

## THE ROLE OF SOCIAL INTERACTION IN ENHANCING STUDENTS' ONLINE LEARNING EXPERIENCE

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**Abstract:** *Online learning is increasingly recognised as an alternative to traditional face-to-face education in higher education. The absence of in-person contact in online learning prompts a need to explore how social interaction shapes the learning experience. This study delves into the critical role of social interaction in shaping the overall online learning experience. Through qualitative analysis, the researchers examine the experiences of five university students with exposure to both online and traditional learning methods. Thematic analysis identified key themes: The perceived benefits and drawbacks of online learning, the importance of social interaction with instructors and peers, the encouragement of interaction by the instructors, and satisfaction with student-instructor and student-student interaction. The implications of this study extend to educators, institutions, and policymakers, providing insights to optimise online learning environments. It emphasises the need for pedagogical advancements, flexible learning models, and technology integration in online education. This study contributes to the evolving field of online education, ensuring it remains effective and responsive to student needs in the digital age. Future research opportunities include exploring advanced pedagogical strategies, assessing the long-term effects of flexible learning models, and examining emerging technologies in online education.*

**Keywords:** *Social Interaction, Online learning Experience, Higher Education, Qualitative Research*

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## Introduction

Technological advancements in education have led to the emergence of new and innovative teaching and learning methods (Miranda et al., 2021). In recent years, the landscape of higher education has undergone a significant transformation with the increasing prevalence of online learning (Azman & Abdullah, 2021). However, there are concerns that online classes may not fully replicate traditional classroom dynamics, which raises questions about the role of social interaction in the online learning environment. Previous studies have highlighted the potential benefits of social interaction, including improved comprehension, motivation, and engagement (Dahlstrom-Hakki et al., 2020; Mehall, 2020; Meşe & Sevilen, 2021). On the other hand, the lack of meaningful interaction in online learning environments can lead to feelings of isolation, reduced motivation, and challenges in knowledge acquisition (Azmat & Ahmad, 2022; Chung et al., 2020; Meşe & Sevilen, 2021).

To comprehend the impact of social interaction on online learning, it is essential to take into account the broader context of the digital era, characterised by unparalleled connectivity (Larson & DeChurch, 2020). Interactions in online courses occur through various mediums, such as live or pre-recorded videos, electronic bulletin boards, emails, synchronous chat, and similar communication tools. Online learning has gained popularity due to its flexibility and accessibility, allowing students to study from any location, regardless of physical boundaries (Muthuprasad et al., 2021; V. Singh & Thurman, 2019). However, replicating the rich interpersonal dynamics of traditional classrooms in online education can be challenging. The absence of in-person interaction raises concerns about the effectiveness of social interaction in shaping the overall online learning experience. Some scholars argue that traditional classrooms provide a better learning experience (Hurst et al., 2013; Mehall, 2020). This is because in-person interactions allow for more immediate and direct engagement with both teachers and classmates, leading to smoother communication (Darkwa & Antwi, 2021; J. Singh et al., 2021). Therefore, it is important to strike a balance between the flexibility of online learning and finding ways to make it socially engaging. Addressing the social aspects of online learning is crucial to improving students' learning outcomes and overall satisfaction (Muzammil et al., 2020).

Moore (1989) identified three primary forms of formal interactivity within educational settings: student-student, student-instructor, and student-content interaction. Student-instructor interaction involves students engaging with instructors or subject matter experts who guide, motivate, present information, and facilitate the application of knowledge. Instructors are essential for maintaining student engagement, providing clear explanations, and offering consistent support. Additionally, student-student interaction involves interaction among learners, either individually or in group settings, with or without the real-time presence of an instructor. Learner-learner interaction can be valuable for peer learning, discussion, and collaborative activities (Moore, 1989). The research indicates that increasing student-student and student-instructor interaction levels can enhance both learning outcomes and student satisfaction (Sher, 2009). The purpose of this study is to explore how social interaction with instructors and peers affects the online learning experience of university students. The study can provide useful insights that can help educational institutions, instructors, and policymakers improve online learning to better meet the needs of students.

## Research Methodology

This study employed a qualitative research methodology, specifically adopting a phenomenological approach, to comprehensively address the research questions. The choice of a qualitative approach was driven by the necessity to explore and understand the nuanced perspectives and experiences of university students in various learning modalities (Creswell & Poth, 2018). Participants were selected through purposive sampling to provide diverse perspectives on the topic. The study interviewed five university students with experiences in both online and traditional face-to-face learning, from public and private institutions. The decision to conduct in-depth interviews with a limited number of participants aligns with qualitative research principles, emphasising depth over breadth and aiming for detailed insights rather than generalisability (Patton, 2014). In response to the challenges posed by the COVID-19 pandemic, all interviews were conducted via social media platforms to ensure social distancing and safety. Table 1 presents a brief overview of the demographic information for the five participants.

**Table 1: Profile of the Five Participants**

Participant	Gender	Age	Course of Study	Type of University
Chee	Female	22	Bachelor of Business Administration	Public
Chandran	Male	22	Bachelor of Communication	Public
Yap	Male	22	Bachelor of Information Technology	Private
Lai	Female	23	Bachelor of Computer Science	Private
Ashar	Male	23	Master of Philosophy	Private

This study used an explanatory technique, which helped interpret students' perceptions and behaviours. A semi-structured interview was employed as it allowed participants to freely express their opinions while ensuring comprehensive coverage of the key research areas (Evans & Lewis, 2018). The researchers interviewed participants using a set of questions based on the research objectives. The participants were provided with the interview questions prior to the interview session, allowing them time to prepare more thoughtful answers. Participants were provided with open-ended questions to freely share their thoughts, emotions, and experiences regarding their online learning journey. The interviews explored students' perceptions of social interaction in online courses. Follow-up questions were generated spontaneously. Each interview lasted approximately 10 minutes and was audio-recorded for reference. The data collected from the interviews were typed word for word into a Word document. The data were then analysed thematically using an Excel spreadsheet. The purpose of this thematic analysis was to identify patterns and themes that emerged from the interview data (Namey et al., 2008). This involved coding and categorising the data to uncover recurring insights about the complex interaction between social interaction and online learning experience. Ethical considerations were given utmost priority throughout the study, with informed consent obtained from all participants before the interviews. Confidentiality and pseudonymity were maintained to protect the privacy of the participants. The study adhered to ethical guidelines for research involving human subjects to ensure the well-being and rights of the participants were respected.

## Results and Discussion

Thematic analysis of interviews with five participants revealed key insights into the impact of social interaction on online learning. These themes directly address the research objectives and shed light on various aspects of the online learning experience. The data analysis identified six distinct themes as discussed below.

### **Perceived Benefits and Drawbacks of Online Learning**

Understanding the perceived benefits and drawbacks of online learning helps contextualise how social interaction shapes the online learning experience for university students. Participants offered diverse perspectives when comparing online learning to traditional face-to-face learning. For instance, Chee held a positive view of online learning, describing it as “much more efficient and effective as compared to face-to-face learning.” She appreciated the convenience of recorded classes and the ability to revise easily: “For those students who are unable to attend the class on that particular day or time, they can watch back the recording and receive the same input with other students. Also, it is very easy for us to do the revision, especially for the preparation for our examination because we can keep repeating the recorded video.” However, she acknowledged the absence of the university experience and opportunities to meet students from diverse courses. This highlighted the importance of social interactions and networking opportunities that are often integral to the university experience but are less prevalent in an online environment (Baber, 2020).

Chandran drew attention to the interaction aspect, stating, “Generally, we will get immediate response from other people in a physical class but through online, there will be some communication barriers which are mostly caused by connection problems.” He noted the communication challenges in online learning but acknowledged the flexibility it offers: “Online learning provides a more flexible study schedule to arrange their time more freely, which compared to the traditional mode of learning, the study schedule will be more rigid.” Lai appreciated the convenience of online learning, saying, “Online learning can be accessible on time and place... I can access the class in my home.” However, she also noted that face-to-face classes allowed for instant interaction with instructors, something that online learning could not replicate fully. This underscores the value of real-time interactions with instructors, which can enhance the learning process and address questions or concerns promptly (Jackson, 2019).

Yap expressed a preference for face-to-face classes, stating, “For me, I would prefer to be able to take a face-to-face physical class.” He highlighted the benefits of concentration and lecturer monitoring but also recognised the value of online classes’ accessibility during the pandemic: “Online classes are not bad also, that can also be taken from every corner of the world at the same time, as long as they are equipped with the Internet.” Students no longer need to commute to a physical campus. They can access their courses and study materials whenever and wherever it is most convenient for them. Ashar identified a drawback in online learning: “The immediate feedback is missing,” highlighting the absence of direct interaction with instructors as a limitation of online education.

### **Importance of Social Interaction with Instructors**

Social interaction with instructors emerged as a critical factor in ensuring successful online learning outcomes. Instructor-to-learner interaction is vital for transferring knowledge and feedback (Baber, 2020). The participants stressed the importance of effective communication and engagement with instructors for better understanding and clarification of course content. Chee believed that such interactions helped students better understand the material and access additional resources, stating: “When we have social interaction with our instructor, we can make sure that we are following and understanding the class.” She further explained the significance of this interaction in expanding knowledge beyond lectures by saying, “Our doctor will send us useful articles or useful online research for us.”

Chandran highlighted the practicality of social interaction in preventing miscommunication, especially in research, saying, “I am doing academic research for this semester, so I need to communicate or social interaction with my advisor frequently to ensure that everything goes smoothly and goes well.” Yap stressed the importance of asking questions to understand the instructor’s expectations: “It is best to have questions, and it is important to ask. We are talking about not being ashamed to ask questions. Because each person may have a different interpretation and understanding of the lecturer’s explanation, we need to understand the lecturer’s needs, then we can answer the test or do the assignment very well because you know what the lecturer wants.” He underlined the value of this interaction in aligning student understanding with instructor expectations although he noted that not all students might feel comfortable doing so. Lai succinctly expressed that social interaction with instructors ensures students grasp their intended messages, emphasising the clarity that these interactions provide. Ashar emphasised the need for dedicated time during interactions to facilitate in-depth discussions: “Make sure the students and the instructors are available at that time and completely focus on what they are discussing instead of doing other work.” He noted the importance of extended meetings to allow comprehensive exploration of topics.

Participants employed a combination of communication platforms, including WhatsApp, email, and video conferencing tools like Microsoft Teams, Zoom, and Google Meet, to interact with their instructors in online courses. These methods enable timely clarification of doubts, discussion of course-related topics, and efficient communication between the students and instructors. The frequency of interactions varied depending on individual needs, with some participants interacting with instructors at least once a week. They found these interactions convenient and more effective than relying solely on email.

### **Encouragement of Interaction by Instructors**

The findings from participant responses highlight a generally positive approach among instructors toward encouraging interactions in the online classroom. Instructors played an active role in fostering interactions among students and with themselves (Kassandrinou et al., 2014). Instructors were generally responsive and encouraged students to interact and engage with them through various means. Chee, for example, attested to instructors actively promoting interaction, stating, “Usually my doctor will appoint one topic and ask students to freely share their ideas.” This highlights a proactive approach to creating an inclusive learning environment. Additionally, Chee noted that instructors use engaging game-based tools like Kahoot to actively engage students in class. They also implement breakout rooms to encourage group discussions, allowing students to “appoint a leader” and share their ideas with the entire class. Chandran also recognised instructors’ efforts, emphasising that some instructors “explore different interacting tools or websites like Kahoot or Mentimeter” to engage students. These game-based Web 2.0 tools can develop interactive classroom environments, enhance student participation, and motivation, and boost academic achievement (Gokbulut, 2020). He further highlighted tasks that require “group discussions to encourage the discussion between students and instructors,” demonstrating a commitment to fostering collaborative learning experience.

Yap provided further insights, indicating that instructors often encourage group work, stating, “Usually they will ask to form a group with friends to discuss.” This practice not only enhances student interaction but also promotes peer learning and discussion, ultimately enriching the educational experience (Webb, 2009). Lai confirmed that instructors do make efforts to interact with students, noting, “Sometimes they try to interact with us by calling our names or asking any volunteers to answer their questions.” Using students’ names is part of instructor

immediacy because it can decrease the sense of distance between students and the instructor. Randomly calling on students may increase their accountability to work and lead to greater diversity in the voices heard in class. However, it may also increase student anxiety (Waugh & Andrews, 2020). Ashar highlighted the openness of instructors to engage with students, stating, “They are just happy to answer your questions.” His observation underscored a supportive environment where instructors encourage students to seek clarification and engage in meaningful learning (Micari & Calkins, 2021). These responses collectively indicated that instructors employed diverse strategies, including technology, group work, and active participation, to foster interaction and engagement in the online classroom.

### **Satisfaction with Student-Instructor Interaction**

Overall, participants expressed satisfaction with the level of interaction with instructors in their online courses. They appreciated instructors’ efforts to engage students during online classes and provide opportunities for questions and discussions. Chee expressed her satisfaction with the level of interaction, stating, “I am quite satisfied with the level of interaction with my instructor because they will ask us to share our opinion instead of he or she just talking alone in the class.” She appreciated instructors’ efforts to engage students through discussions and by sharing personal experiences, fostering a more interactive learning environment. Chandran indicated contentment with the level of interaction, noting that online methods enable effective communication: “For me, I feel quite satisfied for now because everything can be communicated well through online methods.” His response reflected the adaptability of online platforms in facilitating communication. Lai also reported satisfaction with the level of interaction. She stated that instructors actively engage with students to ensure their presence and comprehension. According to her, “I am satisfied with the level of interaction since every lecturer is trying to interact with us often to ensure we are there and we understand what they are trying to let us know.” This satisfaction contributed to a positive learning environment and affirmed the value of active instructor engagement.

However, some participants still preferred the immediacy of face-to-face interactions in traditional classrooms. Yap expressed a preference for physical classes and a sense of dissatisfaction with online interaction: “I think not so good, I more prefer the physical class... Sometimes I can chit-chat with my friend also.” His response highlighted a preference for the immediacy and social aspects of in-person learning. Ashar also expressed a less enthusiastic level of satisfaction, noting that online interaction is not highly satisfying compared to traditional classroom learning. This suggests that he may feel that there is room for improvement in terms of interaction in the online format.

### **Importance of Social Interaction with Peers**

The importance of social interaction with other students in ensuring successful online learning outcomes is a recurring theme among the participants. Chee emphasised the collaborative aspect of social interaction, stating, “When we have social interaction with other students, we can make sure all course mates are contributing to our assignment.” She further explained the value of such interactions in skills development: “We also can increase our communication skill and problem-solving skills for the preparations for us in the future career purpose because we can deal with different types of people with different personalities.” Chandran recognised the practical implications of social interaction, particularly in the context of group assignments: “Having social interactions... the effectiveness of completing the group assignments will be high.” He underscored the role of these interactions in establishing a harmonious study atmosphere and fostering strong relationships among peers.

Yap highlighted the diversity of perspectives among students: “Everyone has a different interpretation... We can exchange resources with each other when having group discussions.” He acknowledged that these interactions enable students to broaden their understanding through resource sharing and discussions. Lai identified both soft and hard skill development through social interaction: “Importance will be to improve the soft skills like communication skills and leadership skills among students.” She also emphasised the holistic development of students, including hard skills, during their studies. In contrast, Ashar expressed concern about limited student focus and interaction: “The students are not very much focused, so there is no interaction or very little interaction.” He succinctly underscored the relationship between interaction and learning, stating that increased interaction leads to increased learning. These insights collectively underscore the vital role social interaction plays in enriching the online learning experience and preparing students for future endeavours.

Participants in online courses utilised various digital platforms such as WhatsApp, Telegram, WeChat, Microsoft Teams, Google Meet, and Discord to interact with their peers. These platforms enable communication, collaboration on assignments, and the sharing of information, fostering a collaborative learning environment despite the remote nature of online courses. Participants reported interacting with their peers on a regular basis, often daily or weekly, especially during lectures or assignments. They emphasised the importance of constant communication for accurate information sharing.

### **Satisfaction with Student-Student Interaction**

The level of interaction among students is a crucial aspect of the online learning experience (van den Berg, 2020). The participants’ feelings about the level of interaction with other students in their online courses are varied. Chee expressed high satisfaction with the level of interaction: “I am very satisfied because we can easily talk with other students whether they are from local or international anytime and anywhere because we can straight away conduct our meetings in a few online meeting platforms such as Zoom, Microsoft Teams, and Google Meet.” She noted the flexibility these platforms offer, overcoming time zone and distance barriers. Chandran also reported feeling satisfied with communication among peers, stating, “I feel satisfied because I am able to communicate with them smoothly all the time.” His response suggested that the online format does not hinder his ability to interact effectively.

Yap drew a distinction between online and physical classes, suggesting they are equivalent in terms of interaction. However, he emphasised the advantages of physical classes: “Able to get to know each other face-to-face and understand their body language,” indicating a preference for in-person interactions. Lai expressed partial satisfaction, highlighting that online tools were the primary means of interaction. She anticipated potential challenges when transitioning to face-to-face interactions due to the reliance on screens and the absence of physical cues. Ashar noted a shift in satisfaction levels, finding in-class interaction more satisfying than online interaction in the current context.

### **Discussions**

The findings of this study offer valuable insights into the intricate relationship between social interaction and the online learning experience of university students. One prominent theme that emerged was the pivotal role of social interaction in ensuring successful online learning outcomes. Participants emphasised the importance of effective communication and engagement with instructors for a better understanding of course content, prevention of miscommunication, and aligning student understanding with instructor expectations. The significance of instructor-

student interaction in enriching the online learning experience was underscored by the value of asking questions and having dedicated time for in-depth discussions.

Furthermore, the importance of social interaction with peers also emerged as a crucial theme in this study. Participants recognised that peer-to-peer interactions in online courses facilitate collaborative learning. Additionally, these interactions contribute to the development of essential soft skills, including communication, problem-solving, and leadership. The study also revealed that effective social interaction contributes to positive group dynamics and fosters a harmonious study atmosphere. The findings align with Stanley and Zhang's (2020) field experiment, which found that peer learning activities improved overall learning and knowledge acquisition. These insights affirm the significant role of social interaction in enriching the online learning experience and preparing students for the future.

This study also underscores the delicate balance between online learning's flexibility and the desire for real-time, face-to-face interactions. While online learning provides students with the convenience of studying from virtually anywhere, it often lacks the immediacy of in-person engagement. Parrish et al. (2021) noted that the sense of connectedness in online courses was often related to the instructor's accessibility and promptness of communication or feedback. Some participants expressed a preference for physical classes, where spontaneous discussions and social interactions are more readily accessible. In face-to-face settings, students typically have weekly chances to inquire about course-related matters, seek further explanations, or request assistance from their instructors. However, in online settings, avenues for such communication may be restricted to email exchanges or a constrained number of synchronous meetings (Parrish et al., 2021). The preferences underline the enduring value of traditional classroom settings.

Lastly, the study highlighted the pivotal role of technology in enabling social interactions in online education. Participants mentioned a variety of digital communication tools and platforms, such as Zoom, Microsoft Teams, and WhatsApp, that they used to connect with both instructors and peers. The widespread adoption of these tools during the COVID-19 pandemic has accelerated the digital transformation of education (Iivari et al., 2020). Furthermore, game-based tools like Kahoot and Mentimeter significantly engage students, fostering interactive classrooms. Instructors effectively employ these tools, encouraging group discussions and active participation. These strategies align with active learning principles, leading to better academic performance (Gokbulut, 2020).

### **Implications of the Study**

This study has several noteworthy implications for the field of online education, particularly in student-instructor interaction. Firstly, there is a clear need for pedagogical advancements in the realm of online learning, emphasising the pivotal role of instructors. The findings underscore the importance of instructors adopting interactive teaching methods, leveraging digital platforms, and actively engaging with students to enhance their online learning experience. This alignment highlights the critical responsibility instructors bear in cultivating effective online education. To facilitate this, educational institutions should prioritise ongoing professional development programs, equipping educators with the necessary skills for effective online instruction. Empowering educators with the skills and resources to foster meaningful online interactions can further enrich the online learning experience (Hampel, 2009).



Moreover, the study underscores the importance of peer interaction in online courses for fostering collaborative learning, positive group dynamics, and skill development. To enhance this aspect of online education, educational institutions should actively promote and facilitate peer interactions within virtual learning environments. They can incorporate group activities, discussions, and projects into online courses to encourage students to interact with their peers effectively. Furthermore, institutions should encourage peer assessment or peer feedback mechanisms within group projects or discussions. This allows students to evaluate their peers' contributions, fostering a sense of responsibility and encouraging active engagement (Adesina et al., 2023).

The study also highlights the need for educators and institutions to consider hybrid or blended learning approaches. Such models can provide students with the flexibility of online learning while ensuring opportunities for face-to-face interactions, discussions, and practical experience (J. Singh et al., 2021). This flexibility accommodates diverse learning styles and preferences, ultimately enhancing the overall educational experience (Ashraf et al., 2021). Additionally, instructors should strive to be readily available to students, facilitating immediate communication and feedback to enhance the online learning experience. The delicate balance between flexibility and real-time interaction is a critical consideration for institutions as they design their online programs.

Lastly, the study underscores the central role of technology in online education. Educational institutions (with the support of government) must invest in robust, user-friendly digital tools and platforms that facilitate seamless communication, collaboration, and engagement. The Ministry of Higher Education should ensure students and instructors are proficient in utilising these tools to mitigate potential barriers to effective communication and interaction. Educational institutions should provide quality support to assist students in the online learning context. Institutional support, such as a quality online system, ought to be updated with the most recent information for educators to effectively share and deliver the content (Khong et al., 2023). Additionally, the institutions must remain attentive to emerging technologies that have the potential to further enrich the online learning experience, such as virtual reality, augmented reality, and artificial intelligence (Vemula, 2021). By staying technologically current and embracing innovations, institutions and policymakers can better meet the evolving needs and support of students in the digital age (Crittenden et al., 2019).

### **Future Research Opportunities**

This study opens the door to several promising avenues for future research in the field of online education. Firstly, further investigation could delve into the development of advanced pedagogical strategies specifically designed for online learning environments. Exploring innovative approaches that maximise social interaction with instructors and peers while optimising learning outcomes would be invaluable.

Secondly, research can focus on the long-term effects of flexible learning models, such as hybrid or blended approaches, on student performance, engagement, and satisfaction. This includes assessing the impact of these models on various student demographics and exploring ways to tailor them to meet the specific needs of different learners.

Lastly, as technology continues to evolve, future research should closely examine emerging technologies and their potential applications in online education. Studies could explore the

effectiveness of immersive technologies like virtual reality and augmented reality in enhancing engagement and knowledge retention.

## Conclusion

In conclusion, this study has illuminated the intricate interplay between social interaction and online learning experience among university students. The findings emphasise the significance of social interactions with instructors and peers in enriching online education. Educators, institutions, and policymakers must prioritise interactive teaching methods, foster peer-to-peer interactions, and leverage technology to create engaging virtual learning environments. As the field of online education continues to evolve, these insights should guide pedagogical practices and institutional strategies. This ensures that online learning remains a dynamic and effective mode of education. By doing so, educators and institutions can better meet the diverse needs and preferences of students. This provides them with a high-quality online learning experience that prepares them for success in the digital age.

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