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Research Article

A case study of students' perception toward online teaching methods: Factors for success in online programs

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ABSTRACT

In order to shed light on the existing problems in the use of teachers teaching methods and improving classroom teaching methods for online classes, there seems to be a need for further research at Eastern Mediterranean University (EMU). The present study aims at exploring the online teaching methods by looking into learners 'perceptions on teachers' use of instructional methods in online classes. It also aims to understand what factors should be taken into consideration to have a successful online program.

This study is a case study done within the quantitative research paradigm, analyzing data through the SPSS program. Seventy-nine (79) students were surveyed about the teaching methods, tools, and technologies in online programs. Participants reported being engaged in learning activities, using a variety of tools and technologies. However, the results indicated that teachers need to incorporate strategies to build on student collaboration in the classroom. Using appropriate communication tools, having interaction and collaboration in the classroom, and giving feedback to students were identified as being vitally important to a successful online program.

Keywords: Online learning, teaching methods, tools and technologies, collaboration, interaction

1. INTRODUCTION

Over the last decades, online education has moved into higher education, and it has been growing on students. Recently, due to the outbreak of the COVID-19, most of the educational institutions inevitably have moved toward online/Hybrid mode. The pandemic adversely has affected the education of 1.7 billion students all around the world (Nicola et al., 2020). According to the results of research conducted by the International Association of Universities Global, 67% of the schools and institutions have offered online education (Marinoni et al., 2020). Considering the current situation, the question is, how do institutions ensure they are offering quality programs, and what needs to be done to have successful online programs?

This study was designed to investigate the perceptions of students related to their online experiences at EMU as Sahin and Shelly (2008) stated that learners' perceptions should be taken into consideration in designing, developing, and delivering online courses. It also aims to understand what factors should be taken into consideration to have a successful online program.

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2. LITERATURE REVIEW

There are many factors are involved in a successful online program, among which teaching methods would stand out (Whipp & Lorentz, 2009). Teachers play an important role in the teaching process and should select the best instructional strategies to increase the students' learning, thinking, and activeness (Mayes et al., 2011). This is supported by the research of Fedynich et al. (2015) who said that the teacher role is vitally important to students' satisfaction which leads to having a successful online program. According to John Hattie's famous book "Visible learning: A synthesis of over 800 meta-analyses relating to achievement" (2009), instructors' teaching strategies and methods significantly affect students' performance. Online educators utilized different teaching strategies to achieve their teaching goals. In the research of Sharoff (2019), one online educator designed an online course in which group work was the main teaching strategy. The instructor utilized a variety of learning tools including PowerPoints, social media platforms such as YouTube and Ted Talk, voice thread, and screen capture. The result of this study showed that using group work and different learning tools in online programs promotes reflection, active participation, and that thoughtfully engages collaborative learning. In another recent study, Kang and Zhang (2020) investigated college students learning engagement and motivation through forum-based online teaching. The results of this study indicated that the forum-based online teaching improved students' learning engagement and motivation as well as reduced procrastination and plagiarism. Kang and Zhang stated that Forum-based online teaching help students to improve their presentation through communications and practice in online teaching forums. They also noted that the forum transforms teacher-centered to student-centered teaching in higher education. Many scholars endorse the idea of creating a student-centered environment to provide students with opportunities to take a more active role in their learning (Means, 1994). Student-centered teaching methods allow students to learn collaboratively, having more interaction in the classroom (Hannafin, Hill, & Land, 1997).

According to Sun and Chen (2016), interaction is the key to having a successful online program. Sun and Chen argued that effective online teaching is dependent upon "well-designed course content, high level of interaction between the instructor and learners, supportive instructors, and creation of a sense of online learning community". Ferguson and DeFelice (2010) suggested that "Live chat rooms, threaded discussions, and the use of blogs, combined with prompt responses to all email inquiries, are strategies that would provide opportunities for increased interaction" (p. 5). Burns (2013) extends that list by including podcasts, skype, Jing, and Wiki. Fedynich et al. (2015) also suggested that "providing examples of the class material, demonstrating a sense of humor and simply personalizing the environment" can improve the level of interaction in an online class.

Another major factor influencing the effectiveness of online courses is tools and technologies (Howshigan & Nadesan, 2021). More recently, Ayadat et al. (2021) examined the effects of tools, and technology used in an online civil engineering program. The result of this study indicated that utilizing green and high-level tools and technologies including appropriate communication platforms (Zoom, WhatsApp, etc.), high-speed internet, and digital software can positively affect the quality of online programs. They stated that choosing appropriate online tools, improving communications between students and teachers, and educating both students and educators about digital issues increase students' engagement in learning. This is also supported by the study of Howshigan & Nadesan (2021) who noted that providing students with appropriate electronic technologies and increasing internet speed are few ideal ways to ensure online teaching and learning effectiveness. In another recent study, Howshigan & Nadesan (2021) strongly emphasized that educational institutions

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need to equip and upgrade their infrastructure for online learning since otherwise, students will face several problems. Howshigan & Nadesan found that the majority of participants in their research prefer face-to-face learning to online learning due to the lack of appropriate technologies and devices.

3. RESEARCH METHOD

The case study approach is used as Yin (2014) suggested, case study is an effective method when our questions include "how" or "why" and also when researchers don't have control over current phenomena. As a quantitative research methodology, this case study aims to investigate learners' perceptions regarding the effectiveness of online teaching methods applied in online courses and instructional tools and technologies in online programs.

3.1 Research Participants

Seventy-nine (79) students participated in this research; 48 students from the Department of Banking and Finance (B&F) and 31 students from the Faculty of Tourism Hospitality and Management (TH&M). Students with no personal experience in online courses also were included in the study. The aim of the study is not only to have a statistical description of the students' opinions, but also to compare the two departments in answering the questions.

3.2 Data Collection

This study involved an analysis of surveys of students regarding their perspectives on online programs. The researcher carried out the questionnaire with students from two departments. The data collection period has lasted one semester from fall till spring, approximately four months. The SPSS program is used to analyze the quantitative data with the guidance of an expert.

3. RESULTS

The survey includes 20 questions related to two major topic areas. These include: 1- the effectiveness of online teaching methods applied in the online courses, and 2- the instructional tools and technologies. Answers are provided through a 5-point Liker scale in a way that 1 represents "Strongly Disagree", 2 represents "Disagree", 3 represents "Neutral", 4 represents "Agree", and 5 represents "Strongly Agree".

Tables 1 and 2 show data on the first topic area in the questionnaire, which dealt with the effectiveness of online teaching methods:

A very large majority of TH&M students (77.5%) and 52.1% of B&F students agreed or strongly agreed that instructors can use similar methods in online classes and traditional classes. More than half of the respondents from the Department of B&F reported that online teachers use new instructional methods that engage students in learning activities (item 2 and item 3). Similarly, approximately three-quarters of students in the Faculty of TH&M agreed or strongly agreed with items 2 and 3. However, about three-fifths (58.4 %) of B&F students and 40% of TH&M students disagree, strongly disagreed, or were neutral on the statement that existing teaching methods engage students in discussions, and collaborative work (item 4). This is despite the fact that more than 60% of all participants in both departments believe that teaching methods should provide adequate collaboration and interaction between students (item 5).

More than 80% of TH&M students agreed that different learning styles of students have been supported by using a variety of instructional strategies, which leads to a successful online program as Zapalska & Brozik (2006), stated that the achievement of online learning can be improved by providing instruction in a manner consistent with each student's learning style (item 6). Overall, students in both departments believed that a variety of instructional methods such as presenting case

studies and articles on web pages, online lecturing, using discussion forms, and creating small group works can be utilized in online classes. A significant proportion of students in both B&F and TH&M departments think that participating in discussion forums is an effective learning strategy in an online program, at 72.9% and 77.5% respectively. Similarly, 80.7% of TH&M students and 64.6% of B&F students agreed that small group works in online courses develops learners' team working skills.

Tables 1 and 2 show the data on another statement that is related to feedback in online classes (item 11). A significant proportion of students in both departments (64.6% of B&F students and 77.4% of TH&M students) agreed that having continuous and immediate feedback in an online program helps students to improve their understanding, learning from their mistakes, and successes. This is supported by Al-Hattami (2019), who highlighted the importance of feedback on students' learning.

Table1. Banking and Finance students' perception about the effectiveness of online teaching methods

Statement of the Item:	SA	A	N	D	SD
1. Instructional methods that instructors use in their online courses are the same in a virtual environment and traditional classes	1(2.1%)	24(50%)	6(12.5%)	12(25%)	5(10.4%)
2. Instructors use new instructional methods in online courses	4(8.3%)	27(56.31%)	4(8.3%)	11(22.9%)	2(4.2%)
3. Online teaching methods engage students in learning activities.	6(12.5%)	22(45.8%)	6(12.5%)	10(20.8%)	4(8.3%)
4. Online courses engage students in discussions and collaborative work.	6(12.5%)	14(29.2%)	7(14.6%)	15(31.3%)	6(12.5%)
5. Online teaching methods should provide adequate collaboration and interaction between students.	64(8.3%)	25(52.1%)	3(6.3%)	13(27.1)	3(6.3%)
6. Different learning styles of students have been supported by using a variety of instructional strategies.	12(25%)	17(35.4%)	12(25%)	4(8.3%)	3(6.3%)
7. Presenting case studies and articles on web pages is an effective method in online classes	13(27.1%)	21(43.8%)	5(10.4%)	6(12.5%)	3(6.3%)
8. Online lectures are an effective instructional method in online courses.	17(35.4%)	12(25%)	5(10.4%)	9(18.8%)	5(10.4%)
9. Participating in discussion forums in online classes is an effective method.	12(25%)	23(47.9%)	8(16.7%)	2(4.2%)	3(6.3%)
10. Creating small group works in online courses develop learners' team working skills	19(39.6%)	12(25%)	7(14.6%)	4(8.3%)	6(12.5%)
11. In online courses, continuous, immediate, and brief feedback is required to improve students' understanding, learning from their mistakes, and success.	14(29.2%)	17(35.4%)	8(16.7%)	7(14.6%)	2(4.2%)

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Table2. Tourism students' perception about the effectiveness of online teaching methods

Statement of the Item:	SA	A	N	D	SD
1. Instructional methods that instructors use in their online courses are the same in a virtual environment and traditional classes	6(19.4%)	18(58.1%)	5(16.1%)	1(3.2%)	1(3.2%)
2. Instructors use new instructional methods in online courses	7(22.6%)	16(51.6%)	2(6.5%)	5(16.1%)	1(3.2%)
3. Online teaching methods engage students in learning activities.	3(9.7%)	19(61.3%)	2(6.5%)	7(22.6%)	-
4. Online courses engage students in discussions and collaborative work.	8(25.8%)	11(35.5%)	3(9.7%)	8(25.8%)	1(3.2%)
5. Online teaching methods should provide adequate collaboration and interaction between students.	8(25.5%)	12(38.7%)	6(19.4%)	5(16.1%)	-
6. Different learning styles of students should be supported by using a variety of instructional strategies.	11(35.5%)	14(45.4%)	6(19.4%)	-	-
7. Presenting case studies and articles on web pages is an effective method in online classes	7(22.6%)	14(45.2%)	6(19.4%)	1(3.2%)	3(9.7%)
8. Online lectures are an effective instructional method in online courses.	14(45.2%)	8(25.8%)	3(9.7%)	4(12.9%)	2(6.5%)
9. Participating in discussion forums in online classes is an effective method.	10(32.3%)	14(45.2%)	3(9.7%)	3(9.7%)	1(3.2%)
10. Creating small group works in online courses develop learners' team working skills	15(48.4%)	10(32.3%)	3(9.7%)	1(3.2%)	2(6.5%)
11. In online courses, continuous, immediate, and brief feedback is required to improve students' understanding, learning from their mistakes, and success.	11(35.5%)	13(41.9%)	5(16.1%)	1(3.2%)	1(3.2%)

Tables 3 and 4 shows the data on the second topic area, related to the instructional tools and technologies in online courses:

The results show that the participants are using a variety of online tools and technologies such as online databases, online libraries, Moodle, email, Facebook, and YouTube. The university's Moodle site was found to be an organized interface for online courses in both B&F and TH&M departments, at 68.8% and 77.4% respectively. A significant proportion of all participants agreed or strongly agreed with item 16 and item 17, showing the importance of appropriate technology and tools in online classes. More than three-fifths of students believe that lack of tools and technologies can be troublesome, inhibiting the success of online programs.

Table3. Banking and Finance students' perception about instructional tools and technologies

Statement of the Item:	SA	A	N	D	SD
12. Students have access to a variety of resources such as online databases, and libraries.	15(31.3%)	18(37.5%)	8(16.7%)	3(6.3%)	4(8.3%)
13. Students use current technologies such as Facebook and YouTube in their online courses	16(33.3%)	16(33.3%)	6(12.5%)	6(12.5%)	4(8.3%)
14. Moodle provides an Organized Interface for Online Courses	18(37.5%)	15(31.3%)	9(18.8%)	3(6.3%)	3(6.3%)
15. When an email is used between instructors and students interchangeably, it can aid the instructional process.	21(43.8%)	11(22.9%)	7(14.6%)	4(8.3%)	5(10.4%)
16. Appropriateness of technology tools in order to deliver course materials is significant	15(31.3%)	16(33.3%)	10(20.8%)	6(12.5%)	1(2.1%)
17. Using appropriate tools and technologies can enhance the quality of interaction in online classes.	15(31.3%)	18(37.5%)	8(16.7%)	6(12.5%)	1(2.1%)
18. Online classes can be implemented in both forms of synchronous and asynchronous communication.	9(18.8%)	22(45.8%)	11(22.9%)	4(8.3%)	2(4.2%)
19. Synchronous learning methods involve different new communication tools.	12(25%)	20(41.7%)	8(16.7%)	3(6.3%)	5(10.4%)
20. Lack of technologies may be troublesome and students need to improve their technical skills before starting an online course.	10(20.8%)	23(47.9%)	8(16.7%)	5(10.4%)	2(4.2%)

Table4. Tourism students' perception about instructional tools and technologies

Statement of the Item:	SA	A	N	D	SD
12. Students have access to a variety of resources such as online databases, and libraries.	13(41.9%)	7(22.6%)	6(19.4%)	4(12.9%)	1(3.2%)
13. Students use current technologies such as Facebook and YouTube in their online courses	14(45.2%)	9(29%)	5(16.1%)	2(6.5%)	1(3.2%)
14. Moodle provides an Organized Interface for Online Courses	13(41.9%)	11(35.5%)	5(16.1%)	1(3.2%)	1(3.2%)
15. When an email is used between instructors and students interchangeably, it can aid the instructional process.	21(43.8%)	11(22.9%)	7(14.6%)	4(8.3%)	5(10.4%)

16. Appropriateness of technology tools in order to deliver course materials is significant.	13(41.9%)	14(45.2%)	4(12.9%)	-	-
17. Using appropriate tools and technologies can enhance the quality of interaction in online classes.	10(32.3%)	14(45.2%)	7(22.6%)	-	-
18. Online classes can be implemented in both forms of synchronous and asynchronous communication.	10(32.3%)	16(51.6%)	3(9.7%)	2(6.5%)	-
19. Synchronous learning methods involve different new communication tools.	12(25%)	20(41.7%)	8(16.7%)	3(6.3%)	5(10.4%)
20. Lack of technologies may be troublesome and students need to improve their technical skills before starting an online course.	10(20.8%)	23(47.9%)	8(16.7%)	5(10.4%)	2(4.2%)

5. COMPARING MEAN AND STANDARD DEVIATION

In this section, the researcher had carried out a comparison by considering the mean and standard deviation values of answer sets. Table 5 shows, in general, all the means in all items are above 3.0 (except item4 for Department of B&F) showing the average agreement of students to all statements. In 19 out of 20 items, the means of TH&M students' answers are higher than B&F students, showing TH&M students have more agreement with the statements; the only statement which is less agreed among TH&M students is item 7, (i.e. presenting case studies and articles on web pages is an effective method in online classes) with the difference 0.05 which is negligible. Items 1 and 4 and 6 are more agreed among TH&M students, with a difference higher than 0.5 scores. Item14 has the highest average agreement (3.88) among B&F students (i.e., Moodle provides an organized interface for online courses), and item16 has the highest average agreement (4.29) among TH&M students (i.e., appropriateness of technology tools in order to deliver course materials is significant). In general, B&F students' answers have more standard deviations than TH&M students' answers, showing more convergence for TH&M students. Item 9 (i.e., participating in discussion forums in online classes help students to explore their understanding from knowledge) among B&F students and item16 (students think that "appropriateness of technology tools" in order to deliver course materials is significant) among TH&M students have the lowest standard deviations, at 1.065 and 0.693 respectively. Item16 has the highest average agreement (3.99) among all students with a standard derivation of 0.980, showing all participants strongly believe that the appropriateness of technology tools in an online program is very significant.

Table 5: Mean and Standard Deviation

	B&F		TH&M		Average	
	Mean	Std. D	Mean	Std. D	Mean	Std. D
1. Instructional methods that instructors use in their online courses are the same in a virtual environment and traditional classes	3.08	1.127	3.87	.885	3.39	1.103

2. Instructors use new instructional methods in online courses	3.42	1.069	3.74	1.094	3.54	1.084
3. Online teaching methods engage students in learning activities.	3.33	1.191	3.58	.958	3.43	1.106
4. Online courses engage students in discussions and collaborative work.	2.98	1.280	3.55	1.234	3.20	1.285
5. Online teaching methods should provide adequate collaboration and interaction between students.	3.29	1.148	3.74	1.032	3.47	1.119
6. Different learning styles of students should be supported by using a variety of instructional strategies.	3.65	1.139	4.16	.735	3.85	1.026
7. Presenting case studies and articles on web pages is an effective method in online classes	3.73	1.180	3.68	1.166	3.71	1.167
8. Online lectures are an effective instructional method in online courses.	3.56	1.413	3.90	1.300	3.70	1.371
9. Participating in discussion forums in online classes is an effective method.	3.81	1.065	3.94	1.063	3.86	1.059
10. Creating small group works in online courses develop learners' team working skills	3.71	1.398	4.13	1.147	3.87	1.314
11. In online courses, continuous, immediate, and brief feedback is required to improve students' understanding, learning from their mistakes, and success.	3.71	1.166	4.03	.983	3.84	1.103
12. Students have access to a variety of resources such as online databases, and libraries.	3.77	1.207	3.87	1.204	3.81	1.199
13. Students use current technologies such as Facebook and YouTube in their online courses	3.71	1.288	4.06	1.093	3.85	1.220
14. Moodle provides an Organized Interface for Online Courses	3.88	1.178	4.10	1.012	3.96	1.115
15. When an email is used between instructors and students interchangeably, it can aid the instructional process.	3.81	1.363	3.90	.978	3.85	1.220
16. Appropriateness of technology tools in order to deliver course materials is significant	3.79	1.091	4.29	.693	3.99	.980
17. Using appropriate tools and technologies can enhance the quality of interaction in online classes.	3.83	1.078	4.10	.746	3.94	.965

18. Online classes can be implemented in both forms of synchronous and asynchronous communication.	3.67	1.018	4.10	.831	3.84	.966
19. Synchronous learning methods involve different new communication tools.	3.65	1.229	3.90	.978	3.75	1.138
20. Lack of technologies may be troublesome and students need to improve their technical skills before starting an online course.	3.71	1.051	4.00	1.065	3.82	1.059

6. DISCUSSION

The purpose of this study was to explore the students' perception regarding online teaching methods, tools, and technologies used in online courses. The results of the study indicated that instructors use new teaching strategies in online courses, engaging students in learning activities. However, they need to incorporate strategies to build on student collaboration in the classroom. The majority of students agreed that discussion forums can provide adequate collaboration and interaction between students. This is supported by the research of Alzahrani (2017) who said that using online discussion forums increase collaboration in the classrooms. Alzahrani noted that social interaction and the collaborative nature in online discussion forums environments leads to a significant increase in the students' achievements. Group work was another teaching method that was found to be effective from the students' point of view. This is supported by the research of Sharoff (2019) who said that group work promotes active participation, and that thoughtfully engages collaborative learning. One necessary component in an online program is feedback, which has been found to contribute to student satisfaction, motivation, and perceived learning (Thoms,2011). Most of the participants in this study agreed that continuous, immediate, and brief feedback is required to improve students' understanding. This further emphasizes that teachers should use interactive teaching methods, with the goal of generating feedback (Choy et al., 2017).

Regarding the technology tools for online programs, statistical results show that most of the students from both departments believe that the appropriateness of technology tools in online classes is very significant. This is supported by Howshigan & Nadesan (2021) who suggested that educational institutions need to equip and upgrade their technology infrastructure for online learning. Moodle was found to be an effective communication tool at EMU. In addition to the university Moodle site, a variety of videoconferencing applications such as Google Classroom, WhatsApp, Skype, emails, MS Teams, and Zoom can be used (Howshigan & Nadesan, 2021). The application of sophisticated communication tools plays a crucial role in implementing effective teaching methods for online classes as in medium richness theory (Daft & Lengel, 1986) which is about the effectiveness of the rich communication medium, an effective medium supports a variety of didactic strategies.

7. Conclusion

There are loads of factors that should be taken into consideration in order to have a successful online program among which, interaction and collaboration in the classrooms, feedback, and appropriate tools and technologies are very significant. Without using appropriate communication tools and technologies, implementing effective teaching methods and techniques is not possible in

online environments. Understanding these factors can offer suggestions for instructors to improve online learning experiences. The following suggestions are offered:

- Incorporate strategies to increase collaboration and interaction in the classrooms
- Use discussion forums and group work to provide adequate collaboration and interaction between students
- Incorporate multimedia and the latest videoconferencing applications to increase collaboration.
- Provide students with continuous and immediate feedback in online programs
- Equip and upgrade the existing infrastructure for online learning

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