

## TOWARD A DISTANCE EDUCATION BASED STRATEGY FOR INTERNATIONALIZATION OF THE CURRICULUM IN HIGHER EDUCATION OF IRAN

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### ABSTRACT

The present study is to investigate the necessity of internationalization of curricula in Higher Education of Iran; it also determines the effect of characteristics of new generation of distance education on curriculum internationalization and presents some influential strategies for internationalizing curricula of Iran Higher Education with distance education approach. For this study, after making 12 personal interviews and conducting 2 sessions of focus groups, 543 professors and students of five universities filled in a questionnaire; the collected data were analyzed using one-sample *t*-test, Friedman test and variance analysis.

The results indicated that internationalizing curricula is necessary in order to follow the globalization trend and to introduce the Iranian culture and civilization to the world; therefore, distance education approach is a thoughtful alternative for this process because of its high flexibility and the harmony of its curricula with the international curricula. Expanding international collaboration of universities, using the international language for teaching, providing resources, founding the infrastructures based on technology, revising rules and their clarification and developing curriculum elements based on the transformative approach are the most essential strategies.

**Keywords:** Distance education, Internationalization, Internationalizing of curriculum, Higher Education of Iran

### INTRODUCTION

The phenomenal growth in distance education systems and the internationalization and globalization of education and curricula have considerably changed educational scenarios especially in higher education. But, can distance education be taken into account as a strategy for internationalizing the curricula? Does internationalization of education make more use of the distance education approach possible? How can one develop international curricula in distance education? These are some challenges which the higher education experts and scholars are involved with.

Nowadays, the distance education approach with the help of ICT<sup>1</sup> has a supporting role in economic and social development and it has been accepted in the national educational systems around the world especially in the developing countries (Moore & Tait, 2002).

The distance education is a process to create and provide access to learning when the source of information and the learners are separated by time and distance and it provides an educational experience of equal qualitative value for the learners to best suit their needs outside the classroom. (Honeyman & Miller, 1993)

The internationalization and globalization of education have been brought up through the increasing demand for appropriate education to achieve better understanding, analyzing and responding to the unpredictable and changing situations and crossing the geographical borders among the nations to establish an international community for better social, occupational and emotional life; therefore, higher education institutions need a different approach to respond to these educational demands qualitatively and quantitatively; they value the participation of international students (Jones & Brown, 2007). Setting internationalization policy in higher education systems and their curricula are in line with this approach.

Internationalization includes international, intercultural and global aspects into the goal, actions and implementation of higher education to increase respect for cultural difference and traditions (Bostrom, 2009). As the knowledge achievement is the main characteristic of a university, internationalizing curricula is the priority in internationalization process (Harari, 1992). Internationalization of curriculum is the process of

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<sup>1</sup> - Information and Communication Technology

developing and changing the curriculum in order to infuse international aspects into formal and operational dimensions of curriculum. The formal aspect is related to the objectives, course content and educational materials and the operational aspect includes teaching/learning (Shailer, 2006) and evaluation methods.

The most common approaches for internationalization of curricula are:

1. Add-on: adding international/intercultural content, concepts or subjects and attitudes to the present curricula without changing the main structure or their teaching and learning approaches;
2. Infusion: infusing a sort of content which enriches intercultural understanding and knowledge of students and reflects various attitudes and provides learners with diverse professional performances;
3. Transformative: internationalization of curriculum based on changing its main structure and teaching/learning approaches. There is a change in thought paradigm and attitude through changing what to teach and how to teach that.

Transformative approach has a high flexibility in training intercultural/international students (Williams, 2008) and causes thought growth, analysis power, criticism and metacognition of the learners; however, each institution chooses appropriate approach regarding its goals, structure and limitations (Aspan, 1993).

As mentioned earlier, distance education approach can be used to solve national educational problems and it is also regarded as an effective strategy internationally; in addition to having advantages such as being economical, high speed, more efficiency and effectiveness in teaching/learning process and its common characteristics with international curricula (e.g. flexibility, high accessibility, being interactive, learner-oriented) make this approach as a suitable option for higher education development.

It seems that international distance education or distance education based on ICT is one of the most important factors for the steady development of internationalization and it can be an alternative to the international movement. In fact, IaH<sup>1</sup>, with which universities try to provide personal and professional development for all the people as global citizens, can achieve its high goals with support of distance education approach and ICT. In the 21<sup>st</sup> century, universities should make their activities global using satellites or international multimedia communication in order to perform education successfully, efficiently and effectively (Knight, 1995). Theoretically, the presence of modern technologies implies the increase in global distance education (Thune & Welle- Strand, 2005). Distance education has presented various opportunities for internationalization of curriculum in higher education; therefore, effective performance of graduate students in multicultural societies and global professional environments will be increased with this educational method (Currie & Vidovich, 2000).

Based on UNESCO (2005) statistics, there were 2.5 million international students all over the world in 2004 and it goes up to 7.2 million students in 2025. The increasing rate of international students was 17% in the US, 29% in Great Britain, 46% in Germany, 81% in France, 42% in Australia and 108% in Japan (Bain & Green, 2006). These countries have used various strategies such as national marketing, considering immigration policies for attracting students, presenting curriculum in English and establishing regional educational poles (Verbik, 2006). It is worth mentioning that Asian and Muslim countries like Singapore and Malaysia are among the leading countries in attracting international students (International Study Abroad Guides, 2008); this shows that they give priority to higher education policies and international curricula in order to respond to applicants' needs; therefore, other countries like Iran must be aware of this fact. Iran has a long history in international studies. In the 5<sup>th</sup> century, Jondi Shapour University was an example a center for medical studies and its curricula covered many research fields. This university was a center for scientific activities and exchange of information among scientists from Iran, India, Greece and Syria. Iran has an enormous potential for attracting international students; however, statistics show that less than 1500 foreign students are at Iranian universities (Iran Higher Education Statistics, 2007-08).

It is obvious that Iran wants to be an economic, scientific, industrial power in the region; so, there should be appropriate infrastructures for removing barriers of non-oil exports and there is an urgent need to achieve a diverse economy and dependent on knowledge, information, human resources and new technology (Nowrouz zade, 2006).

Regarding these facts, the internationalization of curriculum in higher education of Iran is a necessary action and it seems that using educational approaches based on ICT with its facilitative characteristics can strategically affect this process. However, the success of IOC<sup>2</sup> not only can be influenced by environmental factors and out of

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<sup>1</sup> - Internationalization of curriculum at Home

<sup>2</sup> -Internationalization of Curriculum

the educational institution control such as political, economic and cultural conditions, but also can depend on factors inside the institution and the participation of all the scientific members of university, available resources, facilities and opportunities, cultural intelligence development and communicative competences (Early, Ang & Tan, 2006), the type and nature of course subjects and teaching/training approaches. In fact, IOC is a multidimensional process that requires the participation and support of faculty members, students, departments, institution management and international bureaus of a college; therefore, the leadership, commitment to the process, intercultural sensitivity, financial support, tendency, enthusiasm, open communication way and consistency among fields of study must be taken into account (Williams, 2008). Morey (2000) provided a framework for change directed to internationalization in higher education institutions; this framework also includes effective factors for change.(Figure-1)

Morey regards internationalization of higher education institutions as a progressive process and in addition to importance of institution management and strategies which guarantee this process, he emphasizes the influential factors such as realization of factors effective on internationalization (needs analysis), organizational structure, planning and implementation, teaching and training (educational content and strategies) and evaluation. Other factors are educational institution missions, professional development of professors, international unifications and collaborations (Walley et al, 1997) , the language of teaching and communication, budget and financial resources, equipment and technology and supportive role of the government (AUCC, 2009).

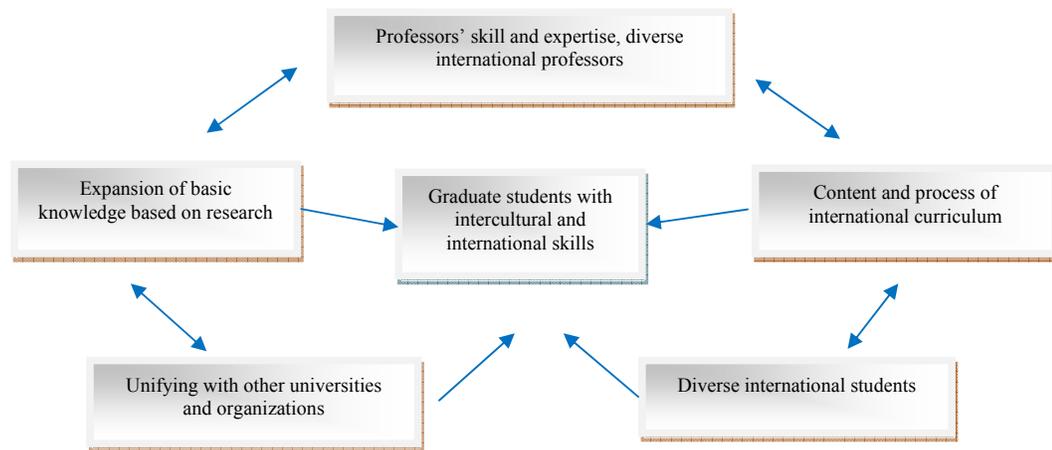


Figure1- The framework internationalization in higher education institutions

Williams (2008) indicated that an international curriculum must be a solution for supporting different needs of international students. Having a transformative approach, which raises critical awareness of deviations from and values related to teaching/learning approaches and curricula, respects different ways of understanding and existence and regards students as active participants, must be the goal of higher education institutions that attempt to help native and international students.

Bond (2006) stated that from the professors' and students' viewpoints, international curriculum should involve most of the students who have not gone abroad for their studies and include new forms of knowledge: basic knowledge about socio-cultural content of other societies, changing how one responds to cultural differences, behaves in intercultural situations and to keep ones cultural unity while understanding others. To get ready for complete participation in a global community, it is essential to learn how to communicate skillfully with people from other cultures. Most of the universities do not focus on the native students while intercultural and international knowledge and experience must be the core of curricula for all the students and the internationalization should be achieved at home.

Ghaehri (2005) studied the effects of international communications of higher education on the curriculum elements (content, teaching methods, evaluation methods and equipment) in Iran. The results showed that the increase in international communications of higher education affects the elements of curriculum and causes content changes in terms of more attention to teaching foreign languages, nurturing communicative skills, teaching how to use internet and technology, teaching research skills, getting students familiar with different cultures, considering global issues using interdisciplinary and multidisciplinary integrative approach; regarding team work in teaching methods, discovery learning methods; using formative evaluation, using oral communication specially about foreign students, more attention to reports, articles and finally more use of

electronic networks and electronic/online conference rooms and more use of new technologies such as emails and websites.

Mihailova (2006) investigated this fact whether e- learning can be a main tool or strategy to internationalize the higher education; the results showed that it is necessary for professors to get more help from teaching and training technologists and develop electronic courses mutually. Additionally, blended learning is the best method of teaching and learning and using e-learning can support the traditional method.

Thune & Welle-Strand (2005) studied the role of ICT in internationalization of higher education and concluded that ICT is important as a tool of preparation for internationalization process and international activities but it is not as a running force for internationalization.

Caruana (2004) studied the role of ICT in internationalization of curriculum and concluded that challenges of internationalization of curriculum are similar to the ones related to e-learning and bilateral strategic approach is more effective and useful than parallel strategies.

The purpose of this study is to investigate the internationalization of curricula with distance education approach in higher education of Iran; it is going to answer these questions:

- What are the reasons of necessity of internationalization of curricula in higher education of Iran?
- Which reasons are there to consider distance education approach as a strategy in internationalizing curriculum in higher education of Iran?
- What are strategies for curriculum internationalization with distance education approach in higher education of Iran?

## METHODOLOGY

The present study has a mixed method and follows the qualitative and quantitative ones. The first phase began at Tehran University, Sharif University of Technology and Imam Khomeini International University which are pioneers in internationalization in Iran. The researcher had a semi- structural interview with 12 managers and professors and she also had focus group sessions with two groups of 9 and 14 foreign students at these universities. The sampling methods were purposive and snowball ones. The experience of living and studying out of Iran for at least one year; experience of teaching foreign students with a traditional or virtual methods; experience of management in international office of the university or having related books or articles were the criteria of selection of interviewees. The criteria for participants in focus groups were being non native students and having at least 6-month experience of studying in higher education of Iran.

The interviews were documented using recorder and camera. After implementation, classification, summarization and writing the reports, the interviewees checked them for proving reliability and credibility (Member check method).

In the second phase, statistical population consisted of all the faculty members, Ph. D and M.Sc. /M.A. students of Humanities and Art, Engineering and Science department and all the foreign students at the universities in Tehran which have international campus. Sampling was done through cluster/stratified method. Five universities including Sharif University of Technology, Shahid Beheshti University, Tarbiat Modarres University, Tehran University and Payame-noor University were selected from the all universities; using Cochran formula ( $\alpha=0.05$ ,  $d=0.1$ ) the number of samples was determined for each cluster. The final sample consisted of 543 professors and students. The research instrument was a questionnaire developed by the researcher; the questionnaire was constructed using the findings of interviews and theoretical and analytical studies and then its validity was approved by some experts and its reliability was measured using Cronbachs Alpha ( $\alpha=0.82$ ). The questionnaire included three questions and 46 sub questions with Likert scale. For data analysis, one-sample *t*-test and then Friedman Test and variance analysis were used in SPSS win15 and Minitab applications.

## FINDINGS

In this section to answer the research question, at first the results of individual interviews and sessions with focus groups are presented and then the results collected through implementing the questionnaires are addressed.

### Q1. Is it necessary to internationalize the curricula in higher education of Iran?

According to what the interviewee said and their experiences, the internationalization of curriculum is dependent on the globalization trend; for this purpose, it is emphasized that graduate students should have the competences for living and working in intercultural and international societies, knowledge about other nations

and cultures and respect for them, the presence in the international areas and competitions. For knowing other cultures and countries, one of the interviewees said:

*“It is necessary for graduate students to know different cultures and nations in order to be able to live anywhere”.*

Making Iran the most scientific country in the region and reducing the educational and scientific gap are the most important reasons for internationalization. One of the interviewees believed that:

*“It is necessary for us to have information about the research and educational programs and technology production in order to compare with each other and identify weak and strong points”.*

The capacities of Iranian civilization and the necessity of introducing this civilization to the world make higher education of Iran have an international viewpoint. One of participants said:

*“According to existing capacity in the era of communication and cyberspace, it is necessary for a country like Iran, with such a history, civilization and historical position in the world of science and culture, to be introduced to the world and others get to know the ideas of its philosophers and scholars.”*

Another professor said:

*“In order to have an appropriate share in international community and to resist domination of the ruling powers in science and culture, there should simultaneously be exports along with imports of science, culture and civilization from other countries. therefore it is necessary to increase the flow of Iranian civilization to go beyond its boundaries; for this reason, physically and virtually presence of international students should be considered. Thus, to respond to the needs of these international students, the curriculum also needs to be internationalized”.*

According to interviewees, one of the most important factors to keep the elite and professionals in Iran as well as not to human resources is providing the appropriate educational and research conditions, interacting and making use of scientific and cultural achievements of other nations. One of interviewees believed that:

*“if developing countries do not try to internationalize their higher education, the top higher education systems will attract their elite and it means brain drain.”*

**Q2.** Which effective factors in distance education approach make it as a strategy for internationalization of curriculum in higher education?

High flexibility of new generation of distance education deeply affects the internationalization of higher education and curricula.

According to one of interviewees:

*“Having features such as considering learning without time and place constraints, learner-centeredness, using a variety of educational materials with different intellectual and cultural roots, utilizing different teaching and learning approaches and facilities such as providing immediate feedback as well as holding meetings to discuss the possibility of using simulations prepare the proper environment for international and intercultural learners who have different needs, personal characteristics, learning styles, cultural and educational backgrounds”.*

Increasing efficiency is another advantage of distance education approach in the internationalization of curriculum. One of professors says:

*“distance education based on technology is a perfect tool for distributing content internationally; using it we can provide a widespread content in a smaller size and higher speed for the unlimited number of audiences without extra costs.”*

Or According to one of the managers:

*“Using cyberspace can spread Iranian power into other countries and lead to more presence in the world of higher education; thus, efficiency will be improved.”*

Anotherof professors said:

*“This approach may increase the possibility of study of foreign students who do not have any interest in physical presence in Iran. As a result, this may be economical.”*

But can this approach be used as an independent or blended one; there are various perspectives and options. One of the participants said:

*“Depending on the university’s mission, productivity rate is different. Some universities may consider this approach as damage to their reputation and prefer to pay attention to distance education approach along with the traditional one only in some courses.”*

One of the professors stated:

*“In some courses such as management that there is less need for laboratory and experimental studies, the distance education approach is more effective compared to technical issues that need laboratory and experimental activities.”*

But, some interviewees had different believe. For example one of them said:

*“Noting that the presence of higher education of Iran in the international area greatly depends on the cultural advantages and hidden or implicit curriculum and requires physical presence of foreign students in the host country so the distance education approach is not appropriate strategy since the cultural attraction cannot be sensed in the distance education.”*

Also some of interviewees believed that although recent technological advances reduce the negative points of virtual training but due to lack of infrastructure, facilities and financial issues, we are not able to rely on the absolute use of the virtual spaces. So classrooms are inevitable.

**Q3:** What are strategies for curriculum internationalization with distance education approach in higher education of Iran?

Resource developments are the strategies on which several interviewees emphasized. In this regard, one of them stated:

*“If a university has financial resources, it has more research and educational facilities and equipment. Consequently, it is likely that other more advanced universities pay more attention to it; therefore, there is an increase in the attraction of faculty and foreign students.”*

Greater recognition of other higher education systems especially those with which Iran higher education cooperates, in macro decision making and strategic planning is noteworthy which is somewhat done with comparative studies, membership in international and regional conventions, foundation of thinking rooms and etc. In this way one of managers stated:

*“Doing comparative studies in the field of curriculum with other countries shows their potential and strengths and weakness in different domains and, then identifying central points in each domain at the regional level to establish a scientific dialogue can greatly help to develop the international curricula.”*

For having international education, the political, cultural, and economic structure of a country may affect this activity and its strategies. The political structure of a country determines the value of presence in global competition and expands its national connections. One of professors declares:

*“Political structure based on ideological principles is effective on the acceptance of foreign patterns and cultures; so, developing the curriculum with transnational perspective will cause the major obstacles and constraints in this way in Iran”.*

One of the interviewees stated:

*“Excessive control and several problems of studying in Iran or giving visa to foreign professors make foreigners reluctant to come to scientific conferences and limit international cooperation of Iran”.*

The proper understanding of internationalization and the balance in cultural and scientific exchanges prevent the identity of a nation from dissolving in international movements. One of the interviewees believed:

*“Regarding Iranian historical background and colonization by foreign countries, the Iranian people somehow hate and mistrust foreigners. However, in order to reach a political and social growth in Iran, we have to be aware that the foreign professors and students are like guests who can revive Iranian culture and it should be necessary to establish a better environment for foreigners in Iran; this can be handled with planning in education system”.*

Based on the findings, the economic structure has an effect on higher education in international areas; the internationalization of trade and markets makes the higher education follow the internationalization trend. The

economic competitions establish scientific cooperation; because education as a service can be produced and presented.

Some interviewees emphasized the fact that the Islamic environment of Iran for attracting Muslims around the world and Iranian potentiality for research cooperation in Islamic sciences with other countries will be a cultural opportunity and advantage. For example, one of the foreign students in focus groups said:

*“Iran is an Islamic country and it is an advantage for Muslims especially women who want to continue their studies and their families will be less worried about them”.*

To internationalize the curricula, it is appropriate to pay attention to course subjects. An interviewee stated:

*“In Iran, empirical science is developed using translated books and the internationalization of their curricula needs a lot of research and productive activities and there must be more attention to the intercultural aspects. On the other hand, internationalizing their curricula in distance education approach requires the technical, hardware and software substructures. Limitations in resources, facilities and equipment will hinder developing effective curricula. However, subjects such as Persian language and literature, Iranian civilization history, knowledge about Iran and Islamic sciences, which depend on the Iranian culture and civilization and are less empirical, have more chance to be internationalized.”*

To internationalize the curriculum, we should consider not only goals, content, educational resources and material, teaching-learning methods but also strategies and activities at implementation level and in physical and virtual classes.

An interviewee said:

*“It is better to design contents in such a way in which local culture and other cultures are infused. It is possible through comparison of thoughts and findings of the Iranian philosophers and scholars with the ideas of great thinkers and scientists from other countries and even it can be beneficial to use the information about countries, cultures and religions of other nations in our course books”.*

An interviewee believed:

*“To development the international content, it is necessary to consider the language proficiency and knowledge level of foreign students and design content based on the rules, simplicity, difficulty and applicability. It appears more appropriate to develop special materials for foreign students”.*

One of the students in focus groups said:

*“Regarding prior teaching-learning methods of students and flexibility in using different teaching methods in harmony with field of study and subject can decrease the problems due to language incompatibility as well as educational and cultural issues of international students”.*

An international curriculum has evaluation methods with diverse and intercultural framework. A student believed:

*“ if students were free to do their homework and research projects, it would somehow be in line with intercultural approach”.*

Here the findings of implementing questionnaires are used to answer the research questions.

#### **Q1.** Is the internationalization of curricula necessary in Iran Higher education?

To answer this question, three variables were studied. Table 1 shows the results about each of these variables. The questions are designed with Likert scale(5 options); therefore, the middle one(3) was selected as the mean and each question was studies with this hypothesis. H0:  $\mu \leq 3$ , H1:  $\mu > 3$ .

Table 1. Descriptive statistics and *t*-test results, mean and priority of variables necessary for internationalization of curriculum in Iran higher education

R	Variable	n	$\bar{x}$	SD	T	df	Pv	rank	priority
1	How much determinant is globalization trend	541	3.94	01.1	20.60	540	0.00	2.15	1
2	How much determinant is 20-year perspective document (making Iran the most powerful country in the region)	537	3.61	18.1	12.07	536	0.00	1.87	3
3	How much determinant is introduction of Iranian culture and civilization to the world	530	3.76	09.1	16.08	529	0.00	1.98	2

Test value=3

Table 1 shows that the mean of responses about the effects of each variable on internationalization of curriculum is acceptable ( $\bar{x} > 3$ ,  $\alpha = 0.05$ , p-value  $< 0.05$ ). It is worth mentioning that Friedman test showed that globalization trend is the highest one. Based on Friedman test results in Table 4, ( $\alpha = 0.05$ ) there is a significant difference among the mean of ranks of these effective variables.

**Q2.** Which effective factors in distance education approach make it as a strategy for internationalization of curriculum in higher education?

To answer this question, the effectiveness of five variables as the strategic characteristics in distance education approach and one variable for the refusal of this approach are studied and the inferential statistics are presented in Table 2.

 Table 2- Descriptive statistics and *t*-test results, mean and priority of effective variables as strategic characteristics of distance education approach for internationalization of curriculum in Iran higher education

R	Variable	n	$\bar{x}$	T	SD	df	Pv	rank	priority
1	The effect of high flexibility of distance education environment	536	3.83	16.60	0.98	535	00.0	3.72	2
2	The effect of using distance education along with traditional one (blended education)	534	3.83	20.13	0.95	533	00.0	3.66	4
3	The effect of using distance education independently or in a blended way in internationalization of curriculum regarding subject	537	3.82	21.71	0.88	536	00.0	3.68	3
4	the prevalence of our higher education internationally using distance education approach	537	3.72	19.42	0.88	536	00.0	3.47	5
5	the effect of the harmony of distance education with internationalization due to pass of geographical, cultural, economic, political borders in this approach	536	3.87	21.81	0.95	535	00.0	3.76	1
6	the effect of the necessity of traditional education (classroom) in Internationalization and refusing distance education approach	531	3.13	2.71	1.14	530	003.0	2.72	6

Test value=3

It is clear that the mean of the responses about the effects of each variable as a strategy in internationalization of the curriculum is acceptable ( $\bar{x} > 3$ ,  $\alpha = 0.05$ , p-value  $< 0.05$ ). Friedman Test showed that the harmony of distance education with internationalization due to pass of geographical, cultural, economic, political borders in this approach has the highest rank and refusing distance education approach has the lowest rank. Friedman test results have been shown in Table 4.

**Q3.** What are the strategies of internationalization of the curricula with distance education approach in higher education of Iran?

To answer this question, the effectiveness of 37 strategies or variables at macro and micro level were investigated; the inferential statistics are shown in Table 3. It is worth mentioning that the macro strategies are

the one which relate to policy-making, decision-making, planning and management out of the institution; micro strategies relate to the implementing issues and inside-the-classroom matters.

Table 3- Descriptive statistics and *t*-test results, mean and priority of effective variables as strategies for internationalization of curriculum with distance education approach in Iran higher education

R	Variables	n	$\bar{x}$	SD	T	df	Pv	rank	priority
1	The effect of having a development perspective plan emphasizing the internationalization of higher education	538	3.76	0.97	22.18	537	0.00	17.12	2
2	the effect of having programs, rules and guidelines in harmony with the perspective	537	3.84	0.92	10.21	536	0.00	18.14	28
3	The effect of comparative studies for various subject with cooperation of other countries	536	4.13	1.94	55.13	535	0.00	21.08	10
4	the effect of knowing about educational systems of other countries	538	4.21	0.82	24.34	537	0.00	23.19	2
5	the effect of using ICT and cyberspace	538	4.20	0.90	74.30	537	0.00	22.94	3
6	The effect of finding common interests in the region and having joint educational courses	538	3.96	0.88	35.25	537	0.00	19.64	18
7	the effect of inviting foreign professors and students to participate in conference in order to attract to Iran higher education	539	3.95	0.93	57.23	538	0.00	19.10	22
8	The effect of having courses with interdisciplinary to respond to current issues	539	3.96	0.89	99.24	538	0.00	19.84	16
9	The effect of having thought rooms to produce thought	532	3.76	0.97	97.17	531	0.00	17.09	33
10	The effect of specific committees in Science ministry for developing international curriculum	537	3.96	0.93	90.23	536	0.00	19.64	19
11	The effect of membership in regional and global higher education conventions	535	4.08	0.87	72.28	534	0.00	21.15	9
12	The effect of having the goals of curriculum for nurturing intercultural and international competences (professionally and socially)	536	3.92	0.87	61.24	535	0.00	18.62	25
13	The effects of giving optional subjects about other countries and culture to native and foreign students	538	3.76	0.93	89.18	537	0.00	16.97	35
14	The effect of giving free choice to foreign students to have subjects totally related to the culture of host country	538	3.70	0.99	28.16	537	0.00	16.23	37
15	The effect of familiarity with one's own culture and other culture in content of the general subjects	534	3.71	1.01	34.16	533	0.00	17.01	34
16	The effect of familiarity with one's own culture and other culture in content of the specific subjects	533	3.63	1.08	50.13	532	0.00	16.47	36
17	The effect of considering educational and language level of the learners	533	3.90	0.97	43.21	532	0.00	19.27	21
18	The effect of developing and presenting the content in the international language	536	4.14	0.90	22.29	535	0.00	21.97	4
19	The effect of having international texts for international students	535	3.89	0.93	11.22	534	0.00	18.34	26
20	The effect of developing and presenting the content in audio, visual, reading, and hypertextual formats	532	4.10	0.88	64.28	531	0.00	21.35	8
21	The effect of using valid and up-to-date scientific resources and books	535	4.38	0.75	67.42	534	0.00	24.59	1
22	The effect of introducing extra resource in the international language	535	4.13	0.87	01.30	534	0.00	21.36	6
23	The effect of content orientation to specialized subjects	530	4.08	0.83	13.30	529	0.00	20.91	11

24	The effect of lack of localization in international content	532	3.90	1.01	60.20	531	0.00	19.04	24
25	The effect of analysis and criticism of different views about global issues in content	523	4.01	0.92	35.25	522	0.00	20.34	12
26	The effect of avoiding national bias in developing international content	539	4.12	0.94	74.27	538	0.00	21.51	5
27	The effect of presenting the content electronically and virtually along with traditional education	538	4.07	0.94	61.26	537	0.00	21.36	7
28	The effect of presenting educational material and resources from different cultural roots	537	3.80	0.91	56.20	536	0.00	17.50	31
29	The effect of more educational support for international students in the initial weeks and months	533	3.84	0.88	93.21	532	0.00	17.81	29
30	The effect of flexibility in using different teaching-learning methods	536	4.01	0.88	63.26	535	0.00	20.14	14
31	The effect of participation of international students in classroom discussions and activities	537	3.98	0.84	23.27	536	0.00	19.61	20
32	The effect of reviewing students' viewpoints toward world issues from other cultural attitude	536	3.94	0.90	15.24	535	0.00	19.05	23
33	The effect of encouraging students to do their projects in other countries	538	4.04	0.84	81.28	537	0.00	20.25	13
34	The effect of having cooperative opportunities in international projects	535	4.02	0.87	98.26	534	0.00	19.70	17
35	The effects of giving international research projects	536	4.01	0.86	32.27	535	0.00	20.07	15
36	The effect of evaluating students in authentic situation or simulated intercultural setting	531	3.80	0.97	90.18	530	0.00	17.50	30
37	The effect of using extra curriculum for internationalization and getting familiar to other cultures	531	3.86	0.97	50.20	530	0.00	18.22	27

Test value=3

It is obvious that the mean of responses about the effect of each variable as a strategy for the internationalization of curriculum with distance education approach is acceptable ( $\bar{x} > 3$ ,  $\alpha = 0.05$  p-value  $< 0.05$ ). Friedman test showed that using valid and up-to-date resources and books had the highest rank and giving free choice to foreign students to have subjects totally related to the culture of host country had the lowest rank. (Table 4).

It is worth mentioning that the respondents in Table 4 are those who answered all the questions and the significant level is  $\alpha = 0.05$ .

Question	n	$\chi^2$	df	Pv
First	528	31.71	2	00.0
Second	524	168.89	5	00.0
Third	462	726.12	37	00.0

Table4- The result of Friedman test for all questions

## DISCUSSION

Based the findings of this study, it is necessary to internationalize the curricula in Iran higher education; its main reasons are the globalization trend, the necessity of introducing Iranian culture and civilization to the world and making Iran the most scientific power in the region. According to the survey of AUCC<sup>1</sup>(2006), the most important reason of internationalization is to make graduate students internationally competent in terms of information, understanding and perception.

It seems that distance education approach is an effective strategy for internationalization because it has high flexibility, accessibility and speed and also common characteristics of its curriculum elements with international curricula. Collis & Van der Wende (2002) found that international students will affect more their institutions

<sup>1</sup>- Association of Universities and Colleges of Canada

and their policies in order to use ICT and other related educational approaches because of its high flexibility in educational methods.

It is clear that in the current century, the universities must prepare the students who have the competency of living and working as well as responding to the needs of international and intercultural communities; this is obligatory for the graduates to have enough knowledge and perception about various cultures and to have a sort of international/intercultural attitude toward other nations; therefore, the international orientation of curricula in higher education system can give an opportunity to both Iranian students and foreign students.

The scientific cooperation of universities with other universities, research centers and scientific, commercial and professional associations can be an effective strategy for the internationalization of curriculum of distance education in higher education of Iran. Having educational workshops or sabbaticals for native students can be thoughtful. The more scientific cooperation of native professors with their foreign colleagues can be a good way to attract international students to Iran higher education. Whalley, Langley & Villareal (1997) found that making international bonds and cooperation with educational institutions is one of the priorities of international curriculum. Ghaheri (2005), Zare ,Fathi Vajargah& Yamani (2009) concluded that lack of international cooperation with top universities around the world, lack of exchange of professors and students as well as lack of implementation of international projects in Iran are the barriers to internationalization of curricula.

Based on research finding, because Farsi does not have any international dimension as well as it is almost impossible to learn it in a short period of time; therefore, it can be a serious issue for internationalization of curriculum in higher education. Williams' (2008) study emphasized the challenges of language inconsistency for international students in the host country.

To overcome these limitations, there are some strategies: developing subjects in international language for non native students, having bilingual course content, teaching in the international language, introducing resources and books in international language, availability of different language options for content study, removing difficult rules for teaching in a language except Farsi.

In order to internationalize higher education in Iran, some effective strategies must be taken into consideration: having international attitude toward higher education; being active at international levels and training skillful human resources for it; a proper perception of internationalization; flexibility and avoiding bias; dominance of thought in the society and getting to know the global environment. Sometimes there is possibly some resistance to new changes such as distance education and ICT; therefore, it is a must to change the present structures. Zare et al (2009) found that using technology requires reviving structure and extensive organizational changes in higher education of Iran and authorities' unfamiliarity with ICT as well as inflexibility in higher education system are barriers to IOC.

The current rules related to international cooperation and international students are unclear, outdated and inflexible. Zare et al (2009) indicated that denying the position of university as well as lack of academic freedom are the obstacles in the way of IOC. Therefore, it is necessary to give performance freedom to the universities and to avoid putting them into bureaucratically difficult challenges and inflexible structures.

One of the reasons of Iranian low performance in presenting the international appropriate content is due to scientific weakness and language incompetency of professors and lack of skillful human resources for this field. The professors do not have enough experience using virtual learning environments and they are unable to communicate in the international language well. According this finding, Benick, Newby & Samuel (1996) found that most of the professors do not perceive the disciplines of a universal environment because of lack of motivation, interest, experience, commitment, flexibility and an open mind.

Whereas the virtual learning environments cross the borders easily, the professors will be more motivated when they see the results of their attempt in a wider scope all around the world; therefore, they make much more effort to produce content and curriculum in an intercultural and standard framework. On the other hand, distance education can pass the time and space limitations; so, the professors have more time doing their work outside their workplaces.

For professional development and intercultural sensitivity, holding educational workshops, فرصت های (sabbaticals to abroad studies) interacting with the professors from other culture and doing shared research projects can develop knowledge, experience and international attitudes of Iranian professors. According to Schuerholz et al (2007), most of faculty members emphasized the application of international

attitudes in their teaching as well as the need for having opportunities for professional development. In Ellingboe's study, however some professors had international experience; they did not have cognitive change for this (Mestenhauser & Ellingboe, 1998).

The technical and technological substructures, educational equipment and facilities such as software, supportive educational kits, Learning & Content Management System and online educational technology are necessary for internationalization of curriculum with distance education approach in higher education of Iran. In fact, providing opportunities for international students can be one of the main goals of institutions in using ICT. According to Ghaheri (2005) and Zare et al (2009), the barriers related to equipment are the most important ones in the way of IOC in Iran.

To be successful in internationalization of higher education of Iran, the cultural and linguistic similarities of the Middle Eastern countries can be an advantage to attract their students to Iranian educational system. Using ICT and distance education and enough advertisement, we can introduce out higher education to this region.

For internationalization, it is quite useful to get to know higher education systems better, to have seats in regional and international conventions of higher education and distance education, to hold thinking rooms consisted of local and international experts in order to identify the strength and weakness of the current curricula as well as changing them to intercultural/international ones. It is worth mentioning that there should be a specialized organization in Science and Technology Ministry to investigate the issues and challenges of internationalization of higher education and curricula.

The strategies and activities are of great importance at the executive and class levels which affect internationalization of curriculum elements in goals, content, educational materials and resources, teaching - learning and evaluation methods. The content must be developed in such a way that is up- to-date, scientifically and culturally diverse and applicable and understandable for the learners. This content needs to be based on different learning styles. Teaching-learning and evaluation methods must be flexible and diverse as well as regarding learner-centeredness. Being flexible in using different methods including lecture, discussion, problem solving, projects, research, internship, laboratories, educational films, video conferencing, virtual discussion forum, a virtual visit of historical sites, meeting famous people, the student teams, field and tour trips regarding the field of study and subject can reduce linguistic, cultural and training inconsistency. The results of Williams' (2008) study also confirm these findings.

What is recommended here is the emphasis on achieving metacognition, critical teaching and training as well as active and experiential learning which motivate students to do research and have critical analysis; so, it develops intercultural knowledge and skills. These principles make fundamental change in thoughts and attitudes of students and this is the ideal which is important in transformative approach as well as the best approach for internationalization of the curriculum, though not the most appropriate option. The basic change is what to teach and how to teach in transformative approach to IOC and based on research findings most of the strategies and activities in curriculum elements are based on this approach; therefore, based on the statistical results, all of them are significantly influential on the IOC with distance education approach in higher education of Iran.

Hooks (2003) stated that the transformative approach to IOC makes the students and professors to change their thought paradigms and to look at the world from different ethnical, cultural and gender perspectives.

It is worth mentioning that the current approach in curricula of Iran higher education are far away from the research, analytical and critical ones and even in virtual space they are based on lecture, memorization, translation and outdated pamphlets; so it is obligatory to revise them. The results of Ghaheri's (2005) and Zare et al (2009) confirm this.

Because of the high flexibility and effectiveness of distance education approach, this can be a considerable strategy in developing and presenting an international curriculum. Additionally, distance learning can remove the bias as well as cultural and ethnical issues.

Giving free choice to students for their homework, research projects and diversifying evaluation methods can somehow foster intercultural approach. According to the results of a study at Monash University (2005), one of the basic principles in designing international curriculum is the use of various evaluation types. It is better that evaluation be in authentic situations or simulated intercultural settings. In distance learning at an international level it is necessary to clarify course goals, performance, expected results, the style of evaluation.

All in all, based on what was discussed about, it seems to achieve the scientific goals in an international endeavor in the current globalization of the higher education, using distance education approach and presenting the curricula in a virtual and electronic framework can be a deeply thoughtful strategy for the internationalization of curricula in higher education system of Iran. Flexibility, availability and high productivity of this educational environment make it an appropriate option to change what is taught and how to teach (Transformative approach) for internationalizing curriculum, especially IaH and it can be used in an independent or blended way based on the conditions, subjects, environmental factors, inside-the-organization factors, resources, facilities, limitations and the current opportunities. Although there are some motivational and cognitive barriers as well as the shortcomings such as substructures, technology, financial and human resources to distance education as a considerable approach to learning in Iran, blended learning is the best option.

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