

Curriculum Development Based on Online and Face-to-Face Learning in a Saudi Arabian University

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Received: April 11, 2020

Accepted: June 16, 2020

Online Published: August 22, 2020

doi:10.5430/jct.v9n3p141

URL: <https://doi.org/10.5430/jct.v9n3p141>

Abstract

This research examined curriculum development in an academic program with respect to graduate education-level methods of teaching. Numerous studies have suggested that educational curricula should be redeveloped based on Web 2.0 technologies. The purpose of this research is to analyze student perspectives regarding curriculum development based on their online and face-to-face learning experiences in a Saudi Arabian university. This research surveyed 95 graduate students in a Saudi university to examine their perceptions of curriculum development based on online and face-to-face learning. The research objective was to determine students' opinions regarding the performance and challenges of the developed curriculum. The research design in this study was based on a qualitative analysis study of an online survey. The survey data were analyzed and showed a consensus in favor of online learning courses. The results show that online students highlighted the flexibility, accessibility, and balance of time management in their personal and professional life during the course yet the face-to-face students emphasized that their main reason for enrolling in face-to-face classes involved having better class interaction with peers and faculties.

Keywords: curriculum, teaching methods, online courses, learning environment, e-learning methods, graduate studies, academic program

1. Introduction

Saudi universities have changed significantly in the 21st century due to the rapid developments in information technology. Internet usage in teaching and its related methods have become essential in the graduate academic courses (Bhagat, Wu, & Chun-Yen, 2016; Hunter Dr & Ross, 2019; Shea & Parayitam, 2019). Many studies have claimed that online learning should dominate the instruction mode for graduate students (Haynes, 2019; Huang & Liaw, 2018; Yeh et al., 2019). Online learning has been defined by Khan in Ref. (Sadeh, Feniser, & Dusa, 2020) page 3. Blackboard and eCollege technologies are today offered in online courses (Al Zoubi & Alzoubi, 2019). A rapid increase in online course offerings has been seen in universities and community colleges in the last decade due to the advancement of social, societal, and economic developments (Fletcher, Everatt, Mackey, & Fickel, 2020; Harrell & Bynum, 2018; Nahar & Chowdhury).

This research aims to analyze student perspectives regarding curriculum development based on their online and face-to-face learning experiences. This work is based on and inspired by a study performed in Canada (Mather & Sarkans, 2018). The study survey will compare and contrast students' responses to develop a deep understanding of their current experiences and subsequently provide guidance for improved university education management.

2. Literature Review

The increase in distance learning demand at universities has been exponential. However, the question arises regarding whether or not online learning satisfies the course needs of all students. Studies of online learning effectiveness show mixed results, particularly for students who are close to failing such courses. Research suggests that online teaching is not preferred by some specific groups of educators (Jaggars & Xu, 2013). They suggest that

online study requires specialized skills for those students facing course failure. In contrast, another study argues that online teaching skills require less expertise and understanding of the necessary tools for at-risk students in order for them to excel in online courses (Flynn, 2016).

Developing a curriculum for students with disabilities is a crucial investigative step. This point was studied to determine whether online learning suits disabled students' needs. The effectiveness of online vs. face-to-face learning for such students was also analyzed. Online technologies tend to present more obstacles for disabled students in particular due to the way the Internet is not suited to many disabilities (Lazar & Jaeger, 2011). Nevertheless, students with disabilities have demonstrated tremendous results in terms of overcoming the challenges of online learning and have benefited from online technology tools. Disabled students, particularly those who find it difficult to travel, have utilized various online learning opportunities, such as communication, online interaction, and social events access (Darragh, Reynolds, Ellison, & Bellon, 2017).

Another area in curriculum development that needs to be discussed is the effectiveness of students' engagement and interactivity in online courses. The methods and efficiency of students' experience differ when comparing online to face-to-face learning (Topal, 2016). The interactions of students with peers and faculty are a crucial area in the teaching methods domain of any class. Student engagements and interactions primarily involve texts via discussion boards, emails, social media, and chat rooms (Barkley & Major, 2020). Interactions during online learning provide additional time to process ideas and questions posed and the ability to offer informed responses. In contrast, it may be that online interactions can provide impersonal experience for students because this teaching method is solely dependent on distance interactions and does not offer personal interactions or experience (Stark, 2019).

Alongside the above-discussed areas, group work is one of the critical educational tools in the curriculum development process (Alenezi, 2019). One study has investigated the benefits and challenges of group work in online classes and projects (Cherney, Fetherston, & Johnsen, 2018), emphasizing the instructor's key role in online group work by setting the ground rules, teaching student group work skills, individual roles, support effective communication, and developing and facilitating online tasks. If the instructor's key role in online group work was well set, the study suggests that the group work challenges can be overcome and increase its effectiveness. Improving faculty professional skills is also crucial for online course instructors. Faculty training is useful in developing and building skills that assist in managing an online classroom environment (Smith & Kanuka, 2018).

3. Methodology

To conduct this research, two courses in an academic graduate program in a Saudi university were selected. The first course (C1) concerns adult learning and is 30% online, with the remaining 70% being offered face to face. This course was provided in 2013 with 10% online and 90% face-to-face content.

3.1 Participant Profiles

Thirty-two multigender students were selected for this study. The online assessment and lectures were based on PowerPoint slides, videos, discussion boards, and communications via emails and the WhatsApp messaging phone application. There were 259 face-to-face (of a total of 434) and 103 (of a total of 593) online learners who completed the Google Survey. Thus, the response rate of this survey was 35%. Participants were aged 21 to 29 years, and most (more than 70%) were aged 25 years and older; this age distribution was primarily due to the majority of students being enrolled at a graduate level with 2 to 4 years of work experience after their graduation.

3.2 Research Design

The research design in this study was based on a qualitative analysis study of an online survey. This approach was used to obtain students' insights into their experience and involvement in online and face-to-face learning. The online survey was designed to collect intensive descriptive data from the students. The survey had five open- and five closed-ended questions that focused on five different aspects of the student preferences:

- a. Learner preference
- b. Interactivity
- c. Workload and performance
- d. Challenges
- e. Future learning preference

The survey did not ask students to provide their names or any personal information in order to maintain anonymity

because their contribution was voluntary. Data were analyzed using a constant comparison method based on student experiences.

4. Results

The survey objective was set to explore student perspectives on curriculum development based on online and face-to-face learning in a graduate course level. The survey found that 75% of males and 15% of females expressed a preference for face-to-face learning, whereas 25% of males and 85% of females preferred online learning.

Participants' survey responses were gathered for the five open-ended questions and coded for different aspects: learner preference, interactivity, workload and performance, challenges, and future learning preference. The first aspect, learner preference, had two main themes: (1) flexibility and (2) convenience of online and face-to-face learning. More than 65% of the participants preferred the face-to-face learning method for this specific course. The two themes of the second aspect of the five open-ended question survey, interactivity, were: (1) online discussions and (2) assignments and course material. The response of the survey participants indicates that most of their current methods of interaction were through face-to-face discussions, group work, lectures, and assignments. Responses to the third aspect of the study, workload and performance, revealed that more students managed the online workload when compared to those students who took the face-to-face course. The majority (75%) of online and face-to-face course students rated their performance as very good or excellent. The themes of the fourth aspect of the study, challenges, were categorized into three themes: (1) technology issues, (2) group work, and (3) faculty feedback and communication. The responses demonstrated a consensus that working in groups was students' most considerable challenge. Finally, the responses to the fifth aspect, future learning preference, illustrated that students' interest in online learning is steadily increasing.

4.1 Learner Preference

Participants' responses in this regard were categorized into time and location flexibility, and professional and academic life balance. The number of students who preferred to go full-time online was 11%; hence, most students prefer some degree of face-to-face interaction. Further, the majority of students noted that the full-time face-to-face option only is difficult and not preferable for them due to their job engagements.

4.1.1 Time and Location Flexibility

The main reason for students preferring online learning methods is that they can manage the course progress at their own pace and more flexibly plan their free time. They also mentioned that they wish to pursue their graduate studies and education, and that the online learning method allows them to attain their personal goals. Some students stated that they prefer to complete their course duties based on their own free time and in a quiet environment (i.e., house office). In addition, the participants expressed how online learning allows them to complete their courses without spending money or excessive time on travel. Some responders also commented that they face difficulties in early morning classes because they prefer night classes.

4.1.2 Professional and Academic Life Balance

The life balance of students' personal, professional, and academic preferences was also considered in the survey. Most students (90%) highlighted that they could not afford to leave their jobs for graduate studies and stated that they would prefer to maintain their jobs rather than become full-time graduate students. Students also highlighted that family engagements take most of their free time. Most graduate students were found to be engaged in full-time jobs and have families, potentially explaining why online preference percentages were higher in most cases.

4.2 Interactivity

The interactivity aspect of the survey was established based on student–student, student–faculty, and student–course content interaction. As for the discussions, most students in terms of face-to-face and online classes agreed that the graduate course discussions are based on class and group interactions. Also, most students highlighted that discussions in all forms are crucial in the graduate course. Moreover, the online students emphasized that using discussion boards enhanced their learning and that it was their only method for communication. The responses of the online students did not point out the effectiveness of the online discussion; however, face-to-face students explicitly described the details of their discussions and interactions.

The survey also considered the assignments as a part of the student–student, student–faculty, and student–course content interactions. The face-to-face and online students highlighted that graduate-level course assignments are mandatory, whether they are completed individually or in groups. Another point to stress is that the online students

mentioned the amount of reading in the course material as being extensive in terms of understanding it and subsequently passing the course; compared to online students, face-to-face students acknowledged that faculty knowledge and expertise in the class was the primary method of learning in this regard. They also highlighted that the faculty explanations and lectures reduced the time taken to understand the course concepts.

4.2.1 Online Discussions

The faculty led the method of online discussions in this course. The discussions began with a question posed by the course instructor. Students then responded to the question with comments expressing their understanding and opinion. The advantage of this method is that it provides all students with the right to answer and sufficient time to set their perspectives. It is noted that in the online classes, evidence of students attending class is only provided by joining the online discussions (Coleman, 2009). Having all students interact with the online discussions promotes diversity of opinion and enhances the discussion's depth. The responses did not show the effectiveness of online discussions; however, they clearly illustrate the primary method of interaction with the faculty and other students. Thus, students were obligated to engage in the online classes' learning process. Contrastingly, the face-to-face students discussed the faculty teaching style and expertise and highlighted how they like the class discussions and immediate faculty feedback with all peers.

4.2.2 Assignments and Course Material

The assignments were completed in groups and individually. The participants acknowledged the significance of the assignments, particularly the group-based ones, yet complained of the overwhelming number of assignments. Nevertheless, group assignments have been found to enhance learning in online courses despite potentially increasing student frustration and challenges while working in groups (Rovai & Barnum, 2009). Responses regarding the assignments were in accordance with the previous study because students complained about poor communications with other group members, difficulties of working in virtual groups, and unfair distribution of the assignment workload.

The course material was provided by the faculty and managed on Blackboard. The online students highlighted that their main source of knowledge was interactive lessons, videos, and reading, whereas face-to-face students stated that their primary source of knowledge was their instructor.

4.3 Workload and Performance

More than 79% of students found that the online course work was manageable. Hence, most students prefer to carry out their classwork in their free time. Students older than 25 years found the work manageable, whereas those of this age or younger found it excessive. However, the face-to-face class students highlighted that they felt overwhelmed with the workload and assignments, particularly with respect to those aged over 25 years.

The survey asked participants to respond to their performance by selecting one of the following options: excellent, good, average, and poor. The collected data illustrated different trends in participant responses. More than two-thirds of the participants in online (66%) and face-to-face (68%) classes expressed their performance as good or excellent. However, 32% and 31% of online and face-to-face students, respectively, selected average and poor. The majority of the students who chose average and poor in online classes were below 24 years of age and 23 for face-to-face courses. When comparing online to face-to-face participants' answers, it is clear that online students had fewer challenges and complaints in their graduate-level course.

4.4 Challenges

The participants responded to the challenges aspect of the survey and raised many points worth mentioning. The difficulties highlighted by students in online courses were related to technology, receiving rapid feedback, completing group work, and miscommunication from faculties. On the other hand, face-to-face students primarily complained about group work.

4.4.1 Technology Issues

Some students highlighted the problems related to accessing course material online, with others mentioning issues when completing online quizzes. These points caused frustration and disappointment for students.

4.4.2 Group Work

This aspect was highlighted by the participants as the most substantial obstacle in online and face-to-face courses. Moreover, difficulties in communications, joining groups, and unfair workload distribution were some challenges noted during group work. Several participants commented that managing members' disputes and coordinating their

meeting times were challenging because they had met the other team members in person.

4.4.3 Faculty Feedback

This area was one of the dissatisfaction points highlighted by online students. Communication delays and vague feedback provided by faculties were a disappointing aspect for students. They claimed that faculties were not fully engaged in their courses, in contrast to the face-to-face faculties. Online class students were 58% satisfied with faculty performance, whereas this level was 91% for face-to-face class participants, who complimented their instructors for their clear instructions, different instruction strategies, and genuine interest in student learning.

4.5 Future Learning Preference

This research determined that 79% of participants were willing to take more online courses. However, 58% expressed a wish for face-to-face courses. No significant discrepancies were noted, yet the online preference students are continuing to increase. A relatively low percentage of participants (9%) noted that this was the first time that they had taken an online course.

5. Discussion

This research analyzed curriculum development based on online and face-to-face methods of learning in an academic program at a graduate education level. The study determined student perspectives in terms of their performance, satisfaction, challenges, and achievements based on their online and face-to-face class experience. Moreover, the analysis revealed the strengths and shortcomings of online and face-to-face learning. Participants emphasized that the online learning option offers flexibility and handiness. It was confirmed that older students are prefer online learning methods. Students with other life priorities, such as families and jobs or those busy due to traveling long distances, were also found to prefer online learning classes. The same group of students noted that if it were not for the online learning option, they would not be taking their master's degree. A minor percentage of students (9%) stated that it was the first time they had taken an online learning course, and they enjoyed it.

In contrast, students highlighted that face-to-face interactions with faculties and other students and immediate feedback explain why they prefer face-to-face learning methods over online learning. They claimed that this latter approach is highly effective for their learning. Moreover, online students resent the delayed faculty response and feedback.

Regarding student engagement, face-to-face students expressed that their instructors introducing and explaining course materials easily was significantly helpful in terms of allowing them to be fully engaged in the course. However, online students noted that their experience was negative in terms of course engagement with faculties, in accordance with research that shows students prefer instructor immediacy (Almarzooqi, 2020; Gloria & Uttal, 2020; Keener, 2017; Wang et al., 2019; Wavle & Ozogul, 2019). To overcome this online learning drawback, instructors should compensate for the lack of immediacy by increasing their provision of videos, audio lectures, email communications, sharing images, and personal stories (Halawi, McCarthy, & Pires, 2009; Hussein, 2016).

The primary challenge faced by both online and face-to-face learners was group work. The complaints were mainly related to unfair workload distribution and miscommunication. Moreover, students carrying out online learning criticized the virtual collaboration aspect that involved group team members. Studies have suggested that such collaboration is the responsibility of the instructor to ensure successful teamwork; instructors can set ground rules, describe each member's role, and provide effective communication to improve the outcomes of teamwork efforts (Morgan, Cameron, & Williams, 2009).

Selecting one course to collect the survey research data can be considered one of the research limitations. Another limitation is the research method and its scope. The author suggests expanding the research scope and choosing more courses from different disciplines and colleges to gain more beneficial, accurate, and broad data. The survey method has provided the study with valuable data; however, adding a quantitative research method in addition to the qualitative approach would provide more comprehensive perspectives of students in their online learning. Each aspect of the study (learner preference, workload, performance, etc.) could be studied more effectively if a quantitative method was implemented. Further, the author suggests applying the same study for different universities across the country to help point out broader pros and cons of online learning.

Follow-up on such studies can present valuable data regarding the effect of online learning and student satisfaction.

6. Conclusion

This study was established in the context of online learning trends in Saudi Arabian universities. The outcomes of this research provide general information to the highest levels of management and university decision-makers to consider when developing online courses. The study provides suitable information for leadership teams with respect to the challenges and advancements in online classes. Students were found to respond differently in terms of their performance, challenges, achievements, and satisfaction in online and face-to-face learning.

Online students highlighted the flexibility, accessibility, and balance of time management in their personal and professional life during the course. Face-to-face students, however, emphasized that their main reason for enrolling in face-to-face classes involved having better class interaction with peers and faculties. The online challenges were found to be technical support, lack of timely feedback, and poor virtual teamwork performance. However, they still preferred online classes compared to face-to-face ones because they provided them with more opportunity to pursue graduate-level education. Providing more courses related to their major and with a better curriculum were more likely to increase students' satisfaction level.

Based on these results, it is recommended that university policymakers focus more on creating flexible classes that are based on tailored mixed mode classes of online and face-to-face methods. The percentage of the mixed mode may vary freely from semester to another based on students enrolled and their needs in each course. Also, it is recommended to broaden such studies in the future to explore the effect of community differences in different cities and study the effect of student socioeconomic status on the class mode selection.

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