

# PERCEPTIONS OF AFGHANISTAN STUDENTS ON THE USE OF ONLINE TOOLS FOR LEARNING

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**Abstract - Online technology plays a significant role in higher education especially in assisting teaching and learning. In Afghanistan, to move towards student-centered and technology-driven learning, the Ministry of Higher Education (MoHE) encourages all universities to use technology to facilitate teaching and learning. This study, therefore, attempts to measure Afghanistan university students' perceptions of online tools utilization on their learning. A survey questionnaire was distributed to 217 students, and 35 of them volunteered to be interviewed. The results generally indicated positive perceptions of online tools utilization. However, participants believed that online tools are able to assist them develop surface learning better than deep learning. This is due to a number of barriers faced by the students, and universities in providing better learning experiences through technology. The findings suggest a need for trainings and constant exposure for both teachers and students for online tools to be effectively utilized to enhance learning.**

*Key words: Online tools, perceptions, learning.*

## I. INTRODUCTION

Technology as a global phenomenon is a significant part of our lives, and its use can support [1] and facilitate teaching and learning process [2]. Technology can improve teaching and learning, and assist teachers to consider and pay attention to different learning styles and intelligences of the students [3]. This indicates the numerous benefits of using technology in teaching and learning. In addition, [4] expressed that Internet technologies like e-mail, course websites, and news groups have a lot of benefits over conventional classroom knowledge delivery. Over the past few years, the increase of Internet technologies and web 2.0 has influenced higher education to enhance teaching and learning. It is therefore evident that with the help of web 2.0 students are able to access new information, socialize, and communicate globally, which contribute to the learning process [4].

## II. LITERATURE REVIEW

### A. Use of Technology in Afghanistan Higher Education

Technology is a significant tool which is being used in many parts of the world for teaching and learning process in higher education. The Ministry of Higher Education (MoHE) of Afghanistan encourages the use of technology for teaching and learning, and indicates that the future of teaching and learning should be more technologically driven. As a consequence, one of MoHE strategic planning is to work closely with private sectors to find out the advantages of technology, and then introduce them to the universities [5]. Based on MOHE strategic plan, it seems that technology as a tool can help facilitate teaching and learning process, and it is more advantageous than using the traditional approaches. As [6] stated in his thesis, that Afghanistan must apply modern and

new technology instead of conventional and traditional approaches in universities for better learning experiences.

### B. Importance of Technology in Education

The effects of using technology in education has been explored and investigated by a number of researchers in different fields. Many of the studies confirmed the effectiveness of technology in education. This indicates that technology support education is increasingly becoming an important part of higher education [7]. According to [2] teachers in the present days often explore and use technology to assist them in teaching and learning. [8] Indicated that technology can help human to solve problems, assist acquisition of knowledge, enable teachers to stimulate learning process, improve the quality of learning, and influence academic changes and process. He also added that e-learning technologies can empower learners to actively take part in the learning process and construct knowledge rather than just silently and passively sit and receive knowledge. This is emphasized in the constructivism theory of learning where technology-based learning should be conducted as student-centered in order for students to maximize the learning experience. In addition, technology is also being used to obtain resources, as well as transfer, and produce information. As [7] stated, over the last few decades, the integration of technology for teaching and learning has been a significant issue, and technology has played many roles such as to obtain resources, deliver and produce information.

### C. Web 2.0 Technologies in Education

Technology such as web 2.0 plays a significant role in education, and can assist teaching and learning process. According to [10], to construct new teaching and learning opportunities, web 2.0 has its capacity to provide opportunities for knowledge construction. Teachers can utilize web 2.0 tools to increase their own learning experiences as well as enhance their students'. These tools can assist students to collaborate and become creators of content rather than only consumers. There are thousands of web 2.0 applications with the capacity to assist teaching and learning, made easily accessible for students and educators. These tools include blogs, wikis, podcasts, and social networking sites. On the other hand, traditional teaching and learning methods where students are told what, when, where, and how to learn should be changed. Instead, knowledge should be actively created, and students should be persuaded to be responsible for their learning. As [11] stated that modern students use their ability to publish and share their ideas, thoughts, and knowledge in an interactive digital environment. For these and most of other reasons,

teachers should pay attention to the use of web 2.0, and try to integrate some of the applications into their teaching and learning. However, using technology for teaching and learning has both positive and negative outcomes. As [12] explained, there are a number of obvious advantages and disadvantages of using web 2.0 technologies in higher education. He listed the advantages which include reduction of costs, flexibility, easiness and quickness to obtain information, integration of different types of web 2.0 technologies for teaching and learning, broad opportunities for collaboration and sharing of information through interactive online tools, and creation of multimedia-based teaching and learning materials. Moreover, [12] added that Web 2.0 technologies allow people to collaborate, create content, share information, and generate information and knowledge online. On the contrary, the disadvantages are: limited internet access and special software such as JavaScript, low quality of creative and original words, and unlimited rules for students. Despite these disadvantages, studies have shown that with proper use, technology can be manipulated for better teaching and learning experiences [4].

#### *D. Use of Online Technology to Enhance Learning*

Technology can assist and enhance learning experiences. As [13] stated that technologies are cognitive tools which can support learners to enrich their thinking process and outputs. This can further lead them towards meaningful learning. It is important for learners to use technologies as intellectual cohorts in order to: a) communicate what they know, b) reproduce what they have achieved, c) support meaning negotiation, d) make their own meanings, and e) support thinking skills [3]. Several technologies support online learning. Such as: the web, online discussion groups, and online resources. The World Wide (www or the web) especially provides hypertext linked and multimedia capacity to simplify educational instruction. Web is a place where learners can publish and construct knowledge, and they can search information for better understanding. The web provides rich resources for learners to solve problems or make their own knowledge. Therefore, web 2.0 provides significant opportunities for learners to read and write with the use of blogs, wikis, and social networking sites.

### III. PURPOSE OF THE STUDY

This paper attempts to report a study which looked at the utilization of technology especially online tools. The purpose was to investigate Afghanistan students' perceptions of online tools utilization on their learning. The introduction of technology in Afghanistan education is rather new, and it is important to find how the students perceive about the changes in how they learn.

### IV. METHODOLOGY

A researcher-developed questionnaire was used as the main instrument of the study. To support the data from this questionnaire, semi-structured interview was conducted with a number of volunteered participants.

#### *A. Participants of the study*

Participants of the study were 217 tertiary students from four universities in Afghanistan which included Kabul University, Kabul Education University, American University of Afghanistan (AUAF), and Kateb University. Kabul University and Kabul Education University are public universities whereas AUAF and Kateb University are private universities.

87 of the participants were from Kabul University whereas 36 of them were from KEU. 75 of the participants were from Kateb University, and only 19 of them were from AUAF. 64.5% of the participants were male, and 35 % of them were female. Both public and private universities were chosen because it is well-known in Afghanistan that private universities are better equipped with current teaching and learning facilities. Therefore, it is essential to look at how students from both types of universities perceive on online tools utilization on learning.

#### *B. Research Instrument*

In this study, a survey questionnaire was developed based on Bloom's digital taxonomy. Five items were developed for each of the cognitive domain, and in total there are 30 items in the questionnaire. The questionnaire was piloted for its reliability and validity before it was used in the main data collection. The purpose of survey questionnaire was to find out the effects of using online tools on students' learning. To support the data from the questionnaire, a semi-structured interview was conducted with 35 volunteered participants.

#### *C. Procedure*

The study was carried out during the second semester in the months of September and October 2013 at the four universities. Permission was obtained from the university's authority before students were approached individually. Data was collected in the classroom, library and outside the class during the break time. Their consents were obtained before the questionnaire was administered. Students who agreed to be interviewed were interviewed a few days later, and this was done face to face. All interviews were recorded in Mp4. The data collection moved from the public universities to the private universities. The results from survey questionnaire were analyzed using statistic descriptive of mean scores and standard deviations, and the interview findings were transcribed and analyzed following the Bloom's digital taxonomy.

## V. RESULTS

#### *Survey questionnaire results*

The SPSS was used to find out the reliability of the survey questionnaire. The result of Cronbach's alpha was .911 which indicates that the survey questionnaire was valid and reliable. The findings from the survey questionnaire are presented in table 1.

**Table 1: Students' perception of using online tools on their learning**

Domain	Items	Mean	Std. Deviation
Remembering	Online tools help me to search the web for more information regarding the lesson	4.44	.864
	Online tools assist me to socialize with classmates	4.07	.868
	Online tools help me to select a topic for discussion	4.08	.864
	Online tools help me to give examples on other's information posted	4.18	.940
	Online tools help me to explain a topic on social network	4.04	.973
Understanding	Online tools assist me to define terms and concept	3.95	.926
	Online tools help me to state my opinions about a text posted.	4.05	.933
	Online tools help me to compare similarities and difference of information	3.59	1.028
	Online tools assist me to classify examples to others proposed task	3.98	1.014
Applying	Online tools assist me to match the given questions with answers	3.89	.997
	Online tools assist me to write and post my work	4.07	.969
	Online tools help me to edit an academic written works posted by others	4.04	.956
	Online tools help me to run an academic discussion related to the lesson	3.96	1.009
	Online tools assist me to carry out a survey related to the lesson	3.81	1.043
Analyzing	Online tools assist me to share my information about academic issue	3.75	1.099
	Online tools help me to reorganize the shared information in academic manner.	3.55	1.115
	Online tools assist me to mind-map my ideas into graphical form	3.99	1.032
	Online tools help me to ask questions related to the lesson	3.84	.889
Evaluating	Online tools assist me to discuss possible solutions to a problem	3.96	1.001
	Online tools help me to outline my ideas in a structured manner	3.77	1.076
	Online tools help me to moderate discussion in online forum	3.73	.974
	Online tools allow me to collaborate with friends on a given project	3.72	1.037
	Online tools help me provide constructive feedback and comments in blogs	3.93	1.007
Creating	Online tools help me to argue on how to apply a theory	3.73	1.055
	Online tools help me to defend my ideas that I have shared on wikis or blogs	3.67	1.127
	Online tools help me to design a weblog in order to discuss academic issues related to my studies	4.00	.976
	Online tools assist me to create multimedia presentation to present my ideas	4.06	.968
	Online tools help me produce YouTube video to share my ideas	3.75	1.123
	Online tools assist me to develop a discussion by adding more information and examples	3.93	1.025
	Online tools help me to criticize on other's ideas, and information	3.79	1.156

subsequent parts discuss the findings of Table 1 in detailed following the six sub domains of Bloom's digital taxonomy which are: remembering, understanding, applying, analyzing, evaluating, and creating.

*Remembering*

As shown in the table, the mean score for every item of this domain ranged from 4.04 to 4.44, with an overall mean score of 4.16. This indicates that participants strongly agreed that online tools are able to assist them retrieve knowledge from memory. In this domain, the item with the highest mean score is "online tools help me to search the web for more information regarding the lesson" (mean=4.44). On the other hand, the item with the lowest mean score is "online tools help me to explain a topic on social network" (mean=4.04). The mean scores for the other items range from 4.07 to 4.18, which generally indicate that participants agreed the use of online tools, are able to help them recall and retrieve information and knowledge either through socializing online with classmates, or describing information posted by others.

*Understanding*

As depicted in the table, the mean scores for each item of this domain range between 3.59 and 4.05, with an overall mean of 3.89. This shows that the participants agreed using online tools helped them to compare similarities and differences of information, to classify examples posted by others, and to construct meaning by doing different types of activities. The important item in this domain is "online tools help me to state my opinions about a text posted". On the contrary, the item with lowest mean score is "online tools help me to compare similarities and difference of information". The mean scores for the rest of items fall between 3.89 and 3.98 which indicates that the participants agreed using online tools help them to make meaning through summarizing, comparing, classifying, and searching information.

*Applying*

The table shows, the mean score for every item of this domain ranged from 3.75 to 4.07, with an overall mean of 3.92. This state that the participants agreed using online tools helped them to share information about academic issue, writ and post their work. The significant item in this domain is "online tools assist me to write and post my work". Whereas, item with the lowest mean score is "Online tools assist me to share my information about academic issue". Overall the participants agreed using online tools assists them to carry out or implement a technique to share, use, and edit information, and knowledge.

*Analyzing*

The table illustrates the mean score for each item of this domain start from 3.55 to 3.96, with an overall mean of 3.82. This illustrates that the participants agreed using online tools help them to break the learning materials, issue, and concepts into parts, relate the parts, organize and distinguish between different elements. The significant item in this domain is "online tools assist me to discuss possible solutions to a problem". On the other hand, the lowest item is "online tools help me to reorganize the shared information in academic manner". The mean score for the rest of items show that the participants generally agreed using online tools assist them to compare, organize, and to discuss information, and knowledge.

Students were asked to indicate their level of agreement or disagreement using 5-point Likert-type scale, regarding their use of online tools on learning. The mean score for every item ranged from 3.55 to 4.44, with an overall mean response of 3.91, which means that all students agreed on the positive effects of using online technology on their learning. The

### Evaluating

The table illustrates the mean scores for every item of this domain ranged from 3.67 to 3.93, with an overall mean of 3.75. This indicates that the participants agreed using online tools help them to collaborate, moderate discussion, and give comments on shared information, experience, and knowledge. In this domain, the items with the highest mean score is "online tools help me provide constructive feedback and comments in blogs". On the other hand, the item with the lowest mean score is "online tools help me to defend my ideas that I have shared on wikis or blogs". The rest of mean score of each item indicates that the participants overall agreed using online tools help them to have a collaborative learning where they can judge the shared information, and knowledge by discussing, and giving comments.

### Creating

As table shows, the mean score for each item of this domain is ranged between 3.75 and 4.06, with an overall mean of 3.9. This shows that the participants agreed using online tools support, and assist them to put the elements, and concepts together to make a better, and coherent; reorganize the new concepts, elements by generating, and producing. The significant mean score for this domain is "online tools assist me to create multimedia presentation to present my ideas". On the contrary, the item with the lowest mean score is "online tools help me produce YouTube video to share my ideas". Generally the participants agreed using online tools helped them to design weblog to discuss academic issues. They also agreed using online tools helped them to produce new information, learning experience, and knowledge. Therefore, the findings have so far indicated that students are positive on the effects of using online tools in assisting in their learning especially the surface learning.

### A. Interview results

In addition to quantitative survey, a semi structured interview was carried out with 35 volunteered participants to get a better picture and understanding from the participants on the effects of using online tools on learning. The interview data were coded based on the following coding: S-Student: 1-student's number: KEU- Referring to the university they belong. Therefore, S1KEU refers to student 1 from Kabul Education University; S2KU refers to student 2 from Kabul University, S3AUAF refers to student 3 from American University of Afghanistan, S4KAU refers to student 4 from Kateb University, and so forth.

The interview data are significant and important to support the survey data on how online tools can enhance students' learning. The participants from all four universities confirmed on the positive effects of using online tools on their learning. The interview findings will be discussed based on the categories of significance of using the online tools.

Firstly, most of the interviewees agree that online technology plays a significant role in teaching and learning process, and it can enhance their learning. For example, online tools are useful and important for them to search for articles, information, and knowledge as these students pointed out:

S1KU "online tools are very important and really useful. Beside the university, it is another university for us to learn from. Overall, I strongly agree, and I use 50% of online tools for my lesson, to search information for all my assignments. S15KEU: "through Facebook, Yahoo, Skype I can get

information from other countries. S22KAU: "for example in twitter, many scientists have an account where they share something; some conferences are possible to follow there and also some learning materials".

The participants stress that time is important in the learning process. Therefore, with online tools, searching and getting information in a short time is possible. S3KU: "it needs little time, without looking at the book directly can get information in a short time".

They are also with the opinion that there are many useful and creative works for teaching and learning which can be found especially in the Internet. There are also online classes for students, and students can also be motivated to use online technology in order to share their knowledge and information with others. There is so much they can learn from these materials. S4 KU: "the teacher must motivate students to use online tools, when we go to online tools there are work of different people around the world, there is a combination of creative mind. It causes to the students to be creative"

Online technology also assists students to put the work online, and let the global readers criticize and give opinions on their work. S11KU "completely have effective rule....one thing can be helpful is that I can know my fault or problem, what problems have our ideas that other criticize"

In addition, students also believe that online tools can assist them create a blog, share, and post their ideas. Through this, students' deep learning can be improved by the use of online tools. This is expressed by these participants.

S1KU: "I like to create something, and post, when I post and I get comments on it, the comments help me to make better ones". S4KU "it can help me to be creative, you see there are creative minds, you become motivated to be creative, you see everything new and you think why I should not bring something new". The participants stated that it is significant for them to be active, and creative. They were interested to write something new. S21KAU: "we have to be operational, we have to show something from ourselves, and it leads the students to be more active, creative, more thinking". Online tools helped them to criticize, analyze, and even create new information. S27KAU: "I am able to criticize, analyze, and evaluate ideas, and create information"

In brief, the interview data have shown that students perceived online tools are beneficial in assisting them to enhance their learning. This can help them to actively take part in the learning process.

## VI. DISCUSSION AND RECOMMENDATION

The findings of survey questionnaire, and interview session with related literature are discussed.

### A. Can Online Tools Assist Students in Their Learning

In this study a survey questionnaire was developed, and distributed to ask students to indicate their level of agreement or disagreement using Likert-type scale on the effects of online tools in their learning. The survey questionnaire was developed based on Bloom's cognitive domain. The bloom's cognitive domain divided into six sub domain namely remembering, understanding, applying, analyzing, evaluating, and creating. This division can be named as surface, and deep approach to learning. The findings revealed that students' surface approach to learning could enhance better than the deep approach. The remembering domain got the highest mean among the rest of domain listed. They believed using online tools helped them to search the web for more information

regarding the lesson, give examples on other's information posted, select a topic for discussion, explain a topic on social networking sites, and to socialize with classmates.

The study also found that most of the participants stated that online tools helped them in the applying domain where they can write, and post their work; edit an academic written work posted by others. Moreover, majority of the participants agreed that online tools helped them in the creation domain where they can design weblog for academic discussion related to the lesson, and to create multimedia presentation to present their ideas. These findings are supported by the previous findings. [14] found that majority of the students are interested, and engaged in the use of social networking sites mainly to socialize with their classmates rather than to use for academic activities. However, they do feel that SNSs have a lot of positive impact on their academic activities. This is because SNSs can be used for various purposes such as communicating with classmates, faculty, lecturers and supervisor for academic discussion. Similar to this, [15] found that teachers' high self-disclosure can lead students in the higher level of affective learning and motivation. Perhaps, students' accessibility to teachers' Facebook page may have positive influence on learning outcome, this can assist students to ask question regarding the lesson, and share their concerns and problems. Teachers may pay attention the use of Facebook as important tools to increase teacher-student relationships. [16] reported that teachers used often social networking, and had positive experiences with podcast, social video and social networking applications. [17] Indicated, Facebook helped students to feel more connected with their classmates, and to exchange information. The strength of Facebook is to increase classroom community, assist students to share ideas, and to know each other. [17] also found out that Facebook can be used for academic discussion.

The findings from interview session also confirmed the positive effects of using online tools on students' learning. They used online tools to search for topics, articles, information, and knowledge. The participants stated that they used online tools to share ideas, and criticize on other's information posted. On the contrary, some of them expressed that YouTube cannot be used for learning purposes. This is due to the restriction and limitation introduced by the government. Some of the participants expressed that online tools can be used as entertainment where they can chat with their friends, and share photos.

The findings of this study may recommend to MoHE and authorities of the Afghanistan universities of possible utilization of technology especially online tools for teaching and learning. Preparing students for the 21<sup>st</sup> century skills and knowledge, the teaching and learning process needs to be revised and more focus should be given on student-centered learning, problem solving and creativity. Technology allows students actively take part in the learning process. Online tools assist students to collaborate, communicate, share, and create ideas, information, and knowledge

## VII. CONCLUSION

The study attempts to investigate the perceptions of Afghanistan students on the use of online tools on their learning. The findings showed that majority of the participants agreed on the positive effects of using online tools on their learning. These finding is similar to the finding that reported by [18] online social networking facilitate students' learning. It is

significant to help students on how to move from one learning domain to another, and to move from surface learning to deep learning. In relation to this, the findings revealed, and confirmed the positive effects of online tools on their learning experience. [14] stated that using social networking sites showed positive influence on students' academic performance. The findings also revealed that in Afghanistan context, there were not too much differences between public and private universities in terms of online tools utilization. This is probably because the use of technology in Afghanistan universities, whether it is private or public universities, is still new. Much has to be done for the teachers and in-class environment and facilities for students to fully experience advantageous teaching and learning using online tools.

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