

Curriculum Design and Development in Selected Universities: criteria extraction for designing an optimal university curriculum model

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Abstract

The impact of science and technology's swift changes globally has led to upheavals in all areas of life. Higher education has not been exempted from these changes and consequences, so that technological changes in the last decade have had a great impact on the body of higher education, especially in curricula, as the heart of the higher education system. Curricula, on the one hand, drive change and, on the other, act against change. Therefore, to develop academic curricula as a generator of constructive change, using intercultural experiences and consolidating the achievements of leading universities will be very effective as a cornerstone to develop a comprehensive and practical framework in this field. Accordingly, the current study was conducted to investigate the design and development of curricula in selected universities in order to extract common criteria for achieving this imperative goal. Consequently, in this study, documentary research method was used by using content analysis technique. The documents of five universities were reviewed in terms of purpose, principles, learning outcomes, content, evaluation, planning process and teaching-learning strategies. In conclusion, based on the criteria and sub-criteria in each of the mentioned categories, a framework for designing and developing a curriculum in Iran's higher education was developed and sent to the universities.

Keywords: higher education, curriculum, designing and developing, selected universities.



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Introduction

Levine (1987) argues that higher education curricula can be studied from a philosophical, institutional, and cultural perspectives, and that an accurate picture of the institution of higher education may not be possible without considering how curricula are formed. The higher education curriculum decisively reflects the needs of the community, the methods of acquiring knowledge and interests of the students, their abilities and previous learning (Momeni Mahmoudi et al., 2008). Therefore, reviewing the status of design and development of academic, national and international curricula with cultural diversity, as a prerequisite for preparing a general and more favorable framework is essential for developing academic curricula for optimal change in the curriculum, the system of designing and compiling it and evaluating the existing programs in each country. According to Hicks (2007), a review of the curriculum literature in the United States, the United Kingdom, and Australia confirms the dispersion of definitions and the lack of a clear framework for achieving a comprehensive definition of the higher education curriculum. Barnett & Quetta (2005) also argue that the curriculum in higher education is not yet as important as it should be, leading to simple perspectives such as course titles or hours. Perhaps the reason for this claim is the lack of collective use of university curriculum development experiences in different countries and summarizing its basic criteria as a prerequisite for preparing a comprehensive and practical framework as an executive guide to design a more appropriate and practical curriculum. Curricula are the heart and soul of higher education institutions. Designing an appropriate and practical curriculum, regardless of the type of higher education institution, is the basis for educational quality. Curriculum design is a process that takes place in different stages and may vary from university to university, but its nature is the same everywhere (Hosseini Largani et al., 2019). Thus, achieving common standards between universities for curriculum design is an important step in the curriculum planning process, and in higher education, as Lattuca & Stark (2009) argue, decisions that lead to curriculum shaping can be adopted in the design phase and the output of the curriculum depends a lot on the quality of the design. Furthermore, they believe that in this regard, a framework and model on which there is general agreement is not currently available. Hence, any scientific effort to address this gap and pave the way for its realization can be very valuable. With this description, the main purpose of this study is to investigate the status of design and development of university curricula in selected countries in order to extract criteria for the cornerstone of preparing and designing a favorable model of university curriculum. Therefore, the results of this study will provide valuable experiences for curriculum planners, designers and implementers, and designers and compilers of a comprehensive

framework for the development of university curricula. Moreover, the results of this study were properly used in designing such a framework by the Higher Education Planning Office of Iran.

Methodology

The present study is a content analysis in terms of paradigm in the field of naturalism and in terms of inductive approach and according to the collected data of qualitative type and research strategy of documentary type and data coding method. The universities studied include the University of Brighton in the United Kingdom, Harvard University in the United States, the University of Portsmouth in the United Kingdom, Flinders University in Australia and Ryerson University in Canada. Universities were randomly selected based on the level of development of countries and the availability of information resources through documents and websites.

Findings

As Table 8 shows, the main criteria for explaining competencies or learning outcomes in the development of academic curricula are the achievement of program learners in creativity and innovation, their employability for the real community, and the acquisition of knowledge and learning to work. However, ethical behaviors in the community, the ability of program graduates to cooperate and communicate effectively as an individual in the local or national community or as a global citizen cannot be overlooked. How to shape and determine these learning outcomes or achievements of the program should also follow certain principles, which is called the wisdom of compiling learning outcomes in the program.

The main criteria for explaining the competencies or learning outcomes in the formulation and development of university curricula are the achievement of program learners in creativity and innovation, their employability for the real community and the acquisition of knowledge and learning necessary to work and life. However, ethical behaviors in the community, the ability of program graduates to cooperate and communicate effectively as an ordinary person in the local or national community or a global citizen cannot be ignored. How to shape and determine these learning outcomes or achievements of the program should also follow certain principles, which is called the wisdom of compiling learning outcomes in the program.

Table 8. Criteria derived from university curricula in the studied countries for competencies or learning outcomes

Category / Criterion (Second Level Coding)	Subcategory / Sub-Criteria (Level One Coding)	Frequency
Employability	<ul style="list-style-type: none"> • Self-employment and entrepreneurship • Adaptation to high job mobility through independent self-centered learning • Ability to make informed career decisions and execute them • The ability to develop your business through investment, information and training programs. • Ability to work in different environments and new situations (flexible, adaptable and realistic), • A knowledgeable, knowledgeable, curious, responsible, independent person to succeed in future careers: • Ability to work independently (organizing activities, prioritizing tasks, managing time effectively and being prepared to update and adapt their knowledge and skills to advances in science and the world in the workplace) • Multi-skills (equipped with future-resistant or obsolete skills for the future) • Identify and meet personal development needs 	12
creativity and innovation	<ul style="list-style-type: none"> • New ways of thinking and promoting innovative solutions • Creative engagement in new research topics inside or outside the field, • Independent, analytical and creative thinking • Achieve excellence by discovering new ideas • The ability to combine existing and new knowledge to generate ideas and develop creative solutions to benefit the economy and society • Has a constructive spirit (bringing innovation and production to groups and communities) • Critical thinking (thinking critically and creatively) • Problem solving (defining and analyzing problems to achieve effective solutions) • Ability to give feedback and evaluate ideas 	15
effective communications	<ul style="list-style-type: none"> • Communicate clearly and effectively with different audiences in different ways • Clear and fluent expression of knowledge, understanding, logic and decisions orally or in writing appropriate to the environment • Ability to listen well and respond well • Communication across borders (positive engagement with people and ideas across geographical, professional or disciplinary, social, cultural, etc. borders) 	5

<p>Ethical behaviors</p>	<ul style="list-style-type: none"> • Social justice (respect for the rights, differences, equality and dignity of others) • Recognize the future challenges of sustainable development and prepare for them • Act based on truth and correctness • Awareness of the ethical complexities and consequences of various issues in your field • Understand the need for ethical action for oneself and others • Ability to achieve ethical solutions • Responsibility ethically and professionally • Ability to understand the effects of the proposed plans and solutions as an expert in the global, economic, environmental and social context 	<p>8</p>
<p>Cooperation</p>	<ul style="list-style-type: none"> • Creating and maintaining an environment full of trust, cooperation, mutual understanding • Active group activist (understanding group dynamics, being a leader and supporting the success of others) • Collectivism and the ability to work collectively, cooperatively and productively in groups to achieve common results • The ability to interact effectively and correctly in different environments with individuals collectively 	<p>4</p>
<p>Knowledge and learning</p>	<ul style="list-style-type: none"> • Mastery of specialized knowledge of the field • The ability to apply your knowledge to work in your field of specialization • Mastery of the necessary knowledge to continue education in higher levels • Ability to push the boundaries of knowledge • Able to discover, access information and critically engage with it using state-of-the-art or emerging technologies • Computer and digital literacy • The spirit of truth-seeking and research • Continuous learning (having up-to-date knowledge, continuous learning and expanding your work career with passion, enthusiasm and motivation, understanding and recognizing the need for on-the-job training and the ability to do it throughout life) 	<p>12</p>
<p>Global citizen</p>	<ul style="list-style-type: none"> • Awareness of different views and the formation of ideas based on them, • Understanding civil liability and social interactions • Globalization and cultural adaptation through opportunities for international displacement • Readiness for life, work and global leadership 	<p>2</p>
<p>Wisdom of compiling</p>	<ul style="list-style-type: none"> • Relation of learning outcomes with university policies and rules, proper understanding of the characteristics of incoming students, community expectations, professionals and potential employers • Relation of learning outcomes with assessment methods, learning interactions and content • Explaining learning outcomes in a participatory way (stakeholders) 	<p>10</p>

	<ul style="list-style-type: none"> • Explain the learning outcomes in each field • Explain the learning outcomes in each course • Brief and accurate explanation of learning outcomes • - Learning-oriented learning outcomes 	
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Discussion

According to the results of the research, in the course of compiling and developing the curriculum, the educational group has the most important role. In fact, the main responsibility for planning and reviewing curricula lies with the relevant department, and the other pillars have the role of policy-making, coordination, guidance, monitoring and final approval of the curricula presented by the departments. However, according to the research of Zainuddin Meymand et al (2010), the level of knowledge of faculty members is not optimal about the steps and stages of curriculum development. On the other hand, in domestic universities, the existence of domestic and foreign specialists in the Curriculum Planning Council has been mentioned, but at least there is no evidence that these specialists have been employed, mentioning their characteristics. Utilization of these specialists due to the complexity and ambiguity in the field of curriculum planning, misconceptions in this regard, lack of familiarity of faculty members with this knowledge and the need for views in specialized fields, especially in interdisciplinary topics according to the results the research of Karimi et al. (2013) and Yadegarzadeh et al. (2014) make it impossible to develop an appropriate curriculum and makes the need to use specialists even clear.

The curriculum of most of the studied universities deals with the learning outcomes or achievements of the disciplines developed at the end of the course for the graduate of that course, such as specialized or comprehensive personal qualifications to enter the real society and labor market of that field or in general. However, according to the studied sources for universities in Iran, these learning outcomes have been neglected in the formulation and development of curricula, and they refer to them and the role they play in inclusive preparation as a trainee or specialist. The issue to be considered in this section is to emphasize the learning outcomes in the university curricula of the studied universities to acquire common and basic competencies, skills and capabilities for all university graduates (beyond studying in a specific specialty) for adaptation. And it is in tune with the changing and unpredictable world of the present age. Among the main criteria for explaining the competencies or learning outcomes in the formulation and development of university curricula are the achievement of program learners in creativity and innovation, their employment for the real community and gaining the necessary knowledge and learning to work in it and their lives. (Khaleghi Nejad et al., 2014).

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