

## The impacts of educational reforms in Professional and Technical systems

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**Abstract:** Fast development in society has brought about the necessity to develop and to reorganize Professional and Technical systems, and the reform in Professional and Technical systems is going on in Iran at present. Curricula development has been one of the central problems in the reform of Professional and Technical system and training in Iran. The purpose of this article is to give a historical survey of the Professional and Technical systems curricula development process during the last two decades in Iran. Based on survey results the article gives a historical background of Iran Professional and Technical systems; the situation in development of formal initial Professional and Technical systems curricula; changes that have taken place during the two decades; results that have been achieved by the end of the last decade; and problems and challenges facing the Professional and Technical system curricula development during the present decade have been described. Survey results show that the process has been very quick, multifaceted, complex and complicated. Results of Iran Professional and Technical systems curricula development have been significant functional national curricula that have been developed and they comply with professional standards; the curricula are outcome-based and correspond to the needs of the learners and the society.

[Shabani Fard, Majid. **The impacts of educational reforms in Professional and Technical systems.** *Academ Arena* 2013;5(9):45-49] (ISSN 1553-992X). <http://www.sciencepub.net/academia>. 8

**Key words:** Professional and Technical systems, training, curriculum development, educational reforms

### 1. Introduction

Education is always about identity formation. The legislators or others who formulate education policies always have certain goals in mind which can be political, social or cultural in nature. Historically, it can be discerned that education is not a neutral act; it is always political.

Clearly, this is an essential arena for the study of training, education, socialization, and social change. However, advancing technological society has prolonged the entire education process from kindergarten through high school to college and beyond. Along-side higher education's extension of function from an option for upward mobility to a requirement for social and economic survival, the structures of post-secondary education are rapidly changing. The old segmentations of elite versus mass education, private versus public, and the traditional disciplines of the sciences, liberal arts, and professional schools have differentiated into far more complicated structures.

Professional and Technical system's effect on culture and its role as a conveyer of culture are issues of great political sensitivity in most countries. Professional and Technical systems can play a significant role in mediating the relationship between particular cultures and the nation-state.

Fast development in society has brought about the necessity to develop and to reorganize Professional and Technical systems, and the reform in Professional and Technical systems is going on in world at present. Some authors say that this reform started in 1991 (Grootings,

1998), some say that it started in 1995 when Phare program Reform in Professional and Technical system was initiated.

Experiences of reforms in Professional and Technical systems carried out in the countries of European Union and Central and Eastern Europe show that curricula development is a key point and strategic area in reforming Professional and Technical systems. At the same time curricula development is a complex process, not only a reflection of the changes taking place in the world of work. It must take into account the changes in the whole society and economy, but changes in science and technology (Buck, 1997). In Iran curricula development has been one of the central problems in reform of Professional and Technical systems and training alongside with development of school network and teachers' qualification.

In this article, focuses on development process of Professional and Technical system curricula in Iran during the last two decades. There has been described the short historical background of Iran Professional and Technical systems, the situation in development of curricula of formal initial Professional and Technical systems at the beginning of the 90s, what kind of changes took place during two last decades, what results had been achieved by the end of the decades and what are the problems and challenges facing the Professional and Technical system curricula developers during the present decade. The following research questions are addressed:

How did the process of Professional and Technical

system curricula development evolve on the national level?

What were the main results of the development process of Professional and Technical system curricula of last two decades?

## 2. Main body

### Theoretical framework

To conceptualize the curricula development process in Professional and Technical system, to combine the standpoints of the following three theoretical approaches: the concept of Professional and Technical curricula, the concept of reforms in education and the concept of the social innovation.

Theoretical basis of the views presented below, is an understanding of curriculum as a social regulatory mechanism, which, by reflecting the historically formed knowledge, "prescribes the rules and standards by which we "think" of the world and of ourselves as active beings of the world. The curriculum is a disciplinary technology that directs how a person should act, feel, speak, and to "see" the world and ourselves"(Popkewitz, 1997). Historically formed knowledge has certainly become a cultural phenomenon. Hence, the curriculum has always a cultural function: both preserving and mediating the culture to the new generations, as well as, under certain historical conditions, transformational function of the culture (Taba, 1962). According to several authors (Taylor 1950; Taba 1962), curriculum may be defined as a fixed course of study (plan, project), or sets of courses. According to modern concepts, curriculum could be defined as knowledge. Knowledge here means the knowledge, skills, experience and values (Eisner, 1992). Eisner writes: The curriculum embodies the different perceptions of knowledge conceptions. First, curricula determine the choices, secondly, complementing the perceptions of acquisition of knowledge (Eisner, 1992). According to curriculum theorists that have dealt with concepts and the changing of concepts of curriculum (Terhart, 2002; Marsh, 2004; Pinar, 2004; Ross, 2005; Schiro, 2008), the concept of curriculum has been changed by the users of the concept. The different concepts themselves changed as if they had some kind of autonomous inner dynamic of their own and they can organize us and our view of a certain object. The use of concept is inevitable, and while we use concept, especially, when an old concept is used in a new context, or a new concept in an old context, they do change the users. Summarizing the changes of concepts of knowledge and curriculum in different European countries, we can point out the trend from the traditional concept of curricula aimed at Learning ("curriculum as a plan for teaching and learning) to Experience (curriculum as an enacted experience in situations). Peter Grootings notes, analyzing the reforms of

educational systems in transition countries, that the reforms in transition countries are systematic, as they imply changes that are both system-wide and system-deep. Reforms are system-wide, in the sense that it requires changes in all aspects of the institutional arrangements of the countries. But changes are also system-deep, since they require the development of new relations between education and training on the one hand, and other evolving institutions in society on the other. These are in particular, the relations between schools, the labour market and private enterprises (Grootings, 2009). According to Grootings we can point out that substantial modernization of Professional and Technical education is system-deep. Developing new roles and relationships is for individuals essentially a process of learning new knowledge, skills and attitudes in order to become competent in a changing context. Reforming national educational systems is the collective learning process of all interest groups involved in the process (ibid). Strategic directions of Professional and Technical systems reforms (Young et al, 2000) are as follows:

- a) Occupational standards and qualifications system,
- b) Transformation of the school network,
- c) Formation of regional Professional and Technical training centers,
- d) Curriculum reform,
- e) Integration of Professional and Technical and general education.

When analyzing the results of Professional and Technical systems all educational reforms in Central and Eastern Europe, the leading experts point out that the objectives of all Professional and Technical training curricula should be:

- a) Personal development,
- b) Basic and generic skills of professional work and development of the professional field,
- c) Understanding the society, its values and democratic development,
- d) Providing Professional and Technical training to young people, which would give the base for further education (Lasonen et al, 2000; Parkes, 1999; Young, 1998).

It is important to consider "what are the underlying value principles of Iran Professional and Technical systems curriculum reform?" The question is, to which extent they counterbalance the selective aspect of Professional and Technical systems and to what extent they help to the overcome the narrow specialization.

According to Heiskala, social innovation can be defined as a change in multilevel institutions of the society which enhance its collective power resources and improve its economic and social performance. He sees that social innovation encompasses regulative, normative as well as cultural innovations (Heiskala, 2007).

By the definition of social innovation, the reforms in Professional and Technical systems should:

- a) Satisfy certain social needs,
- b) Have a positive impact on social development,
- c) Have been embraced by a "critical mass" of identified actors,
- d) Lead to institutional changes; e) trigger changes in the meaning systems and patterns of the parties.

### **Methodology**

In this paper the results of two qualitative surveys are presented. The surveys were carried out among policy makers and legislators, national curriculum developers, and Professional and Technical system curriculum developers in 2002 to 2003 and 2009 to 2010.

The data was collected with a semi-structured interview, which was based on a written questionnaire. The interviews were recorded electronically and transcribed. The survey sample was compiled from among the partners of curricular reform and key persons with long term experience in curriculum development were included in the sample. Altogether 16 key persons were interviewed about the process of curricula development. The data was gathered in two phases, in period 2002-2003, before the implementation of national curricula and in period 2009-2010, after the implementation of national curricula. The same questions were asked from the respondents in both periods. The data was analyzed in two phases: in 2003 and in 2010. The results of the interviews were analyzed, similar and diverse opinions were considered and the chronological flow of the process was described.

### **Period 1990-2000**

According to the data issued by Ministry of Education of Islamic Republic of Iran, there were 80 Professional and Technical system in Iran in 1990. There were more than 220 curricula (Higher schools, technical schools and Professional and Technical secondary schools in Iran). Curriculum consisted of two parts: the first part contained the name of the specialty, requirements for admission, study period and requirements for graduation; the second part was usually given in the form of a table containing the list of subjects, number of lessons, assessment and division of subjects during the year and lesson plans.

Improvement reasons of professional and technical systems in Iran are:

- 1) Narrow specialization in initial Professional and Technical system,
- 2) Abundance of similar specialties (usually only the name was different, the content was same),
- 3) Long study periods, especially after basic school,
- 4) In the curriculum of Professional and Technical secondary education the content and amount of general

secondary education was the same as in the curriculum of academic general education,

- 5) Headmasters of the schools were oriented on the management by strong central authorities,
- 6) There was an idea about a fixed and unchangeable and predictable labour market,
- 7) Methods and work traditions were based on stereotyped traditions or authorities.

Most of interviewed persons mentioned, that development of Professional and Technical system curricula at the first half of the 1990s was self-activity of schools, not coordinated by authorities, there was no analysis of the content. The quality and quantity of Professional and Technical system did not correspond to the constant changes on the labour market.

Systematic work on creating infrastructure for development of contemporary Professional and Technical curricula was started in 1995.

Referring to a corresponding survey 13 economic key sectors was chosen, some pilot schools were chosen. Within the program contemporary modular curricula were worked out in pilot schools. Curricula based on analysis of the descriptions of occupations. As a result of the analysis, knowledge, skills and attitudes necessary in the given occupations, were specified. Curricula were built up so that at the beginning of the study period the emphasis was on broad base of study, that is needed for the given occupation or group of similar occupations. At the end of the study period emphasis is on specialization on a certain occupation.

### **Period 2001-2010**

At the beginning of this period, in the academic year of 2000/2001, there were some Professional and Technical systems institutions in Iran.

After the Chamber of Commerce and Industry had ratified first occupational standards, the professional councils proposed the Ministry of Education to establish work groups to start working on national curricula of Professional and Technical systems.

National curricula, worked out by the broad-based working-groups, consisted of the following parts-level and duration of the curriculum; structure of the curriculum; objective and tasks; compulsory modules and their amounts/duration; principles of assessment etc.). Social Fund projects, which launched in 2005, supported the development of national curricula:

- 1) Development of new professional standards and preparation for renewal was launched,
- 2) Training and in-service training of Professional and Technical system teachers was launched,
- 3) Development of contents of modules of Professional and Technical systems curricula was launched. The last 3-years period of decade is marked by approval of Ministry of Education and Science

### Summing up the development of curricula in decade 1990-2000

Development activities of Professional and Technical systems in Iran were quite tumultuous at the 90s and remarkable results were achieved:

1. Preparatory work on the national modular curricula of occupational areas in 1999-2000, the process of compiling national curricula of occupational areas was triggered.

2. In all Professional and Technical schools modular curricula of the occupations taught at the school were worked out.

So the institutional network for development of Professional and Technical curricula was there by the end of the 90-s, but the supporting infrastructure was still somewhat brittle. The following facts support the author's opinion:

1. Some drafts of national Professional and Technical curricula of the occupational areas that were ordered by the Ministry of Education, were approved by the minister,

2. In the new structure of the ministry there was committee of national Professional and Technical curriculum; the process of curricular work was coordinated,

3. Ministry of Education order any research connected to curricula from competent institutions,

4. Theoretical and pedagogical principles of the national curricula that were completed in 2000-2002, were very similar.

5. The application process of the national curricula training of headmasters, people who worked on the curricula and those who had to use them, also didactic materials for using these curricula was planned. It must be said that development activity of Professional and Technical curricula at the second half of the 90s was intensive and involved all Professional and Technical systems at institutions. On the other hand there were great challenges facing the developers of curricula and the coordinators of the process at the beginning of the new decade.

### Summing up the development of curricula in decade 2001-2010

Despite of several disruptions at the beginning of this period, curriculum development gathered speed at the second half of the period and it became extremely rapid and effective. Main results in curricula development in the period of 2001 to 2010 are the following:

1) National and school curricula were systematically developed.

2) A set of documents dealing with curriculum development were elaborated.

3) Model for national curriculum structure was elaborated;

4) Transition to modular curricula by the end of the period, transition forms application modules to content modules

5) Conceptual basis of national curriculum module composition were elaborated.

6) Curricula of all Professional and Technical systems institutions were harmonized.

Besides the results, also problematic aspects in curriculum development must be brought out:

The implementation process of the national curricula training of headmasters, people who worked on the curricula and those who had to use them, also didactic materials for using these curricula, was planned and implemented only in the second half of the period.

Implementation of modular curricula according to national curricula in schools took longer than expected because curriculum developers and teachers were not ready for that.

Regardless of lively discussions, agreements on how to formulate conceptual basis, incl. value systems of curricula, were not reached. Too strong inclination is noticeable towards traditional or reproductive curriculum and too little inclination towards reconceptual or transformative curriculum.

### Conclusion

Regardless of the shortcomings in Professional and Technical systems curriculum development the future perspective is optimistic. Within two decades the process of elaborating national curricula in curriculum groups was launched. By the end of the last decade, Iran had created legislative preconditions of the system of professional and technical systems curricula. The majority of modular curricula that were elaborated in Professional and Technical systems institutions are in accordance with professional standards and with the established requirements of modular curricula.

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8/31/2013