A Survey on Presenting a Conceptual Framework towards Establishing a World-Class University

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**ARTICLE INFO**

**Article history:**
- Received 3 August 2014
- Received in revised form 27 September 2014
- Accepted 24 October 2014
- Available online 3 November 2014

**Keywords:**
- World-Class University, Features, Transformational Mechanism

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**ABSTRACT**

**Background:** The purpose of present study is to investigate the features of World Class University as well as the challenges confronted toward establishing it. Finally, a proposed conceptual framework is presented. **Objective:** The selected statistical population of the research are Higher Education experts [N=40], and a mix methods of conducting a questionnaire and interviews are used. The research questions are: A- What are the features of the World-Class University? B- What are the challenges and obstacles in Iran Higher Education System towards having the World-Class University? C- What kind of framework can be proposed in order to promote the universities towards World-Class University? One-Sample Kolmogorov-Smirnov Test is used to analyze the data. **Results:** The result obtained in the study is to upgrade the present universities rather than either to create or merge.

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**INTRODUCTION**

University is defined an institution or center that has facilities for teaching and research and at least has the characteristics of education, research, services, international and electronic-learning, actually is a place based on a systematic view and its data includes capital, program, facilities, personnel and students. University derivation includes teaching, research, and ultimately produces expert and skilled human resources in various fields for the society. Based on the higher education goals, promoting the knowledge level and inventing new knowledge, transferring the knowledge and training human resources are the most important goals of education. So, the function of education is to train the human resources based on the qualitative aspects of education and research.

Very few studies and researches investigate the subject of World Class Universities and as far as the researcher searched, has not find similar research about the establishment of World class universities in Iran. According to Altbakh necessarily any country should have a world class university in order to play its role in the world. Although all the universities cannot win a Nobel Prize, but students can use its knowledge and publish it nationally. Applied research in this article contains updated resources and articles of higher education in this field of higher education experts and using higher education experts’ comments, are in order to propose a conceptual framework for achieving a World Class University. Having a World Class University is everyone wishes and requires national, collective, and programmed efforts [1].

**Research Objectives:**

A: Study features of the World class University
B: Propose the mechanism of transferring Iranian universities to world class universities
C: Investigating the existing challenges and obstacles in the country in order to achieve world class universities

**Research questions:**

A: What are the features of World class University?
B: How and by which mechanisms Iranian universities could upgrade to World class University?
C: What are the existing challenges and obstacles in the country in order to achieve World class University?
Literature review:

The goal of establishment and changing the university to world Class University in the modern world is compete in the universal knowledge economy and also training productive human resources and promote national development. In this section we define the concept of university in world class and their features and characteristics.

Define the concept of the world class university and their characteristics:

According to Rhee World Class University is a university that has an excellent academic program, a strong tradition of academic research, the preservation of scientific freedom, independent intellectualty, good governance, cultural tolerance and diversity [2].

According to Altbach a big theorist in higher education field, the concept of university is collective, comparative, vague and developing world class. While the concept of a world class university is somewhat vague and unclear, therefore; the following definitions are presented [1].

According to Altbach World Class Universities means ranking among the best international universities in the world with the best standards [1]. Experts agree that the world class universities have the high rank of classification. In fact, high ranked universities are entering a world class university classification. In the meantime it is worth mentioning that many researchers communicate about world Class University and ranking, but all the researchers have not agreement. Therefore, the expert agreed that the ranking system of universities and world class universities are signals of the universities’ quality upgrade. In addition, he mention, focus on academic and students’ talents, excellence in research, attract and retain the best employees with good working conditions, academic freedom and intellectual milieu, self- control, significant budget, strategic vision and good governance as the main indexes of this type of universities.

Ramakrishna consider world class university with 7 basic elements: 1: having international curriculum. Step 2: increase the student exchange. 3: increase the international students’ registration. 4: emphasize on the improvement of faculty and professors’ communication. 5: use information technology. 6: support the cooperation with foreign institutions to strengthen. 7: progress in the international development process [3].

Based on the comments world class university has 3 main roles and in fact excellence in the same University functions is considered: 1: excellence in the education and research 2: Developing and broadcasting of knowledge 3: Pursuit cultural and scientific activities and social and civil life [3]

Three main and common strategies in order to achieve World Class University based on Altbach P. & Salmi 1: competitive financing programs 2: internationalization 3: Governance Reform [Administrational] [4].

Features and characteristics of world class university:

Feature and characteristic of World Class University as well as this definition has not absolute objectivity to evaluate it with a detailed index. Collins considers the three main indexes of World Class Public University dedicated to scientific, transparency [5], accountability and budgetary affairs as adequate.

Li, Whalley, Zhang, & Zhao also consider four features as main factors in achieving World Class University [6]:

A: Commitment to excellence in all university areas [theoretically is easy, but practically it is very difficult]

B: Participation in the latest and most advanced researches and regarding education, powerful and meaningful communication between education and research.

C: Researchers’ freedom

D: They have permeable borders. This kind of university view is beyond the borders. Cooperate with the industry through open interdisciplinary of education and research.

Salmi [2011] said: we could increase research quality with the appropriate vision and governance of the universities. [11 universities have achieved this issue in a short period and are: Universities of Science and Research of Hong Kong, China-Shanghai, Universities of Science and Research of Korea-Pohang, National University of Singapore, Technology University of India, Nigeria-Idaban, Mexico-Monterrey, Economic School of Russia and Chile University]. Also he considers the success of the East Asian Universities due to focus on students and international personnel [4].

Sharma in a study titled: How to build a world class university? In this research, World Class Universities have three main characteristics. The first feature is the focus on talent. In fact, poorness or richness, smallness or largeness of the countries is not important. The second feature is the high cost of this type of university. In fact, the establishment of a World Class University cost millions of dollars. Saudi Arabia in 2007 was spent ten billions of dollars to establish Research University of graduate studies. Pakistan for establishing new universities of engineering, science and technology allocated a budget of 750 million dollars for each one and establishing Qatar university of Cornell Medical School cost 750 million dollars. The third feature is key and important elements such as competitive environment, unlimited scientific research, scientific freedom, creative thinking, innovation and creativity, academic independence and high flexibility, and removing the cumbersome
rules. For example, China due to investment in this sector, despite the limit access to the internet and low scientific freedom has achieved his goal which is alignment with world Class University [7].

Kerr about academic freedom said: there are four kinds of freedom and this freedom is essential for world Class University. 1: Freedom in creativity and innovation 2: Freedom in order to get rid of bureaucracy and unnecessary limitation 3: Freedom from arbitrary decisions of financing 4: Freedom with partners [8].

Provide conceptual framework and transfer mechanisms:

Regarding the provision of higher education infrastructure in order to upgrade the universities to World Class Universities, three main mechanisms according to comparative and universal studies and the experiences of the researcher offered as follows and among this three mechanisms, upgrading and transforming is prior.

![Fig. 1](https://via.placeholder.com/150)

1. The stage of promotion and upgrading:

   In this mechanism, all the indexes, standards, norms and rules, collected based on comparative studies and has been passed through all philosophical, social, cultural, political filtering. So to upgrading the current systems of Iran traditional universities by action plan, for example in a five-year period, in the sixth program of cultural and economical development of the Islamic Republic of Iran, we will provide a gradual upgrading in universities. In this process, all instructions, guidance, executive regulations and their related rules are prepared, designed and implemented. Usually the process of promotion and upgrading takes two or three decades depended on multitude focus on the talents and financial resources able to consider and govern and dominate the independence and academic freedom from the very beginning [7].

2. Stage of combination and merging:

   Combination and merging of existed universities in a new integrated system is done by Joint Ventures and integration. However, in this mechanism, departments, colleges, various educational departments of universities in order to obtain world class are merged, participate and combined. Salmi [2009], consider profitable partnerships with reputable and prestigious universities of the world through joint programs of issuing documents, participation in research and academic consortium as the characteristics of this type of universities [9].

3. Stage of creating and establishing:

   According to Sharma about the establishment of a world class university; generally establishment done faster and more efficient than upgrading. In fact, indexes, standards, software, and programs are specified in a period transparently and within the manner. In this mechanism, two major action must done: 1: design university according to world class in order to explain the elements, objectives, comprehensive plan and road map with the international standards.2: the execution and development stage and at this stage, in a maximum of two to five years, executive fields will provided and University implemented its programs according to international standards.

Research method:

Tools and methods of data collection:

Researcher based on the library studies, reviews the latest organized science and used mix method of qualitative method by means of semi-organized interview and also quantitative method through questionnaire tools. In order to achieve the research objectives, a questionnaire consisted of closed and open questions were used. This questionnaire includes three main parts. First part assess necessity and proportionality of Iran universities with the World Class University, then in the second part, assess the existed challenges and barriers in two steps and in the third part assess presented mechanisms. Answers of the questions ranked by Likert rating scale.
Validity and reliability of the questionnaire:

One of the applied tools in the research is questionnaire. It should be noted that the obvious content validity of the questionnaire were provided through studying the researches and literature of world class areas. The logical validity and also reliability and validity of the conceptual framework questionnaire after studying and investigating was delivered to a number of faculty experts of higher education and their corrective comments took into consideration. Reliability shows the correctness and accuracy rate of collected data for the stability and repeatability. The test reliability according to Cronbach’s Alpha test was 89%.

Statistical sample and sampling method:

Researcher partake of the experts’ views in the field of higher education, educational administration, strategic management, business management, information technology professionals [statistical population N = 40] randomly in the best university of Tehran.

Method of performing research and data analysis:

The researcher after proposing the suggested framework based on literature review; a questionnaire and semi-organized interview was prepared and distributed among 40 experts. Totally, all of whom were interested and agreed to universities’ transformation. However, consider this act as very difficult and mostly believed in universities’ promotion.

In the present study, the quantitative methods are used to present the data analyze results. In order to analyze the questionnaire data; SPSS software by one-dimensional Kolmogorov–Smirnov test [K - S] is used.

Research adding up and findings:

The findings of question A: based on the findings of question A we reach to the common point in which 18 elements form World Class University and considering characteristics of existing universities in the country and objective and theoretical experiences, there is distance and gap between the depth of universal and current country components. Thus the findings of this study can serve as a map and guide for designing and plan of university system according to international standards for the country. This components and dimensions are as follows:


Cooperation with foreign institutions, industry and the community

The findings of question B: according to the obtained results and because Z amount of Kolmogorov–Smirnov is between 1.96 to -1.96, the community distribution is normal and because the average of 3.6 is obtained, therefore, by polling we conclude higher education experts believe that the universities in the country is a difference with international standards.

Considering the existed findings about the obstacles, indicative some realities. The important barriers are: language, research, infrastructure and these barriers are considered as the main barriers and how and how to turn barriers into opportunities.

Language: the language requires gradual work and its problem institutionalize by education and cultural act.

To solve this problem, also requires extended act in elementary and secondary schools.

Research: the facts show research among the distinguishing characteristic of the World Class University. Although, fundamental tasks have been done about research, however, in order to institutionalizing the research in the country universities, it needs to commercialize in the real world of industry, service and agriculture. In the process, universities should take their programs toward basic and applied research and beyond the borders.

The infrastructure: a look into the country's infrastructures, even public universities and private universities shows revision and reinvest and use technology in a broad level and its culture and literature should pave the way for university way in this field. So in order to disarm this phenomenon requires careful planning and not a daily program. In this process, also special attention must be aimed to other barriers and draw and predict transfer mechanisms from the unfavorable situation to favorable situation and support the disarm.

Polling frequency indicates: generally 26 individual in response to questions had agree, 12 individual agreed completely and 2 individual have no comment. No experts disagree or strongly disagree.

The findings of question c: after presenting the conceptual framework and mechanisms [promotion and upgrading, combination and merging, creating and establishing] and according the empirical results of the polling N = 40 and also cultures characteristics, in the first stage, 87% of experts were consentient, believe and
agree about universities upgrading. In the second stage, 76% agree on university combining and emerging and in the third stage, 73% due to the extremely high cost agree on the establishment and creation of universities.

Chart 2:

Research results:

The findings’ results of the research expressed are in response to three main questions.

A: what are the features of World Class University?

Based on the literature review of research, this university characteristics, emphasizes on the following issues: quality of education, quality of research, scientific referencing and citation, international outlook of university including personnel, students and masters with diverse backgrounds and nationalities, income and innovation, in the students educational period, clear strategic vision, strong management team, responsive curriculum to the latest need of society, a strong institutional commitment to researches’ subject, considerable financial resources, and culture of continuous improvement.

Moreover, in general, the features and characteristics of world-class university summarized in Focus on the talents, the high cost of university, high level of research activities, competitive admission of students, international masters, multilingualism, international students, high rating and ranking, publications and references, universal learning resources, innovation and creativity, practical freedom and independence.

B: What are the existing challenges and obstacles in the country in order to achieve World Class University?

The findings of the research are according to Altbach P. & Salmi and confirm their opinion in which express the challenges to achieve world class university as academic independence, university governance, academic accountability, funding, improve the research Excellence and access and affordability. Also according to research findings, focusing and considering the talents, considering the research and using technology of particular importance. Salmi [2011], also regard reputation and reliability as the basis and foundation of international university and quality indexes of faculty, research appetite, attract and retain talented undergraduate students, different science, using smart technology and good management as important factors [4].

C: How and by which mechanisms Iranian universities could upgrade to World Class University?

Approved framework can act as charter and guide to fulfill one of the country's aspirations of higher education that is creating the world class university which express the intelligence, talent, puberty and the capacity of the educational system of the country in world class. This process requires considering to three main components of the 18 components in creating a World Class University. In addition to considering these components, the implementation stages also require special attention. We learned that the aspirations create realities. Thus, this framework can be used as a guide for the university creation. While the promotion and upgrading of the existed university to create the World Class University consider as the appropriate mechanism in higher education system, we suggest to select a talented university among existing universities in the country, a university in medical sector, a university in the public sector and a university in the free section and also a private university that represent the four World Class University ideas.

This framework was approved by 80% of the fitness coefficient. Applying this framework will require implementation stages. Therefore, this framework prepared for implementation. [See Figure 3.]

**Applied suggestions and recommendations:**

1: Specially regard World Class University [18 components] and the voluntary university, in case of holding universal authentication, strengthen these elements in their structure.

2: Among medical universities that their characteristics are closer to the universal characteristics implemented the necessary infrastructure of World Class University.

3: Select universities among public universities [Tehran, Sharif University of Technology], among free universities and among private universities and nonprofit and implemented the necessary infrastructure of World Class University.
4: With regard to the three main barriers of creating world class universities, reduce the existed barriers by culture-building and the media and upgrade them to new opportunities. Moreover, by using international experiences, promote universal graduates and citizens knowledge. By providing barriers’ disarm and by mechanisms such as training workshops and seminars, national media create a common language and eliminate the obstacles.

5: In order to generalizing, it is suggested to scrutiny, revise and improve this framework in wider level.

Chart 3:

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