

Case Report

ONLINE CLASS MANAGEMENT PROBLEMS & SOLUTIONS

* Dr. Nguyen Thanh Tuan and Huyen Huyen Ton Nu Quynh Mai, MA.

Hong Bang International University, Ho Chi Minh City, Viet Nam.

Received 04th January 2024; Accepted 05th February 2024; Published online 20th March 2024

ABSTRACT

Online class management has been a new trend in the age of digital education growth since Covid-19 pandemic exploded. This education model has been largely developing all over the world for over twenty years. Universities have tried their best to make break-through in online education; however, they must encounter difficulties in the management quality. The purpose of the current study is to find out solutions to the better management of online classes. The study significantly contributes to the improvement of online class quality at universities. The qualitative research methodology was mainly applied to this study, including the use of questionnaire to survey students. The data was collected and analyzed to find out the results on the base of variables relationship. The outstanding novelty of the study results had positive impact on the effectiveness of online class management in terms of (1) students' interaction and prompt feedback via discussion participation; (2) facilities for technology tool and software programs with technical support from instructors and staff; (3) well-organized content format with sufficient feedback mechanism and effective class time management; (4) encouraging self-reflection and class assessment performance; and (5) online teaching skill of instructors, verbal and non-verbal interaction, and students' motivation. These findings are helpful for universities to create the most appropriate strategies to meet the educational needs of students in the digital age.

Keywords: online class, online class management, online class effectiveness...

INTRODUCTION

The online class quality has become a controversial topic since universities turned their physical classes into online classes as the result of Covid-19 pandemic. Similarly, universities have taken step by step to enhance the online learning quality; nevertheless, managers, instructors, and students must encounter challenges to class management effectiveness. This hinders universities from the comprehensive development of online education in digital age.

As a typical example, the history of the online class model started in America in 1980's. During this time there was a powerful growth of video-based education that could be distributed with relative ease via satellite broadcasts. Throughout the 1980's and 90's, schools were required to develop with the primary goal of providing instruction in an online setting. This development served as the genesis of what would become modern E-learning. Since the 1990's, E-learning has become a profitable industry that draws the special attention of both public and private institutions of education (Debter, 2014). The significant increase in the E-learning industry, and the subsequent closing of face-to-face instructions during the 2019-2020 and 2020-2021 school years have made a turning point in education history. Especially after Covid-19 pandemic, life around the world has completely changed and has given impetus to the intensification of online learning instructions into universities. Simultaneously, many nations have selected online learning models to prevent the spread of the COVID virus (Leontev, 2023). However, there has been very little consistency in what is included in the delivery of the online course or what is expected within online classes (Merisotis and Phipps, 1999). In addition, the insufficient understanding of E-learning industry has consequently resulted in a lack of standards of quality; therefore, a framework for the application of E-learning as well as online classes

in an educational setting is much needed (Cheng, Lehman, and Armstrong, 1991; Figueroa, 1994). Considerably, there has been a rapid expansion into the online learning space and a solid reliance on the use of educational technology and virtual learning environments to deliver content and to facilitate online classes (Arday, 2022). *Online class* provides students with flexibility regarding time and location, allowing learners to study at their own pace and convenience, and reducing geographical distance (Yuan, 2023).

The study purpose aims to find out the existing issues students have faced in online classes via survey questions. The qualitative research method applied to the paper is to compare and draw findings and then to offer possible solutions to the enhancement of online class quality. As a result, the article will explore questions such as (1) What difficulties do students have to encounter when taking part in online class? (2) How do instructors as well as managers help students to improve these difficulties? (3) What requirements do instructors need to meet to manage online classes effectively? The research scope mainly focuses on the challenges in online classes related to interaction and prompt feedback mechanism, technology facilities, content format, class time management, self-reflection and class assessment, learning motivation, verbal and non-verbal interaction. Although this paper has some limits to data collection and research time length, it significantly contributes to online class development and ensures the quality of teaching and learning online at universities if they are in a similar setting.

LITERATURE REVIEW

Online class management is related to the process of organizing and supervising virtual learning environments to facilitate effective teaching and learning activities and experiences. With the rapid growth of online education and remote learning, the appropriate management of online classes is essential to make sure of smooth operations and maximize students' participation. However, the management always faces the controversial challenges involved in

online class effectiveness, instructor' training skills, students' difficulties in interaction, and minimal facilities offered to classes.

Some Factors Affecting Online Class Management

The quality of online learning is based on students' experience starting from the opinions and needs of them so that higher education managers and instructors can develop strategies that best fit the reality. Nevertheless, the authors strongly believe that the effectiveness of online class management refers to the major items consisting of student interaction, technical instructions, technology infrastructure, course format, feedback, observation, and evaluation.

Effective Interaction among Students

George and Leon (2023) found that online learning seemed to be useful for public health students, identifiable differences in lesson design or lecture implementation, software illustrations, online discussion, active learning, and homework assignments had a significant effect on learning outcomes and student satisfaction. The authors think that setting up clear communication channels is vital in an online learning environment to ensure interaction between students and instructors. Instructors should provide students with frequent updates and announcements, respond rapidly to student requirements, and encourage students to take part in online discussions and collaborative activities. Utilizing tools such as chat platforms, discussion boards, email and video conferencing can advance interaction and enforce a sense of community among students. Nevertheless, the biggest challenge instructors must face is active student participation. Instructors should utilize various strategies to encourage participation, such as interactive activities, group projects, online quizzes, and virtual simulations. Haataja *et al.*, (2018) emphasized that collaborative problem solving was an outstanding feature in 21st century learning skills. It was related to two or more people working together to solve a problem. Such capabilities were identified as a crucial goal in education. Additionally, collaborative problem-solving skills of team members had impact on the effectiveness of collaboration. It is the interactive online tools and technologies that facilitate students' participation. For example, instructors can use interactive whiteboards, breakout rooms in video conferencing platforms, or collaborative document-editing tools to encourage active engagement. Nevertheless, not all students and instructors can use technology proficiently; therefore, it is essential to train them in technology use.

Technical Support and Guideline to Using Technology

Hoter and Nagar (2023) confirmed that the types of support were offered to the students and the favorable support methods via various options were in terms of written instructions and explanations, viewing instructional videos, filling out a form requesting support, seeking assistance from other participants in the course, from instructors, from the technical support staff in the various institutions, or from an external source. Personally, well-done technical support guidelines are very helpful for students to have effective access to the course content, and this could increase training course quality in general.

The competence of using technology takes a decisive role in online or virtual learning environment because it is involved in delivering contents to students and facilitating learning process and class management (Arday, 2022). Technology expertise significantly contributes to technology-enhanced learning strategies that are related to the use of technology to improve learning, and the creative utilization of digital resources for asynchronous learning or using social media (and other platforms) to encourage collaborative

learning (Ansari and Khan, 2020). It is obvious that the lack of technology expertise prevents instructors from class management and student interaction. Therefore, the authors reckon that training instructors and students in how to use software programs serving online teaching and learning activities is essential because it helps instructors to manage class well, and students can perform their learning tasks effectively.

Technology Facilities for Online Class

To facilitate effective online class management, universities need to meet the technical requirement for conducting an online class consisting of technology infrastructure with digital education trend, many universities in the world have been able to quickly accept online learning, thanks to the availability of part-time education and the necessary electronic tools, which has allowed students to quickly take part in the learning process. The lack of suitable infrastructure and digital tools and technologies at universities negatively affects the transition of the educational process to online mode (Leontev, 2023). However, what instructors and students encounter is the cost of mobile data, as well as software and hardware issues that prevent them from accessing online class quality (Pietersen, 2023). Briefly, it is certain that online classrooms must be well equipped with internet coverage, software packages as well as the devices used for connection such as computers, laptops, or smartphones that help students to have access to the course.

Online Course Content Format

The delivery of the effective online course requires instructors to consider the crucial dimensions of content, format, and feedback to increase the learning opportunities to meet the needs of students. The online experience is correlated positively with a higher overall satisfaction in the respective online courses. Students evaluate the quality of an online course through three dimensions based on how user-friendly the format is, how well organized and adequate the content is, and how well the feedback mechanism meets their personal information/feedback requirements (Heischmidt and Damoiseau, 2012). The instructor-led courses provide students with the lessons of the course open according to predetermined dates, and students perform according to the instructions in each lesson. In this method, all students complete the same lesson at the same time and can cooperate with each other. On the contrary, in the self-paced courses the student is not reliant on the instructor or their peers. This allows the student to be more independent and to progress at his or her own pace (Topolovec, 2018). According to 2006 research, Chejlyk confirmed the nature of any relationships between course format in web-based courses, student perceptions of interaction including student-student interaction, student-instructor interaction, and student-content interaction, and overall student satisfaction. Therefore, the authors think that it is a good idea to establish obvious timelines and deadlines for activities and assignments, and they are feasible and manageable for students. Also, instructors should offer a schedule or syllabus outlining course topics, due dates, and important events. Students should be encouraged to interact with instructors and peers, manage their time effectively, allocate dedicated study hours for online learning activities, as well as receive comments from instructors.

Feedback

Heischmidt and Damoiseau (2012) found feedback is the foundation of significant learning performance. Also, it was known as the need for building skills for remote collaborations. Therefore, the authors think that feedback on student participation in online classes is

essential for guiding students' learning and encouraging their continued engagement. In experience, instructors need to provide students with specific feedback that highlights the strengths and shows what students should improve. Especially, feedback that is considered as an opportunity for growth and improvement should be positive to encourage students in participation. Besides, instructors can make learning activities more exciting by motivating students to reflect what they have studied. In short, effective feedback can guide students' perception development and foster continued active participation in online classes. Pietersen (2023) confirmed that Learning Management System (LMS) was the most favorable to support teaching goals and facilitate effective online class management because instructors could upload course materials, share announcements, facilitate discussions, distribute assignments, and provide feedback. However, it is certain that students are familiar with the LMS and its features to ensure positive learning performance and effective course evaluation.

Assessment Implementation

Puiu (2023) argued that intensive efforts had to be motivated to develop related assessments and to activate education reforms to improve the effectiveness of online course management through critical thinking skills. The authors reckon that effective online course assessment needs to collect feedback from students, conduct assessments, identify improvement areas, and make appropriate adjustments. It is a good idea to make assessments involved in learning objectives and promote critical thinking skills. Certainly, instructors should perform formative and summative assessments via quizzes, essays, projects, or presentations. The authors highly appreciate providing students with their work feedback in time because it contributes to learning progress. Therefore, instructors must encourage students to promote self-reflection and metacognition skills and provide prompts for self-assessment and goal setting.

Instructors' Guiding Skill

According to Gilbert (2015), an effective online course requires well-structured course material, qualified lecturers, cutting-edge technology, feedback, and directions that are apparent. Ivanova and Petrova (2023) showed that the lack of computer literacy and IT skills for both instructors and students and some technical issues had effect on the quality of online class. Similarly, the practical experience in using technological tools in teaching affected the instructors' knowledge and beliefs (Blonder, Feldman-Maggor, and Rap, 2022). The two main factors involved in online class management are digital skills and online teaching skills. First, the "Digital Skills Training" programme needs to be equipped to enhance employment opportunities, guide instructors to have access to the Internet, and improve their digital skills which would allow them to use the Internet to fulfill their online class management needs. Also, instructors should learn how to use computers and smartphones. Some teachers without digital skills, have impact on the preparation and conduct of online classes (Kwok-kin. *et al.*, 2023). Second, Passey *et al.*, (2018) pointed out the positive consequences of online learning instruction, which manifested itself in the fact that many instructors were forced to develop their digital competencies, and they were motivated to do so by the current circumstance. On the contrary, preparing for online classes took instructors much more time than preparing for similar classes in person (Leontev, 2023). In a nutshell, digital skill and online teaching skill as well as experience in using technology have significant contribution to online class management. Once instructors lack these skills, there will be serious effects on the quality of online course guide.

Specific Communication Problems

Online classes always cope with challenges and problems that may hinder effective communication. These are some specific interaction barriers that can arise in online class settings.

Face-to-Face Interaction

Face-to-face interaction refers to direct communication and engagement between individuals who are physically present in the same location. It refers to the use of verbal and non-verbal cues, such as facial expressions, body language, tone of voice, and eye contact. However, Lewohl (2023) indicated that there was an existing barrier between students who desired the flexibility of studying online or asynchronously and those that expected to return to face-to-face class. Specifically, he highlighted that *the* availability of online captured lectures had been postulated to reduce student interaction in face-to-face classes. Russo and Campbell (2004) advised that, in online situations, instructors should provide students with more opportunities for communication to explore ideas together and to help students feel less isolated. Similarly, Salmon (2000) added that more direct communication with instructors and students should be done during online classes to give students opportunities to fully immerse in learning from one another. Because of the different nature of the online learning environment, both students and instructors had to readjust their learning and teaching styles by considering the importance of cultural values held by all participants. Based on experience, the authors recognize that most of the students get used to face-to-face interaction in traditional classrooms; therefore, they find it harder to accommodate to asynchronous or online classes. In addition, online communication can lack the personal touch and sense of human connection that comes with face-to-face interactions. As a result, this can make it more arduous to establish trust, build rapport, and maintain positive interaction with other students.

Verbal and Non-Verbal Interaction

It is very helpful to keep interaction by using non-verbal tools (cameras and software programs) to enhance student connectedness and engagement in online class communication. Online classes may make it harder for students to actively participate in discussions in home schooling. This results in reduced interaction and less active involvement in class activities (Zhang and Pan, 2022). Similarly, the importance of training teachers is to help them decipher non-verbal signs shown by students during online classes. For this to happen, it is essential to have internal regulations requiring the students to turn on their cameras and ensure visual contact during online classes because this significantly contributes to teaching and learning activities (Shaw, Kominko, and Terrion, 2015). It is noticeable that non-verbal cues like facial expressions, body language, and gestures are often limited or absent in online classes. This prevents both students and instructors from interpreting and understanding each other's messages fully. However, the solution to the issue is not to give up online classes now that there are remarkable benefits for this type of leaning. Therefore, the crucial thing is to take measures to raise the quality of online classes by better preparing students and instructors.

Less Communication between Instructors and Students

It is advisable that instructors and students should utilize Learning Management System (LMS), and Blackboard to support teaching and learning activities. It is so important to perform the blended teaching and learning environment to secure the engagement between instructors and students. Unfortunately, this relationship is so often ignored in an online context, and the higher-education managers

have been making their efforts to address any inequalities that may exist in a post-pandemic online learning environment (Pietersen, 2023). Another problem with online class communication is the instructors' responsibility for encouraging students to learn on LMS platforms or Blackboard (Mpungose and Khoza, 2022). The authors wonder if instructors really execute responsibility through dialogue and care for students. For example, it is insufficient feedback and clarification that lead to the misinterpretation of important details, instructions, and confusion or incorrect actions. This hinders opportunities for spontaneous interaction because online classes need to make sure of a structured schedule, leaving little room for spontaneous questions, discussions, or interactions that naturally arise in traditional classroom settings. Also, the asynchronous nature of some online classes can further limit real-time interaction among students and instructors. This leads to the challenge of building rapport with classmates in the online class environment.

Lack of Motivation and Experience in Learning Online

Online learning may have negative impacts on learners' motivations because of the lack of social interaction and a gap between expectations and the organization of the content in online settings (Lin, Zhang and Zheng, 2017). In contrast, students' level of motivation in online learning can be enhanced if instructors provide students with relaxed classroom culture, detailed and positive feedback (Chen and Jang, 2010). Similarly, students with positive learning attitudes and those with an interest in learning about different cultures have higher levels of motivation and better self-regulatory capacities in online learning environments (Zheng, Liang, Li and Tsai, 2018). In another research, online learning experience has positive effect on students' interaction and course result if students are highly adaptable to new technology and expect their learning experiences to be immersive, interactive, and personalized (Shorey, Chan, Rajendran and Ang, 2021). In short, students' motivation and online learning experience take an important role in achieving the course quality. Therefore, all the authors mean is very essential for instructors to motivate students and share learning experience to encourage them to participate in online class, and this also contributes to class management effectiveness.

METHODOLOGY

Research Design

The study was based on qualitative research method in which interpretive techniques and descriptions were used to analyze issues. This was a favorable approach because it provided the authors with the effort to answer the theoretical and methodological questions, highlight important common motives in the research paper, and concern discovery and development as well as the testing of theory. Also, qualitative techniques were applied to exploratory investigation of management questions. The three techniques applied to the study were interview, reference materials analysis, and case studies related to online classes. This was a descriptive study, including descriptions of online class management, and its impact on sample population (who, where, when, what, and how), estimates of proportions of a sample population involved in the characteristics of online classes as well as the relationship among different variables.

Subjects

The major objective of the study was also to evaluate the effectiveness of online classes. The survey was conducted on a random sample of 300 students and instructors at English Language Department (ELD) of Hong Bang International University (HIU). The

noticeable characteristic of these participants was that they spent a long time learning online during Covid-19 pandemic; therefore, they had experience in teaching and learning in online classes. Besides, they were given equal chances to take part in the survey. These were quite useful for the survey results and actively contributed to the research.

Data collection

The data was collected online through the Google form so that it saved research time length. The data was obtained from a survey instrument developed on the theoretical framework of the literature regarding the factors that had positive impact on the effectiveness of online class management. The data was analyzed by using exploratory factor analysis and descriptive statistics to extract the barriers or challenges which were being faced by students for online classes. It was certain that the data information was confidential thanks to the participants' wholehearted support. Also, they contributed honest ideas to the questionnaire when they identified something unusual or irrelevant on it. Being reliable colleagues and ELD students, the authors completely believe in their participation in the survey.

DATA ANALYSIS - RESULTS AND DISCUSSIONS

This part shows the information collection from the survey. The data statistics were demonstrated by the following charts that were used to support data analysis and discover findings. The questionnaire consisted of an administrative question, a classification question (Figure 1), and eight target questions (Figures 2-9). The survey results had been meticulously collected and selected before they were analysed. The charts with a number, a title, and a caption were set up to support explanation and illustration. These are the remarkable findings.

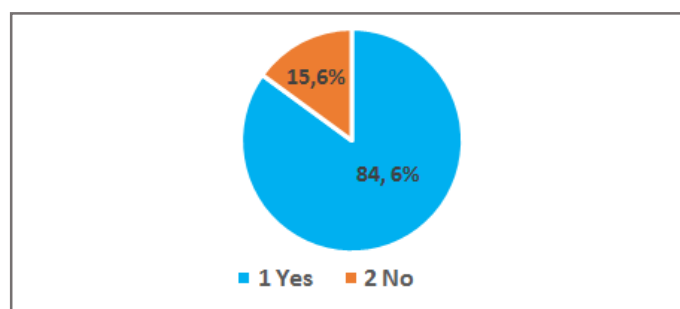


Figure 1: Interest in Online Classes

Figure 1 shows students' special attention to online classes. Over three quarters of students (84,6%) cared about online learning mode. It proves that the need of online classes is very high, and this is a potential investment for any university.

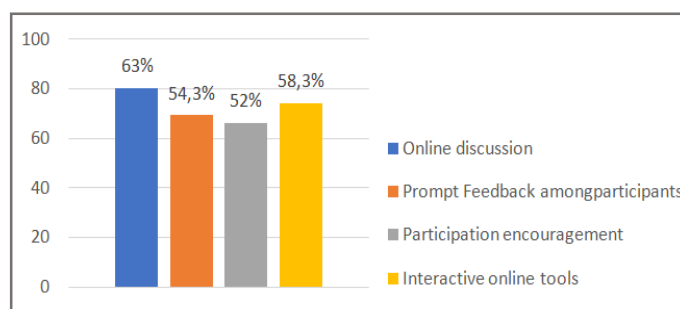


Figure 2: Interaction in Online Class

Figure 2 indicates the interaction factors that positively contribute to online-class quality. The percentage of students that were interested in online discussion was the highest (63%). The tools for interaction support reached 58,3%, and 54,3% was in favor of rapid feedback among participants. The participation encouragement occupied the lowest rate (52%). In general, it is essential for instructors to boost more interaction times, encourage students to take part in learning activities, and maintain interaction during the course period.

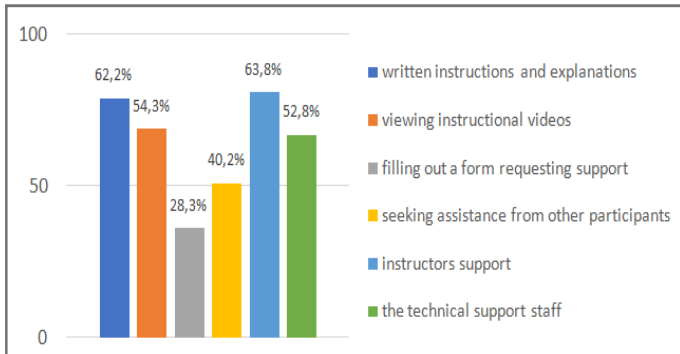


Figure 3: Technical Supports & Guidelines

Figure 3 demonstrates the major factors related to technical assistance and essential instructions that students have received from instructors and staffs. Over a half (63,8%) of students appreciated the support from instructors, while the technical assistance from staff was only 52,8%. That instructions and explanations should be written was 62,2%, and 54,3% for guidelines via video. The need for seeking support from peers was 40,2%. Not many students were interested in writing support requesting form, and it took up the tiniest proportion of technical support (28,3%). It is certain that effective technical support is the best way to keep regular connection and optimize the quality of the course.

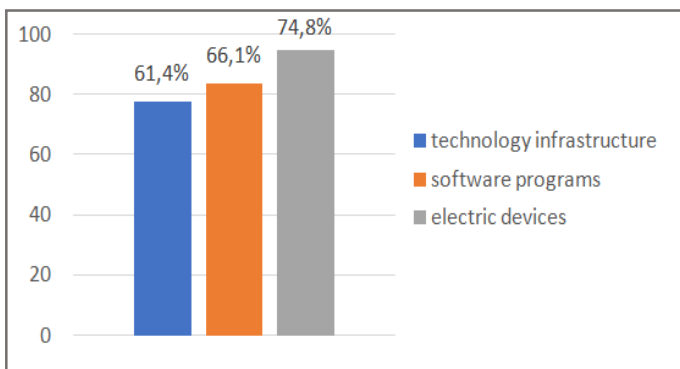


Figure 4: Technology Facilities in Online Class Quality Management

Figure 4 points out technology amenities that take decisive part in enhancing online class quality. The highest percentage (74,8%) was electric devices, whereas software programs were 66,1% and technology infrastructure reached 61,4%. Basically, the course quality is impossible to ensure without the intervention of technological amenities.

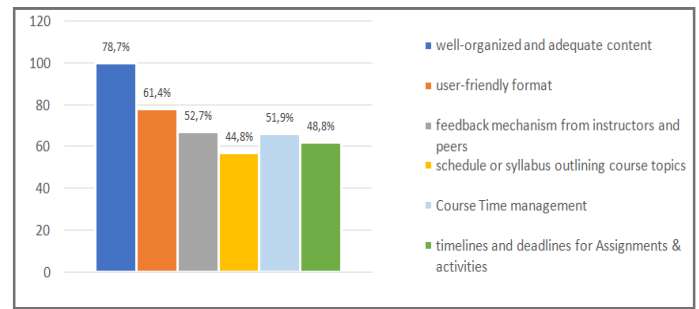


Figure 5: Effective Management of Online Class

Figure 5 illustrates the crucial factors that create online class effectiveness. 78,7% of students highly appreciated the well-structured and sufficient content in online class. The user-friendly format accounted for about 61,4%. The feedback mechanism and the course time management were close to 52,7% and 51,9%. The time regulations for assignment submissions and activities made up nearly half (48,8%), and the following lower proportion was 44,8% for schedule and syllabus that were required to outline course topics. It is a good idea for instructors to pay attention to building available content format that is a decisive factor involved in students' positive participation.

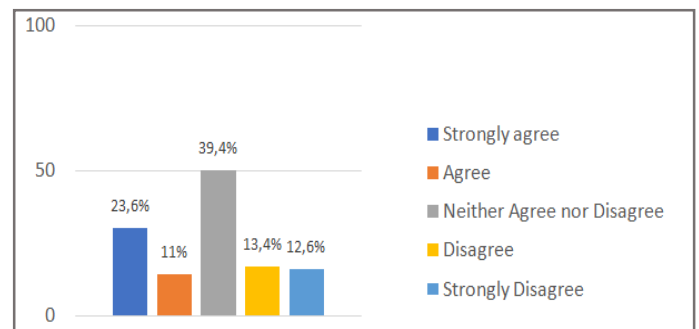


Figure 6: Learning Management System (LMS)

Figure 6 presents the facility of using LMS. 34,7% of students agreed that LMS was a useful tool to connect and receive feedback among participants. However, 39,4% of them hesitated, and 26% disagreed. It was obvious that over half of students were appropriately unaware of LMS feasibility. Therefore, it is essential to help students identify the usefulness of this application background.

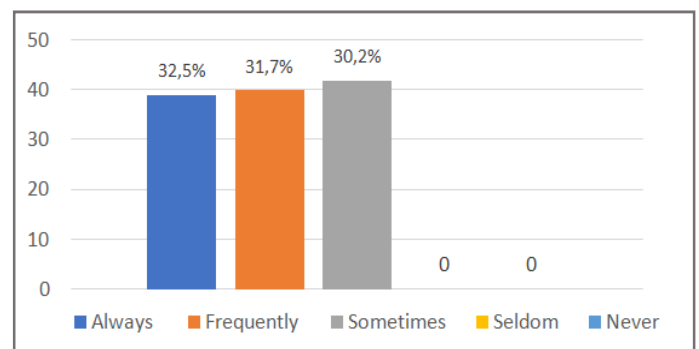


Figure 7: Feedback from Instructors

Figure 7 depicts the positive feedback that students can receive from their instructors. 32,5% of students always received feedback from instructors. The frequent feedback proportion reached 31,7%, and 30,2% was the smallest rate that students sometime received. In general, the interaction and feedback between instructors and students was not noticeable. Personally, this is not sufficient to meet the quality of the online class.

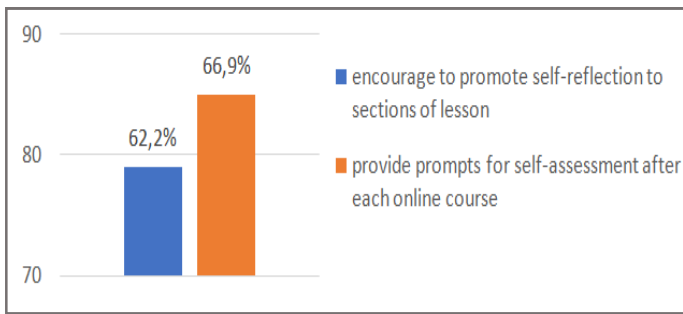


Figure 8: Assessment Implimentation

Figure 8 outlines how students themselves can implement class evaluation. The percentage of students that were interested in lesson content self-reflection was 62%, while 66,9% of students wanted to be provided with assessment instructions after each online course. It is vital that students should be encouraged to reflect on the course and evaluate it by themselves.

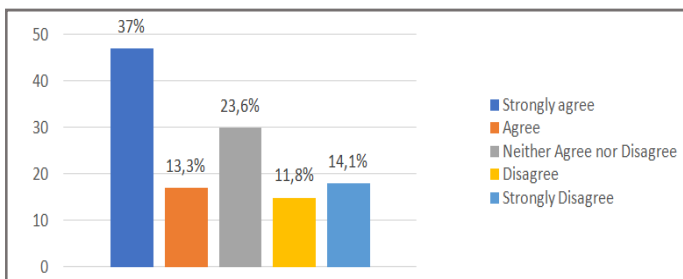


Figure 9: Instructors' Digital Skill Affecting Online Class Quality

Figure 9 illustrates the instructors' digital skill that has positive effect on class quality management. A half (50,3%) of students completely agreed, 25,9% disagreed, and 23,6% hesitated. Individually, instructors should equip themselves with digital skill because it is related to the quality of course guideline and feedback process.

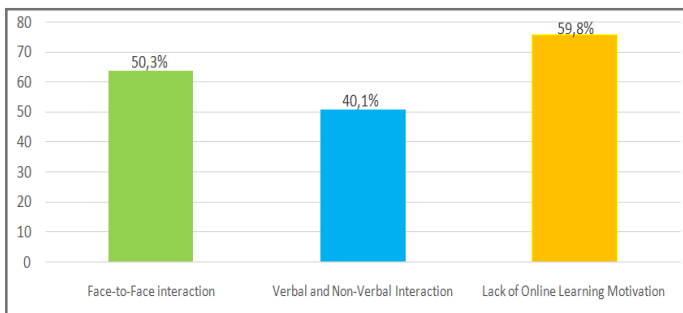


Figure 10: Communication in Online Class

Figure 10 expresses how students communicate in online class. That students did not find it interesting to study online took up 59,8% and followed 50,3% for interest in face-to-face interaction. The proportion of verbal and non-verbal interaction was 40,1%. Noticeably, instructors need to enforce various interaction forms and to motivate students to participate in learning activities.

CONCLUSIONS AND RECOMMENDATIONS

In conclusion, the major findings of the study have shown some challenges as well as problems with online class management. First, there is still limit to the interaction in online class that consists of forum discussion, rapid feedback, participation encouragement, and interactive tools. The solution to this problem is to set up channels of communication to keep interaction and create an online learning

environment, provide students with frequent updates and announcements, respond rapidly to student assignment, encourage students participate in online discussions and collaborative activities, enforce a sense of community among students, and enhance problem-solving skill. Second, technical support is essential for instructors and students. It should be done in the forms: written explanation, instructional video, requesting form, peer assistance, and support from staff. It is very convenient for students to have active access to the course content. Instructors and students should learn how to use software programs serving online teaching and learning activities because it helps instructors to manage class well, and students can perform their learning tasks effectively. Insufficient technology facilities prevent students from interaction and affect the transition of the educational process to online mode. It is certain that online classrooms should be well equipped with internet coverage, software packages as well as the devices used for connection such as computers, laptops, or smartphones that help students to have access to the course. Third, well-structured content, feedback mechanism, time management, and deadline assignments decide the course quality through LMS platform where students still haven't completely identified its power. Instructors should organize transparent content format, timelines and deadlines for activities and assignments that students are feasible and manageable. In addition, they should provide students with a schedule or syllabus outlining course topics, due dates, and vital events. Students should be motivated to interact with instructors and peers, implement their time effectively, determine study hours for online learning activities, and receive instructors' comments that highlight the strengths and show what students should improve in time. Fourth, the requirements of assessment implementation and instructors' digital skill training are crucial to ensure the online class quality. Instructors need to collect feedback from students, promote self-reflection and meta cognition skills, provide prompts for self-assessment and goal setting, identify improvement areas, and make appropriate adjustments. Last, online learning motivation and experience, as well as verbal and non-verbal interaction are the decisive factors related to positive learning attitudes that affect the online class quality. Therefore, instructors should share learning experience with students and appeal to them for activities and how to behave in online class. This could increase class management effectiveness.

REFERENCES

Ansari, J. A. N., & Khan, N. A. (2020). Exploring the role of social media in collaborative learning the new domain of learning. *Smart Learning Environments*, 7(1), 1–16.

Arday, J. (2022). COVID-19 and higher education: The times they are a'changin (Vol. 74, pp. 365–377). Taylor & Francis

Blonder, R., Feldman-Maggor, Y., & Rap, S. (2022). What can be learned from lecturers' knowledge and self-efficacy for online teaching during the covid-19 pandemic to promote online teaching in higher education. *PLoS One*, 17(10) doi:https://doi.org/10.1371/journal.pone.0275459

Cheng, H.-C., Lehman, J., & Armstrong, P. (1991). Comparison of performance and attitude in traditional and computer conference classes. *The American Journal of Distance Education*, 5(3), 51–64.

Chejlyk, S. (2006). The effects of online course format and three components of student perceived interactions on overall course satisfaction (Order No. 3213421). Available from Pro Quest Dissertations & Theses Global. (304909641). Retrieved from https://www.proquest.com/dissertations-theses/effects-online-course-format-three-components/docview/304909641/se-2

- Chen, K. C., & Jang, S.-J. (2010). Motivation in online learning: Testing a model of self-determination theory. *Computers in Human Behavior*, 26(4), 741–752.
- Debter, L. (2014). From correspondence courses to MOOCs: The highlights of distance learning over the ages.
- George, B. J., & Leon, J. (2023). Making the switch: Experiences and results from converting a biostatistics course to flipped and online formats for public health students. *Journal of Statistics and Data Science Education*, 31(1), 91-101. doi:https://doi.org/10.1080/26939169.2022.2046522
- Gilbert, B. (2015). Online learning revealing the benefits and challenges. *Education Masters*. Paper 303.
- Haataja, E., Malmberg, J., & Järvelä, S. (2018). Monitoring in collaborative learning: Co occurrence of observed behavior and physiological synchrony explored. *Computers in Human Behavior*, 87, 337–347.
- Heischmidt, K. A., & Damoiseau, Y. (2012). Dimensions of quality in online business course offerings: Content, format and feedback. *Journal of Higher Education Theory and Practice*, 12(2), 84-97. Retrieved from <https://www.proquest.com/scholarly-journals/dimensions-quality-online-business-course/docview/1021381491/se-2>
- Hoter, E., & Nagar, I. (2023). Technical support in large online courses and MOOCs using virtual worlds. *The International Journal of Technologies in Learning*, 30(2), 1-22. doi:https://doi.org/10.18848/23270144/CGP/v30i02/1-22
- Ivanova, M., & Petrova, T. (2023). Towards independent students' activities, online environment and learning performance: An investigation through synthetic data and artificial neural networks. *Informatics*, 10(2), 37. doi:https://doi.org/10.3390/informatics10020037
- Kwok-kin Fung, Hung, S. S., Lai, D. W. L., Shum, M. H. Y., Hong-wang, F., & He, L. (2023). Access to information and communication technology, digital skills, and perceived well-being among older adults in hong kong. *International Journal of Environmental Research and Public Health*, 20(13), 6208. doi:https://doi.org/10.3390/ijerph20136208
- Lewohl, J. M. (2023). Exploring student perceptions and use of face-to-face classes, technology-enhanced active learning, and online resources: *Revista de universidad sociedad del conoimien to*. *International Journal of Educational Technology in Higher Education*, 20(1), 48. doi:https://doi.org/10.1186/s41239-023-00416-3
- Leontev, M. (2023). Study the attitude of teachers and students toward online classes at technical university. *Les Ulis: EDP Sciences*. doi:https://doi.org/10.1051/e3sconf/202338102027
- Lin, C. H., Zhang, Y., & Zheng, B. (2017). The roles of learning strategies and motivation in online learning: A structural equation modeling analysis. *Computers & Education*, 113, 75–85.
- Merisotis, J., & Phipps, R. (1999). What's the difference? Outcomes of distance vs traditional classroom-based learning. *Change*.
- Mpungose, C.B. & Khoza, S.B. (2022). Postgraduate students' experiences on the use of Moodle and Canvas Learning Management System. *Technology, Knowledge and Learning* 27(1):1-16. <https://doi.org/10.1007/s10758-020-09475-1>
- Pietersen, D. (2023). Perspectives on dialogue and care in teaching, learning relationships in an ever changing online higher education landscape 1. *Perspectives in Education*, 41(2), 134-150. doi:https://doi.org/10.38140/pie.v41i2.6291
- Puiu, S., Idowu, S. O., Meghisan-Toma, G., Bădîrcea, R. M., Doran, N. M., & Alina, G. M. (2023). Online education management: A multivariate analysis of students' perspectives and challenges during onlineclasses. *Electronics*, 12(2), 454. doi:https://doi.org/10.3390/electronics12020454
- Passey, D., Shonfeld, M., Appleby, L. (2018). *Technology, Knowledge and Learning*, 425-439. DOI: <https://doi.org/10.1007/s10758-018-9384-x>
- Russo, T. C., & Campbell, S. (2004). Perceptions of mediated presence in an asynchronous online course: Interplay of communication behaviors and medium. *Distance Education*, 25(2), 215–232.
- Shorey, S., Chan, V., Rajendran, P., & Ang, E. (2021). Learning styles, preferences and needs of generation Z health care students: Scoping review. *Nurse Education in Practice*, 57, 103247. <https://doi.org/10.1016/j.nepr.2021.103247>
- Shaw, J., Kominko, S., & Terrion, J. (2015). Using Lecture Tools to enhance student–instructor relations and student engagement in the large class. *Research in Learning Technology*, 23, 27197.
- Salmon, G. (2000). Computer mediated conferencing for management learning at the Open University. *Management Learning*, 31(4), 491–502.
- Topolovec, S. (2018). "A Comparison of Self-Paced and Instructor-Paced Online Courses: The Interactive Effects of Course Delivery Mode and Student Characteristics." Paper presented at the Open Education Global Conference 2018 Proceedings, Delft University of Technology, Netherlands. <http://resolver.tudelft.nl/uuid:aac0b965-e978-4a52-9cc5-a8e4b975e9e6>.
- Yuan, W. (2023). Perceptions of Chinese college students towards online learning: Implications for teaching in blended learning environments. *The Educational Review, USA*, 7(2), 185-194. doi:https://doi.org/10.26855/er.2023.02.009
- Zheng, C., Liang, J., Li, M., & Tsai, C. (2018). The relationship between English language learners' motivation and online self-regulation: A structural equation modelling approach. *System*, 76, 144–157.
- Zhang, X., Cao, S., & Pan, Y. (2022). The relationship between the use of non-verbal information in communication and student connectedness and engagement in online design education. *Sustainability*, 14(23), 15741. doi:https://doi.org/10.3390/su142315741
