An Analysis of the Internationalization of Iran's Higher Education Curriculum; requirements & obstacles
Hoda Sadat Mohseni1*

1. Faculty of Education, Alzahra University, Tehran, Iran.

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Abstract
Purpose: The purpose of the present study was Analysis of the Internationalization of Iran's Higher Education Curriculum; requirements & obstacles.
Methodology: This research was applied in terms of the purpose and, in terms of the type of data collected, is quantitative. Also a descriptive survey type was used based on the data collection method. The statistical population of this research includes all faculty members of comprehensive universities of Tehran which was 4429 people. The sample was 384 people based on Cochran formula and selected by simple random sampling method. The main tool used for measuring and collecting data in this research is a researcher-made questionnaire. To create the questionnaire, the components were extracted from the literature review and theoretical foundations and the researches carried out in the field. Then, after the modification, they were classified and arranged in a form. Finally, in the first section, in order to identify the current status of the university in terms of internationalization of the curriculum of higher education with 29 items and in the second section, to identify the obstacles to the internationalization of higher education curriculum with 8 grades on a 5-point Likert scale (Low, very low, moderate, high, very high), was developed and answered to the professors. In this research, we used SPSS software and Cronbach's alpha test to obtain the reliability of the questionnaire. Cronbach's alpha for the questionnaire, "Identifying the barriers to internationalization of higher education curriculum" was equal to 0.74 and for the questionnaire "Reviewing the current status of curriculum internationalization" was calculated to be 0.76. Due to the fact that reliability is generally more than 0.70, the researcher-made questionnaire has a relatively high reliability.

Findings: The Result showed that the "Lack of motivational and incentive factors for professors" with 6/909 T test and with 0/000 Significant was the most important obstacles that this research was identified and the "Lack of financial support from professors in traveling abroad in line with international research" with 6/718 T test and with 0/000 Significant was second obstacles are identified.

Conclusion: In the present article, the present status of internationalization of curriculum at the comprehensive universities of Tehran has been studied. Then the barriers were identified and finally solutions were presented. In the following, a comparison between the comprehensive universities of Tehran in relation to the internationalization of the curriculum was carried out and, finally, a comparison was made between the different faculties.

Keywords: Internationalization, Curriculum, Higher Education, international co-operations

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* Corresponding author: hoda.sadat@mailfa.com
1. Introduction

Nowadays, scientific-international co-operations are considered as a response to globalization pressures and models for protecting efficiency and competition in the world’s markets in relation to higher education. It is therefore, scientific-international co-operations education have been developed among countries dramatically and this issue is visible most of the time by paying attention to modern process at information and communications technologies. In Iran, higher education in addition to having strengths such as: development of complementary education, increasing the number of articles at publications throughout the world, increasing level of technology knowledge at university community, it has also had many weaknesses which have to be challenged. These weaknesses in turn are able to produce an obstacle on the way of international co-operations development. Thus, in order to recognize, to improve and to set aside these obstacles, an effort must have exerted in the form of a momentous affair. One of the most important concepts and world’s process is internationalization that is also one of the necessary needs for high education. Knight is believed that internationalization is a process needed for combining university activities that must be in continuous. According to this approach, internationalization is defined under the title of “Process of Combining International and Intercultural Aspect to Teaching function, Research and Services” (Knight, 1994). Van der Wende (2001) is believed that internationalization is “Every systematization effort that could be responsive to higher education needs and related challenges to society’s globalization, economy and labor markets”. Nevertheless, the above-mentioned description includes important elements and pay attention to international aspect in the form of external environment, globalization in particular and thus, this definition for internationalization would not render a framework based on teaching structure and also its goals and its functions (Knight, 2004).

Along with daily promotion of knowledge and technology borders, universities are looking for cooperation with other teaching and in order to research organs in an active way in order to reach to those goals the were unable to reach them. Most of universities are acting solely and independently and are like Islands that are not in an interaction with each-other. Owing to this reason, this center is not in a position to use from each-other capabilities and this affair will result to waste time of using resources, teaching and research constriction, and an increase for costs and reduction of ability to compete at internal and external markets and finally, effectiveness reduction. Once we are talking about internationalization pertaining to high education we are usually emphasized on students, scientific and individual relations for different programs and activities, while a lot of elements and part of universities international integration for teaching affair, learning, researches and common services are hidden from our understanding. Among these factors, there are important elements that are determined at internationalization process by means of determining goals and providing and using various institutions resources and experiences. These must be put under consideration (Knight, 1997).

Internationalization of the curriculum can refer to such varied internationalization activities as study abroad programs, foreign language courses, interdisciplinary or area programs, or the provision of programs or courses with an international, intercultural, or comparative focus (Bremer & van der Wende, 1995). However, within this website an internationalized curriculum will refer to course content and teaching and learning approaches which incorporate an intercultural and international perspective. The focus, therefore, is not only on the subject matter of the curriculum, but also on the pedagogical implications of teaching and learning approaches that will promote the inclusion of international students (Adams, 1992; Bond, 2003b; DeVita & Case, 2003; Leask, 2001; Marchesani & Adams, 1992; Maidstone, 1995; McKellin, 1998; McLoughlin, 2001). Bond (2006) defines this curricular transformation as "changing fundamentally what we teach and how we teach it" (p. 3).

Internationalization of the curriculum may be an effective means of providing an academic environment that supports the diverse cultural learning needs of international students. Leask (2001) suggests that, "internationalizing university curricula is a powerful and practical way of bridging the gap between rhetoric
and practice to including and valuing the contribution of international students" (p. 100). Numerous researchers emphasize the centrality of the curriculum and the internationalization of the curriculum and teaching and learning processes as critical elements of internationalization (Bond, 2003a; Bond et al., 2003; Green & Olson, 2003; Knight, 1994, 1997, 2000a; Lemasson, 2002; Paige, 2003; Tonkin & Edwards, 1981). Knight (1994) describes the curriculum as "the backbone of the internationalization process" (Knight, 1994, p. 6). Other researchers concur, emphasizing the importance of an internationalized curriculum in providing a student-centered learning experience for all students and in preparing students to be successful in today's increasingly interdependent global society (Bonfiglio, 1999; Leask, 2001; Lemasson, 2002; Schuerholz-Lehr et al., 2007).

Education and the curriculum play a key role in shaping students' values (Khalideen, 2006). Because curriculum is typically reflective of the values, attitudes, and beliefs of a particular culture and an institution, forcing students to assimilate to an unfamiliar learning culture is unlikely to be successful and may negatively impact on their sense of identity (Cortazzi & Jin, 1997; Freedman, 1998; Kennedy, 1995; Khalideen, 2006; Mestenhauser, 2002b). The ethnocentric values underlying the curriculum and pedagogy in Western post-secondary institutions and the emphasis on a didactic lecture format with tutorials and seminars that emphasize discussion, critical thinking, and active learning disregards the diverse ways of knowing of international students. This approach may alienate international students who are accustomed to different styles of teaching and learning (Joseph, 2008; Mestenhauser, 2002b). An optimal learning environment reflects the diverse cultures, perspectives and experiences of students (Banks, 2004). Because the manner in which people think, reason, and view knowledge is culturally and socially determined, international students from diverse cultural backgrounds may have difficulty balancing the expectations of the traditional Western curricular perspective and pedagogical strategies with their own culturally based learning expectations and values (Mestenhauser, 2002a; Peelo & Luxon, 2007).

Numerous researches in relation to scientific-international co-operations in higher education have been conducted in developed countries that we have pointed out to some of them as follows: Harder (2010) in his research under title of (Internationalization Efforts That Take Place in America International Colleges) is to consider to 4 indices including institutional support, instruction rules, above-programs and activities, policy, and the existed opportunities for scientific board members and students. Result of this research show that in general, local collages are located at lower level in view of internationalization and rural colleges were internationalized less than urban and suburbs colleges perceptively. Wataba (2010) in his research under title of (Japaneses approach to universities organizational internationalization) have conducted a case study over 3 national university institutions. This research is looking into way of national university institutions internationalization along with concentration of formulation of organization planning, strategic programs and effective factors. Results of this research were recognizing 5 common elements in universities internationalization process so that through these factors, they will be able to answer about environment changes. Ultimately, based on recognized elements a strategic model is obtained for university internationalization development. Bao in his research under title of (growth of scientific board members and Pardis internationalization: a case study) investigated on 18 persons view that were belong to scientific board members and had short team mission in China for teaching coarse. The object of this research was that to put under consideration the effect of out-border short team teaching on origin pardis internationalization based on teaching research and serviced.

The results of research show that professors who participated at programmers belong to China cultural exchange have much effects in pardis internationalization trough creating new courses, gathering data for research, regulating learning styles, working with international student and directing programmes and international activities. Bozeman (2009) in another research looked into university personnel experiences in America and Brazil in comparison with higher education common programmers. He pays attention to this basic question what factors can influence on a successful performance in higher education international co-
operations. Results show that there are certain conditions that facilitate a successful performance of these co-
operations. He categorized these conditions under 6 axes: participant’s equality and accepting, participant’s evident properties, participant’s relationships, financial credits, strategies and human labour. It should be noted that these factors are the most important factors and successful strategies for contracts of co-operations among higher education institutions. Results also show that respondents considered national culture as an important factor for co-operation experiences and execution. In this book while we have a close look at challenges in the way of international co-operation execution, we notice that this book introduced (lack of resources) as a major challenge for all stages of international co-operations including (beginning, talks and execution). Other case includes: views difference in goals, lack of attention to details, ceremonies in excess of need, cultural differences and poor relations. The present book, while looking in to resulted results and interests from international co-operations, believes that interests of these co-operations including factors such as a reduction of risk rate, distribution of costs and an increase in competitive advantage are resources and this can create a variety for university, creating international image, international curriculum, teaching quality and financial helps for institutions. However, one of the obvious resources of international co-operations in relation to higher education is rate of students; learning increase based on a partnership for scientific exchange programmers. Bruce (2009) in his research under title of (Planning and Internationalization of High education Institution in America) looked into organizational structures in formulation of efforts that are help for internationalization of higher education institutions. Results show that presence of a professional leadership for international efforts can be very effective.

Other effective factors are consolidated structure of organization, existence of personnel with much ability in international relations and concentration on international activities facility and quality of programmers and organization for internationalization. Childress (2009) in his research under the title of (Internationalization programs For Higher education) has examined 31 internationalization programs belong to present educational institutions at international education manager’s society with respect to type of programs, rate of circulation, growth, being under work and monitoring over them. Results show that international programs were existed for 71 percent of institutions.

Hayle (2008) has conducted a research under title of (Internationalization Benefits of Higher education Based on Student’s View). He has reported that spreading of knowledge and understanding of other nations, cultures and world’s issue, producing social network and growth of social and affectionate skill, producing income, take part in production, show that studying outside a country is the most usual way in a partnership at international co-operations and the main motive factors for creating such area is professors’ interest and inclination for these kind of international co-operations as well as the most important advantage for internationalization is world’s understanding growth of students, For scientific board members, creating social networks and scientific co-operations and for managers having institution and international university have the most important interests.

Bendriss (2007) in his research under title of (Internationalization Efforts in Florida Universities) has examined into internationalization indices relationship and internationalization level over 11 public universities in Florida. The targeted indices in this research are as follows:

Statement of mission, type of programs organizational substructures, rate of allocation for financial resources, scientific board members, foreign students and student programs, Results show that higher positive correlation is existed among 6 indices that expressed before and level of internationalization in Florida universities. Full knowledge of country’s language (skills and linguistic capability) interaction understanding of culture, job progress, attaining skills for critical thought, sensitization towards surroundings and an increase of understanding form nations variety.

Mc Cormack (2005) in an article under title of (Enrolling Of foreign Students For Two Years) wrote that results show that in universities and higher education centers, innovation, adjustment with surroundings and social changes, coordination with social needs, programming, management and leadership of changes play an
important role. He also added that universities in developed countries are converted to a place for solving economic difficulties and its improvement along with cognition of knowledge.

Thus, 45 countries including those that are members of European Union and some of countries in Middle Asia and Caucasias have signed Bolonia statement with emphasis on facility on professor and student exchange, creating educational common programs, scandalization and quality guarantee. This statement is one of the successful activities related to international co-operations in higher education and is considered one of the most important revolutions in European higher education during recent century. Foreign students are providers of higher education consolidation in these countries as well as a help for economic progress for instance, in 2004, foreign students helped U.S. economy and income more than 13 milliard dollars.

Chan (2004) in an article under title of (international co-operations in higher education) had stated the following motives for universities and for international co-operations; establishing a distinctiveness with other universities, attaining more share from market, reinforcement of position and prestige in higher education society, An increase of influence and an increase to access to rare and valuable resource.

Chan believes that universities international co-operations include exchange of students and professors, scientific or academic exchange, curriculum development, joint bidding for research projects and benchmarking. Starting stage, talk stage, approval stage, making stage, operational stage, evolution stage. Edelson (2003) in an article under title of (International Co-Operations in Higher education, Studying on Basic Issues) pointed out to those challenges existed in the way of successful co-operations for America higher education institutions with foreign institutions. At first, he concentrated on managerial aspects, financial conditions and political and cultural factors and in continuance he set forth several strategies such as development of employees’ experts, structural readiness, pay attention to economic inequality among nations and an increase of undertaking to globalization. 1) The status of comprehensive universities in Tehran in terms of curriculum internationalization Is? 2) Is there any significant difference between the comprehensive universities of Tehran in internationalizing the curriculum? 3) Is there a significant difference between colleges at comprehensive university universities in Tehran in terms of internationalization of curriculum? 4) What are the obstacles to the internationalization of higher education curriculum in public universities in Tehran?

2. Methodology

This research was applied in terms of the purpose and, in terms of the type of data collected, was quantitative. Also, a descriptive survey type is used based on the data collection method. The main tool used for measuring and collecting data in this research is a researcher-made questionnaire. To create the questionnaire, the components were extracted from the literature review and theoretical foundations and the researches carried out in the field. Then, after the modification, they were classified and arranged in a form. Finally, in the first section, in order to identify the current status of the university in terms of internationalization of the curriculum of higher education with 29 items and in the second section, to identify the obstacles to the internationalization of higher education curriculum with 8 grades on a 5-point Likert scale Low, very low, moderate, high, very high), was developed and answered to the professors. In this research, we used SPSS software and Cronbach’s alpha test to obtain the reliability of the questionnaire. Cronbach’s alpha for the questionnaire, “Identifying the barriers to internationalization of higher education curriculum” was equal to 0.74 and for the questionnaire "Reviewing the current status of curriculum internationalization" was calculated to be 0.76. Due to the fact that reliability is generally more than 0.70, the researcher-made questionnaire has a relatively high reliability. The statistical population of this research includes all faculty members of comprehensive universities of Tehran which is 4429 people. The sample was 384 people based on Cochran formula and selected by simple random sampling method.
3. **Findings**
In response to the first question of research that "The status of universities in internationalizing the curriculum," the following findings are as follows.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Theoretical Mean</th>
<th>Standard deviation</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalization of curriculum</td>
<td>83/30</td>
<td>87</td>
<td>11/98</td>
<td>-5/023</td>
<td>0/001</td>
</tr>
</tbody>
</table>

The results of the research showed that according to the faculty members of comprehensive universities of Tehran, the internationalization of the curriculum is lower than the average in all universities.

2. In response to the second question of the research that "there is a significant difference between colleges at comprehensive university universities in Tehran in terms of internationalization of curriculum", The findings are as follows.

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>Mean</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internationalization of curriculum</td>
<td>3/572</td>
<td>489/18</td>
<td>0/004</td>
</tr>
</tbody>
</table>

The results of the above table show that F is equal to 3/572 and with a significant level of 0/004, and since this value is less than 0.05, it can be concluded that there is a significant difference, Between the comprehensive universities of Tehran in terms of internationalization of the curriculum.

3. In response to the third question of the research that "there is a significant difference between colleges at comprehensive university universities in Tehran in terms of in Internationalization of curriculum" The findings are as follows.

<table>
<thead>
<tr>
<th>University</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tehran</td>
<td>184</td>
<td>89/9</td>
<td>1/253</td>
</tr>
<tr>
<td>Shahid Beheshti</td>
<td>69</td>
<td>85/1</td>
<td>2/523</td>
</tr>
<tr>
<td>Tarbiat Modares</td>
<td>58</td>
<td>86/5</td>
<td>1/785</td>
</tr>
<tr>
<td>Kharazmi</td>
<td>42</td>
<td>80/7</td>
<td>4/258</td>
</tr>
<tr>
<td>AL-Zahra University</td>
<td>31</td>
<td>82/8</td>
<td>3/127</td>
</tr>
</tbody>
</table>

As you can see in the table above, the highest average is for Tehran University with an average of 89/9 and the lowest average is for Kharazmi University with an average of 80/7. So, Tehran University is more successful than other university in Internationalization of curriculum.

<table>
<thead>
<tr>
<th>College</th>
<th>Frequency</th>
<th>Mean</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>87</td>
<td>88/81</td>
<td>1/664</td>
</tr>
<tr>
<td>Basic Sciences</td>
<td>83</td>
<td>85/44</td>
<td>1/386</td>
</tr>
<tr>
<td>Medical and Paramedical</td>
<td>41</td>
<td>84/03</td>
<td>7/946</td>
</tr>
<tr>
<td>Agriculture and Natural Resources</td>
<td>53</td>
<td>83/02</td>
<td>9/203</td>
</tr>
<tr>
<td>Literature and theology</td>
<td>63</td>
<td>80/16</td>
<td>12/979</td>
</tr>
<tr>
<td>Educational Science</td>
<td>57</td>
<td>78/56</td>
<td>2/748</td>
</tr>
</tbody>
</table>
As you can see in the table above, the highest average is for the Faculty of Engineering with an average of 81.88 and the lowest average for the Faculty of Educational Sciences with an average of 56.68.

In response to Forth question that “What the obstacles are to internationalize the curriculum of higher education in public universities in Tehran” table below showed that results of this survey. In this article obstacles defined.

**Table 6. Obstacles to internationalize the curriculum of higher education in public universities**

<table>
<thead>
<tr>
<th>Obstacles</th>
<th>T</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>The resistance of professors to change their mental structure towards the internationalization of curricula</td>
<td>1/338</td>
<td>0/185</td>
</tr>
<tr>
<td>Ignoring international aspects in curriculum content</td>
<td>2/679</td>
<td>0/008</td>
</tr>
<tr>
<td>Unaware of international opportunities</td>
<td>4/382</td>
<td>0/000</td>
</tr>
<tr>
<td>Lack of motivational and incentive factors for professors</td>
<td>6/909</td>
<td>0/000</td>
</tr>
<tr>
<td>Lack of financial support from professors in traveling abroad in line with international research</td>
<td>6/718</td>
<td>0/000</td>
</tr>
<tr>
<td>Not considering the international element as an indicator of the recruitment and evaluation of professors</td>
<td>4/532</td>
<td>0/000</td>
</tr>
<tr>
<td>Extensive volume of available training materials and limited time for them</td>
<td>1/846</td>
<td>0/066</td>
</tr>
<tr>
<td>Disbelief in intercultural communication and the cooperation of professors in international research affairs</td>
<td>0/445</td>
<td>0/657</td>
</tr>
</tbody>
</table>

As you can see in the table above, the “Lack of motivational and incentive factors for professors” with 6/909 T test and with 0/000 Significant is the most important obstacles that this research was Identified and the “Lack of financial support from professors in traveling abroad in line with international research” with 6/718 T test and with 0/000 Significant is second obstacles are Identified.

4. Discussion

Recently, scientific- international co-operations are suitable tools in order to upgrade quality at universities and producing applied knowledge. Isolation scientific individualism and egocentricity have no result except backwardness especially in relation to scientific and technology levels. It is obvious that no country has economic power to import its technology and achievements and also has not any role to produce it. This phenomenon has also truth pertaining to researches. In general, in our country, universities, international co-operations are important when we regard them from various aspects including economic, cultural, scientific, and in particular political aspect and require having a correct programming. In this Movement, forming scientific - international office at ministry of sciences, research and technology and also establishing international affairs office at universities are a positive step. However, lack of strategy to motives and reinforcer and suppressive factors in these co-operations results that considerable result, from international cooperation cannot enter into higher education institutions located in our country.

Despite of many obstacles that existed on the way of scientific –co-operations, nevertheless, scientific co-operations are placed at higher place to produce science and in our country. There is a good opportunity to make use of Iranians that are resided in developed countries and are looking for various scientific and research positions and in this manner, we may be able to establish a spread connection door for improving various sciences in Iran and these educated people will facilitate scientific relation establishment and like efficient ambassadors pay attention to related affairs. In continuation, it is presented the most important strategies that can have a solution for country’s higher education movement towards Internationalization:

1) Creating area and better facilities and more in relation to exchange programs such as exchanging students and professors and researcher with world’s validated university and research centers. 2) University out-borders and international units must be established and reinforced. 3) For all higher education centers office of scientific-international co-operations must be established. 4) Instructional workshop must be hold up in order universities senior directors could be aware of importance, goals and method in relation to scientific - international co-operations. 5) The necessary facilities and possibilities must be provided for scientific board members of universities while they are attending at seminars and scientific conferences located in outside of country without bureaucratic conditions. 6) Especial financial facilities, exchange or custom
facilities for universities in order to buy books, magazines, laboratory equipment and so on must be established in case these items must be imported from outside the country. 7) International cooperation understandings must be concluding while considering all aspects so that execution of contents can be concluded. 8) Obstacles and difficulties in relation to sending off professors must be eliminated so that they have access to studying opportunities outside the country and in order to establish scientific constant relations with other countries professors and experts. 9) Suitable organizational structure must be provided for international relations and international co-operations. 10) In order to attract foreign students in Iran’s universities, the necessary effort is granted and subsidy is given to talented international students. 11) Models for scientific-international relations development belong to other countries must be known and must be placed under utilization. 12) It is emphasized on multi-language program at universities along with skill reinforce to work with computer and strengthened internet and also for learning and teaching them in the form of word’s known scientific languages (like English language). 13) Inviting from foreign professors for instructing short term subjects to students 14) Rendering sufficient studying opportunities for knowing world validated universities and as well as it must be provided cooperation opportunities for scientific board members who are doing research works or intended to take part in international projects under title of trainee. 15) Especially budget must be allocated in direction of universities internationalization. 16) Universities scientific board members have active membership in international gatherings. 17) It is necessary to pay attention to increase validated publications and magazines to be published by university and in order to inform scientific findings to students. 18) Political structure for conducting studying opportunity for scientific board members at foreign validated universities must also be brought about. 19) Difficulties in relation to visa issue must be eliminated for scientific board members and international student. 20) Hardware and software facilities that are in suitable form must be increased in case they are in the field of internet and information technology. Result of this research show that based on view of scientific board members working at higher universities, in the field of scientific - international co-operations, the presented ways can have much effect for universities internationalization and may have to remove a lot of obstacles. However, these ways that introduced by Ministry of Sciences Research and Technology as a rule show themselves without participation at producing science in our country, we are only consumers that idle away our time to buy others’. It is evident that pressing need of every society that moves towards development call for its scientific - international co-operations strengthening with other countries and enjoy from world’s common knowledge. In general, we must say that in modern world, no country has anything to say if this country wants to stand all by itself.
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