Utilizing Online Discussion Forums to Improve Graduate Students' Cognitive Skills at King Khalid University: The University Faculty's Perspectives

ABSTRACT

The present study intended to explore the role perceptions of teachers at King Khalid University on utilizing Online Discussion Forums to improve graduate students' cognitive skills at the University. The questionnaire designed by the researchers was used as a data collection tool. The purposive sample of the study consisted of fifty staff members at King Khalid University. The results revealed that the utilization of online discussion forums plays an active role in improving graduate students' cognitive skills or cognitive functions, especially in critical thinking, problem-solving, decision making, social skills, and language skills. Moreover, data from the questionnaire also indicated that majority of the staff members of King Khalid University hold positive perceptions regarding the use of online discussion forums to boost their graduate students' cognitive skills as well as cognitive functions at King Khalid University. The findings also revealed that a majority of the faculty members appreciated and recognized fully the issue of discussing and debating by using online discussion forums. A minority of them though disagreed to use online discussion forums in teaching and some of them remained neutral in using the technology. Moreover, the e-staff members at King Khalid university perceived content experts and instructional designers as the most significant roles during online discussion forums. The study also recommends training for the e-staff members on using Online Discussion Forums.

Keywords: Online Discussion Forums, Cognitive Skills, Saudi Students, Faculty's Perspectives

1. Introduction

The accelerated speed in technological innovation in the past few years has made an urgent and burning need for carrying out educational studies that can play a pivotal role in enhancing our understanding of how university learning is being conciliated by contemporary technologies. Bernhard (2012) opines that all science in its production of knowledge is technologically embodied and [scientific] perception is co-determined by technology. But perception, on the other hand, uses the theories of science (p.194). Today, one cannot candidly experience education without experiencing its technological dimension.

The utilization of e-learning technologies has great influence on education today and is changing the method we teach and learn. They also open innovation in many domains of life. The innovative dimension of e-learning technology is very much constrained by the level of digital skills of the instructors and their students as well. Not surprisingly there is a very strong interaction between education and skills and the comeback and utilization of e-learning digital technologies in all fields of life in general and education in particular. The role of education and skills in promoting innovation is evaluative as noted by King and Anderson (1991).

The debate about the capability of e-learning technologies in education is growing making them the matter of far-reaching and broad-ranging approach to innovation in education. Education systems and institutions prefer change by utilizing digital technologies in their educational institutions and teaching and learning practices. The use of e-learning technologies like the Blackboard has given education a
new ease of life allowing us to approach old ideas in new ways. Today's approach is the holistic one to assist, design, and integrate information and communication technologies (ICT) into education which is coherent with the context in the present scenario so that the students grow into life-long learners even after their graduation. As Bates and Poole (2003) rightly opine, the choice and use of technology are dependent on the beliefs and assumptions we have about the nature of knowledge, how our subject discipline should be taught, and how students learn (p. 25).

Even the objectives of Kingdom’s Vision 2030 also aim at integrating information technology across the Kingdom in e-learning as well as in distance learning in the Kingdom. In this respect, the Ministry of education intends to develop the digital infrastructure through the Digital Transformation Program. This digital infrastructure will be the cornerstone for ICT development as well as for e-learning in assisting instructors and students as noted by Nurunnabi (2017) & Mitchell & Alfuraih (2019).

The impact of ICT on the Saudi education sector has accelerated the need by instructors to develop teaching and learning strategies in their universities and colleges. The Blackboard platform is an example of how e-learning is used holistically by the international educational system in general as well as by the universities in the Kingdom. The Blackboard platform was launched in 1997 in the United States of America as a part of widespread e-learning and online education. The Blackboard platform gives undergraduate, graduate and postgraduate students a platform for debates and discussions. It also helps them in sharing information such as homework, assignment, audios, and the likes. The asynchronous online discussion forums are the result of these rapid improvements in ICT which was recommended by Saudi Arabia’s Vision 2030 as reported by Zaki, et al (2014).

Teaching and learning go on significantly and because of the current competitive global world and the age of technology, the compatibility of students to be technologically savvy is central and important. Technology will keep up to influence many domains of human life. Technology has made its way to colleges, schools, and universities and currently has a pivotal role to play in education. e-Blackboards have replaced the traditional whiteboards and the chalk-talk method of teaching has almost been discarded in favor of innovative teaching and learning techniques that emphasize interactivity. According to Koller, Harvey & Magnotta (2001).

There is a necessity to explore whether educational technology influences the teaching and learning experience in positive ways in contrast to traditional learning. Thus, this study concentrates on how online discussion forum technology through teaching and learning can improve graduate students’ cognitive skills at King Khalid University. The paper also discusses Blackboard technology in teaching and learning with the aim to make contribution to the existing literature.

In the context of Kingdom of Saudi Arabia, the Saudi universities utilize internet in teaching and learning (AbuSeileek, 2007; Almekhafi, 2006; Lauffer & Hill, 2000, as cited in Al-Tale, 2014 and Al-Qahatani, 2019). For example, King Khalid University (KKU) has developed and has been utilizing e-learning program since 2005. The university is constantly embracing different technological tools and platforms to enhance effectiveness in the teaching and learning process. One of such technologies in education is Online Discussion Forums which provides both synchronous and asynchronous interactions making it easier for students who may be offline while discussions but may be able to access previous threads of discussions and make contributions using such forums. (Onyema, et al, 2019).

1.1 Aims of the Research

The paper aims to:
1. Explore the university faculty's perspectives towards utilizing online discussion forums in improving graduate students' cognitive skills at King Khalid University.
2. Identify the factors which affect the university faculty's perceptions towards utilizing online discussion forums in improving graduate students' cognitive skills.
3. Study the role played by virtual online discussion forums in enhancing cognitive skills among the graduate students at King Khalid University.
4. Discuss how faculty members at King Khalid University perceive virtual online discussion forums as contributing to the
development of graduate student’s critical thinking skills.

1.2 Research Questions

The study will attempt to seek answers to the following research questions while accomplishing the aims of the research:

**RQ1:** What are the perceptions of faculty members about utilizing virtual online discussion forums in improving graduate students’ cognitive skills at King Khalid University?

**RQ2:** What are the perceptions of faculty members at King Khalid University (Abha) in terms of the effectiveness of the virtual online discussion forums in communication?

**RQ3:** Based on faculty members’ and graduate students' experiences, do virtual online discussion forums play any important role in enhancing cognitive skills among the graduate students at King Khalid University?

**RQ4:** Do faculty members perceive virtual online discussion forums as contributing to the development of their graduate students’ critical thinking skills?

The study is the first to explore and investigate the perceptions of the faculty members at King Khalid University towards the utilization of virtual online discussion forums on improving graduate students' cognitive skills at King Khalid University. Thus, it may help academic community to benefit from its findings. As the technology has made its way to universities and colleges in the Kingdom, the study’s findings may also contribute in improving e-learning infrastructure in King Khalid University in particular and in the Kingdom in general.

2. Review of the Related Literature

Plenitude of research exists on the issue of using online discussion forums and their pivotal roles in learning and teaching in general but few studies to date have quantitatively focused on utilizing online discussion forums on improving graduate students’ cognitive skills (Parker, 2000). Therefore, attempt has been done here to review previous studies related to the topic under investigation.

2.1 The Concept of Online Discussion Platform

The online discussion platform is an electronic forum for e-learning, debate, discussion, and information spreading. As Alabo, et al., (2014) opine, the online discussion forum is a web-based application that brings people together with shared interests and mindsets, and members have the privilege to post messages to the discussion threads, interact and receive feedback from other students and instructors, and hence create a deeper understanding of the subject matter being discussed.

2.2 The Concept of Cognitive Skills Dimension

Cognitive Skills dimension is defined by Garrion, (2007) and Abrams, (2005) as the level to which students can construct and confirm meanings through reflection and dialogue within an inquiry community. This dimension is based on critical thinking which could be understood as a process, as well as a result. As a product, it refers to acquiring deep and meaningful understanding, which is perceptible in the different assignments elaborated by students. As a process, it is considered that critical thinking acquisition may be enhanced by understanding how it is.

2.3 Previous Studies

Studies such as Onyema, et al (2019) revealed that online discussion forum tools can put an end to some of the communication hindrances lying behind the face-to-face lectures providing a forum to address issues through critical thinking and collaboration. The study carried out by Cheng et al. (2011) as cited in Onyema, et al (2019) revealed that students who participated in online discussion forums had a better performance than others who do not engage in the forum.

Alubthne’s (2018) study also aimed to investigate students’ perspectives regarding the quality elements required for online courses developed by the SEU. The findings of the study showed that interaction with teachers in online classes played important role in improving the students' cognitive skills. This interaction included using spectra of communication methods, such as averring course aims and goals, employing opportuneness and summaries, associating course content with real-world applications, supplying resources, and working with other students collaboratively. (Alshuaibi, 2020,).

In the study entitled ‘The Relevance of Doing Virtual Classes: A Study of Postgraduate Female Students’ Attitudes and Perceptions’, Al-qhahtani (2019) noted many positive and negative factors affecting students’ attitudes and perceptions about using online virtual classes and online discussion forum. Omar and et al (2018) also carried out a study on how to use the online discussion forum effectively. The study merely confirmed the advantages of online discussions as part of the whole learning process. Yet, to experience the
benefit of these advantages, students need to employ the appropriate strategies.

Online discussion forums can play a pivotal role in web-based courses by assisting students to construct knowledge (Jeong, 2004). In an effective online discussion forum, the discussion encloses the principles of constructivism and social interactions to help students reach new insights, knowledge, and perspectives. Alebaikan et al. (2010) also investigated the effectiveness of online discussion use in blended courses in Saudi universities. The findings of their study highlighted the issues to be considered while utilizing efficient online discussion such as e-pedagogy, e-plagiarism, infrastructure, Learning Management System tools, and demands on time.

Conrad’s (2004) study explored instructors’ perceptions on their experiences with online teaching and virtual discussion. The findings revealed that each new instructor enters his virtual classroom with knowledge of the cohort model. In conclusion, most of the reviewed literature compatibly underlined the importance for (a) identifying prevalent faculty members and student’s perceptions and reflections towards online discussion forum use; (b) investigating the effectiveness of online discussion use in blended courses in Saudi universities in general and King Khalid University in particular; (c) determining the source of information on which these perceptions and reflections are relied on (d) determining how online discussion forums can play a pivotal role in web-based courses by assisting students to construct knowledge; (e) confirming the advantages of online discussions as part of the whole learning process; (f) identifying how online discussion forum tools can put an end to some of the communication hindrances lying behind the face-to-face lectures providing a forum to address issues through critical thinking and collaboration and (g) confirming that interaction with teachers in online classes played an important role in improving the students' cognitive skills. However, these seven areas had the least amount of prior research available.

In summary, the reviewed literature identified that the problems encountering university faculty in using online discussion forum technology in their classes need to be addressed to enhance the level of online discussion forum technology utilization. Hence, this research paper aims to explore how to utilize the online discussion forums on improving graduate Students’ cognitive skills at King Khalid University from university faculty’s perspectives. It also aims to examine factors affecting faculty’s perceptions toward the utilization of the online discussion forums into their teaching.

3. Methodology
3.1 Research Design
A quantitative study design is used for exploring utilization of online discussion forums in improving graduate students’ cognitive skills at King Khalid University. A questionnaire was developed by the researchers utilizing existing literature.

3.2 Participants of the Study
The study used purposive sampling generally adopted in qualitative research. Following Ritchie & Lewis (2003), this approach is appropriate for the current study. The sample of the study were 50 faculty members from the College of Science, College of Arts and College of Education at King Khalid University. They were involved in e-learning and were chosen randomly to participate in a survey prepared by the researchers designed to obtain responses about utilizing online discussion forums on improving graduate students' cognitive skills at King Khalid University. Faculty members were advised that their involvement in the project was voluntary; they could withdraw from participation at any time.

3.3 Data Collection Instrument & its Validity and Reliability
A panel of experts (5 e-learning professors with more than five years of experience) was asked to review the instrument for content and face validity. To enhance the validity of the instrument, the instrument was pilot tested with a group of 25 instructors with online teaching experience from King Khalid University.

The changes in the questionnaire were made by the researchers based on the recommendations of five e-learning professors from King Khalid University.

Table 1: Internal Consistency

<table>
<thead>
<tr>
<th>Description</th>
<th>Item numbers</th>
<th>Cronbach’s alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes Towards Online Discussion Forums</td>
<td>1-5</td>
<td>0.83</td>
</tr>
<tr>
<td>Utilizing Online Discussion Forums</td>
<td>2-3</td>
<td>0.83</td>
</tr>
<tr>
<td>Instructional design for Online Discussion Forums (ODF)</td>
<td>4-8</td>
<td>0.87</td>
</tr>
<tr>
<td>Learning resource for Online Discussion Forums (ODF)</td>
<td>9-15</td>
<td>0.85</td>
</tr>
<tr>
<td>Multimedia tools use in Online Discussion Forums (ODF)</td>
<td>16-23</td>
<td>0.86</td>
</tr>
<tr>
<td>Content expertise for Online Discussion Forums (ODF)</td>
<td>24-29</td>
<td>0.84</td>
</tr>
<tr>
<td>Management/ Leadership for online Discussion Forums (ODF)</td>
<td>30-31</td>
<td>0.82</td>
</tr>
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As seen from table (1), the value of Cronbach's alpha for each dimension was high (0.82-0.89). The overall alpha reliability coefficients for the perceptions and attitudes of the University Faculty toward the online Discussion Forums questionnaire (PAEODFQ) were 0.96 & 0.97.

4. Data Analysis, Results and Discussion

4.1 Data Analysis

The questionnaire inquired the participants about their perceptions regarding utilizing online discussion forums on improving graduate students' cognitive skills at King Khalid University. It also explored the role of Online Discussion Forums in enhancing communication skills and some related matters.

The statement ‘learning via the Internet is easier than the traditional one’, received varied responses. Majority of the staff members believed learning via Internet is easier than the traditional one as 40% strongly agreed and 26% agreed. 12% disagreed and 16% strongly disagreed and 6% were neutral. Responses to the statement, ‘I can use the Blackboard to monitor graduate students’ collaborative group works’ were as follow- 36% strongly agree, 26% agree, 8% disagree, 16% strongly disagree, and 14% neutral.

To the statement, ‘I can perceive and answer the posed Strongly Disagree questions (privately and publicly) submitted by graduate students via online Discussion Forums’, most of the participants responded positively (62%). ‘As an e-Instructor I always encourage and support graduate students to participate in Online Discussion Forum (ODF) effectively’ statement generated different responses. A majority of the staff members encouraged and supported graduate students to participate in Online Discussion Forum (ODF) effectively with the high rate of replying 40% strongly agree and 26% agree. 12% replied saying disagree and 16% strongly disagree whereas 6% remained neutral.

One of the noticeable findings was that most of the participants (66%) always motivated their graduate students to interact with each other by assigning teamwork and project via Online Discussion Forums though some (24%) did not do so. When the participants were asked to respond to the statement, ‘I can rectify successfully the casual conflicts when they arise in teamwork assignments in Online Discussion Forums (ODF)’, 42% replied that they strongly agreed and 18% agreed. 6% replied saying they disagreed and 20% replied saying they strongly disagreed. 14% were neutral to the statement. To ‘I can offer opportunities for hands-on practice so that graduate students can apply the acquired cognitive skills to the real world, not the fiction one’ 38% responded indicating they strongly agreed and 20% as agreed. 6% disagreed whereas 22% strongly disagreed. 6% of the participants chose to be neutral.

42% of the participants strongly agreed to the statement ‘I can develop manifold group academic and educational activities to boost graduate students’ collaborative group works’. 22% agreed to it, 8% disagreed, 20% strongly disagreed and 8% remained neutral. 30% of the participants strongly agreed and 18% agreed to the statement that they can use peer assessment in their assessment of graduate students’ work via Online Discussion Forums (ODF). There were negative aspects too. 12% disagreed and 18% strongly disagreed implying that they couldn’t use peer assessment in their assessment of graduate students’ work via Online Discussion Forums (ODF). 22% remained neutral. Responded also indicated that they can offer helpful feedback on graduate students’ assignments that enhances learning via Online Discussion Forums (ODF) (36% strongly agree and 28% agree). However, there were some staff-members who indicated that they cannot offer helpful feedback on graduate students’ assignments 10% of the respondents had no opinion.

36% of the respondents strongly agreed and 26% agreed that they can use devised strategies to assess graduate students’ learning outcome via Online Discussion Forums (ODF). On the negative side, 12% disagreed and 14% strongly disagreed whereas 12% remained neutral indicating that they could not devised strategies to assess graduate students’ learning outcome via Online Discussion Forums (ODF). To suit the course instructional cognitive objectives, 58% teachers (36% strongly agree and 22% agree) could design suitable and applicable evaluation form via Online Discussion Forums (ODF). But 28% of the respondents (16% disagree and 12% strongly disagree) were not skilled in the same. Remaining (14.%) participants indicated no choice.

It was also noticed that most of the participants (42% strongly agree and 22% agree) always supplied additional resources to encourage graduate students to delve deeper into the content of the course via
ODF. However, 28% of the respondents replied negatively indicating their inability to do so.

On a very positive note 74% of the participants replied stating that they always gave high esteem and respect to their students for their achievements and in their communications with them as well via Online Discussion Forums. It was also found that 66% of the respondents used KKU Blackboard tools to observe and keep a check on graduate students’ learning progress. 65% of the respondents were also found to be able to use e-learning multimedia technologies to achieve course goals through ODF but 28% were not able to do that owing to different factors which need separate investigation. 64% of the participants also offered technical support guidelines for their students via Online Discussion Forums to solve students’ technical inquiries. 28% of the respondents couldn’t do that and remaining remained neutral. It was also found that 58% of the participants at the university are skilled at using e-learning multimedia technologies which are suitable for the learning activities via ODF. But still 26% are unable to use them which needs special attention so as to make them skilled in using the e-learning technologies which has become really a need of the day particularly since the Covid-19 pandemic. In the extraordinary situations like the Covid-19 pandemic, teachers of today are required to upgrade not only their subject knowledge and teaching skills but also their capabilities in using modern educational technologies to meet the needs of the days.

On the another positive note most of the teaching staff (60%) was found to be capable of selecting technology suitable for my online course through the ODF to achieve the instructional objectives though 26% replied negatively and remaining didn’t indicate their choice. Most of the staff members also stated that they can help their students to be on the task in order to learn from Online Discussion Forums (62%). 26% responded negatively. 66% of the staff also responded that they are capable to engage their students effectively in productive dialogues using Online Discussion Forums. However 28% of the staff-members responded negatively.

Most of the staff members (58%) believe that they can put a clear computer technology requirement guideline for their students through Online Discussion Forums. However, 26% of the staff-members believe that they cannot do it. They also believe that they can understand students’ demands, expectations, and requirements on ODF. Though 22% responded negatively indicating their inability. 62% of the respondent staff members also believe that they can arrange their teaching/learning materials, (multimedia, tablets handouts presentation, computers, etc.) in advance to deliver content to online graduate students. It was also noticed that 32% of the staff was unable to do this which indicates the need for technical training for such staff-members.

The data analysis also revealed that most of the staff-member respondents (62%) believed that they could always update online learning resources for their students via Online Discussion Forums. 28% responded negatively whereas 10% were neutral. The positive respondents also believed that they could develop their professional knowledge and cognitive skills about e-learning technology through ODF. However, 30% respondents showed inability in it. Positive respondents also believed that they could monitor their students’ adherence to Academic Integrity policies and procedures online. Negative respondents were unable to do so. The positive respondents also wanted to join scholarship communities in order to strengthen their professional development in e-teaching. 30% respondents were negative about it and 8% remained neutral.

60% of the participants also believed that they can effectively run the course communications by offering good model of anticipated behavior towards ODF. 28% indicated inability in doing this. However, only 58% participants believe that they were proficient in the chosen course management system for Discussion Forums. This again reflects the need for technical training for almost half of the staff-members in the university.

All this analysis of the participants’ responses is summarised in the following table.

Table 2: Questionnaire statements about staff-members perceptions on Online Discussion Forum and their responses.

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4.2 Findings

The following findings were obtained from the data analysis.

1. Majority of the staff members believed that learning via Internet is easier than the traditional one.

2. They can use the Blackboard to monitor graduate students’ collaborative group works.

3. They can answer the questions (privately and publicly) submitted by graduate students via online Discussion Forums.

4. A majority of the staff members believe that they can encourage and support graduate students to participate in ODF.

5. They also believe that they always motivate their students to interact with each other by assigning teamwork and project via ODF.

6. They are also able to resolve successfully the casual conflicts arising in teamwork assignments in ODF.

7. They can also offer opportunities for their graduate students to acquire cognitive skills to the real world.

8. They can develop diverse academic and educational activities to boost their students’ collaborative group works.

9. They can also use peer assessment in their assessment.

10. They can offer helpful feedback on students’ assignments enhancing learning.

11. They are capable of using strategies to assess graduate students’ learning outcome via ODF.

12. The Staff-members are also able to design suitable and applicable evaluation form via ODF.

13. They also supply additional resources to encourage graduate students to delve deeper into the content of the course via ODF.

14. They gave respect to their students for their achievements.

15. The respondents use KKU Blackboard tools to observe and keep a check on graduate students’ learning progress.

16. They are also able to use e-learning multimedia technologies to achieve course goals through ODF.

17. They can offer technical support via ODF to solve students’ technical inquiries.

18. They are also skilled at using e-learning multimedia technologies which are suitable for the learning activities via ODF and can select technology suitable for their online course through the ODF to achieve the instructional objectives.

19. They can help their students to be on the task in order to learn from ODF and can engage their students effectively in productive.

20. They can put a clear computer technology requirement guideline for their students.

21. The respondent staff members also believe that they can arrange their teaching/learning materials, (multimedia, tablets handouts presentation, computers, etc.) in advance to deliver content to online graduate students.

22. Most of the staff-member respondents believed that they could always update online learning resources for their students and could develop their professional knowledge and cognitive skills about e-learning technology.
23. Respondents also believe that they could monitor their students’ adherence to Academic Integrity policies and procedures online and want to join scholarship communities in order to strengthen their professional development in e-teaching.

24. The participants also believe that they can effectively run the course communications by offering good model of anticipated behavior towards ODF as well as are proficient in the chosen course management system for Discussion Forums.

25. Overall 64% of the respondents had positive perceptions towards e-learning through ODPs. 28% had negative perceptions and 08% were neutral.

5. Conclusion

Blended learning is playing a significant role in the transformation of education as an organic entity that evolves to meet the emerging needs of the community. Online Discussion Forums as an example of e-learning and one of the primary components of blended learning can boost students’ cognitive skills by creating a paradigm shift from teacher-centered and memory-based education to a student-centered education where students work collaboratively, construct their knowledge and enhance their critical thinking. Though debates and discussions deal with complex arguments, Online Discussion Forums help improve the oral and communication skills of the students. It is also believed that Online Discussion Forums technology interaction in the e-learning environment could help the students who participated in debates and discussions through ODPs become more confident, cognizant and successful by providing alternative channels of collaboration.

To sum up, it was noticed from the findings that utilization of online discussion forums is believed to be effective in improving Saudi students’ cognitive skills at King Khalid University. Most of the staff members at the King Khalid University (almost 62%) have positive perceptions towards ODPs for improving and developing various cognitive, academic, language and soft-skills. The faculty members also recognised important role of e-learning and ODPs in boosting their students' cognitive skills or cognitive functions such as: critical thinking, problem-solving, decision making, social skills, and language skills. However, it was also noted that almost 38% of the respondent participants did not have positive perceptions towards e-learning through ODPs. Considering the changing nature of teaching and learning in the technology influenced world of today, such percentage of negative perceptions is worrisome requiring remedial efforts in the form of technical training to such reluctant staff. As the Covid-19 pandemic emerged out of the blue and completely changed the very nature of teaching and learning, teachers must equip themselves with required technological arsenals of the day to face any probabilities efficiently.

References


Alubthne, F. O. (2018, January 1). Exploring the quality needs of Saudi Electronic University students: a learner perspective. ProQuest LLC. ProQuest LLC.


