

Studying Implication of Globalization on Engineering Education

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Abstract—The primary purpose of this article is an attempt to find the implication of globalization on education. Globalization has an important role as a process in the economical, political, cultural and technological dimensions in the life of the contemporary human being and has been affected by it. Education has its effects in this procedure and while influencing it through educating global citizens having universal human features and characteristics, has been influenced by this phenomenon too. Nowadays, the role of education is not just to develop in the students the knowledge and skills necessary for the new kinds of jobs. If education wants to help students be prepared of the new global society, it has to make them engaged productive and critical citizens for the global era, so that they can reflect about their roles as key actors in a dynamic often uneven, matrix of economic and cultural exchanges. If education wants to reinforce and raise the national identity, the value system and the children and teenagers, it should make them ready for living in the global era of this century. The used method in this research is documentary and analyzing the documents. Studies in this field show globalization has influences on the processes of the production, distribution and consuming of knowledge. The happening of this event in the information era has not only provide the necessary opportunities for the exchanges of education worldwide but also has privileges for the developing countries which enables them to strengthen educational bases of their society and have an important step toward their future.

Keywords—Globalization, Education, global era

I. INTRODUCTION

IF we closely observe the world's progression for a few decades, we find everything is quite changed, if not drastically. Since changes are found in all domains, it affects the educational domain also. In the present age, education is not bounded in a particular locus as it was seen in earlier. Now education is available on the doorsteps, rigidity in earlier education became flexibility; the educational degree can be achieved while at work. All these happen due to the

globalization effects. It is the globalization which empowers people to think in a rational and wider way, to see for a larger benefits, to use technology to do their task more efficiently, effectively, comfortable, and quickly [1]. Every aspect of life in the contemporary or future world is more or less influenced by Globalization and for stepping in the process of globalization it is necessary to decrease the efficiency and sufficiency of the education system and the learners in confronting the challenge and crisis of globalization and revise the factors of the education system. The important point is that we are guided to a deadlock by following the way for arriving to more standard, cohesive, concentrated and legislated structures. In other words the way of the future is not the current one and it should be changed (Saeed shabanlu,2008). Globalization creates new ideas, values, identities, practices, and movements. In the globalization era, the world is becoming a more independent place in which people have a better chance of discovering their common humanity. Hence, it is viewed that globalization is a progressive transformation of social structures (Sethy, 2008).

II. EDUCATION IN THE CHANGING WORLD

Education as a public mean and necessary strategy for all educational levels and an infrastructure for research, innovation and creativity should be included among the responsibilities and economical support of the governments, as insisted on in the Global Act of the Human Rights that "the moment of society should have equal access to higher education according to their adequacy" (Clause26,Paragraph1). The present recession increases the gap for equal accessing to qualitative education between the developed and developing countries and even inside the countries and makes more challenges in those countries which accessing to education is limited. Investment in education to this amount in establishing a comprehensive and varied science-oriented society and progressing research, innovation and creativity has not been given such an importance at any period of time. The previous decade is an evidence that education and research were two partners in poverty eradication, sustainable development and moving ahead toward accessing the accepted goals of development at an international level including MDGs and EFA The universal guide direction of education should reveal such realities (UNESCO, 2009). In a globalized society education plays a vital role for bringing any changes or modifications. The new changes or modifications are mostly caused by ICTs. ICTs welcome majority of the learner across the border irrespective of caste, creed, race, sex, and age. It provides information with a lesser time, help learners to complete their course successfully and effectively. [1]

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III. EFFECTS OF GLOBALIZATION ON THE STRUCTURES OF EDUCATION

Education as a part of whole is also influenced by the latest globalization and modernization process. The structure of education is affected by a process which according to space diffusion theory of Hagerstrand its center is in the northern countries. This process is introducing neo-liberalism in the structure of education of the countries affected by globalization are creativity, innovation, school orientation, collaboration, etc. it should not be forgotten the public thought just like the other parts prefer a structure which is based on the western democracy principles and bases and they think it's the best sample for the space era. They structures which were based on the centralizations of modern government and the bureaucratic education previously has changed into a local and nativized structure of the post modern era which try make the small structures global through globalization. This school for progressing and advancing the universal civil society or the network society finds the better sample in school orientation, collaboration from the down respecting the people creativity and mentality which centralization. In addition some cases such as educational privatization, reduction of public schools and entering of facilities and modern equipments to school, remind the globalization of economy and capitalist economy [12].

We are living in an ever-changing world. New findings are generated and become established at breathtaking speed. To move hand in hand with this technology oriented globalized world we have to search for an atmosphere where most of the outcomes are caused by technology. Education is one of the prominent domains where advanced technologies are used. The term 'education' here should not be confused as discipline rather it should be understood as a whole which provides space to incorporate all the possible ways of learning. What education means and what it should comprise in a globalized world? A simple answer may be, a good education system should set out to achieve the highest goal and will be defined as the process of acquiring and developing knowledge.(Sethy, 2008)

IV. IMPLICATIONS OF GLOBALIZATION ON EDUCATIONAL NEEDS

International scope is not totally absent from current education systems. For example, at university level, and especially in the areas of science, technology and research, the flow of foreign students has not ceased growing over the past three decades. It is estimated today at over a million individuals. All the same, in most cases, the teaching provided does not meet the new demands being created by globalization. To meet the challenges of globalization, it would in fact appear necessary to prepare individuals for a workplace where responsibilities are constantly changing, where vertical management is replaced by networking, where information passes through multiple and informal channels, where initiative-taking is more important than obedience, and where strategies are especially complex because of the expansion of markets beyond national borders. Therefore, education must help individuals to perform tasks for which they were not originally trained, to prepare for a non-linear

career path, to improve their team skills, to use information independently, to develop their capacity for improvisation as well as their creativity, and finally to lay the basis of complex thinking linked to the harsh realities of practical life (Poisson,1998). Globalization may therefore benefit university graduates only in *relative* terms, but the implications for general educational investment strategies are the same as if university graduates' incomes were rising more rapidly than incomes of those young people with less schooling. By increasing the *relative* demand for university graduates more rapidly than universities can expand their supply, globalization puts continuous pressure on the educational system to expand. [7]

The potential implications of globalization for higher education are many and diverse. This paper intentionally addresses specific elements of globalization; namely, the growing importance of the knowledge society/economy, the development of new trade agreements that cover trade in education services, innovations related to information and communication technologies (ICTs), with emphasis on the role of the market and the market economy. These developments have important implications for higher education in terms of quality, access, diversity and funding. The impact of globalization on other aspects of education such as research and knowledge production, governance, reform, intellectual property and academic freedom, while acknowledged, is outside the scope of this paper. Globalization is a theme that is at the centre of debate by education policymakers, scholars, professionals and practitioners worldwide. It is a concept that provokes intense debate and examination. The discussion, in terms of the nature, causes, elements, consequences and implications of globalization is prolific, rather controversial and very important (UNESCO,2004). It is impossible to discuss the impact of globalization on higher education without referring to the internationalization of higher education. These two terms are often mistakenly used interchangeably. In this paper, globalization is presented as a phenomenon which is having an impact on higher education and internationalization is interpreted as one of the ways in which higher education is responding to the opportunities and challenges of globalization. Internationalization includes a broad range of elements such as curriculum, teaching/learning, research, institutional agreements, student/faculty mobility, development cooperation and many more.³ However, the clear focus of this paper is on globalization as a complex phenomenon with multiple implications for higher education, and only one aspect of internationalization, that of crossborder education, is discussed.(UNESCO,2003)

In the context of globalization and knowledge economies, higher education in its knowledge producing and disseminating function, is recognized as an essential driving force for national development in both developed and developing countries. At the same time, in its universality and international dimensions, higher education can be seen as both an actor and reactor to the phenomenon of globalization.(UNESCO2003)Globalization in its several forms--economic, political, and cultural--has had major impacts on education. It has required a rethinking of education's purpose, structure, content and pedagogy, methods of delivery and assessment of

outcomes. [5-14]The need to expand educational opportunities to meet the social demands for more education and the economic demands of the global economy for better-educated workers means that governments need to increase their expenditures on education. Yet, in many developing countries, and especially in fragile states in Africa, additional public funds for education are in short supply.(Millar,2008). The global knowledge economy requires, and rewards, those who are better educated and more skilled. Thus, there is pressure to increase the average level of education in the labor force which, in developing countries, means expanding both secondary and tertiary educational opportunities. "The need for different societies to compete in a world where knowledge is a principal currency has turned the organization and purpose of education systems into key factors for relative competitiveness" [15].

V. WHY DOES GLOBALIZATION INCREASE THE DEMAND FOR EDUCATION AND FOR EDUCATIONAL QUALITY?

In the past fifty years, most countries have undergone rapid expansion of their primary and secondary education systems. This is not universally true. But thanks to a generalized ideology that basic education should be available to children as a right, even financial constraints in many debt-ridden countries, such as those in Latin America, did not prevent them from increasing access to basic and even secondary education. The answer lies in two parts. The first is economic: rising payoffs to higher education in a global, science based, knowledge intensive economy make university training more of a "necessity" to get "good" jobs. This, in turn, changes the stakes at lower levels of schooling, and drastically changes the function of secondary school. The second part is socio-political: demographics (the changing family) and democratic ideals increase pressure on universities to provide access to groups that traditionally have not attended university.[7]

VI. CONCLUSION

It seems that globalization raises a global competition among the learners and their application towards the global market principle, where large segment of population are involved for acquiring the knowledge and keep themselves update with the time and space. It also encourages the minority to come out from the bondage and enjoy their rights/liberty (Sethy, 2008). Education and globalization seem to be more intricately related to each other. On the one hand, globalization impacts education, on the other education facilitates globalization. Such relationships vary among countries depending upon their level of development. Whereas developed countries derive significant benefit out of globalization, developing countries perceive it as a significant thrust for out-flow of resources and increasing gap between the developed and developing countries. Globalization is raising the stake in terms of opportunities for poverty reduction and the potential cost of policy mistakes. The potential effects of globalization are many and far-reaching, due to this unparalleled scale and nature. It has major connotation for regional and national economies, which, in turn, affect economic growth prospective, resources available, work requirements and the role of the Government. It has therefore major consequences for the development of

education systems, which have not been fully assessed. More specifically, there is an urgent need to debate on the Impact of Globalization on educational inequalities and work for the suitable policies and plan to reduce inequalities. In this situation, the role of educationist is to raise their voice through this kind of forums to help the policy makers and administrators to protect the equity and equality issues in education. Education needs to be protected not only with a human face but also with a human spirit. In response to globalization, institutions of education, national governments, and regional and international organizations are placing greater priority on the international dimension of education. Doing so helps the sector respond to some of the challenges that globalization creates (Wit.et al,2005). Globalization has increased interactions one-on-one and also via ICT which, in turn, has increased opportunities for learning from diverse sources and with diverse content outside of traditional education programs. The need to expand educational opportunities to meet the social demands for more education and the economic demands of the global economy for better-educated workers means that governments need to increase their expenditures on education.(Millar,2008) Globalization's impact on education is generally cast in terms of educational reforms. Carnoy identified three broad types of reforms driven, respectively, by competition, finance, and equity concerns, which are not mutually exclusive. Competition-driven reforms "aim primarily to improve economic productivity by improving the 'quality of labor'" and of educational institutions. Such reforms include decentralization, the introduction of achievement standards, the improved management of educational resources, improved teacher recruitment and training and changes in the curriculum and pedagogy aimed at improved educational quality and relevance (Carnoy, 1999).

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