# A Comparison of Students' Performance during Face-to-Face vs. Open and Distance Learning – Evidence from Diploma in Accountancy Students

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**Abstract**
Following the COVID-19 outbreak, the educational delivery mode has gone through a drastic change from face-to-face (F2F) to open and distance learning (ODL). This has called for a comparison of the learning outcomes to ensure that the current learning mechanism and exam format are appropriate, and the academic results truly reflect the ability of students. This study aims to compare the students' performance in various financial accounting and reporting (FAR) courses and to determine if there is any significant difference in the results during both sessions. A dataset of two prime semesters is utilized which includes the results of the last F2F final examination held in 2019 and the first online examination conducted in full in 2020 following ODL. The results indicate a significant difference in scores between F2F and ODL sessions for all FAR courses except for FAR160. There is a mixed picture with a combination of a significant increase, decrease, and no changes in the performance of each FAR course during ODL. However, a significantly better performance can be seen in the overall FAR courses and total GPA scored. Future research may explore the factors influencing the improved performance in ODL as compared to the F2F session.
**Keywords:** ODL, Accountancy, Education, Learning, Performance

## Introduction
In December 2019, the world was shocked by the spread of a new virus detected in Wuhan City of Hubei Province of China. According to Singhal (2020), Chinese scientists reported that this virus had significant genetic similarity with a Yunnan bat coronavirus RaTG13 and with severe acute respiratory syndrome coronavirus (SARS-CoV). Then, on 12 January 2020, World Health Organization (WHO) officially announced that this epidemic outbreak was caused by SARS-CoV-2 and named it the coronavirus disease 2019 (COVID-19). The outbreak spread rapidly all over the globe, with no exception in Malaysia.

Malaysia has confirmed its first case among Chinese travellers arriving in Johor via Singapore on 25 January 2020 while the first Malaysian tested positive for the COVID-19 reported on 4

February 2020 (Elengoe, 2020). Since then, COVID-19 cases in this country were relatively under control, and the Malaysian government continues to educate its citizens to take precautionary action to avoid transmission of the virus. However, several local clusters emerged in March 2020, and the number of infected cases increased significantly due to the religious gathering in Sri Petaling, Kuala Lumpur. This cluster has caused the first fatal case in Malaysia on 17 March 2020 (Shah et al., 2020). In response to the rising cases, the Malaysian government has announced a nationwide lockdown known as Movement Control Order (MCO) which was effective on 18 March 2020 to curb the COVID-19 spread. The lockdown required the closure of all government agencies, private premises, businesses, schools, and higher educational institutions with the exception to providers of essential services and items. To flatten the curve and break the chain of virus transmission in specific geographic regions that reported higher cases of infection, the government imposed the Enhanced Movement Control Order (EMCO) where no one was permitted to leave their house.

After being extended five times, the Malaysian government replaced the MCO with the Conditional Movement Control Order (CMCO) in May 2020 and followed by Recovery Movement Control Order (RMCO) in June 2020 to ease the economic loss (Abdul Khalid, 2020). It was reported that aviation, tourism, travel-related industries, hotels, restaurants are among the highest affected sectors during the MCO (Segal and Gerstel, 2020). The COVID-19 pandemic also disrupts the growth of the SMEs' businesses, automotive, metal products, chemicals, communication equipment, rubber and plastics, and office machinery sectors (Omar et al., 2020; Hasanat et al., 2020). Recent literature also documented that the shipping, fisheries, maritime, tourism, oil and gas sector, and agriculture sector were severely affected by the pandemic during the lockdown (Menhat et al., 2021; Adnan and Nordin, 2021).

Apart from health and economic concern, the education system also experienced drastic changes following the sudden announcement of MCO. Kee-Ming Sia and Adamu (2020) stated that some tertiary education institutions faced unprecedented challenges and were found unprepared, while other universities that were previously exposed to e-learning have their contingency online learning tools at hand. Universiti Teknologi MARA (UiTM) has previously implemented integrated face-to-face (F2F) and online learning known as Blended Learning. During blended learning sessions, i-Learn (presently labelled as uFuture) was used by the lecturers to disseminate information and teaching materials, having online interactions by creating a forum and posting online assessments. UiTM then introduced "Week Without Walls" in 2018 where the lessons took place outside the physical classroom and both lecturers and students were encouraged to utilize other learning aids such as UiTM Massive Open Online Courses (MOOC), Edmodo, Quizziz, Padlet, and other educational webpages as tools for teaching and learning (Soo et al., 2019). Due to the widespread transmission of the COVID-19, online learning is no longer merely an option. It is necessary to ensure the continuity of the teaching and learning process that was suddenly stopped due to the announcement of the MCO by the then Prime Minister, Tan Sri Muhyiddin Yassin.

UiTM has implemented Open and Distance Learning (ODL) in facilitating the teaching and learning process where students were required to complete their enrolled courses without the need to attend a physical class such as lecture hall, computer lab, library, or physical classrooms (Azmi and Lai, 2021). It is undeniable that ODL offered huge advantages due to its flexibility, accessibility, affordability, and life-based education opportunities. At the same

time, ODL has equipped the students with the ICT and digital technology knowledge to meet the demand of the future employer. Despite its numerous benefits, there are a few drawbacks of ODL that may hinder students from achieving good academic performance. Sundarasen et al (2020) revealed that students faced problems in terms of internet stability, network coverage, and compatibility of the devices used. The prolonged time facing the screen on the gadgets also contributes to stress and other serious health problems. Besides that, students feel distracted because they need to juggle between house chores and taking care of siblings while concurrently attending online classes. During ODL, students tend to feel alienated because there is no physical and social interaction with the lecturer and team members to perform course assessments. This situation leads to poor self-confidence, increases procrastination, and triggers anxiety and fear to achieve good performance for the course enrolled (Allam et al., 2020).

The transition from F2F learning to online learning requires some time for both lecturers and students to adapt to the setting of the new normal of teaching-learning methodology. ODL also has dragged the exam to be conducted online. We believed that different learning and exam formats would yield different results in terms of students' performance and the performance of a particular subject itself (Hughes and Lyons, 2017). Therefore, the present study aims to compare the students' performance in various financial accounting and reporting (FAR) courses based on the grades achieved during F2F and ODL semesters as well as to determine if there is any significant difference in the results during both sessions. This study is timely important for the management of universities to ensure that the current learning mechanism and exam format are appropriate, and the academic results truly reflect the ability of students. The article proceeds as follows; Section 2 reviews the prior literature on comparison of grade-based performance in F2F and ODL sessions. Section 3 describes the research method. Section 4 presents the findings and discussion of the results obtained, and the final section concludes with recommendations for future research.

**Literature Review**
In online learning, various instructional modes that can be conducted such as pre-recorded videos, discussion boards, live meetings, and any similar collaborative tools. Self-regulated learning is one of the prominent factors in the online learning environment. Generally, self-regulated learning is defined as the capacity of an individual to personally monitor, control, and manage their behaviour, emotions, or thoughts to reach a goal. It is used by students to self-observe their progress and to recognize the strengths of the used learning strategies as well as to detect any weaknesses throughout their learning process (Anthonysamy and Choo, 2021). However, not all students are able to become great self-regulators. If a student experiences failure and lower self-efficacy, it could greatly affect their ability and desire to self-regulate which will eventually lead to unfavourable effects. It is necessary to acquire self-regulated learning strategies in online learning or ODL because students are expected to have self-monitoring, self-instruction, self-reinforcement, and self-management skills as they achieve their academic targets independently. Hence, students need to prepare themselves with self-regulation abilities to learn effectively and successfully in online learning (Greene et al., 2018).

With the sudden shift away from classrooms following the COVID-19 pandemic, higher education had to rapidly transform to the online learning environment. Correspondingly, researchers currently have emphasized on examining the outcomes of either online or F2F

courses which is in line with the increased enrolment rate in online learning. Many prior studies have documented evidence that students tend to perform differently under online and F2F modes of instruction. Time management, perceived enjoyment, facilitating condition, academic motivation, and student's attitude may significantly contribute to differences in grade for both learning modes. Some studies found positive impact whereas some literature found the other way round while other studies did not find any significant difference in grade-based performance between online and F2F modes of instruction.

Previous academic analysis suggested that students receiving the F2F instructions will obtain better exam grades than those in the online learning assessments. Sohn and Romal (2009) proved that students' performance in the F2F mode outperformed in the final exam than online mode since online mode requires more effective design and proper management in the course assessment. Similarly, a study done by Wachenheim (2009) presented that students who take the course in the physical classroom tend to achieve higher test scores than those taking the course online because the online learning format is substantially less effective than the F2F format. In addition, Faidley (2018) who performed a study to compare students' outcomes in Principles of Accounting courses which are delivered in two methods of instruction, consistently revealed that students accomplished significantly better final course grades in F2F classes than online. Furthermore, Bosshardt and Chiang (2018) specifically provide further evidence that economics students who have completed principles of microeconomics in an online format normally underperform in subsequent principles of macroeconomics courses with a lower course grade. In other words, online students ordinarily experience difficulty in understanding the subject matter in detail and feel uneasy digesting the basic course information which results in a lower grade in exams compared to F2F students.

Several institutions highlighted that online learning requires a unique educational approach to maintain the quality of the F2F learning, but the sudden transmission did not allow them to prepare the instructors to adapt to this online learning. Thus, many believe that this new technique of learning cannot work effectively which leads to unfavourable final grades especially for low achiever students. Schwartz (2012) showed that students' performance in the F2F mode exceeded students' performance in the online mode for accounting courses specifically in Financial Accounting (Intermediate), Federal Taxation, Cost/Managerial, and Auditing. Furthermore, the issues of computer self-efficacy and unfamiliarity with the online examination method also can potentially deteriorate students' performance. Struggling students might experience test anxiety and technical difficulties while taking the online exam which in turn negatively affects students' exam grades (Wuthisatian, 2020)

From a different point of view, Krasodomska and Godawska (2020) revealed that students' engagement in online learning had a positive effect on their final performance. Likewise, Broadbent and Poon (2015) demonstrated that students in an online learning environment who efficiently manage their time by planning, monitoring, and controlling their learning will achieve better grades in examinations. In a study investigating self-regulated learning strategies in an online learning environment and academic achievement at a public university, Barnard-Brak et al (2010) claimed that students who used more self-regulated learning strategies such as structuring their learning environment, setting goals, managing their time wisely and conducting self-evaluations had a better academic performance. Meanwhile, in

accounting courses, Al-Hadrami and Morris (2014), asserted that the environmental factors, for instance, instructors' interactivity, the efficient use of technology, and the online learning environment have a significant and positive impact on the accounting students' performance which is measured by the student's final grade. Furthermore, Little and Jones (2020) provide evidence that overall, students performed better in the online classes than in the F2F classes when exam scores for Accounting Principles are analysed. Also, McCarthy et al (2019) further proved that Intermediate Accounting III and Auditing students in the online modes significantly outperformed compared to students in the F2F mode in which suggests a favourable support for the acceptability of online accounting education. Indirectly, the results display positive assessments of students' engagement and adaptation to online teaching and learning.

Meanwhile, other studies that conducted a comparison between the students' performance in online learning and F2F learning disclosed that there was no statistically significant difference in grade-based students' performance between instructional modes of learning (Aly, 2016; El Said, 2021). In terms of overall students' performance, Milz (2020) agreed that students achieved similar grades in the examination for both online and F2F environments. Rich and Dereshiwsky (2011) also indicated that there were no significant differences in terms of students' performance in undergraduate accounting courses between F2F and online modes. This argument is further supported by Chiu et al (2014) who found no significant difference for students' performance between the two delivery modes particularly in Introduction to Financial Accounting and Introduction to Managerial Accounting courses by using final grade points as the measure of performance. It can be summarized that course instruction is more crucial for students' learning than the type of delivery and instructors should put more effort into the quality of designing and developing course content.

Research on the analysis and comparison of the results obtained by students between F2F and ODL in Malaysia, however, is still limited. Therefore, the objective of the present study was to provide evidence from Diploma in Accountancy students for a comparison of academic performance during F2F and ODL sessions, particularly in financial accounting courses. Apart from that, this study also intends to determine any significant difference between the results of the individual financial accounting courses during both sessions.

**Research Methodology**
**Research Population and Rationale**
Universiti Teknologi MARA (UiTM), Perak Branch, Tapah Campus is one of the campuses that house the Faculty of Accountancy with a significant population of students compared to the others. This study focuses on the main program offered by the faculty, namely Diploma in Accountancy (AC110). Included in the study is a total number of 1,955 students enrolled in FAR courses for F2F learning, while 1,997 students for ODL. Data is taken internally from the Students Information Management System (SIMS).

Two semesters are chosen for comparison which is the second semester of the year 2019 (20194) that represents the data during the F2F examination since ODL has not yet been implemented during this semester. As for ODL data, this study focuses also on the second semester of the year 2020 (20204). This study chose to scrutinize the second semester for both years since the students' intake is larger in number, making the data bigger and more

reliable. Other than that, the second semester of the year 2020 students was the first batch in which the online learning and online final assessments in UiTM were conducted in their entirety.

This study chose to evaluate the performance of all Financial Accounting and Reporting courses, subsequently coded as FAR courses, offered in AC110. The rationale for studying the differences in outcomes between both traditional and online methods of assessing the FAR courses, is mainly because these are the core and technical papers of the program. Apart from that, it is due to the nature of the courses where students need to prepare the financial statements of companies that involve specific accounting formats, treatments, and calculations in deriving the figures to be reported. Unlike most other courses where the students' understanding can simply be tested using multiple-choice questions, true/false, or short essay formats, FAR courses require a deep understanding of the subject to enable them to successfully prepare the statements. Thus, it is fair to conclude that the grades and results of these FAR courses achieved by the students are reliable to be used as a measure of performance, where they are based on the students' understanding of the subject, not just by chance. In getting unbiased results, each of the FAR courses included in this study was taught by the same group of instructors for both methods of learning.

**Data Analysis**
Descriptive analysis and statistical analysis are used to find the limelight of findings for this study. Although these analyses on their own will not allow this study to predict the future outcomes or explain the answer to the question of why the findings are as such, it will organize the data so that it is ready for further analysis in the future.

**Results and Discussion**
*Descriptive Analysis*
**Table 1:** Descriptive Statistic on Students Enrolment

|  | F2F | | ODL | |
| --- | --- | --- | --- | --- |
|  | **Frequency** | **Percentage** | **Frequency** | **Percentage** |
| FAR110 | 527 | 27.00 | 380 | 19.00 |
| FAR160 | 63 | 3.20 | 44 | 2.20 |
| FAR210 | 464 | 23.70 | 525 | 26.30 |
| FAR270 | 85 | 4.30 | 98 | 4.90 |
| FAR320 | 408 | 20.87 | 473 | 23.69 |
| FAR340 | 408 | 20.87 | 477 | 23.89 |
|  | **1,955** | **100** | **1,997** | **100** |

**Note**
This table shows the results of descriptive analysis for the total number of students enrolled in FAR courses.
F2F is face-to-face, ODL is Open and Distance Learning, FAR is Financial Accounting and Reporting.

Table 1 shows the descriptive analysis of frequency and percentage of students enrolled in FAR courses for Diploma in Accountancy (AC110) for both semesters of F2F class and ODL. There was a total of 1,955 students enrolled in FAR courses during the F2F semester, while for the ODL semester, there were 1,997 students involved. There was a slight increment of students' enrolment by about 2% (42 students).

Table 2 below shows the comparison of the number of grades achievers for overall FAR courses between the two different learning sessions. The results show that the majority of the students performed well during the ODL session since 1,181 students secured the top grades (A, A- and A+) for all the FAR courses, making the overall percentage is 59%. In comparison to the F2F session, only 885 students scored the top grades with a total percentage of 45%. For a clearer view, the findings of the result are also illustrated by using a cluster bar chart in Figure 1.

**Table 2:** Results comparison based on number of grades achievers

| Session | Course | A | A- | A+ | B | B- | B+ | C | C+ | D | D+ | E | F | Grade Total |
|---------|--------|---|----|----|---|----|----|---|----|---|----|---|---|-------------|
| ODL | FAR 110 | 115 | 72 | 20 | 33 | 39 | 57 | 18 | 13 | 4 | 5 | 4 | 0 | 380 |
| | FAR 160 | 10 | 9 | 9 | 4 | 4 | 5 | 0 | 1 | 2 | 0 | 0 | 0 | 44 |
| | FAR210 | 192 | 100 | 9 | 68 | 30 | 95 | 6 | 23 | 1 | 0 | 1 | 0 | 525 |
| | FAR 270 | 11 | 14 | 0 | 13 | 20 | 10 | 12 | 16 | 0 | 0 | 2 | 0 | 98 |
| | FAR 320 | 207 | 110 | 3 | 31 | 21 | 66 | 12 | 19 | 2 | 1 | 1 | 0 | 473 |
| | FAR 340 | 172 | 123 | 5 | 40 | 30 | 76 | 15 | 15 | 0 | 0 | 1 | 0 | 477 |
| | TOTAL | 707 | 428 | 46 | 189 | 144 | 309 | 63 | 87 | 9 | 6 | 9 | 0 | 1997 |
| F2F | FAR 110 | 235 | 81 | 81 | 27 | 24 | 52 | 10 | 11 | 0 | 3 | 0 | 3 | 527 |
| | FAR 160 | 20 | 9 | 12 | 4 | 2 | 8 | 3 | 3 | 2 | 0 | 0 | 0 | 63 |
| | FAR210 | 21 | 37 | 0 | 102 | 85 | 75 | 57 | 63 | 11 | 9 | 4 | 0 | 464 |
| | FAR 270 | 9 | 17 | 0 | 18 | 10 | 18 | 5 | 6 | 1 | 1 | 0 | 0 | 85 |
| | FAR 320 | 150 | 74 | 15 | 60 | 30 | 66 | 2 | 11 | 0 | 0 | 0 | 0 | 408 |
| | FAR 340 | 56 | 66 | 2 | 80 | 67 | 79 | 19 | 39 | 0 | 0 | 0 | 0 | 408 |
| | TOTAL | 491 | 284 | 110 | 291 | 218 | 298 | 96 | 133 | 14 | 13 | 4 | 3 | 1955 |

**Note**

This table presents the comparison number of grade achievers during ODL and F2F sessions. ODL is Open and Distance Learning, F2F is face-to-face, FAR is Financial Accounting and Reporting.
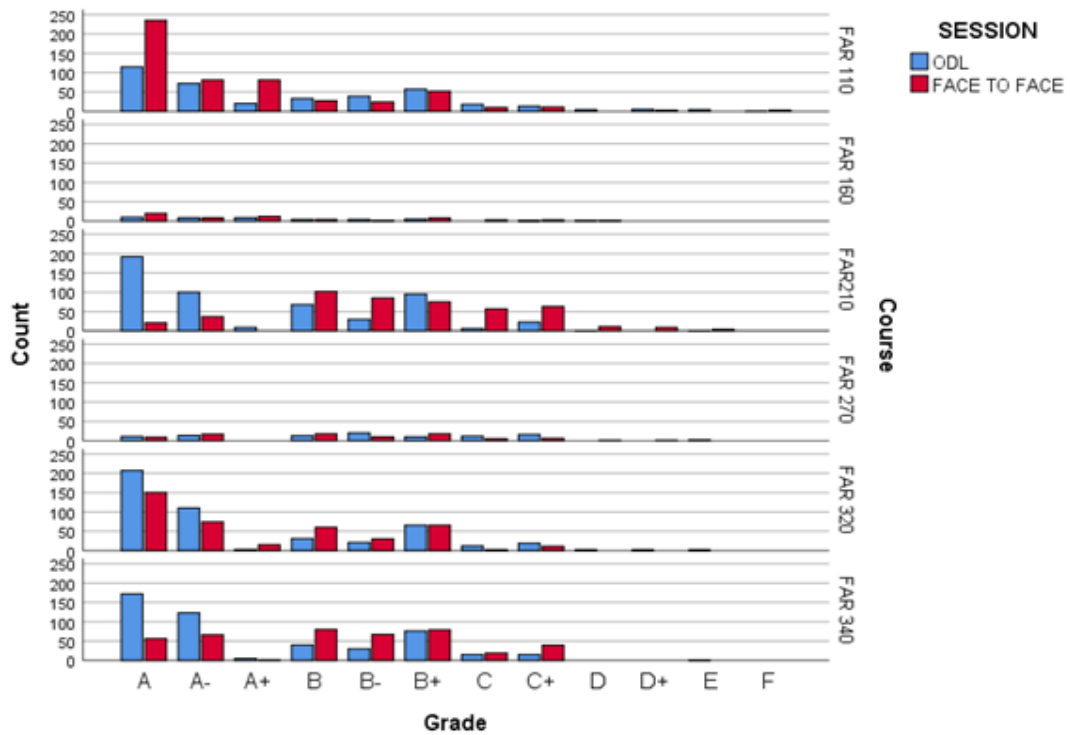
**Figure 1:** Results comparison based on grades between sessions
**Note:**
This figure compares the number of grade achievers during ODL and F2F sessions.
ODL is Open and Distance Learning, FAR is Financial Accounting and Reporting.

From the above results, the graph of significantly better performance during ODL is crystal clear, where there is a drastic increase in the percentages of students who scored excellently in FAR courses. This shows that ODL does provide a significant increase in grades, and it is consistent with those found by (Tan et al., 2017; Betihavas et al., 2016).

**Statistical Analysis**
**Table 3:** Mann Whitney U Test

| Course | Session | Total | Mann Whitney U | p-value | Median |
|--------|---------|-------|----------------|---------|--------|
| FAR 110 | ODL | 377 | 71425.000 | .000** | 3.670 |
|         | F2F | 525 |           |        | 4.000 |
| FAR 160 | ODL | 43 | 1313.000 | .776 | 3.670 |
|         | F2F | 63 |          |      | 4.000 |
| FAR 210 | ODL | 524 | 47243.500 | .000** | 3.670 |
|         | F2F | 454 |           |        | 3.000 |
| FAR 270 | ODL | 96 | 3224.500 | .019** | 2.830 |
|         | F2F | 84 |          |        | 3.330 |
| FAR 320 | ODL | 469 | 88355.500 | .040** | 3.670 |
|         | F2F | 408 |           |        | 3.670 |
| FAR 340 | ODL | 476 | 59487.000 | .000** | 3.670 |
|         | F2F | 408 |           |        | 3.000 |

Note:
This table shows any significant difference between individual FAR results during F2F and ODL.

F2F is face-to-face, ODL is Open and Distance Learning, FAR is Financial Accounting and Reporting.
***Significant at the 1% level, **Significant at the 5% level, *Significant at the 10% level.

Table 3 shows the difference in each of the individual FAR results between two different learning platforms by using the Mann-Whitney U test. The findings show that there is a significant difference in scores between ODL and F2F sessions for all FAR courses except for FAR160. For FAR110 (Mann Whitney U = 71425.000, p-value<0.05) and FAR 270 (Mann-Whitney U = 3224.500, p-value<0.05) the GPA score was greater during F2F session (Median 4.000, n = 525, Median = 3.330, n = 84) compared to the ODL session respectively (Median = 3.670, n = 377, Median = 2.830, n = 96). Among the reasons why students excel during physical class is that ODL has certain flaws where it can impede the communication between the students and their lecturers (Dhawan, 2020). In other words, a normal two-way F2F communication and human touch are lost. To support this view, technical papers such as FAR courses, which are predominantly concerned with accounting standards, expose students to technical difficulties that frustrate and slow-down the teaching-learning process (Favale et al., 2020).
In contrast for FAR 210 (Mann Whitney U = 47243.500, p-value<0.05) and FAR 340 (Mann Whitney U = 59487.000, p-value<0.05), the GPA score is better during ODL session (Median = 3.670, n = 524, Median = 3.670, n = 476) in comparison to F2F session respectively (Median = 3.000, n = 454, Median = 3.000, n = 408). These results are aligned with previous recent studies by Little and Jones (2020) and McCarthy et. al (2019), who similarly studied accounting courses as their study. From the results obtained, it is suggested that self-regulated criteria in terms of maturity levels of students in handling ODL was the key answer that lead to their success, similar to what has been suggested by Barnard-Brak et al (2010). Students who took these two courses were students in the second and final year of their studies who have had the experience of both models, F2F and ODL which subsequently led to a better performance in the latter mode.

As for FAR 320 (Mann Whitney U = 88355.500, p-value<0.05), the GPA scores were the same for both sessions and this suggested similar findings as to the previous study by Aly (2016) and El Said (2021) that both models did not affect the performance of students. However, the difference shows a significant result. This could be due to the reason that the current study has a different number of students and sample size.

From the above results, there are mixed findings between ODL and F2F grades for each of the individual FAR courses. These are in line with Hughes and Lyons (2017), where they found different findings of performance when four studies demonstrated a significant improvement in test scores using online learning compared to traditional F2F learning, while four showed no significant difference and three demonstrated mixed results. Other factors should be considered in getting these mixed results, such as students' traits, family involvement, peers support, perceived stress, or burnout.

**Table 4:** Results comparison of Students' GPA for Both Methods of Learning

| Statistics | F2F | ODL |
|---|---|---|
| Mean | 3.370 | 3.544 |
| Median | 3.450 | 3.670 |
| Mode | 3.780 | 3.890 |
| Std Deviation | .465 | .395 |
| Skewness | -1.728 | -2.059 |

**Note**
This table compares students' GPAs during ODL and F2F sessions.
ODL is Open and Distance Learning, F2F is face-to-face.

Based on Table 4 above, the findings show that the average GPA of the students during the F2F session is 3.370 (sd=0.465) and 3.544 for ODL (sd=0.395). Next is the median value, results show that 50% of the students scored above 3.450 while another 50% scored below 3.450 in their GPA during the F2F semester. This is way behind the achievement of students during ODL, where the median is at 3.670. In terms of mode, the GPA with the highest number of achievers is 3.780 and 3.890 during F2F learning and ODL respectively. This shows that the overall final performance of these students is better during ODL compared to F2F learning. This is consistent with the results obtained by Krasodomska and Godawska (2020) who showed that students' engagement in online learning had a positive effect on their final performance, which means that students with higher GPAs performed better in their studies during ODL.

When this study compares the performance of students in terms of GPA and overall FAR courses apart from the individual FAR courses in both methods of learning, it has seen a roughly better performance during ODL in comparison to the traditional physical learning. This is in line with Asarta and Schmidt (2017) who found that students who are categorised in high GPA level perform better in the online learning than in the traditional conditions. High GPAs students who excel in their studies during ODL indicate that they managed to coordinate and plan their strategies on living their life at home with all other works to do such as helping their parents with domestic works or even part-time works to support family income but outshine in their studies. This further proves that self-regulated students work efficiently on managing their time, setting their own goals will achieve better performance during ODL (Al-Hadrami and Morris, 2014; Barnard-Brak et al., 2010).Thus, it is fair to conclude that students perform much better during ODL as compared to those during the F2F session. Overall, students are benefiting from the shift of the learning and examination platform. This is evident in the data that more students secured a better result in pointer.

**Conclusion and Recommendation**
In a nutshell, accounting students performed much better academically during ODL as compared to the F2F semester. This is evident in the total number of students who scored the top grades in the overall FAR courses as well as the students' improved GPA. However, when focusing on the specific FAR course, a mixed picture emerges, with considerable increases, decreases, and no changes in the performance of each of the course during ODL.

Narad and Abdullah (2016) concluded that the students' academic performance determines academic institutions' success and failure. Hence, continuous upgrades and improvements to this ODL mechanism need to be actively examined to not merely get a better academic performance among the students, but most importantly to suit the new environment.

Although the findings in this study are generally favourable to both students and the university, it is also crucial to ensure that the outcomes are really what the students deserve based on their effort and hard work.

To achieve such true academic performance, many aspects and factors will have to be looked into. Future research may focus on the factors that influence the improved performance in ODL, which are not only beneficial to the students but also the educators and the institution as a whole. Other than that, this study can also be expanded to include the data from other accounting program offered by the faculty, which is Diploma in Accounting Information System (AC120) as well as the data from other accounting-related papers, such as costing, taxation, and audit to strengthen the conclusion within the accounting field. Future studies may also include and compare the results obtained from students studying in other universities.

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