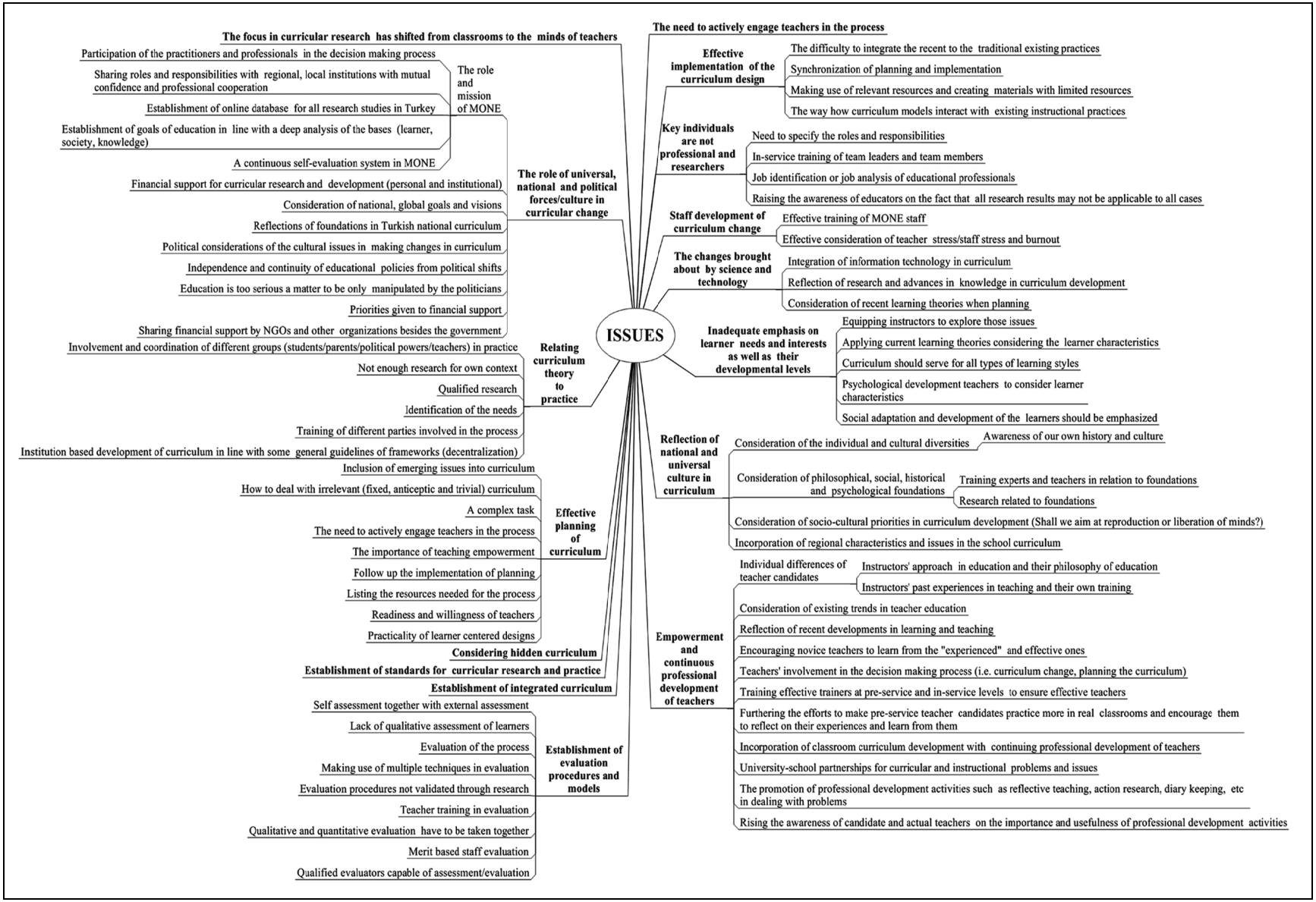

Figure 1. Curricular issues through mind mapping

3. How can we improve the research base reflecting the Turkish educational context?
4. How can we train different parties involved in the process as researchers and practitioners?
5. How can we establish school/institution-based research for curriculum development?

3.4 Consideration of Foundations/bases-total 40 issues

1. How can we reflect regional characteristics and issues in the school curriculum?
2. To what extent are the cultural characteristics of different nations reflected in the curriculum?
3. Can the students think critically about the global and intercultural issues?
4. Is there a balance in the reflection of national and global needs in the curriculum?
5. When planning and implementing the curriculum, to what extent are learners' developmental level, interests, and abilities taken into consideration?

3.5 Issues related to newly emerging areas-total 12 issues

1. Are we aware of the nature and importance of hidden curriculum?
2. Is there a danger in hidden curriculum in relation to imposing an external pressure on individuals for social adaptation?
3. How can we take individual differences into account in hidden curriculum?
4. How can we establish horizontal and vertical integration of disciplines, contexts and individuals?
5. How can we relate students' different background characteristics and past experiences to an integrated curriculum?

In conclusion, it was apparent from the products of the brain storming session that both the quality and the quantity of the issues improved through the use of the mind mapping process. In addition, cooperation in the group and critical thinking was facilitated which provided the background for collaborative problem solving. When the students were asked to reflect upon the process, they emphasized that they could perceive all the concerns together as they were related to each other in the mind map and were able to relate their experiences to their observations. They enjoyed expressing their opinions in a participative democratic climate, thinking analytically/critically on the issues both at local and global levels, developing an in depth understanding of the field of curriculum with all of its components. "Drawing a big picture of the current status and issues" was a shared meaningful experience for them. The findings were also compared with and used for the strategic planning process in human resource development and education system in Turkey. The feedback from the mind mapping process contributed to the improvement of the graduate program concerned and the practice provided the opportunity to engage in a meaningful process of learning When the finalized issues were compared with literature, it was observed that they were also shared with the global and intercultural audience and they need to be challenged with an international collaboration and exchange of expertise through practical experiences.

4 References

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