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A Comparative Study on Students' Performance in Entrepreneurial Education Using Face-To-Face and Online Distance Learning (ODL) Instructional Approaches

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ABSTRACT

Malaysia's Ministry of Higher Education announced in early March 2020 that all universities' teaching and learning (TL) processes must be conducted entirely online until the end of the year to prevent Covid-19 from spreading. This change has drastically altered the way teachers teach and students learn, and as a result, the impact on both lecturers and students has been enormous. This study aimed to compare students' performance in the Fundamentals of Entrepreneurship (ENT300) subject at Universiti Teknologi MARA (UiTM) Cawangan Terengganu when using an online learning approach as against a traditional face-to-face approach. Many scholars agreed that the face-to-face approach is more effective and gives students more fulfilment than the online method because students prefer to see and hold paper-based reading material and the satisfaction derived from experiencing the lessons live. This descriptive study data were taken from two different learning approaches, face-to-face and online distance learning (ODL) classes, and the results showed that students' performance is better when lessons are conducted face to face proving that the difference in teaching and learning approach affects the students' grades.

Keywords: Teaching, Learning, Online Distance Learning Class, Face To Face Class, Students' Performance

INTRODUCTION

Most of us were surprised by the global spread of the Covid-19 pandemic in 2020. The year 2020 was seen as an incredible year with extreme advances in world technology, but the dream disappeared when Covid-19 brought the world to a temporary halt. The business was forcible to close, the employees were told to work from home, and the teaching and learning process had to continue entirely online at schools and higher education institutions. These measures have been taken to prevent the disease from expanding. Teaching and learning (TL) online had an impact on both educators and students, as both had to adapt to the new method of learning. According to Ratten, V. (2020), the campus's temporary closure had a significant impact on students, teachers, and the community. As a result, many universities continue to offer online courses without knowing when students will be able to return to campus for

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classes. After months of teaching via Online Distance Learning (ODL), lecturers at Universiti Teknologi MARA (UiTM) Cawangan Terengganu noticed the impact the ODL method had on students' performance. While some students had no problems with online learning and appreciated the flexibility that the ODL method provided, others struggled to adjust to this new way of learning. Many factors contributed to this situation, ranging from family problems, stress caused by an inability to physically socialize with classmates, slow or no internet connection, financial problems caused by one of the family's breadwinners being retrenchment or laid-off, to a lack of learning tools such as smartphones or laptops. Unfortunately, not all students are fortunate enough to have a conducive learning environment at home. As the semester progressed, lecturers began to notice a significant decline in student performance and behaviour, such as being absent from online classes, being unresponsive in group chats, and failing to complete class exercises and assignments. When the emotional and physical strain becomes too much to bear, some students drop out halfway through the semester. this study aims to investigate if the ODL method had any effect on student performance by comparing students' performance before and after ODL, that is, TL via face-to-face, and after fully ODL. The comparison subject is the Fundamentals of Entrepreneurship (ENT300) course, which is also a university requirement for all UiTM students.

LITERATURE REVIEW

To understand the relationship between these methods and student performance, a thorough discussion of the traditional face-to-face TL method and the ODL method is required.

Face-to-Face Teaching Method

Face-to-face teaching has been the most popular and widely used technique by lecturers, teachers, and tutors all over the world. It has been the teaching practice since the introduction of formal teaching and learning, so educators favour this approach. The continuous assessments for the entrepreneurship subject at UiTM are more focused on individual and group assignments such as case studies, business analysis, and the preparation of a business plan. Therefore, students need a great deal of time with their lecturers to complete these assignments successfully. When consultation is carried out in person, it is easier and more effective. Educators think that this approach of learning is more satisfied because students can communicate efficiently with the instructor and the feedback is immediate as well. This belief is supported by a study that found that the more hours of face-to-face learning, the higher the student satisfaction (Adam et al., 2009).

Even in blended learning, a method that combines both face-to-face and online approaches, students prefer the blended learning method over the fully online method because blended learning involves a mixed approach of face-to-face and online sessions. While in a class with multicultural students, they prefer a face-to-face class because they believe they did not develop any skills while learning online (Pillay et al., 2014). Furthermore, they believe that by being in class with students of different ethnic backgrounds, they can learn about the cultures of other students. According to Burch et al. (2016), students in face-to-face classes have higher social and cognitive intelligence and are more engaged in class. Educators may also believe that creating an effective learning environment with cognitive presence is easier in a face-to-face class. Weldy (2018) backed up the idea that students prefer face-to-face classes over blended learning or online classes. Students believe that they learn and retain more information during face-to-face classes, allowing them to achieve higher grades. This approach is more teacher-centred, with students guided through lectures and activities in the classroom. Students have numerous opportunities to discuss and learn directly from lecturers and classmates, as opposed to the online approach, where feedback is usually delayed, especially if done in asynchronous mode, which requires students to engage in self-directed learning.

According to Asarta and Schmidt (2017), face-to-face learning is more effective for students who perform below average because these students require direct supervision and immediate feedback from lecturers to perform. Arias et al. (2018) found that even when the same instructor is teaching both face-to-face and fully online classes, students in the face-to-face approach perform better on the exam than students in the fully online class. Although one of the advantages of online learning is that lectures are recorded and can be viewed multiple times, it lacks the personal connection between student and teacher that a face-to-face class provides. During the lecture session, students benefit from intellectual engagement with the instructor and their peers, which aids in their understanding of the lesson.

Blended Learning

Most learning institutions around the world use blended learning, which combines face-to-face and virtual education. Staker and Horn (2012) defined blended learning as an education programme in which a student learns, at least in part, through face-to-face and online learning, with some element of student control over time, place, and learning platform. This new style of learning appears to be very effective in the way teachers deliver content to students using technology while remaining deeply engaged with students in small group instructions (Murphy et al., 2014). Many academics agree that blended learning is more effective than other teaching methods. According to Derby et al. (2011), students who were taught using a blended learning style scored significantly higher on the comprehensive exam. Mars (2018) discovered that blended learning is appropriate for increasing student engagement in class and with the subject being studied. Salameh (2005), on the other hand, discovered that a lack of experience and skills among teachers and students in dealing with technology, such as hardware, the Internet, and learning platforms, can be a barrier to effectively conducting blended learning. To maintain the system, learning through technology necessitates user-friendly applications, a stable internet connection, and trained IT staff.

In terms of student performance in a blended learning teaching method, Cheng M. C., (2020) found an intriguing finding in which students in Hong Kong achieved the same result whether they learned through blended learning or traditional learning methods. Furthermore, Thomas (2018) found no link between e-learning activity and academic performance in his research. As a result, we cannot simply declare that blended learning is the best learning strategy. Teil (2017) concluded that teachers and students must be prepared before blended learning can be fully implemented in schools. Readiness in this context refers to students' and teachers' complete knowledge of the technology or platforms used for learning.

Online Distance Learning (ODL)

Open and distance learning (ODL) is one of the fastest-growing fields of education today with a significant impact on all education delivery systems. Also called distance education, e-learning, and online learning. It is a form of education in which the main elements include physical separation of teachers and students during instruction and the use of various technologies to facilitate student-teacher and student-student communication (Simonson & Berg, 2016). It is a combination of online learning with distance learning as the teachers and students are not physically present in the same room and communicate with each other using educational tools that can be accessed on the internet. According to Kiera (2020), online learning occurs when teachers or students use educational tools that can be accessed on the internet. This means that students can also use online tools while they are physically in the classroom with their teachers and peers. Online learning can be used anywhere and anytime, either as a tool in the classroom or for preparation and homework. In terms of readiness to execute the ODL method, Alstete and Beutell (2004) commented that ODL requires the faculty to prepare more on courses and establish relationships with students through discussion boards, live chats, and other forms of communication. Performance indicators for online classes should take into account planning,

delivery of the learning experience, and evaluation. They also stated that students who actively participate in course discussion boards, in addition to other factors such as computer and internet skills, computer availability, and virtual team dynamics, may have an impact on-course performance.

According to Ratten, V. (2020), the Covid-19 crisis has resulted in a rapid shift to online learning and teaching methods. However, this can be viewed as a once-in-a-lifetime opportunity to incorporate more creativity and innovation into educational experiences, thereby facilitating the transition to digital technology. The digital revolution and related networks such as the World Wide Web have had and would then continue to have a tremendous impact on the transformation of training and education through ODL. According to Saima Ghosh et al. (2012), the ODL system is now a rapidly growing subject, and the entire education and training system will be fully controlled by the ODL system. As a result, there are numerous opportunities for entrepreneurship educators to leverage their existing skillsets to develop new entrepreneurship education community techniques that can facilitate a more contextual learning environment.

Student Performance

Student performance can be evaluated in a variety of ways, including class participation, individual written work on papers and exams, and group activities like projects and presentations (Harvard Business School, 2020). It is typically assessed based on students' academic performance at their educational institution. There are numerous approaches that educators can use to assess students' performance. Academic performance, according to Ballotpedia (2020), is a measure of a student's achievement in a variety of academic subjects. Classroom performance, graduation rates, and standardized test results are commonly used by teachers and school officials to assess student progress. We can assess a student's comprehension of the topic or subject at hand by evaluating his or her performance. The results from the study on performance indicators in ODL by Alstete and Beutell (2004) showed that factors such as gender, age, previous undergraduate grades, work experience and/or job position level, and performance on intra-course assignments are related to performance in online distance learning courses. The researcher emphasized the link between student participation during online learning (discussion board participation and discussion thread initiation) and overall student performance, believing that this participatory factor should be emphasized among students.

Halabi et al. (2010) found that students with no prior accounting knowledge who completed the computer-based learning materials performed significantly better on the test than the face-to-face teaching group in a study on both online and face-to-face learning. However, there was no statistically significant difference in the grades of students with prior accounting knowledge and students of different genders. This demonstrates that various factors influence students' performance in both ODL and face-to-face classes, and this study focused on students' prior knowledge as a determinant factor for students' performance in both online and face-to-face classes. The face-to-face contact in blended learning resulted in a higher level of perceived satisfaction (Adam & Nel, 2009). Students preferred blended learning over traditional face-to-face learning because it combines both face-to-face and online learning. According to Dell et al. (2010), the quality of student work is the same whether it is done online or in person. This demonstrates that other factors, rather than the platform, determine a student's performance. In contrast to the findings of a study by Amro et al. (2015), which concluded that the average grade obtained by students who learned the face-to-face method was higher than the average grade obtained by students who learned online. This demonstrated that the difference in teaching methods affected the students' grades.

Moreover, Davidson (2016) found that online education is less effective than face-to-face education. According to the findings, students with a high Grade Point Average (GPA) were unaffected by the abrupt transition from offline to online learning, whereas students with medium and low GPAs struggled more in the online education environment. This could be due to students' lack of personal

interaction with not only educators but also other students. Another finding revealed that students in online mode are overconfident because they can follow their study habits and routines, whereas students in face-to-face mode cannot. As a result, their performance is below average because there are no motivators for them to strive for greater accomplishments. Gangranam (2015) also investigated students' performance and persistence in blended or online courses in areas such as quizzes, assignments, discussions, and final exams. Different course structures, contents, and delivery styles all had an impact on students' overall performance. It was discovered that students who participated in blended learning performed better on assessments than those who took completely online courses. Not only that, but many students who enrol in online courses have a higher rate of withdrawal/dropout. This demonstrates that the online learning method is not suitable for everyone; for some students, performance dropped significantly when they participated in online learning.

METHODOLOGY

The purpose of this study is to see if the ODL method had any effect on student performance by comparing students' performance before and after ODL, that is, TL via face-to-face, and after fully ODL. The comparison subject is the Fundamentals of Entrepreneurship (ENT300) course, which is also a university requirement for all UiTM students. The nature of the course necessitates constant face-to-face interactions between students and instructors, which explains why this course was chosen. Data for this comparison study is derived from students enrolled in the course in semester 20194 (September 2019 – January 2020), semester 20202 (March-August 2020), and semester 20204 (September 2020 – January 2021) from the Faculty of Accountancy, Faculty of Business Management, Faculty of Computer Science and Mathematics, Faculty of Electrical Engineering, Faculty of Hotel and Management, Faculty of Mechanical Engineering, Faculty of Chemical Engineering and Academy of Contemporary Islamic Studies three campuses, UiTM Cawangan Terengganu – Kampus Dungun, Kampus Rekreasi Bukit Besi, and Kampus Kuala Terengganu.

RESULTS AND DISCUSSIONS

As previously stated, the purpose of this research is to determine the impact of the ODL method on student performance by comparing the results of students enrolled in the Fundamentals of Entrepreneurship course (ENT300) using the traditional face-to-face method to the results of students enrolled in the same course but using the ODL approach.

Students' results from semesters 20194, 20202, and 20204 were used as a comparison to investigate the effect of different approaches in TL on student performance. Semester 20194 (September 2019 – March 2020) refers to non-online learning because face-to-face TL was conducted for 14 weeks. While semester 20202 (March-August 2020) refers to partially online learning, where face-to-face classes were only held for 3 weeks and the remaining 11 weeks were conducted using an ODL approach due to the Covid-19 pandemic. For semester 20204 (October 2020 – January 2021), TL was entirely online. All data from 20194, 20202, and 20204 were obtained from the Student Information Management System (SIMS) at UiTM Cawangan Terengganu. The table below depicts the comparison results from all three (3) semesters.

Table 1: Comparison of Students'	Performance for Semester	20194,	20204 and 20204

		SEMESTER 20194		SEMESTER 20202		SEMESTER 20204	
% RANGE	GRADE	Number of students	%	Number of students	%	Number of students	%
90-100	A+	0	0	9	0.69%	46	6.69%
80-89	Α	112	27.32%	338	26.00%	304	44.19%
75-79	A-	119	29.02%	410	31.54%	150	21.80%
70-74	B+	116	28.29%	337	25.92%	86	12.50%
65-69	В	56	13.66%	110	8.46%	48	6.98%
60-64	B-	7	1.71%	35	2.69%	25	3.63%
55-59	C+	0	0	13	1.00%	9	1.31%
50-54	С	0	0	32	2.46%	10	1.45%
47-49	C-	0	0	1	0.08%	0	0
44-46	D+	0	0	0	0	0	0
40-43	D	0	0	6	0.46%	0	0
30-39	E	0	0	3	0.23%	3	0.44%

The descriptive analysis revealed that there is a significant difference in the students' performance. Because there were no failures reported in Semester 20194, it is possible to conclude from the data above that, at a glance, students from semester 20194 perform significantly better than students from semester 20202 and 20204. On the other hand, there were more failures in semester 20202, with 1.23% of students receiving grades of C- or lower. In 20204, the failure rate was 1.46%, 0.23% higher than the previous semester. It is also possible to conclude that the ODL method used in semesters 20202 and 20204 may have a negative impact on students' subject performance. The high failure rate in semester 20202 may be attributed to students' inability to adjust to the new TL method. The findings of this comparative analysis are consistent with the findings of the study by Amro et al., (2015), which found that the average grade of students who learned face-to-face was higher than students who learned online, demonstrating that the difference in TL approach affects the students' grades.

Nonetheless, the analysis revealed that more students in semester 20204 received grades A+, A, and A-, at 72.68% and 58.23% in 20202, respectively, as compared to semester 20194, where only 56.25% of students received the same grade. It is believed that various other factors not discussed in this comparison study may influence students' performance in both ODL and face-to-face classes. Other factors that might influence students' performance are individual's gender (Chen, Greene, & Crick, 1998), cognitive aspects of individuals (Solesvik, Westhead, Matlay, & Parsyak, 2013) and support from peers (Falck, 2012).

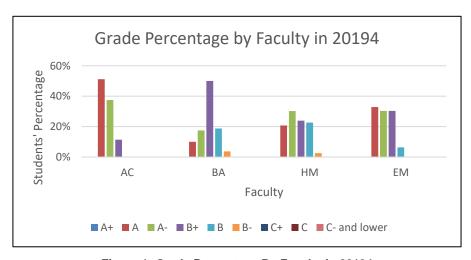


Figure 1: Grade Percentage By Faculty In 20194

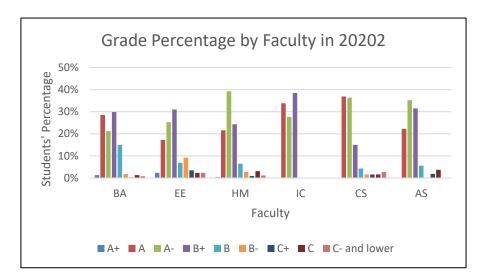


Figure 2: Grade Percentage By Faculty In 20202

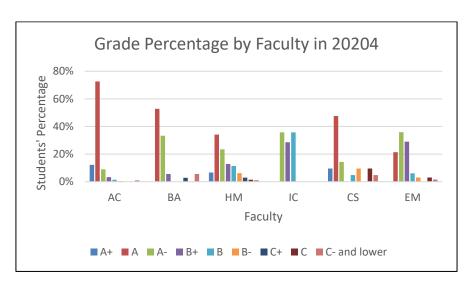


Figure 3: Grade Percentage by Faculty in 20204

However, as shown in Figures 1, 2, and 3, student performance can be further analysed based on their faculty. In semester 20194, the Faculty of Accountancy (AC) had 51% of their students receive an A, compared to other faculties with fewer students receiving the same grade. However, for semester 20202, Computer Science students from the Faculty of Computer Science and Mathematics obtained the highest percentage of A which is 37%. In semester 20204, the highest percentage of A were obtained by students from the Faculty of Accountancy (AC) with 12% of students obtained A+ and 73% of their students obtained A.

Based on the results of this comparison study, it can be assumed that the findings from this data are valid and can be used for further research. More thorough research on the online distance learning (ODL) method is needed to determine other factors that may have an impact on students' performance.

CONCLUSION

According to the findings of this comparison study, the fully online distance learning (ODL) approach has a negative impact on students' performance in the entrepreneurship subject. This could be due to the nature of the subject, which necessitates constant consultation and direct supervision of students' assignment progress by lecturers. Furthermore, the course necessitates the guidance of the lectures to fully understand the subject and complete the entire course. It can also be concluded that not all subjects are appropriate for fully online TL. For entrepreneurship subjects, it is recommended that teaching and learning be done using a blended-learning method that combines face-to-face and online learning.

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