

Student Perspectives of Online Teaching and Learning During the COVID-19 Pandemic

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Abstract

This exploratory study explores an array of student perceptions regarding their online learning experience. In the present circumstances where the COVID-19 pandemic has affected all fields of life, most educational institutions have resorted to online instruction and virtual meetings. The present study explored the variables contributing to student satisfaction with online teaching and learning effectiveness. Data were collected through an online survey. Python with Scikit-Learn was used for data analysis to implement regression functions and classify the data. The results of the study defined effective online teaching during the COVID-19 pandemic. In combination, eight criteria contributed to the definition: motivating students to accomplish, communicating effectively, meeting students' needs, providing access to a wide range of content, providing a well-organized course structure, providing numerous sources, providing explanatory feedback, and facilitating meaningful discussions. The results of the study are beneficial to understand what kind of factors contribute to student satisfaction concerning online transition during the COVID-19 pandemic. They will also help them develop a future support plan to help youth cope with virtual classes and online instruction.

Keywords: Online instruction, student perspectives, COVID-19 pandemic

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What is online teaching effectiveness? Many researchers conducting studies on effective teaching have investigated this construct with numerous different techniques. Research studies have investigated student validity ratings (Murray et al., 1990), the personal effectiveness of instructors on student ratings (Feldman 1984), the relationship of student characteristics on student ratings (Greenwald & Gillmore, 1997; Arbuckle & Williams 2003), and the relationship between student accomplishments and student ratings (Centra & Gaubatz 2000; Cohen, 1981). However, effective online teaching might look very different to some students, although several research studies have agreed on the principal types of teaching effectiveness in traditional classrooms.

Researchers have asserted the active role of students' perceptions by aggregating the different domains to determine efficiency. Marsh (1984; 2007) provides an evaluation of the reliability of students' perceptions in validating teaching practices in university teaching. He stated that "student ratings are clearly multidimensional, quite reliable, reasonably valid . . . , and are seen to be useful to students, faculty and administrators" (1984, p.749). Marsh (2007) proposed that effective teaching is contextual; to be valid, it must be studied in different settings and with different criteria. Greenwald (1997) is further concerned with concerns and usefulness of student ratings of instruction. He suggested that students' perceptions are affected by various dimensions other than teaching effectiveness while favoring the use of these ratings effectively. Likewise, the present study investigates the various domains of students' perceptions and illustrates the significance of virtual classes during the COVID-19 pandemic.

In the current study, participants provided a definition of effective online teaching during the Covid-19 pandemic. In combination, eight items contributed to the definition: motivating students to accomplish, communicating effectively, meeting students' needs, providing access to a wide range of content, providing a well-organized course structure, providing numerous resources, providing explanatory feedback, and facilitating meaningful discussions. These items, in an online classroom, may enhance connections between the instructor, the students, and the course content. This study created a dataset concerning the effectiveness of online teaching and learning during the present COVID-19 pandemic. The study highlighted the differences between online and traditional courses and assessed student perspectives on online teaching effectiveness. This study is important because the results will be beneficial to understand what kind of factors contribute to student satisfaction concerning online transition during the COVID-19 pandemic, as well as help them develop a future support plan to help students cope with virtual classes and online instruction.

Research Question

How do students describe effective online learning during the present circumstances where COVID-19 pandemic?

Literature Review

The COVID-19 pandemic has presented a real challenge for educators everywhere in the world. Hence, a need exists to investigate the perceptions of students who are enrolled in face-to-face classes and had to switch to online classes in a very short time. The current literature review focuses on investigating the different factors contributing to the students' perceptions of online learning.

Online Learning vs. Face-to-Face Classes

The advantages and the instructional features vary in online learning, which has proven to be successful over the years (Allen & Seaman, 2011; Brass, 2002; Chambers, 2002; Lindberg, 2004; O'Neil, Singh, & O'Donoghue, 2004). First and foremost, a differentiation must be made between online learning as courses in which all teaching and course material are online instead of definitions that include technology or web-based material that supports in-person courses (Allen & Seaman, 2011). Online learning refers to “the use of a wide variety of electronic media as well as information and communication technologies to achieve educational purposes” (Muljana & Luo, 2019, p. 20). The definition includes the electronic delivery of instruction through the Internet, Intranet, or multimedia platforms (Hall, 2003; O'Neil, Singh, & O'Donoghue, 2004; Ozfidan, & Burlbaw, 2020). The goal is to have a convenient and effective means of delivering classes to ensure that what a learner experiences in an online class is similar to a face-to-face class. Online learning is linked to technological advancement and is exponentially increasing, with some studies estimating 2002 to be the real starting point of this growth in the United States (Allen & Seaman, 2013). The growing need for online education can be recognized as a “market need,” and the great increase in online programs may satisfy the needs of students aiming for the convenience of online education (Eduventures, 2005). Students' readiness in online education reflects in their perceptions related with online vs face-to-face classes. Such readiness cover domains such as student attributes, time management, technical and communication competencies (Martin, Stamper & Flowers, 2020).

Both online and traditional classes have a number of overlapping factors for success and struggles. Gunawardena (1995) highlighted that social presence is necessary to increase communication in schooling. Yet he follows-up on the analysis of the impact of social presence in online environment as a means to perceive others as “real” in online communication. Connor contemplates the challenge of maintaining student engagement and achieving active learning in face-to-face environment (Connor, 2009). One of the most acknowledged benefits of online classes is convenience.

Perceptions of Students and Online Courses

Some research has sought to establish a link between students' perceptions and achievement. Some studies have validated the reliability of student perceptions in educational research (Marsh, 1984; McKeachie, 1979; Kocabas, Ozfidan, & Burlbaw, 2019). Many institutions are keen to conduct questionnaires to verify the opinions of student stakeholders. Researchers even incorporate student satisfaction as part of their definitions of teaching effectiveness (Gorsky & Blau, 2009). Further studies have indicated that high levels of student satisfaction are related to achievement (Zhang, 2005). Student satisfaction plays an active role not only in course completion but also in taking other online courses in the future (Matsunaga, 2016). Thus, more studies have recommended that student satisfaction can be used to enhance learning because it is directly linked to motivation and learning (Koohang & Durante, 2003). An evaluation of student perceptions provides new metrics for measuring learning experiences, unlike the deductive knowledge that a teacher's perspective provides. Pellegrino and Hilton speak of various dimensions that students reveal about their learning, such as lifelong, social and relationship skills, cultural sensitivity to other life perspectives, and digital skills (Pellegrino & Hilton, 2013). A considerable body of literature affirms that student satisfaction increases with high-quality online courses (Clawson, 2007).

Domains of Students' Satisfaction

Certain features distinguish online learning from face-to-face learning. Those features become the main factors that shape student experiences. Student satisfaction in various studies covers various domains or factors that are directly related to the success of the learning experience. In some studies, satisfaction is explored within an instructor's directions and support, satisfaction with their commitment to learning, and satisfaction with the course design and policies (Lo, 2010). Others have focused on dimensions of social presence, social interaction, and satisfaction (Bali & Liu, 2018). Some studies use student satisfaction as a parameter among other factors of online success. Other satisfaction domains that are explored are social presence, social interaction and collaborative learning (Spears, 2012), group learning environment, technology and preferences (Fortune, Spielman, & Pangelinan, 2011), as well as course design, learner interaction, student engagement and instructor presence (Gray & KiLoreto, 2016).

One of the most critical factors that affects the overall experience of students is the structure and instructional design of online courses. Instructional design and delivery is a common component of the success of the online learning experience. Several studies have explored the efficiency of instructional design (Bozarth, Chapman, & LaMonica, 2004; Wegner, Holloway, & Garton, 1999). However, linking factors like course structure and design to student performance and satisfaction require further study. Dabbagh affirms the link between student satisfaction and an adequate instructional method, support, and course structure (Dabbagh, 2007). Furthermore, Dabbagh (2007) identifies both the instructors and the students as key to achieving an effective learning environment, a view that builds on previous research identifying both parties as primary elements of a successful experience (Wegner, Holloway, & Garton, 1999). Gomez-Rey, Barbera, and Fernandez-Navarro (2018) link course design to the role of instructors because course design includes the design of instructional strategies for the learning environment.

Another important feature that affects the students' overall satisfaction with online classes is the role of the online teacher. Even though an extensive body of literature tackles the importance of the role of teachers in online classes, each has identified its unique elements based on their students' needs and learning environment. Thach and Murphy (1995) have identified eleven online instructor roles: "instructor, instructional designer, technology expert, technician, administrator, site facilitator, support staff, editor, librarian, evaluation specialist, and graphic designer" (p.59). Goodyear et al. (2001) identified "the additional roles of content facilitator, technologist, designer, manager/administrator, process facilitator, adviser/counselor, assessor, and researcher" (p.69). Abdulla (2004) combined Thach and Murphy's model of students' perceptions and Berge's (Berge, 1995) role-based educational model to report the differences between the perceptions of students and experts regarding the role of the online instructor. The findings pointed out a significant difference between students' perceptions and experts' perceptions regarding the most crucial online instructor roles. To the experts, the social role was the most important one, whereas the students considered the instructor role of provider of content knowledge as the most important one.

Gomez-Rey, Barbera, and Fernandez-Navarro (2018) acknowledged that the way studies have approached the role of a teacher (using what they call a "top-down or deductive" approach) was not the most representative of the efficiency of such a role. They promoted student perceptions as a bottom-up measure to assess the role of a teacher in online instruction (Gomez-Rey, Barbera, & Fernandez-Navarro, 2018). Moore (2003) said that offering support for students in an online environment should be "proactive" rather than reactive (Moore, 2003, p. 143). He

said that areas of student support included student-generated issues, technical issues, and emotional stress.

The interaction between teachers and students is an essential feature of the success of online learning. A lack of interaction between the teachers and the students is a major challenge for students in online classes and has been found to be an issue (Wilkes, Simon, & Brooks, 2006; Gregory, 2003). Thus, it becomes crucial to attend to this element to improve the quality of online courses. Research shows that learner-to-instructor interaction leads to higher student engagement in online courses (Dixon, 2010; Gayton & McEwen, 2007; Jung et al., 2002; Ozfidan, & Mitchell, 2020).

Among the most critical factors that affect overall student experiences is the quality of feedback that they receive from their teacher. Feedback is an essential element in the educational cycle of learning. In most research conducted about successful online learning environments, student satisfaction with interaction and feedback was key (Awofeso & Bamidele, 2016; Eom, Wen, & Ashill, 2006; Muilenburg & Berge, 2005; Ruey, 2010; Ozfidan, 2021; Song et al., 2004). Gaytan includes feedback as one of the means of creating interaction in an online environment, thus recommending that teachers utilize immediate and ongoing feedback (Gaytan, 2005). The idea of interactive feedback as an element of communication is further validated as support for the success of online courses (Harris, 2014).

The feedback given must be constructive and effective. For feedback to be considered constructive, it must include certain features as “being descriptive; timely; honest; useful; respectful; clear; issue-specific; supportive; motivating; action-oriented; solution-oriented; strictly confidential; trust; collaborative and informative” (Hamid & Mahmood, 2010, p. 226). For online classes, the constructive feedback students receive becomes even more important. Effective feedback is essential for the students to keep them engaged in their courses and the feedback must be given in a timely manner to compensate for the distance between the teacher and the students (Tanis, 2020). Instructor feedback can take several forms. Corrective instructor feedback, which is usually focused on the specific content of the task performance, may be categorized as no feedback is given, simple verification or knowledge of results, knowledge of correct response, elaborated feedback, and try-again feedback (Dempsey, Driscoll, & Swindell, 1993).

Method

Design and Participants

The study used a survey instrument to investigate students’ perspectives on effective online learning and teaching. According to IRB protocol (#2020-03-0033), all participants and instructors (who helped in data collection), were completely informed regarding the procedures of the study. Participation in the study was voluntary, and all data were stored confidentially. None of the participants’ identities were exposed. The data were collected in the spring semester in 2020. The survey link was emailed to 3465 undergraduate and graduate students in April 2020 and the last response was received in June 2020. Totally, 890 participants (Male=452; Female=438) completed the survey instrument for a response rate of about 25.6%. Of the responses received, the descriptive statistics of participants indicated that 70% of the participants were undergraduate students, and the rest (30%) were graduate students. The data was collected from a diverse population consisting of two U.S. institutions (408 participants) and one Saudi institution (482 participants). All the participants were able to speak English fluently. Additionally, 479 participants spoke Arabic; 118 participants spoke Spanish; 25 participants

spoke Urdu; 9 participants spoke French; 7 participants spoke Mandarin; and 5 participants spoke Turkish. Participants' majors were social science (83.5%) (e.g., Education, Political Science, Sociology, Business, Psychology, and so on) and the rest of them (16.5%) had an engineering background (Electrical Engineering, Computer Engineering, Civil Engineering, and so on).

Instrument

The survey began with demographic questions to identify the background information of the participants, and it continued with 5-point Likert-type scale questions (strongly disagree=1; disagree=2; neutral=3; agree=4; strongly agree=5). Thirty items highlighted the general perspective of effective online teaching, and the remaining six items reflected specific characteristics of teaching effectiveness. Thirty items measured teaching effectiveness consisting of student satisfaction on the effects of instructional design and delivery, effects of teacher roles on student satisfaction, student-faculty interaction on student satisfaction, and effects of quality of feedback on students' satisfaction. All items on the instrument were generated from the literature review. Each item on the instrument was grounded in various studies such as Hara and Kling (2000), Abrami et al. (1990), Cohen (1981), Marsh (1987), Northrup (2002), and Feldman (1984). These all items collectively form a measure for effective online teaching and learning. Additionally, there were two open-ended questions to describe the overall impression of online courses at the end of the survey instrument.

Data Collection

The researchers started collecting data in April 2020. The survey instrument was prepared in the Qualtrics program and sent out to participants. To collect the data, the researchers used their personal contacts with the department heads at three different universities. The prepared survey link was emailed to the department heads, and they spread the link to the instructors in their departments. Afterward, each instructor emailed the prepared survey link to all of their students before starting the class. Each instructor allowed their students to complete the survey during their class period. Each participant had to accept the consent form on the first page of the survey instrument before filling out the survey.

Data Analysis

For the data analysis of the study, the researchers conducted descriptive statistics such as means, standard deviations, and correlations (*rp*). The researchers used multiple regression to explain the level to which there was a linear relationship between a dependent variable and independent variables and classified the data. Multiple regression analysis, according to Dupont and Plummer (1998), "refers to a set of techniques for studying the straight-line relationships among two or more variables" (p. 592). The form of the multiple regression equation is as follows:

$$y = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \dots + \beta_p x_p + \varepsilon$$

As indicated above, the Y represents the dependent variable, and Xs are the independent variables. For the present study, the overall effectiveness of online teaching and learning items was the dependent variable, and this was regressed onto the thirty items, which were independent variables of the study. Because the study had many independent variables, the analysis indicated a multicollinearity issue. In other words, there were two items that were highly correlated with each other.

This caused an issue with understanding which independent variable contributed to the variance explained in the dependent variable. To solve the issue, the highly correlated items were removed from the scale. As a weighted average in which the regression coefficients (β 's) were

the weights, this multiple regression indicated the relationship between the dependent variable and the independent variables. Linear regression in Python with Scikit-Learn was performed, which is a library in Python that provides numerous supervised and unsupervised learning algorithms. The purpose of using Python with Scikit-Learn is to implement regression functions and classify the data.

The researchers also proposed two open-ended questions at the end of the survey instrument to allow students (participants) to reflect their attitudes, feelings, and understanding of online learning. The data downloaded from Qualtrics and categorized and identified repeating themes by coding (a word or simple phrase that summarizes the idea). After the data were downloaded, the researchers coded the data manually.

Findings

All thirty items in the instrument were found to be internally consistent (Cronbach’s Coefficient Alpha = .9), and Table 1 below shows that the item-to-overall correlations were all affirmative and at least moderate, showing some proof that the set of 30 items captured the principle of effective online teaching and learning. All items were found to be reliable. Therefore, the survey questionnaire that measured online teaching effectiveness for the students was reliable and valid.

How do students describe effective online teaching and learning? By using regression analysis, the researchers addressed this research question. The purpose of using regression was to find a principal group of items in the instrument that most intensely related to online teaching and learning effectiveness. Additionally, the students (participants) who completed the survey also wrote statements that described their overall impression of online courses. The results of open-ended questions were determined, in part, by the regression analysis’s results. The table displayed “the means and standard deviations” for each of the thirty items and “the overall item.” Likewise, Table 1 highlighted the overall effective online teaching and learning item of the correlation between each item. Item correlations and the overall item ranged from .57 to .81. Table 1 also indicated that the Standard Deviation (SD) range of the study is .79 – 1.19. According to Leys et al. (2013), “a high standard deviation indicates a heterogeneous group” (p. 765). Leys et al. also highlighted that “low standard deviation means data are clustered around the mean, and high standard deviation indicates data are more spread out” (p.765). The low SD of the study highlighted that the data points tended to be very close to the mean; the high SD of the study indicated that the data points were spread out over a large range of values.

Table 1
Descriptive Statistics: Means (M), Standard Deviations (S.D.), Correlations (rp)

Item	M	SD	rp
Communicate effectively	4.13	1.01	.75
Meet students’ need	3.98	0.79	.77
Provide meaningful examples	4.02	1.10	.69
Clear assignment instructions	3.78	1.02	.65
Self-motivation	4.06	0.96	.59
Diverse learning and teaching styles	3.88	1.06	.61
Encourage to take responsibility	4.10	1.10	.66
Foster critical thinking abilities	3.68	1.09	.71
Valuable discussion	4.03	1.11	.57
Provide explanatory feedback	4.31	1.05	.80

Encourage to improve	4.09	1.14	.65
Useful online equipment	4.32	1.12	.70
Easily to reach the instructor	3.67	0.96	.57
Various online activities	4.04	1.01	.67
Provide numerous sources	4.11	1.12	.77
Provide access to a wide range of content	4.21	1.15	.76
Natural interaction between student and instructor	3.79	1.07	.72
Natural interaction among the students	4.12	0.89	.73
Ask any questions freely	4.06	1.08	.61
Provide more successful work	4.01	1.12	.72
Comfortable learning atmosphere	4.56	1.16	.62
Friendly and warm classes	4.07	1.04	.58
Technical issues	4.15	1.11	.59
Provide a well-organized course structure	4.13	1.13	.78
Useful one-on-one virtual meeting	3.97	1.10	.70
Facilitate meaningful discussions	4.01	1.02	.78
Easy to manage course	4.32	1.14	.72
Respect to students	4.37	1.11	.58
Motivate student to accomplish	4.35	1.19	.81
Available out of course	4.21	1.01	.59

Note: Strongly disagree=1; disagree=2; neutral=3; agree=4; strongly agree=5.

An analysis of multiple regression was conducted to find the items to explain overall online teaching and learning effectiveness statistically. The dependent variable was online teaching and learning effectiveness, which was regressed onto the thirty items in the instrument (see the regression analysis Appendix A). Additionally, a plot of the residuals for the thirty items scaled against the anticipated values showed a linear relationship. The R^2 was .881 once all 30 items in the scale were included. Some of the items were removed based on their contribution from the scale. The items dropped from the scale were based on low B-weights, which were judged to be comparable because all items were measured on the same metric. First, the researchers removed seven items (see the last five items in Appendix A) from the scale because they had nonsignificant B-weights, which were almost zero. The remaining 23 items after removal generated an R^2 of .875.

Table 2
Multiple regression analysis

Item	R^2	B	t	p
Motivate student to accomplish		0.23	3.96	< .01
Communicate effectively		0.21	3.99	< .01
Meet students' needs		0.19	4.06	< .01
Provide access to a wide range of content		0.17	2.91	.02
Provide a well-organized course structure		0.16	2.35	< .01
Provide numerous sources		0.19	3.51	< .01
Provide explanatory feedback		0.15	2.79	.04
Facilitate meaningful discussions		0.14	2.11	.03
8 items	.859			

Note: R^2 for each model includes all items listed above and items below are removed.

The researchers totally removed three groups of items from the scale (see the entire scale in Appendix A). Eight items, which were not significant and had low B-weights, were removed

because they had very small unique contributions, and the remaining fifteen items after removal generated an R^2 of .866. Finally, seven items, which had nonsignificant B-weights, were also dropped from the scale, and the remaining eight items had an R^2 of .859. These last eight items remained on the scale were clearly and statistically reflected in overall online teaching and learning effectiveness.

Table 2 above shows that these eight items had very similar B-weights, and the t -test values of the items were measured and found higher than 2. Besides, these eight items were significant with $p < .05$. The eight items in the scale (as displayed in Table 2) included motivating a student to accomplish, communicate effectively, meet students' needs, provide access to a wide range of content, provide a well-organized course structure, provide numerous sources, provide explanatory feedback, and facilitate meaningful discussions. The remaining 22 items, which were removed from the scale, were generally very useful and helpful for an instructor and student but did not essentially predict online teaching and learning effectiveness (see Appendix A). The respondents of the study described a definition of online teaching effectiveness along with the eight items, as seen in Table 2.

Analysis of Open-ended Questions

The analysis of open-ended questions helped the researchers identify how instructors facilitated effective online teaching and learning. The students reflected their positive and negative perspectives. For instance, one of the students stated,

I believe online classes are beneficial for both students and instructors since both of them have more time to study and to achieve certain goals rather than time being lost on the face-to-face classes. Online courses require more self-motivation and time-management skills because we spend more time on our own without someone physically close to keep us focused on deadlines. Our instructor was always motivating us to accomplish. I had a great experience with online classes, and I developed new skills. Overall, online courses are well structured and provide too many informative documents for us.

Students highlighted that effective online teaching and learning consisted of motivating students and providing a well-organized course structure for sufficient academic success. According to one student, "Teachers should provide opportunities for students to personally connect to the subject matter and have them set their own goals and set up a system for self-monitoring and progress-tracking" to motivate students. The students reflected that instructors for effective online teaching and learning should provide numerous sources to meet student needs.

The open-ended data analysis reflected that effective online teaching and learning facilitated meaningful discussions among the students. It builds natural interaction among the students and between students and instructors. According to the response of one student,

Online classes increase the quality of education. I think online classes are more interactive than traditional classes. In my online classes, we had a very useful online discussion, and I learned lots of things from my classmates. My online classes' instructors were well-prepared and provided many useful sources.

Students reflected that effective online teaching brings strong and interactive work. To have an interactive class, one of the students stated, "Teachers need to incorporate an interactive element

on each slide and use digital storytelling in their courses. They should also create a simulated environment where learners can freely practice.” The students highlighted that instructors should be well prepared for their courses and provide access to a wide range of content in their field.

Providing explanatory feedback was also an essential factor in online teaching effectiveness. The open-ended data highlighted that giving explanatory feedback helps students with suggestions for development, learning strategies, and corrections for errors. One student summarized the online experience this way:

My online writing course was very good, and I was receiving useful feedback from my instructor. My instructor was explaining to me every single detail of my issues. When I didn't understand the written feedback, I was meeting with my instructor via Google Hangout to understand the problems clearly.

Most students in the study reflected that feedback was important because it encourages them to think critically about their work and reflect on what they need to do to develop it. According to a student, “My instructor’s meaningful feedback enhanced my critical thinking, reflective practice, and developed my relationships with my instructor, which is important in an online environment.”

On the other hand, some students reflected negative perspectives of online education and how this affected their courses. The open-ended data highlighted that some students did not like online courses since they cause too much stress. One student stated:

I had many technical issues (Internet, submission issues, etc.), and it was affecting my learning negatively. I was also not able to reach my professor easily. My professor was responding to my emails after a week, or I was being ignored. The instructions of the assignments were not clear enough, and I was not getting clarification from the instructor. These all were causing mental issues for me.

Some students indicated that traditional courses were better than online courses because they failed to learn the subject sufficiently.

Overall, the responses to the open-ended questions mostly reflected that the participants were happy with online courses, and with the instructors who made a strong effort to enable meaningful, well instructed, and carefully structured courses. The students expected instructors to engage with them. An effective instructor, according to the students, should help students motivate themselves, adapt to their numerous needs, and demand high-quality work. The instructors should also create an atmosphere to encourage students to work collaboratively and interactively with their instructors and peers.

Discussion

The study provides data on the unique situation in which the Covid-19 pandemic posed challenges for educators everywhere in the world. Most of the research about online classes lies within a very different context than the one governing this study, as most previous research draws from the experience of students’ choice of an online learning environment when face-to-face classes are not “convenient” (Haugen, LaBarre, & Melrose, 2001; Liaw & Huang, 2002; McEwan, 2001).

The current study examines the unique situation of a forced and abrupt online transition due to the COVID-19 lockdown. This variable is considered for two reasons that give this study substantial significance. First, it situates the study among the first to contribute to the initial body of knowledge in that area. The second is the global nature of the COVID-19 online transition, as most schools and universities from all over the world had to adopt this mode of education. Thus, it was relevant to report the experiences of students from a Saudi and a U.S. university, and the data collected had more depth because they were international rather than national. Ultimately, the correlation between the specified domains and student' perceptions offer a dataset for online instruction that validates theory through practice. The results were irrespective of the demographic differences related to gender, undergraduate/graduate status, academic major, age, and the number of online courses.

Thus, the emergent definition of effective online teaching during the COVID-19 pandemic encompassed the student satisfaction domains. In this study, participants provided a definition of effective online teaching during the COVID-19 pandemic. In combination, eight items contributed to the definition. These items were the following: motivating students to accomplish, communicating effectively, meeting students' needs, providing access to a wide range of content, providing a well-organized course structure, providing numerous sources, providing explanatory feedback, and facilitating meaningful discussions. In an online classroom, these items may enhance connections between the instructor, the students, and the course content.

The respondents recognized the importance of self-motivation for succeeding in online classes. This can be explained by the fact that the students in the study did not choose to be enrolled in online classes and that this enrollment was imposed on them due to the pandemic. This required a high level of self-motivation to continue and succeed in the online medium. This is also consistent with previous research that points to the importance of self-motivation for online classes (i.e., Stark, 2019; Berndtson & Makanyama, 2018; Lawrence, 2018; and Yurdugül & Menzi Çetin, 2015). Therefore, an effective online class for respondents was one that successfully motivated them to learn and made it easier for them to motivate themselves. This was done by creating multiple opportunities to connect to the course material and creating a system for the students to monitor and track their progress.

The respondents recognized the importance of an effective course structure and related that structure to the ease of accessing content. Interest in content is directly linked to motivation and, in turn, affects student learning. This finding is consistent with several studies that emphasize how students are more motivated with what they perceive as interesting content, or content related to their jobs (Brass, 2002; Burke & Moore, 2003; Adler, Milne, & Stablein, 2001). In addition to content, the respondents also pointed out that their online classes provided them with all the resources they needed to succeed.

The results indicated that one primary attribute of their online learning was that it provided them with a comfortable learning environment. This is consistent with findings of previous studies (i.e., Skordis-Worrall, Haghparast-Bidgoli, & Batura, 2015; Harris, 2014; Perreault et al., 2008) that also indicated that convenience and flexibility were key features that distinguished online classes from face-to-face classes.

Another essential attribute of online learning, according to the respondents, was that it provided them with the feedback they needed. The respondents in the study were isolated from their teachers and their classmates. Therefore, it was essential for them to receive quality

feedback regarding their progress and performance in their courses to improve their learning and to hold them to a high standard of performance. This result is consistent with previous findings that students perceived feedback as an important attribute of online learning to improve their learning and to keep them motivated (Pan & Shao, 2020; Tanis, 2020; Filius et al., 2018). This further strengthens the importance of receiving quality feedback to improve learning in online classes.

The respondents also highlighted interaction and discussions as important attributes of online classes. Interacting with the teachers and classmates became challenging during the lockdown due to the social distancing constraints. Therefore, the respondents valued the interaction opportunities and discussions in their online classes. The respondents viewed interaction as an important quality in a productive and effective online class. Creating an interactive online class can be very challenging for the teacher but might be facilitated by using videoconferencing tools, i.e., Google Meet and Zoom.

In their open-ended responses, the respondents highlighted some challenges that they faced in online classes. Technical difficulties were probably the most stated challenge. Another challenge was related to time management. Therefore, to ensure that online classes are effective, students must receive technical support regularly and receive guidance regarding managing study time.

Limitations and Future Research

The strengths of this study relate to number of participants and methodology. The researchers chose the group of participants to explore the perceptions of students towards their online learning and to use it as way to define and depict a picture of effective online learning. One of the areas of strengths of the study is that the sample size of the study allowed for generalizability of the findings. Although the size of the sample is a major area of strength, the study precludes conclusions regarding the socio-economic backgrounds of the participants and how it affected their perceptions of effective online learning. The Saudi participants, for instance, were all students in a private university and hence it is reasonable to assume similar socio-economic backgrounds. The major area of strength of this study is that it captures an exceptional situation where the students were forced to transit to online learning almost overnight. The study sheds light on a situation that affected students in almost every part of the world. However, that could also be a limitation to this study since this situation cannot be easily replicated. Another limitation of the study is that the perceptions of graduate and undergraduate students were not compared and may suggest an area for future research. Future research would also include comparing the results based on a racial breakdown and based on the students' perceptions of effective traditional face-to-face learning. Another factor deserving of future research would be comparing the perceptions of the online learning students to those of teachers.

Conclusion

The change of classes from face-to-face to online almost overnight due to the COVID-19 pandemic and the social distancing constraints posed a severe challenge to the educational system. This change might be sudden and inconvenient and might last for some time, but quality online classes that resemble the quality of education the students receive in a regular face-to-face class must be offered. The students in this study were able to paint a picture of what they perceived as an effective online class. The eight criteria that the students identified are motivating students to accomplish, communicating effectively, meeting students' needs, providing access to a wide range of content, providing a well-organized course structure,

providing numerous sources, providing explanatory feedback, and facilitating meaningful discussions. Those are the criteria that the students recognized as the definition of effective online teaching during the COVID-19 pandemic. Considering the results, it is recommended to use the picture that was painted by the participants in preparing online classes and to incorporate it into any teacher training course that targets improving online learning. Even though the context of the COVID-19 pandemic limits the results of the study, it has changed education forever, and many universities are currently planning to have online learning as the new norm going forward. Therefore, it is of utmost importance to understand how students perceive their online learning experience. The future progress of online learning relies upon how we define it in the present.

Declarations

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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References

- Abdulla, A. G. (2004). Distance learning students' perceptions of the online instructor roles and competencies [Doctoral dissertation, Florida State University].
<http://www.citeulike.org/user/jrhode/article/1029039>
- Adler, R. W., Milne, M. J., & Stablein, R. (2001). Situated motivation: An empirical test in an accounting class. *Canadian Journal of Administrative Sciences*, 18(2), 101-116.
- Allen, E., & Seaman, J. (2013). Changing courses: Ten years of tracking online education in the United States. *Babson Questionnaire Research Group*. Retrieved from
<http://www.onlinelearningsurvey.com/reports/changingcourse.pdf>
- Allen, I. E., & Seaman, J. (2011). *Going the Distance: Online Education in the United States*.
http://sloanconsortium.org/publications/survey/going_distance_2011
- Awofeso, N., & Bamidele, M. (2016). Efficient Instructor Feedback: Perceptions of Online UAE Undergraduate and Postgraduate Public Health Learners. Proceedings of the International Conference on E-Learning, 1–12.
- Bali, S., & Liu, M. C. (2018). Students' perceptions toward online learning and face-to-face learning. *Journal of Physics: Conference Series*. doi:10.1088/1742-6596/1108/1/012094
- Berge, Z. L. (1995). The role of the online instructor/facilitator. *Educational Technology*, 35(1), 22-30.
- Berndtson, R., & Makanyama, L. (2018). Online learning for geography undergraduates: Student perceptions and motivations. *Geography Teacher*, 15(4), 145–155.
doi:<https://doi.org/10.1080/19338341.2018.1524779>
- Bonestroo, W. J., & De Jong, T. (2012). Effects of planning on task load, knowledge, and tool preference: A comparison of two tools. *Interactive Learning Environments*, 20(2), 141-153.
doi:10.1080/10494820.2010.484253
- Bonwell, C., & Eison, J. (1991). *Active learning: Creating excitement in the classroom*. 1991 ASHE-ERIC Higher Education Reports. Washington, D.C.: Jossey-Bass.
- Bozarth, J., Chapman, D., & LaMonica, L. (2004). Preparing for distance learning: Designing an online student oriented course. *Educational Technology and Society*, 7(10), 87-106.
<https://www.jstor.org/stable/jeductechsoci.7.1.87>
- Brass, K. (2002). Pushing E-learning. *Sales and Marketing Management*, 154(3), 56.
- Brown, K. M. (1996). The role of internal and external factors in the discontinuation of off-campus students. *Distance Education*, 17(1), 44-71. <https://doi.org/10.1080/0158791960170105>

- Burke, L. A., & Moore, J. E. (2003). A perennial dilemma in O.B. education: Engaging the traditional student. *Academy of Management Learning & Education*, 2(1), 37-53.
- Chambers, J. (2002). This time we get to do it right. *Community College Week*, 14(20), 8.
- Choy, S., McNickle, C., & Clayton, B. (2002). Learner expectations and experiences: An examination of student views of support in online learning. *National Center of Vocational Education and Research*.
https://www.researchgate.net/publication/37377463_Learner_expectations_and_experiences_an_examination_of_student_views_of_support_in_online_learning
- Clawson, S. L. (2007). *Does quality matter? Measuring whether online course quality standards are predictive of student satisfaction in higher education* [Doctoral dissertation, Capella University]. ProQuest Dissertations Publishing.
- Connor, E. (2009). Perceptions and uses of clicker technology. *Journal of Electronic Resources in Medical Libraries*, 6(1), 19_32. doi:10.1080/15424060802705145
- Dabbagh, N. (2007). The online learner: characteristics and pedagogical implications. *Contemporary Issues in Technology and Teacher Education*, 7(3), 217-226.
<https://www.learntechlib.org/primary/p/22904/>
- Dixon, M. (2010). Creating effective student engagement in online course: What do students find engaging? *Journal of the Scholarship of Teaching and Learning*, 1(13), 1-13. EJ890707
- Eduventures. (2005). *Developing Effective Channels to Corporate and Government Markets, Part I*. Boston: Eduventures: LLC.
- Eom, S., Wen, H., & Ashill, N. (2006). The determinants of students' perceived learning outcomes and satisfaction in university online education: An empirical investigation. *Decision Sciences Journal of Innovative Education*, 4(2). doi:doi: 10.1111/j.1540-4609.2006.00114.x
- Felder, R. M., & Brent, R. (2005). Understanding student differences. *Journal of Engineering Education*, 49(1), 57-72. doi:10.1002/jee.2005.94.issue-1
- Fersen, J. W., & Boyd, L. G. (2005). Caught in the web quality. *International Journal of Educational Development*, 25, 317-331. <https://doi.org/10.1016/j.ijedudev.2004.12.002>
- Filius, R. M., de Kleijn, R. A., Uijl, S. G., van Rijen, H. V., & Grobbee, D. E. (2018). Promoting deep learning through online feedback in SPOCs. *Frontline Learning Research*, 6(2), 92–113. EJ1197913
- Fortune, M., Spielman, M., & Pangelinan, D. (2011). Students' perceptions of online or face-to-face learning and social media in hospitality, recreation and tourism. *Journal of Online Learning and Teaching*, 7(1), 1-16.
- Francola, K. (2001). Why online learners drop out. *Workforce*, 10, 52-60.

- Gaytan, J. (2005, Spring). Effective assessment techniques for online instruction. *Information Technology, Learning, and Performance Journal*, 33(1), 25-33.
- Gayton, J., & McEwen, B. C. (2007). Effective online instructional and assessment strategies. *American Journal of Distance Education*, 21(3), 117-132. doi:10.1080/08923640701341653
- Gomez-Rey, P., Barbera, E., & Fernandez-Navarro, F. (2018). Students' perceptions about online teaching effectiveness: A bottom-up approach for identifying online instructors' roles. *Australasian Journal of Educational Technology*, 34(1). <https://doi.org/10.14742/ajet.3437>
- Goodyear, P., Salmon, J., Spector, J. M., Steeples, C., & Tickner, S. (2001). Competences for online teaching: A special report. *Educational Technology Research and Development*, 49(1), 65-72. <https://doi.org/10.1007/BF02504508>
- Gorsky, B., & Blau, I. (2009). Online teaching effectiveness: A tale of two instructors. *The International Review of Research in Open and Distributed Learning*, 10(3), 1-27. doi:<https://doi.org/10.19173/irrodl.v10i3.712>
- Gray, J., & KiLoreto, M. (2016). The effects of student engagement, student satisfaction, and perceived learning in online learning environments. *International Journal of Educational Leadership Preparation*, 11(1), 1-20. EJ1103654
- Greenwald, A.G. (1997). Validity concerns and usefulness of student ratings of instruction. *American Psychologist*, 52, 1182-1186.
- Greenwald, A.G. & Gilmore, G.M. (1997). No pain, no gain? The importance of measuring course workload in student ratings of instruction, *Journal of Educational Psychology*, 89, 743-751.
- Gregory, V. L. (2003). Students perceptions of the effectiveness of Web-based distance education. *New Library World*, 104(10), 426-431. <https://doi.org/10.1108/03074800310504366>
- Hall, B. (2003). FAQs about e-learning. www.brandonhall.com/public/faqs2/faqs2.htm
- Hamid, Y., & Mahmood, S. (2010). Understanding constructive feedback: A commitment between teachers. *Journal of Pakistan Medical Association*, 60(3), 224-227.
- Hara, N., & Kling, R. (2000). Students' distress with a web-based distance education course: An ethnographic study of participants experiences. *Information, Communication and Society*, 3(4), 557-579. <https://doi.org/10.1080/13691180010002297>
- Harris, G. E., & Kelly, G. (2004-2006). The development and implementation of online undergraduate systems security courses: Lessons learnt. *Information Technology, Learning, and Performance Journal*, 22(3), 65-82.

Harris, P. e. (2014). Perceptions of Online versus Face-to-Face Learning of Educational Leadership Graduate Students. *European Journal of Educational Sciences*, 1(1), 30–37. <http://search.ebscohost.com/login.aspx?direct=true&db=eric&AN=EJ1236642&site=ehost-live>. Acesso em: 24 set. 2020.

Haugen, S., LaBarre, J., & Melrose, J. (2001). Online course delivery: Issues and challenges. *Issues in Information*, 127-131.

Jung, I., Choi, S., Lim, C., & Leem, J. (2002). Effects of different types of interaction on learning achievement, satisfaction and participation in Web-based instruction. *Innovations in Education and Teaching International*, 2, 153-162. <https://doi.org/10.1080/14703290252934603>

Ke, F., & Xie, K. (2009). Toward deep learning for adult students in online courses. *Internet and Higher Education*, 12(3/4), 136-145. doi: 10.1016/j.iheduc.2009.08.001

Kocabas, S., Ozfidan, B., & Burlbaw, L. M. (2019). American STEM Education in Its Global, National, and Linguistic Contexts. *Eurasia Journal of Mathematics, Science and Technology Education*, 16(1), em1810.

Koohang, A., & Durante, A. (2003). Learners' perceptions toward the web-based distance learning activities/assignments portion of an undergraduate hybrid instructional model. *Journal of Information Technology Education*, 2(1), 105-113.

Laine, L. (2003). Is e-learning effective for I.T. training? *T+D*, 57(6), 55-60.

Lawrence, A. J. (2018). *Instructor caring: Using Self-Determination Theory to understand perceptions, measurement, and impact of instructor caring on motivation and learning in online contexts*. <http://search.ebscohost.com/login.aspx?direct=true&db=ddu&AN=23B384B6AB4D7965&site=ehost-live>

Leys, C., Ley, C., Klein, O., Bernard, P., & Licata, L. (2013). Detecting outliers: Do not use standard deviation around the mean, use absolute deviation around the median. *Journal of Experimental Social Psychology*, 49(4), 764-766.

Liaw, S., & Huang, H. (2002). How web technology can facilitate learning. *Information Systems Management*, Winter, 19(1), 56-61. <https://doi.org/10.1201/1078/43199.19.1.20020101/31477.8>

Lindberg, M. (2004). Attitudes towards distance education and hybrid courses based on quality of student experience. *Proceedings of the Midwest Instruction and Computer Symposium*.

Lo, C. (2010). How student satisfaction factors affect perceived learning. *Journal of the Scholarship of Teaching and Learning*, 10(1), 47-54.

- Marsh, H. W. (1984). Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases, and utility. *Journal of Educational Psychology*, 76(5), 707-754. <https://doi.org/10.1037/0022-0663.76.5.707>
- Marsh H.W. (2007) Students' evaluations of university teaching: Dimensionality, reliability, validity, potential biases and usefulness. In R.P. Perry & J.C. Smart (Eds.) *The scholarship of teaching and learning in higher education: An evidence-based perspective*. Springer. https://doi.org/10.1007/1-4020-5742-3_9
- Martin, F., Stamper, B. & Flowers, C. (2020) Examining student perception of readiness for online learning: Importance and confidence. *Online Learning*. 24(2), 38-58. <https://doi.org/10.24059/olj.v24i2.2053>
- Matsunaga, S. (2016). College students' perceptions of online learning: Knowledge gain and course effectiveness. *The Online Journal of Distance Education and e-Learning*, 4(2), 20-30. <https://www.tojdel.net/journals/tojdel/articles/v04i02/v04i02-02.pdf>
- McEwan, B. (2001). Web-assisted and online learning. *Business Communications Quarterly*, 64(2), 98-103. <https://doi.org/10.1177/108056990106400211>
- McKeachie, W. J. (1979). Student ratings of faculty: A reprise. *Academe*, 65(6), 384-397. doi: 10.2307/40248725
- Moore, M. G. (2003). Editorial: Learner support. *The American Journal of Distance Education*, 17(3), 141-143.
- Muilenburg, L. Y., & Berge, Z. L. (2005). Student barriers to online learning: a factor analytic study. *Distance Education*, 26(1), 29-48. doi: 10.1080/01587910500081269.
- Muljana, P. S., & Luo, T. (2019). Factors contributing to student retention in online learning and recommended strategies for improvement: A systematic literature review. *Journal of Information Technology Education: Research*, 18, 19-57.
- Oigara, J., & Keengwe, J. (2013). Students' perceptions of clickers as an instructional tool to promote active learning. *Education and Information Technologies*, 18, 15-28. doi:10.1007/s10639-011-9173-9
- O'Neil, K., Singh, G., & O'Donoghue, J. (2004). Implementing elearning programmes for higher education. *Journal of Information Technology Education*, 3, 313-323. <http://jite.org/documents/Vol3/v3p313-323-131.pdf>
- Ozfidan, B. (2021). Verbal working memory and short-term memory: Bilingual vs monolingual children. *3L: Southeast Asian Journal of English Language Studies*, 27(3).
- Ozfidan, B., & Burlbaw, L. (2020). Teachers' Perspectives and Attitudes towards Computer-Assisted Language Learning (CALL). *Revista de Cercetare si Interventie Sociala*, 71.

- Ozfidan, B., & Mitchell, C. (2020). Detected difficulties in argumentative writing: The case of culturally and linguistically Saudi backgrounded students. *Journal of Ethnic and Cultural Studies*, 7(2), 15-29.
- Pan, X., & Shao, H. (2020). Teacher online feedback and learning motivation: Learning engagement as a mediator. *Social Behavior & Personality: An International Journal*, 1(10), 1–10. doi:<https://doi.org/10.2224/sbp.9118>
- Pellegrino, J. W., & Hilton, M. L. (2013). *Education for life and work: Developing transferable knowledge and skills in the 21st century*. National Academies Press.
- Perreault, H., Waldman, L., Alexander, M., & Zhao, J. (2008). Graduate business students perceptions of online learning: A five year comparison. *Delta Pi Epsilon Journal*, 50(3), 164–179. EJ837823
- Ruey, S. (2010). A case study of constructivist instructional strategies for adult online learning. *British Journal of Education Technology*, 41(5), 706-720. <https://doi.org/10.1111/j.1467-8535.2009.00965.x>
- Skordis-Worrall, J., Haghparast-Bidgoli, H., & Batura, N. &. (2015). Learning online: A case study exploring student perceptions and experience of a course in economic evaluation. *International Journal of Teaching and Learning in Higher Education*, 27(3), 413-422.
- Song, L., Emise, S. S., Janette, R. H., & Myung-Hwa, K. (2004). Improving online learning: student perceptions of useful and challenging characteristics. *Internet and Higher Education*, 7(1), 59_70. doi:10.1016/j.iheduc.2003.11.003
- Spears, L. R. (2012). *Social presence, social interaction, collaborative learning, and satisfaction in online and face-to-face courses*. Iowa State University: Doctoral dissertation. <http://lib.dr.iastate.edu/cgi/viewcontent.cgi?article=3983andcontext=etd>.
- Stark, E. (2019). Examining the role of motivation and learning strategies in student success in online versus face-to-face courses. *Online Learning*, 23(3), 234–251.
- Tanis, C. J. (2020). The seven principles of online learning: Feedback from faculty and alumni on its importance for teaching and learning. *Research in Learning Technology*, 28, 1-25. doi:<https://doi.org/10.25304/rlt.v28.2319>
- Thach, E. C., & Murphy, K. L. (1995). Competencies for distance education professionals. *Educational Technology Research and Development*, 43(1), 57-79.
- Wang, Y. (2003). Assessment of learner satisfaction with asynchronous electronic learning systems. *Information & Management*, 41(1), 75-86. [https://doi.org/10.1016/S0378-7206\(03\)00028-4](https://doi.org/10.1016/S0378-7206(03)00028-4)

Wegner, S., Holloway, K., & Garton, E. (1999). The effects of internet-based instruction on student learning. *Journal of Asynchronous Learning*, 3(2), 1-9.

Wilkes, R., Simon, J., & Brooks, L. (2006). A comparison of faculty and undergraduate students' perceptions of online courses and degree programs. *Journal of Information System Education*, 17(2), 131-140.

Yurdugül, H., & Menzi Çetin, N. (2015). Investigation of the relationship between learning process and learning outcomes in e-learning environments. *Eurasian Journal of Educational Research*, 58, 57-74.

Zhang, D. (2005). Interactive multimedia-based e-learning: A study of effectiveness. *The American Journal of Distance Education*, 19(3), 149-162.
https://doi.org/10.1207/s15389286ajde1903_3

Appendix A

Multiple Regression Analysis Results

Item	<i>R</i> ²	B	<i>t</i>	<i>p</i>
Motivate student to accomplish		0.23	3.96	< .01
Communicate effectively		0.21	3.99	< .01
Meet students' needs		0.19	4.06	< .01
Provide access to a wide range of content		0.17	2.91	.02
Provide a well-organized course structure		0.16	2.35	< .01
Provide numerous sources		0.19	3.51	< .01
Provide explanatory feedback		0.15	2.79	.04
Facilitate meaningful discussions		0.14	2.11	.03
8 items	.859			
Useful online equipment		0.09	1.33	.22
Useful one-on-one virtual meeting		-0.08	1.31	.21
Foster critical thinking abilities		0.07	1.29	.22
Provide more successful work		0.05	1.28	.20
Easy to manage course		-0.06	1.21	.25
Natural interaction between student and instructor		0.06	1.19	.26
Natural interaction among the students		0.07	1.13	.26
15 items	.866			
Provide meaningful examples		-0.06	0.92	.42
Clear assignment instructions		0.07	0.90	.40
Diverse learning and teaching styles		0.07	0.85	.39
Encourage to take responsibility		-0.05	0.91	.43
Encourage to improve		-0.04	0.76	.51
Various online activities		-0.06	0.67	.38
Comfortable learning atmosphere		0.05	1.01	.36
Ask any questions freely		-0.07	0.95	.31
23 items	.875			
Valuable discussion		0.04	0.34	.84
Easily to reach the instructor		0.02	0.17	.81
Respect to students		0.01	0.48	.76
Technical issues		0.03	0.11	.67
Self-motivation		0.01	0.12	.85
Friendly and warm classes		0.01	0.15	.91
Available out of course		0.02	0.25	.75
30 items	.881			

Note: “*R*² for each model includes all items listed above and items below are removed.”

Appendix B Survey Instrument

1.	Gender:	<input type="checkbox"/> Male <input type="checkbox"/> Female
2.	Nationality: _____	
3.	Languages that you speak: (Please check all that apply)	<input type="checkbox"/> Arabic <input type="checkbox"/> English <input type="checkbox"/> French <input type="checkbox"/> Mandarin <input type="checkbox"/> Spanish <input type="checkbox"/> Turkish <input type="checkbox"/> Urdu <input type="checkbox"/> Other: _____
4.	College	<input type="checkbox"/> College of Humanities <input type="checkbox"/> College of Law <input type="checkbox"/> College of Engineering <input type="checkbox"/> College of Business and Administration <input type="checkbox"/> College of Computer & Information Sciences

Student Satisfaction on Effects of Instructional Design and Delivery

	SA	A	N	D	SD
It is easy to navigate the subject learning material in online classes.					
Online classes encourage students' aspiration to learn.					
Students during online classes are given sufficient opportunities to interact with each other.					
Online classes classify clear topics and require instruction to complete assignments in a timely manner.					
Online classes require instruction in online discussion.					
Self-motivation is important to be successful in online classes.					
Online classes allow diverse learning perspectives and styles.					
Online classes provide numerous sources that help student learning					
Online classes include various activities for students to foster critical thinking abilities.					

Effects of Teacher Roles on Student Satisfaction

	SA	A	N	D	SD
Instructors encourage to take responsibility for my own learning					
Instructors provide explanatory feedback.					
Instructors need to provide sufficient contact information for the students.					
Online classes provide access to a wide range of content.					
Online classes provide activities for critical thinking.					
Online classes provide different types of assessment.					
During online classes, students are able to get help as needed.					
Students are provided adequate opportunity to discuss with instructors					

Beliefs of students on online classroom platform

	SA	A	N	D	SD
Online classes' design follows a consistent structure.					
Online classes encourage interactions with the classmates.					
Online classes provide good interaction between instructor and student					
Online classes provide a good quality discussion.					
Online classes provide valuable course materials.					
The assignments in online classes help students master course content.					
The exams in online classes provide an accurate assessment of knowledge of course content.					
Online classes' platforms provide online technicians when needed.					
Online classes increase academic success.					
Online classes contain enough learner support that links to campus resources.					
Online classes deliver adequate resources.					

Effects of student-faculty interaction on students' satisfaction

	SA	A	N	D	SD
Online classes allow for a natural interaction between me and my instructor.					
My instructors responded clearly to my questions.					
I feel I could ask questions freely on my online class.					
I can easily reach my instructors.					
I can express my disagreement with my instructors.					
I can ask my instructors to repeat if I didn't understand.					
My instructors listen if I have something to say.					

Effects of quality of feedback on students' satisfaction

	SA	A	N	D	SD
I received feedback on my assignments on a timely manner.					
The feedback I received helped me improve my learning.					
My instructors provided me with multiple forms of feedback					
I could ask my instructors to explain their feedback.					
I can easily negotiate my feedback with my instructors					
The feedback I received on my assignments was clear.					
The feedback I received encouraged me to improve.					

Online vs. face-to-face classes

	SA	A	N	D	SD
I think I learn more in online courses than in face-to-face courses.					
I prefer online courses to face-to-face courses					
I feel more comfortable participating in online course discussions than in face-to-face course discussions.					
Online classes require more study time than face-to-face courses.					
Online classes are harder than face-to-face classes.					
Retention rates are higher with online learning					

Online classes require more self-motivation and time-management skills					
Face to face classes build a better interaction between student and instructor					

Open-ended Questions

- Describe your overall impression of online classes.
- In your opinion, what are the strengths/weaknesses of online classes?
- What are one to three specific things about transitioning to online classes that you liked/disliked?
- What are one to three specific things about transitioning to online classes that especially supported your learning?
- What parts of the online classes aided your learning the most?
- What parts of online classes were obstacles to your learning?
- Do you have any specific recommendations for improving online classes? What changes that can be made to online classes to improve your learning?