



Impact of information and communication technology on higher education in Afghanistan

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Abstract

Our beloved country Afghanistan is suffering since last three decades through home war, politician, economic and educational difficulties which has mainly affected the educational systems and keep us away in term of development of ICT in higher education in Afghanistan. According to MoHE (2010) it is stated that, since last decade we have great ICT achievements in higher education, the internal donor and government of Afghanistan have special consideration in ICT sector in higher education to bring many changes in educational system as well as the quality of teaching and learning in higher education in Afghanistan.

This paper is prepared on the impact of information and communication technology on higher education in Afghanistan. Information and communication technology is dramatically expanding all over the world. This has significance result to education sector and extension of educational opportunities, for the people all over the world. As well as I will look for the impact of ICT on higher education and how ICT plays a typical role on higher education in Afghanistan.

ICT is the only source which improves the exchange of electronic communication and help to dynamic the education institution system, which will help in fast transaction of information, document delivery, document process and hindering corruption in higher education. The use of ICT is the need to bring changes in higher education system.

With the existence of security threats and ongoing war in Afghanistan which has hinderd the development of information and communication technology. However, ministry of higher education has made good achievements. Almost from one and half decade MoHE in Afghanistan and all relevant higher education universities most of the educational, administrative and communication activities were performed manually through paper work. But recently ministry of higher education is trying to adopt ICT in education, which has brought many changes in ministry of higher education.

Keywords: ICT, higher education and Afghanistan

1. Introduction

In modern age there are many advantages of ICT which has dramatically changed human lives in term of education, access to education and increase in number of student's graduations. As well as for the development of a country it is important to have powerful and well organized information and communication technology system in higher education, therefore the development of economic and societies of a country can be strengthen by their well educated citizen. According to chitnis (2017) ^[1] that, Finland, Norway, Belgium and Korea are the well-organized countries that have considered and amplified efficiency in ICT sector. This consideration have increased efficiency in ICT sector and improved their educational output. Typically information and communication technology have great impact on the development and improvement of educational objectives, in this age of information and communication technology implementation of ICT in higher education have potential effect on students to perform well, increase their knowledge, skills and to maximize their learning style. This study shows that the existence and usage of ICT have good effect in the improvement of knowledge and learning process of students in higher education.

Years of oppositions in Afghanistan have destroyed the higher education systems and universities in all provinces of Afghanistan, ICT infrastructures and internet machinery stations were ruined. But since one and half decade Afghanistan is promoting in term of ICT and have most ICT centres in higher educational institutions which have

thousands of students with quality education. Nevertheless, international donors and MoHE have special consideration on ICT projects and implementation of ICT in educational institutions in all provinces of Afghanistan but still some ICT projects are not benefited and some are faced with failure. As (Sigar, 2016) ^[4] points out that, United States agency have invested \$2.6 billion in ICT division in MoHE and MCIT in Afghanistan but still the quantity of activities are anonymous. It means most of the ICT projects are failed and have no durable outcome for the people and government of Afghanistan.

Implementation of ICT in most of the government organization have brought many useful changes and maintained a strong relationship between government and the people of Afghanistan. The good model is the existence of internet and telecommunication services in educational institutions in Afghanistan which have a significance impact on modern societies as well. On the other hand most of the government universities are equipped with ICT centres with means of availability and access to internet to increase the quality of teaching and learning in higher education in Afghanistan.

In this study we will have demonstration on impact of ICT in ministry of higher education and in higher educational universities using the qualitative method to identify the effectiveness and improvement of information and communication technology. As well as the empirical work, importance of ICT and the main ICT projects which has brought the educational access opportunities for the people

of Afghanistan in higher education. Access to education has brought many improvements in teaching and learning which has increased the access to education in rural and urban areas of Afghanistan.

2. Material and Methods

The method is library research (review paper) which is used to collect the data from update books, articles and reports. As well as to have update information about ICT centres in Afghanistan chairman of information technology in higher education shared update information regarding ICT centre in different public universities in Afghanistan.

3. Literature Review

Implementation of ICT projects play a vital role in higher education because this information and communication technology has strengthen the teaching and learning style in all over the world this technology enhanced the economic and education of countries with international standards. Farrell, (2007) ^[2] reported that the key factors that influence the implementation and diffusion of ICT in education in many studies and project reports such as the UNESCO survey on the Use of Technologies in Asia and Pacific. In the development and implementation of ICT in Uganda they have benefited this research and figured the factors influenced ICT adoption in education in Uganda. Some of the factors are mentioned below.

- Establishment of new policies for ICT in education and implementation under a certain plan nationwide.
- The national plan authority and ministry of ICT strongly advocate developing, supporting and implementing ICT policies in education in Uganda.
- Availability and access to ICT resources are quickly improving in urban areas.
- Awareness of ICT in higher education in Uganda and delivery of training has been increased.
- The importance of ICT on nationwide in Uganda has been maximized for the implementation of ICT in education.

The study of (Lal & Paul, 2013) ^[3] on the impact of ICT on higher education shows that slow diffusion of ICT in higher education in rural India has been due to lack of ICT infrastructure and lack of awareness of faculty have also been reason for minor use of ICT in teaching. The study literature evidence suggested that there is a continue need for faculty up gradation programs and students need to be educated about ICT and its resources.

Since 2001 the government of Afghanistan has notable progress in rebuilding the ICT infrastructure, economy growth and strengthening educational institutions. Information and communication technology as enhance the teaching and learning style in higher education, increase in number of students in universities and dramatic change in establishing the number of government universities are the main key points to be considered. Nevertheless, it has a positive effect on the growth of economy of a country and gives the opportunity to the people to have easy access to education.

According to (Oliver, 2002) ^[5] states that, as technology influence and support the teaching and learning process in schools and universities and change the way students are learning. And integration of ICT moves teacher centre to student centre learning and encourage pupils to take

responsibility for their own learning more comfortably. As well as integration and use of ICT in education as instructional medium is changing many strategies employed by teachers and pupils in the learning process.

4. Importance of ICT in Education

As information and communication technology has brought many changes and developed education sector in all over the world. Most of the higher educational institutions, societies, cultures, business and economics are being developed, this development compelled us to run as where they are and benefit the ICT in higher education to maximize the level of teaching and learning to deliver the quality education. Most of the universities lecturers do not employ the use of ICT in teaching some reasons might be that they are unfamiliar with ICT resources or unfamiliar with use of ICT resources. Before importance of ICT in education it is important to understand ICT. Meenakshi (2013) point out that, ICT stand for information and communication technology which include computer, internet and telecommunication resources. The uses of ICT are increased worldwide in education; she believed that ICT can strengthen teachers and learners with strong contribution to learning achievements. Teachers review on the usefulness of ICT in education also point out that introduction and use of ICT are tremendously effective in children learning and achievement.

There was not any progress in last few decades in Afghanistan about the use and presence of information and communication technology for communication services; they only benefited satellite for communication. But now a day's ICT is developed and the usage of smart phones, powerful computers and internet dramatically increased. Nevertheless seeing great changes in higher education and most of the government universities are well utilized the information and communication technology in teaching, learning and research purposes for evidence we can model the Kabul University and Kabul Medical University.

5. Impact of ICT on Higher Education

Information and communication technology is the most powerful tool for the development and promotion of different organizations in a country including economic growth; poverty reduction and increase job opportunities as well as maximize the quality basic and higher education. As (Chitnis, 2017) ^[1] stated that, ICT has a great impact on the education sector and seeing a great change in teaching and learning methods, some countries have integrated ICT into their curriculum and demonstrated high impact and effectiveness in supporting teaching and learning processes. As well as e-learning gives the opportunities to access learning and increase in number of students graduation. The use of information and communication technology in education means to promote creativity, quality and create more efficient learners and problem solvers.

It shows that, the use of ICT in higher education has constructive impact on student's achievement, impact on teaching process and complements the teacher's instructions. As well as enhance the learning process and motivate both teachers and students for learning.

According to (Oliver, 2002) ^[5], the impact of ICT since last three decades has been massive. The integration of ICT in higher education changed the traditional teaching process which has emphasized on content. Information and communication technology has the power to advance,

encourage and renovate the education from teacher centered to student centered learning

6. Achievements and Development in ICT in Higher Education in Afghanistan

The fast development of information and communication technology has maximized and encouraged the amount of students to join higher educational institutions. The aim of this study is to identify the impact and effect of ICT in higher education as well as to identify the projects support the higher education in term of ICT. As (Mire, 2011) points out that information and communication technology are manipulating all aspects of human life. Information and communication technology not only play a major function in education but apparently playing an important role in business, education, economic and development of telecommunication services. ICT work as a change agent, change working environment, helps in exchanging information it has change the teaching and learning methodologies and plays a significant role in accessing information.

Reports in 2018 from ministry of higher education department of information technology have indicated some major achievements in MoHE including ICT which are mentioned below:

- Introduction of more than 155 lecturers for master programs in Afghanistan.
- Introduction of more than 500 lecturers for master programs to Malaysia, India, Russia, Turkey, France, Germany, America, China, Iran, Thailand etc.
- Development and improvement in six different curriculums based on international standards.
- Connection of research and education network of Afghanistan with South Asian research and education network.
- Establishment and development of 4 creative centres, 5 Consulting centre, 11 quality assurance centre and 9 centre for the development of professors at different universities.
- Attainment membership of the EDX e-learning network.
- Arrangement and initiation the EDX online education program and online teaching and learning program through EDX for 22 lecturers in higher education with support of India.
- Implementation of e-learning program in 9 public universities in Afghanistan.
- For capacity building digital libraries are developed in different universities in Afghanistan.
- Standardized the competitive online scholarship exam.
- Creation of ICT centre and 10 equipped 10 public universities with IT labs.

Ministry of higher education developed many ICT projects in different educational institutions most of these projects are ICT centres, Solar systems for sustainable electricity, incensement in internet speed and connection of university for quality internet facilities with fiber cable.

Higher education development program (2018)^[6]. Operation and monitoring support team reports: ministry of higher education have achieved most of the goals in 2018 including abundance in student’s number, transparency in kankor exam, gender equality, implementation of outcome based education and student centered learning with a great and

dynamic changes and development in term of ICT in ministry of higher education and higher education universities. The universities which are well equipped and established with ICT centres are well summarized in the given table with relevant plan.

Table 1: HEDP ICT Centres establishment plan

Universities	2016	2017	2018	2019
Kabul Education Faculty				
Shaikh Zayed University				
Faryab University				
Ghazni University				
Paktia University				
Kunar University				
Takhar University				
Kabul Polytechnic University				
Kabul Medical University				
Baghlan University				
Bamyan University				
Alberoni University				
Badakhshan University				
Kunduz University				

It shows that information and communication technology is broadly diffused in higher education in Afghanistan. As well as the new policies and procedures in higher education trying to adopt in teaching and learning and gives the opportunities to lecturers to create new power point slides using computer and internet facilities in ICT centres instead of traditional lecture method. Using information and communication technology as computer, internet and projector has huge impact on motivation of students for learning.

7. Result and Discussion

To explore the impact of ICT in higher education in Afghanistan a library research is applied to collect the well analyzed and relevant data. This study explores the impact and effectiveness of ICT in higher education. The effectiveness and existence of ICT gives us the opportunities to access and adopt ICT in education for the improvement and development of organization, teaching and learning and to have interactive learning environment in higher education in Afghanistan.

The being combat in Afghanistan is a big challenge in Afghanistan which has mostly avoided the integration and implementation of ICT projects in education. To maximize the use and awareness of ICT in higher education ministry of higher education with the support of government of Afghanistan and international organization must recover and promote the ICT infrastructures to well demonstrate the impact of ICT in higher education in Afghanistan.

8. Conclusion

This study explores the impact of information and communication technology in higher education of Afghanistan. It shows that ICT has impacted the education institution in higher education and effectively influence the administration system, teaching and learning process in all higher institution in Afghanistan. The continued improvement in term of ICT in higher education in Afghanistan will bring considerable changes in teaching and learning in educational institutions. It seems the traditional

manual administration system, traditional teaching and learning methodologies and kankor examinations in higher education in Afghanistan will typically change to dynamic systems by the use of ICT.

9. Acknowledgement

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10. References

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