

Students and supervisors interactions in master's projects: Exploring face-to-face vs mediated communication



Yousra El Khashab

Kuwait University, Kuwait.

Email: elkhashabyousra@gmail.com



ABSTRACT

Article History

Received: 4 April 2023

Revised: 29 May 2023

Accepted: 2 June 2023

Published: 6 June 2023

Keywords

Autobiography

Black hole phenomenon

Capstone project

Direct active supervision

Direct passive supervision

E-supervision system

Mediated communication.

This study aims at exploring communication practices between students and supervisors in thesis projects. The study conducted a comparison between face-to-face and mediated communication through the use of emails. The researcher used the autobiographical reflection to document examples of information communicated during the two interactions. Furthermore, it utilized semi-structured interviews with three students who were conducting their thesis in the Information Studies Department at Kuwait University. Then, the researcher conducted interviews with four students' from other masters' programs. The study used a qualitative method to analyze the results. The findings showed that students used face-to-face meetings and mediated communication to seek different types of information. The topics discussed varied between the face-to-face and mediated interaction. Face-to-face communication was perceived as more effective and productive, while mediated communication was easier and faster. Students used e-mails to set appointments with their supervisors, ask questions and get feedback on assignments. Students faced some communication barriers such as difficulty of sense-making and experiencing the "black-hole" phenomenon. The study suggested applying an electronic supervision system to facilitate students' communication with their supervisors. This study has practical significance as it helps students and supervisors interact successfully during different thesis writing stages.

Contribution/ Originality: This study contributes to the body of knowledge by providing researchers with evidence from Kuwait about the types of information delivered in face-to-face and mediated communication between students and supervisors. Unlike other studies that only used interviews, this study also used autobiography in the research method.

1. INTRODUCTION

Having relationships between people necessitates creating useful tools of communication. Throughout history, people have been searching for ways to deliver information and communicate with others. Different communication tools have emerged lately. These technologies revolutionized many communication concepts and took the attention of scholars to study their attributes (Drago, 2015). People can easily use technological methods to interact with their family members or friends in an informal context. However, the use of technology is more sensitive in businesses and working contexts as the relationships between people become formal. The messages sent to others have to be specific, clear and direct. The way of communication can influence the quality of work.

In educational institutions, the relationship between the instructor and students is also critical. Both parties are often involved in prolonged discussions. Students send messages to their instructors and vice versa. More

specifically, graduate students in educational institutions need to interact with their supervisors in a back-and-forth process. From choosing the research topic to the final submission of the thesis or project, instructors and students communicate frequently. Students consult their supervisors or seek different types of information. The more the educational level is advanced, the more careful the students should be with their messages and deliver them professionally. Various mediums are used to communicate. Sometimes, the face-to-face meetings take place. Technological means also exist as students and supervisors may use emails, social networks, mobile applications, etc.

1.1. Purpose of the Research

This research aims at exploring the types of communicated information between students and supervisors of thesis projects in Kuwait University. It has the purpose of comparing face-to-face and mediated interactions through the emails. The study is expected to help students and supervisors to choose the best communication means based on the type of information. Selecting the appropriate medium to deliver the message is necessary to ensure successful two-way communication.

1.2. Research Questions

This study aimed at answering the following research questions:

1. What types of information are delivered during face-to-face communication between students and supervisors?
2. What types of information are delivered during the mediated communication between students and supervisors?
3. What are the challenges students face while communicating with their supervisors?

2. LITERATURE REVIEW

New technologies provided many communication methods that are used in various settings. Mass media and information technology changed the ways of communication and interaction between people (Chen, Pedersen, & Murphy, 2012). Technology also provided new methods, approaches and sources to be used in the educational and academic settings. The attitude of the users will determine if the technology would succeed or not. In universities, mediated and face-to-face interactions frequently happen between students and instructors (Habibi et al., 2018).

Graduate students and supervisors' communication takes place several times during the thesis development. Some of the topics discussed include negotiating about required assignments for doing the thesis or dissertation. In Kuwait University, which is the main governmental school in the State of Kuwait, graduate students and their supervisors have many options to choose from when they communicate. Besides face-to-face interaction, technological means exist. Some of these mediums include Microsoft Teams and emails.

This review of the literature will discuss the nature of communication between students and supervisors. It will show the importance of this interaction and some features of it. The second section will highlight some pros and cons of face-to-face and mediated communication. Then, it will discuss emails as a way of communication between students and supervisors in the educational setting. The literature will also give examples of types of information conveyed in emails.

2.1. Interaction Between Students and Supervisors

Students interact with their supervisors for different reasons. Martin, Myers, and Mottet (1999) mentioned the reasons why students communicate with their supervisors. The motivations included building a relationship and getting information about the course. They also communicate for functional purposes as they give excuses for late work or absence. Students also communicate to participate and show interest in the course material.

Lucas (2005) studied the relationship between students and their supervisors in Indonesia while developing their graduation research "Skripsi." The study conducted interviews to determine students' perceptions of their interaction with supervisors. Then, it conducted other interviews with the supervisors to understand their ideas of communicating with their students. Supervisors confirmed that having frequent communication with students is essential. The effective interaction will lead to a strong collaboration and understanding between the two sides. The communication is important to understand students' needs. Communication will help to progress with the research. This agrees with what Hutchings (2017) said, the supervision of the doctoral students is necessary for their success. It helps them to overcome problems.

It is fundamental to have a positive relationship between postgraduate students and their supervisors. Effective communication, confidence and mutual respect ensure the success of the relationship. Supervisors share their experience and knowledge with their students. They provide support and advice for them. They also help to address the strengths and weaknesses of the supervisee. The relationship will depend on effective communication and interaction between the two sides. Negative feedback from the supervisor can disappoint the student. Some students are happy with their relationships with their supervisors. Those supervisors give time to their students to explain things comprehensively (Murshid, Ismail, & Baki, 2019).

On the other hand, the relationship between graduate students and their supervisors is complicated. Sometimes, it is characterized by mutual understanding, but conflicts also happen between both parties. Many students complained of their relationship with supervisors and vice versa. Some supervisee felt a sense of care from their supervisors; others did not feel the same. Some supervisors read in detail all the work of their students, while others skipped most of their work. Previous studies revealed the problem of miscommunication between supervisors and students. Students reported some issues when communicating with their supervisors. Around 29.8% of the students said that they found difficulties setting an appointment with their supervisors. 21.7% of the students complained about ambiguous guidance and supervision. 18.9% of the students suffered from the little time given for the supervision. Around 10.8% said that their supervisors are extremely busy. Students also said that they had difficulties discussing issues with their supervisors. Students wait for a long time to get the approval of their supervisors. One student believed that setting a 30-minute meeting weekly with her supervisor is insufficient. The study also showed that students feel disappointed when they could not communicate with their supervisors. In fact, they feel the necessity to keep up with their supervisors to complete the research. They also face difficulties when they begin with their idea. They also had problems managing their stress, organizing their time and submitting their assignments (Harwood & Petric, 2017).

Fitri (2017) also found the same result. The study showed that the interaction between the students and their supervisors might interfere with complex procedures, limitations of time and different expectations between the two sides. The study suggested improving the interactions between the students and the instructors when doing research. It suggested that using an online method can help to improve understanding between students and supervisors. On the other hand, problems that appear during the interaction between students and supervisors might be a consequence of the improper use of communication methods. The channel and the messages of the communication could have affected the relationship and communication. Both face-to-face and mediated interactions have unique features that should be understood.

2.2. Face-to-Face and Mediated Interaction

Technological means are largely used in educational settings. Academic advisors usually find useful mediated channels to advise and help students. Most advisors are satisfied with the use of technology in their work. One study emphasized the importance of using technology in academic advising practices. Around 87% of the people on campus use computers daily. The advisors conduct about 97% of their academic advising using computers and about 77% of their advising using laptops. The use of technology for communicating with the faculty constructs

approximately 47%. The advisors use the emails with a percentage of approximately 98.8% daily to communicate. They also advise students face-to-face, or by using phones and Facebook (Pasquini & Steele, 2013).

Previous studies have discussed the attributes of both face-to-face and mediated communication. The literature highlighted the pros and cons of each method. Several perspectives were presented in the literature. Some studies claimed that mediated interaction is equivalent to face-to-face communication, while other studies believed that face-to-face communication is superior.

Drago (2015) studied the effect of technology on face-to-face interactions. The study showed that communicating through technological means could have a bad influence on face-to-face interaction. This result agrees with what Przybylski and Weinstein (2013) found. The study claimed that communication technology had a negative effect on closeness, quality of conversation and connection of people. The study also claimed that the existence of mobile technologies could have a negative effect on face-to-face interactions. The study emphasized on the negative influence of the mediated communication on the face-to-face relationship. Platt, Amber, and Yu (2014) showed that students do not find the mediated and the face-to-face meetings to be equivalent. Online courses were seen as more flexible than face-to-face ones. Lee, Leung, Lo, Xiong, and Wu (2011) found that mediated communication could not predict the quality of life, while face-to-face interaction can.

2.3. Reflecting Emotions in Communication

Mallen, Day, and Green (2003) experimented 64 students. These students were asked to have face-to-face and mediated conversations with each other. The study revealed that students were satisfied with their face-to-face experience compared to the mediated one. The students reported that they felt a sense of disclosure and a degree of closeness. The emotional understanding was the same in both face-to-face and mediated conversation. Face-to-face interaction had a higher level of positive and negative influence. Furthermore, the students who were involved in the face-to-face interaction remembered the facts discussed during the meeting efficiently. The conflict is also lower in face-to-face interaction. Since the tone of voice is not included in the mediated interaction, the level of disagreement between parties could increase. The study also interpreted this result by people's avoidance of conflict in real-world communication.

On the other hand, Lucas (2005) said that students feel afraid and worried when they meet their supervisors face-to-face. They are scared to argue with their supervisors. When supervisors do not reply to messages and calls, some students wait for their supervisors in the office. Instructors also ask their students to send them messages to know when they will meet. Sometimes, they do not reply to the message, but they are on time. If students do not come, the supervisor would call them to ask where they have been. In some of these setting, students are afraid to talk or ask questions.

Magi and Mardeusz (2013) studied the reasons why students still value face-to-face consultations with librarians. The study aimed at investigating why students seek assistance face-to-face, although mediated consultation is available. It conducted interviews with 53 students from the University of Vermont to determine the reasons they prefer individual consultations. In the study, students needed help with their research process. They said that they prefer face-to-face help to emails or chats because it is rapid, easy and effective. The authors found the result surprising, as students had to send emails and wait for a couple of days to take appointments. Students said that they prefer to exchange information face-to-face because it is fast and they get immediate answers to their questions. They found emails and chats to be time-consuming. Some students felt the overwhelmed, anxious, excited and lost. After the face-to-face consultations, they felt much better and they were confident.

Contradictory to what many scholars have found, Driscoll, Jicha, Hunt, Tichavsky, and Thompson (2012) claimed that students' satisfaction does not differ from face-to-face settings to the mediated ones. The effect of online learning could be the same as the traditional one. This equivalence could be reached if the online strategy was the same. Other studies showed the effectiveness of online methods.

2.4. Additional Technological Tools for Communication

Perry (2012) studied the supervision strategy in one online university. The study found that webcam supervision, like those conducted via Skype and GoToMeeting, is an active channel for both students and supervisors. It helps them to build their identity. Mediated meetings are not inferior to face-to-face meetings. Although the study also highlighted that other supervisors prefer face-to-face meetings with the students who are in the town Habibi et al. (2018). Due to the spread of social networking sites, many instructors decided to use them for educational reasons. The study investigated the use of SNS for supervision, communication and discussion. Social media were used to create social interaction. Students and instructors valued using social networks for educational reasons. They believed it help them to save time and interact simply. Collaboration is strengthened between students and instructors anytime and anywhere. Students interacted with their instructors to get feedback.

Roets and Bhembe (2016) said that supervisors need to be aware of communication skills when interacting online and during face-to-face communication. Both students and supervisors can think deeply before sending messages. Some messages of non-native speakers might get lost in the translation. However, giving feedback online lacks the ability to express feelings about the work. It would take lots of time when communicating these feelings online. Some supervisors do not know the possibility of students misinterpreting their messages due to the absence of non-verbal elements. Students expect that the supervisor will be patient, honest and friendly person both during face-to-face and mediated interactions.

2.5. Communicating through Emails in Educational Settings

Robson, Cook, and Habgood (2016) conducted interviews with 40 students to explore their use of emails in the academic context. Students appreciated emails to be the primary method of communication. If students receive many emails, they might feel overwhelmed and confused. The findings of the study revealed that students received emails from the university. Giving a short email with a link for further information is preferred. Around 76% of the students were happy with the amount of information they receive on emails, while 24% of them find it very generic.

Lucas (2005) demonstrated that email was the most frequent technological mean to be used between Indonesian students and their supervisors. They use it to consult with their professors. Similarly, Aribi (2017) examined the use of emails in the academic context in Tunisia. The researcher distributed a questionnaire on 38 postgraduate students. The study found that postgraduate students have a positive attitude towards using emails in communication for academic matters. Around 36.84% of the students use the email several times and check their inbox, 31.57% check their emails frequently. In addition, 71% of the students spend from 0-30 minutes on emails. About the reasons for using emails, around 41.2% said that they use it for academic purposes. Around 36.8% use it for professional reasons. The study emphasized that emails can facilitate communication in educational institutions. However, the messages in the email may be misunderstood due to language deficiencies. If the politeness rules are not followed, the effectiveness of the message decreases.

Merdian and Warrior (2015) examined the preference of 98 Psychology students' communication in the academic context. Students found that interacting with the course materials face-to-face helped them to understand the topics better. Approximately 60% of the students said that when they have time, they prefer to email their instructors. Emails are usually used when the inquiry does not require an immediate answer. Around 31% tried to approach their instructor face- to- face before sending an email. They are embarrassed to send an email to the lecturer. The preferred way of communication would depend on the depth of information. If the needed information is intense, the face-to-face method is preferred. The study suggested that instructors have to encourage the students to interact face-to-face if they need any help. The study showed that email exchange is one of the most used methods of interaction in the UK for both formal and informal contexts. Students prefer to communicate via social networking, followed by face-to-face and emails. Males preferred face-to-face meetings, while the females liked using social networking more.

All technological means could have positive and negative sides. Lightfoot (2006) indicated that Emails are a very powerful tool of communication, but it has some advantages and disadvantages. Emails are not restricted by time. For an instructor who has many students, it is difficult to have face-to-face meetings with every student. However, the text information could be unclear for some recipients. The email could be ignored without a reply. The absence of body language and tone of voice could have a negative influence on the quality of communication.

2.6. The Language of Emails

Studies also stressed that Students are aware of the differences between face-to-face and mediated interaction. They understand that emails should be written carefully to avoid any misinterpretation. Students put more amount of information into mediated communication than face-to-face. This conclusion supports the social presence theory. The study suggested that email writers should do their best to ensure that the sent message is clear and understandable. It is different from traditional face-to-face interaction. Instructors should offer a convenient way of communication for those who do not like to use emails (Lightfoot, 2006).

A study conducted by Roghanizad and Bohns (2017) revealed that students' emails are less influential and less persuasive than what they think. The trust found in face-to-face interactions is missing in the mediated methods. People think it is more convenient to send requests by email, but they do not understand their limitations.

The language of the emails sent between students and supervisors is worth studying. Krish and Salman (2016) analyzed 50 emails sent by Arab postgraduate students to their Malaysian professors. The study indicated the differences between female and male students when sending messages to their supervisors. The study revealed that females are more aware of the politeness criteria in academic emails. The study showed that students needed three types of requests from their lecturers. They needed information related to their grades, classes or supervision. They also requested to have face-to-face appointments with their professors. Most of the males send emails to ask for feedback, while females have several requests. These requests were regarding advice and suggestions from the instructor. The study showed that students' language did not encourage instructors to fulfill their requests. Students need to be more direct and to state their needs clearly. In addition, the study asserted that students understand the differences in power between them and their instructors. Thus, they did not use the obligatory language.

The literature revealed that scholars had different ideas about the nature of face-to-face and online interactions. The successful relationship between the supervisor and the student could result in the success of the thesis (Prazeres, 2017), and the effective interaction of the two parties will result in generating knowledge in a better way (Ensher & Murphy, 2011). Hence, it is essential to study the interaction between students and supervisor in both face-to-face and mediated interactions. The existing literature has a gap in studying the types of information sought on face-to-face and mediated meetings. This research aims to fill this gap by comparing the two methods used by students and supervisors at Kuwait University. It also aims to recommend the best way of communicating based on the type of information.

3. METHODOLOGY

This research uses a qualitative approach. It uses two methods to address the research purpose. The first method is the autobiography, while the second method are semi-structured interviews.

3.1. Sample

The target population was the students of Kuwait University. The research used a convenient sample from the Information Studies Department. Three students who were conducting the thesis were chosen for participation. Then, the researcher selected four students from other programs at the University who were conducting their thesis or capstone projects. At Kuwait University, a thesis is prolonged research, while the capstone project is a

shorter type of research, both required from the senior students of the Master's program. The interviewees were both males and females. Table 1 shows the demographic information of the participants.

Table 1. Demographic information of the participants (N=7).

Participant	Gender	Program	Academic year
#1	Female	Information studies	2018
#2	Male	Information studies	2018
#3	Female	Information studies	2018
#4	Female	Political science	2017
#5	Female	Education	2018
#6	Female	Education	2016
#7	Female	Education	2018

3.2. Instruments

The research used autobiography. Autobiography consists of personal narratives. The researcher documented around 15 months of face-to-face and mediated communication. A mixed method of supervisory was used during the first 10 months before COVID 19. Then, the researcher depended on mediated communication to discuss the thesis with the supervisors. This method depends on the memory and life narratives of the researcher. It is usually written in the first person and it depends on personal diaries. In the autobiographical method, the researcher would construct new meanings to the facts (Abrahão, 2012).

The interview consisted of 18 questions divided into four parts. The first part collected demographic information. The second part contained general questions about the interaction of students with their supervisors. The third part was about face-to-face interactions. Then, the last part was about mediated communication. The research used the interview questions found in Ng (2020) as a guide. The estimated time of the interview is 30-45 with each student.

3.3. Data Collection

The researcher collected the data during the second semester of the academic year 2019/2020. For the autobiography, the researcher reported her experience after communicating face-to-face and electronically with the supervisors. For the interviews, the researchers at an appointment with the students who are willing to participate. The interview was conducted through the phone. The researcher transcribed the interviews and coded them for analysis.

4. FINDINGS AND DISCUSSION

This study investigated the communication between students and supervisors during face-to-face and mediated interactions. The study used an autobiographical reflection and conducted interviews with three students who registered the thesis in the Department of Information Studies at Kuwait University and 4 students from different master's programs. An autobiography was used to record the methods of communication used, the topics discussed in each method, the feeling and impressions and problems faced during communication.

The researcher documented around 15 months of face-to-face and technology-mediated communication. A mixed method of supervisory was used during the first 10 months before the broke up of COVID 19. Then, the researcher depended on mediated communication to discuss the thesis with the supervisors. An autobiography was used to record the methods of communication used, the topics discussed in each method, the feeling and impressions and problems faced during communication. The following is an extract of the autobiography written by the student.

"It was a new phase of my academic life; I started writing my master's thesis. I am done with my paperwork and it was the time to start working on my thesis. I needed to meet my supervisors so I can discuss with them my ideas and the thesis topic. I sent an email to my supervisors asking them for the appropriate time to have a

meeting. "We can meet on Monday at 12 PM, said my supervisor in an email." The reply was very quick and it was time to prepare for the meeting.

It was Monday, the day of our first meeting. The way to the university was really crowded. I sent an email to my supervisors asking them to wait for me and apologizing for being late. During the face-to-face meeting, I had a list of suggested topics to discuss. I did not feel worry of talking to my supervisors in the first meeting. Maybe because I had previously interacted with them in classes. Also, because I do not have anxiety talking to people or having presentations. We negotiated, we laughed and we debated. I went out from the meeting with a general idea of what I could do in my research. I kept developing my thesis and I sent emails for my supervisors back and forth. Each time, I confirm a face-to-face appointment with my supervisors by an email.

During the later face-to-face meetings, we started discussing more in deep ideas. The methodology was the biggest concern to me. Should I have sentiment analysis? Should it be data mining? Can I code the data manually or I need a software? Face-to-face meetings really important to me to understand what I should do. I discussed a model with my supervisors during the meeting, then I sent them some emails to clarify how could I use this model.

In the face-to-face meetings, the comments of my supervisors were related to the core of the thesis. I wrote my ideas on a paper and I went to my supervisors at office. The supervisors gave me some guidelines on how to write properly. They also advised me to continue reading articles and to spot the most used methodologies. Prof. Chaudhry raised some concerns about the assessment of the thesis and the committee. It was a topic that is early to discuss. However, we sometimes discuss the paperwork during the face-to-face meetings. He also addressed the issue of having the thesis as an interdisciplinary paper. He also adjusted the methodology and suggested some changes. At that time, I was anxious about the best way to conduct my research, but I was sure of the first method that was content analysis. My supervisors also asked me to find the accurate sample or data to analyze in my thesis. I worked on it until I sent the next email. The face-to-face meetings took around 45 minutes. When we meet and discuss any topic, it was expected to submit the related assignment the following week. After the face-to-face meetings, I felt that I achieved the goal. The road map is much clear. This increased my excitement to continue working on my thesis.

Well, I can say that I did not face any problems while communicating with my supervisors. They paid great attention to my guidance. They offered me sufficient time to discuss my thesis both face-to-face and by technological means. However, there are many things that I liked and disliked while communicating with my supervisors. Sometimes I was confused because my supervisors did not reply my emails Face-to-face communication seemed to be more productive! I can immediately know the feedback of my supervisors, their thoughts and their feelings through face-to-face meetings.

After months of back-and-forth emails, I was ready for submitting my thesis. It was the last stages of the thesis writing, I had to depend on mediated communication. It was hard because this was the stage in which I had to receive the overall feedback on my work. At this time, my feelings were different. I felt a bit nervous because of the format of the thesis. I sent an email to my supervisors expressing my concerns. I sent several files of my thesis chapters to be corrected. Prof. Sajjad sent me an email sent more comments and he said that some chapters needed more editing especially with the tables. My feelings are accurate; all the issues are related to the format of my research. Surprisingly, I discovered after two days that I did not do the changes correctly. I felt very disappointed. I immediately sent an email informing my supervisor that I will send the correct file soon. Around an hour later, I sent an email with the correct editing of the file. Again, I highlighted that working on several files at the same time is actually confusing. I said we should make sure to work and edit the same file. The Professor replied to my email with one word, which is "Ok."

I resubmitted my thesis by email many times. I wished I had face-to-face communication to solve. Emails are easy and quick, but face-to-face communication is necessary for many purposes. I kept sending emails to my supervisors. Until Prof. Sajjad asked me to start my submission process. I was ready for the next step."

The qualitative analysis of the students' narratives and the autobiography revealed the existence of several themes. The findings of the interviews were organized and presented based on six themes emerged from the analysis. Those themes were; motivations of face-to-face communication, motivation of mediated communication, communication barriers, emotional experience, supporting communication tools and e-supervision system.

4.1. Motivations of Face-to-Face Communication

This section addresses the context in which students communicated with their supervisors and the topics discussed using face-to-face meetings. The researcher has been communicating with the supervisors for more than a year. The interviewed students have been communicating since several months. Most of the students used to meet with their supervisors once a week. The students reported *"before the broke up of COVID 19, I used to meet with my supervisors once per week,"* (Participant #1 and #2). *I only meet my supervisors once a week"* (Participant #1, #4 and #6). Since the students have been communicating with their supervisors for a long time, several sub themes emerged from the face-to-face communication.

4.1.1. Information Seeking

Students use face-to-face communication because they seek some information related to the research topic and the methodology. It was necessary for the students to have more details about their work during the face-to-face meetings. They also have open discussion with their supervisors.

4.1.2. Scope of Research and Method

Students depended on and preferred face-to-face meetings at the early stages of their research process. They needed to conceptualize the ideas of their topics and get "the big image" by communicating interpersonally with their supervisors. The students reported, *"We depended on face-to-face meetings with our supervisors to read general articles and to choose the topic and the scope of research, then we depended on mediated interaction to have in the later stages."* Brain storming the thoughts of both parties are necessary during the first phases of thesis writing. This could be because students feeling of confusion at the early stages of thesis writing while they are searching the ideas. As mentioned in the model of information research process, the initiation stage includes feelings of uncertainty and students seek relevant information during this stage (Kuhlthau, Heinström, & Todd, 2008).

Some major issues discussed interpersonally were the main topic of the research and the methodology. *"During the face-to-face meeting, we started discussing more in deep ideas. The methodology was the biggest concern,"* the researcher reported. *"During the face-to-face meeting, we discuss the methodology and the instrument we will use,"* reported by (Participant #1). *"In the interpersonal communication, I went to my supervisor to talk about the topic I would choose for my capstone project"* (Participant #4).

The autobiography indicated *"In the face-to-face meetings, I was mainly seeking clarifications or more details and ideas about the work. I negotiate and report all my issues openly during the face-to-face meeting."* One participant also said, *"I usually discuss the ideas of my research during the face-to-face meeting, it is more open and easier"* (Participant #1). Another participant ensured this idea by indicating *"face-to-face meetings include a back-and-forth communication that helps generating ideas"* (Participant #5). This was not the case claimed by MacKeogh (2006). The research showed that online communication would allow the students to have more open discussion to their problems. They would also have more knowledge from the online interaction. *"When I had to set a meeting with my supervisors, I usually had two styles. I told them that I need to see you to let them schedule the time and date or I gave them*

options to choose from." Lucas (2005) showed that American students gave their students options to choose from, while international students only expressed their need to meet with their supervisors.

Two students and the researcher supported the face-to-face communication as it provides comprehensiveness in all discussed ideas. *"It is more convenient to use face-to-face communication to understand more about the ideas we discuss."* (Participant #1, #5 and #6). The students felt a sense of achievement after the face-to-face meetings. A group whose members were communicating face-to-face had a greater productivity. Although they did the same tasks both online and face-to-face, they reached their goals (Straus & McGrath, 1994). The students indicated that having a face-to-face discussion is more helpful. The autobiography revealed *"meeting face-to-face with my supervisors helped me to conceptualize my thesis topic."* Like other students, they liked the direct interaction with their supervisors (Nelson, Nichter, & Henriksen, 2010). One interviewee preferred the technology mediated method to communicate with supervisors. *"I believe that the advantages outnumber the disadvantages of the mediated communication, the electronic interaction is much easier"* (Participant #7).

4.1.3. Experiencing Social Support

Social relations are very necessary for a successful relationship between students and supervisors (Denstadli, Julsrud, & Hjorthol, 2012). Having face-to-face meetings are crucial to get the students and supervisors in a successful relationship. However, during the mediated communication, less social support and exchange are experienced, while face-to-face communication enriches the social relationships. One student showed that *"I have to choose my supervisor myself so as to know him and have a previous relationship with him before actually proceeding with mediated communication"* (Participant #5). A solution for this issue could be using videoconferencing for communication. Having videoconferencing could be useful to provide the immediate response and feedback the students need. Videoconferencing could be similar to the face-to-face communication in terms of providing motivation and support (Könings et al., 2016). They can save the time of people. The videoconferencing could be suitable at the times of emergency. The organizations would choose either the face-to-face or videoconferencing based on the content they want to deliver. Creating communities of practice would help to overcome the loneliness experienced by the students who work online (Gray & Crosta, 2019).

4.2. Motivations of Using Mediated Communication

This section discusses the reasons why students communicate through an electronic medium with their supervisors. It highlights the topics that are usually addressed in emails. The interviews and the autobiography revealed that supervisors reply to students' emails in a short time. One participant reported that, *"my supervisors usually reply my emails the second day"* (Participant #1). The autobiography showed that *"my interaction was mostly brief in the electronic communication; it takes less than 30 minutes."* This was the case with the Tunisian students, they spent around 0-30 minutes sending messages to my supervisors every week. Tunisian students agreed that emails helped them to save time. On the other hand, American students usually use the emails every day for about 29 minutes. They stated *"I believe this is a long time," I do not agree that emails save time"* (Aribi, 2017).

4.2.1. Information Seeking

Several motives stand behind the internet usage. Information seeking is one of the reasons why people use internet (Rubin, 1981). This applies also to the mediated communication. Students sought different types of information through the mediated communication. Stacey and Fountain (2001) identified reasons for email dialogues between the students and the supervisors. Students use emails for exchanging information with their supervisors. In addition to that, around 39.47% of the students use emails to exchange information or request it (Ruppel et al., 2017). As Nelson et al. (2010) mentioned, some students believe that mediated communication is more convenient. They also think that it is more flexible. Students can send emails to their supervisors at any time.

This result agrees also with Conn, Roberts, and Powell (2009) research. Some students believed that electronic communication would be more helpful to seek certain information.

4.2.2. Appointments and Feedback

In general, the autobiography showed some purposes of using emails. Settings appointments and submitting assignments were two main purposes for using online communication. Other students also used emails for the same goal. They all received feedbacks on emails, but they were brief and without details. Having electronic feedback was a major goal for using emails. The autobiography showed that, *"In this email, it was the first time to have feedback about my writing. I sent an email to thank him for the feedback and that I will change the paper according to the guidelines. I also confirmed that we would meet next Monday as I sent an email to my supervisors requesting a meeting. We set an appointment at 12 pm."* Another interviewee mentioned, *"I send an email to set an appointment or I call them in office to confirm the time of the meeting."* (Participant #2) The face-to-face meetings took place only once a week. This goal of communication was popular. Emails were considered mediums to receive feedback on assignments (Lucas, 2005). *"If I need to inform my supervisors about any updates or issues, I prefer electronic channels (email)"* (Participant #1). Similarly, Kumar, Johnson, and Hardemon (2013) showed that the students were using Microsoft Word software to track the comments of their supervisors. Students found the comments of the emails and those that were written in the Word to be useful. The feedback written electronically by the supervisors could be a document that students can go back to check the comments later. Furthermore, one respondent reported that emails are used for giving updates about the assignments, *"I send many emails to my supervisors. Maybe, every three days I send emails asking for some information or sending updates about my research"* (Participant #3). Students sent emails with their assignments or parts of the thesis attached to receive the comments from the supervisors. *"I usually send emails for my supervisors with an attachment of my task or assignment"* (Participant #3). Supervisors write comments on the files of the students while they are working on the research process. The electronic supervision in this case is easier and is better than meeting with supervisors several times (Bengtzen & Jensen, 2015).

4.2.3. Asking Questions

In one hand, Students are usually task-oriented when they communicate through emails. They only ask the question or discuss the issue directly. *"I used mediated communication to ask questions and getting an answer for my inquiries"* (Participant #1 and #2 and #3). On the other hand, the face-to-face interaction helps to have more intimate relationship between the supervisor and the student. They ask about one another, discuss personal issues and express more feelings. It is very essential to establish a relationship between the supervisor and the students. This relationship is usually built by the face-to-face interaction. This could be the case during the first phases of the thesis or dissertation development. Based on the theory of social presence, it is very important to have face-to-face interaction. This kind of interaction would help to understand facial expressions and non-verbal language, which will help to strengthen the relationship.

The students reported that they needed to know who the supervisors are. There should be a combination of the cognitive and social aspects in the online communication (Stacey & Fountain, 2001). Students used emails to have a quick answer for their inquiries. One participant said, *"I usually send an email with my short question to get an immediate answer"* (Participant #3). However, electronic communication does not always contain an immediate answer. The researcher did not have quick comments for her assignments. As indicated by other studies, supervisors sometimes postpone the response (Bengtzen & Jensen, 2015). On the other hand, one student reported that she depended on face-to-face meetings to ask questions, *"I prefer the face-to-face method if I was asking a question. I can get detailed answer on my questions"* (Participant #1). In this research, all the students had direct relationships and already knew their supervisors before conducting their thesis.

4.2.4. Announcements and Grading

The autobiography revealed that emails could be used to deliver announcements quickly as stated by Benbunan-Fich and Hiltz (1999). Grading is one purpose associated with the students' use of emails (Ronau & Stroble, 1999). These two purposes were interrelated in many cases. For example, the researcher indicated *"I sent an email with the title "Urgent." I asked him to send my evaluation to the administration. I told him that the paper is in the office."* Also, one interviewee mentioned that *"I sent an email to my supervisors asking them to clarify an announcement from the College of Graduate Studies."*

4.3. Email Description

The findings of the narratives described some features of the emails sent between the students and the supervisors. Students also highlighted the necessity of sending effective emails to their supervisors in order to achieve the goal of the email.

4.3.1. Preciseness and Cleanness

Four students explained how emails can be effective. The findings also revealed that directness, preciseness and cleanness should be three major features of the emails between students and supervisors. *"The messages sent electronically are usually brief. Well, it depends on the situation. Sometimes, my supervisors send me detailed emails to explain things comprehensively. Other times, the information are brief and simple"* (Participant #1). Students differed in their way of judging the messages. Some students only mentioned that emails should be "clear and direct." One student provided more description for the "clear" email saying that it should be brief and to the point by not exceeding certain number of lines. Another interviewee said, *"The questions or information would be straight forward in couple of sentences and using a simple language, it should have a maximum of two lines. No more than 4 or 5 lines"* (Participant #2). Formality was another criterion found in the literature. Tunisian students showed great formality while sending emails to their supervisors (Aribi, 2017). However, the autobiography showed that *"my supervisors always send the emails without the formal format of the emails. For me, I send the first email in a formal manner, and then the following emails are just informal."*

4.3.2. Direct Active vs. Indirect Passive

On the other hand, the autobiography highlighted several types of supervision practiced by the instructors. The language used in the emails could indicate this supervisory style. For example, the supervisors approached the students several times in what is called direct active communication process. This was to give students evaluation and criticism. Students always appreciate the feedback they take from their supervisors. They need the feedback to be clear and specific (Kumar et al., 2013). While the students initiated the conversation other times in an indirect passive communication process. This process is experienced when supervisors leave the floor for their students to think and let initiate the communication process (MacKeogh, 2006). The autobiography showed that, *"I can say that most of the emails were sent by me and I always start the conversation."* Also, indirect requests were used for having more information from supervisors. That was the case with the Iranian students investigated in the study of Hallajian (2014), and the Malaysian students who tend to use the indirect request as they find it politer with their supervisors.

4.4. Communication Barriers

This section addresses the difficulties and obstacles faced by the students during their interaction with their supervisors either face-to-face or when sending emails. The autobiography and the interviews revealed that students complain from the difficulty of sense-making in some emails. Other students showed that not communicating face-to-face caused more problems.

4.4.1. Difficulty of Sense-Making

Sense-making is searching for meanings and understanding the situations (Bansler & Havn, 2006). The narratives indicated that miscommunication happened sometimes because of students were not able to make sense of the information they read on emails or during face-to-face interactions. Students faced a kind of confusion while understanding the messages of their supervisors. In the face-to-face meeting, students had some problems related to the environment.

“Through the face-to-face meetings I had to encounter some problems. These problems were because of the students not the supervisors. We lack some privacy during the meeting especially because the office door should be open. Some students might not value the privacy of other students with supervisors. Students just jump in the office to talk to my supervisor while I am setting, they sometimes interrupt our conversation to ask a small question. This habit causes me to forget my inquiry and I could not understand what my supervisors were explaining.” (Participant #2).

Another student said that they faced difficulty of sense-making because their supervisors had ambiguous emails. For example, one interviewee said that, *“sometimes I lose track of my emails, I understand that my supervisors and I are not in the same page.”* (Participant #1). Nelson et al. (2010). For example, connecting to the internet and using technological-tools can cause some frustrations for the students. They showed that interacting through electronic methods could have negative influences on the conversational quality. Furthermore, the mediated interaction does not ensure the successful deliver of messages.

On the other hand, some students reported difficulties to proceed with their research writing in the absence of the interpersonal interaction. They could not make sense of the guidelines sent to them by emails. One participant said, *“I wish I could interact face-to-face with my supervisors to avoid misunderstanding”* (Participant #3).

4.4.2. “Black hole” Experiences

Communication black-hole phenomenon could happen in several contexts. Information could distort. The essence of the message could disappear. The absence of body language, facial expressions and tone of voice contribute of this black-hole. It also happens when one partner of the conversation does not reply. The non-reply could be interpreted by laziness, anger, punishment or many other meanings (Suler, 2004). This definition applies to one problem that was found in the autobiography, *“my supervisors did not reply my email, I could not determine whether they approved or disapproved my work. I continued working on my file, after two weeks, my supervisors told me that they were working on another file, another times, they did not reply to my suggestions.”* Not replying some emails reduces the quality of the communication. Przybylski and Weinstein (2013) raised this concern. Sometimes, students did not understand the messages sent for them by the supervisors. One of the participants indicated, *“I could not understand some emails sent by my supervisors”* (Participant #3). Other supervisors prefer to send a reply like *“we will take a look and let you know”* (Participant #2) if they do not have an existing reply to the enquiry. Lags in times of response were frequently happening with communicators (Benbunan-Fich & Hiltz, 1999).

4.5. Students’ Emotional Experiences

Students experienced different emotions between the face-to-face and technology mediated communication. A feeling of excitement existed at the first stages of the thesis writing when the students had to meet their supervisors face-to-face.

4.5.1. Self-Disclosure

Researches showed that users could express their thoughts and feelings using meditated communication (Bidin, Tamam, & Ahmad, 2011). However, this result was not found in this research. In the emails, only the researcher herself reflected on her feelings in some emails. The autobiography included some clues of the researcher’s feelings

"I went to meet my supervisors with a list of the suggested topics of my thesis, I was very excited to work on it." I had to use it also for showing gratitude for my supervisors because of giving me certain feedback or just apologizing for not postponing a meeting. Howells, Stafford, Guijt, and Breadmore (2017) highlighted that gratitude practices between the students and the supervisors help to achieve better research outcomes. Gratitude has a positive influence on the communication process between the students and the supervisors. It will also lead to better engagement between the students and the supervisors. On the other hand, most of the students preferred the face-to-face communication for self-disclosure. This agrees with what Ruppel et al. (2017) mentioned, that self-disclosure was higher in face-to-face interaction.

4.5.2. Emotional Understanding

Mohamed and Yang (2011) highlighted the ability to track emotions in many types of emails. Although students highlighted the importance of the body language and facial expressions to understand the feelings of the supervisors, the researcher and another student indicated that they understood the supervisors' feeling of satisfaction from the way of writing the email. *"Although body language is missing during the mediated interaction, I could tell that my supervisor is angry when he sends an email to criticize my work"* (Participant #3). The researcher also reported that *"my supervisor sent me an email that has no body, only a subject with a long sentence saying that I should send each email separately and that he cannot track my ambiguous chain."*

4.6. Supporting Communication Tools

All the students used combined methods to communicate with their supervisors. This research revealed that WhatsApp is another technological method could be used for the communication between the students and their supervisors. One participant showed that *"sometimes I ask my supervisor for more clarifications through WhatsApp call."* (Participant #1). Another student showed that, *"my supervisors and I, used Skype to communicate because of COVID19 pandemic."* Different strategies of supervision could be used to achieve a better supervision process (Bengtson & Jensen, 2015). Students send emails or have phone calls with their supervisors to clarify some information (Kumar et al., 2013). Students in this research went to the phone calls and face-to-face methods to have more rich dialogue as a way to overcome the limitations of emails. This was the case when they faced problems with handling and understanding the written comments. Students also used some software to share the screen of their computer to display their data analysis.

4.7. E-Supervision System

Students had some suggestions to develop the supervisory process. They suggested applying an electronic system to facilitate the supervision. The electronic supervision system helps to deliver feedback evaluation, coordination and guidance.

The e-system offers better management of information. The integrated information system allows students and supervisors to communicate easily (Mardah, 2009). Two students suggested the use of developed technological systems to submit their thesis chapters and get clear feedback from their supervisors. *"I suggest having an electronic system to follow up the development of the thesis with our supervisors, we usually use Microsoft Word to track the comments of our supervisors"* (Participant #6). Blended E-Learning Skeleton of Conversation suggests the existence of three cycles of feedback between students and supervisors. These cycles of feedback are easily done by using electronic methods. Students also prefer having electronic comments and to be able to track changes (Heinze & Heinze, 2009). This issue was raised by (Participant #5), *"we can have an electronic system to follow and track the comments of our supervisors."*

5. CONCLUSION AND RECOMMENDATIONS

In sum, this study compared between face-to-face and mediated communication of master's students and their supervisors. The study found advantages and disadvantages for both ways of communication. The two methods were used for information seeking. However, there are different types of information sought in both ways. The face-to-face meeting was to provide more details and comprehensive information in an open discussion as well as deciding on the thesis main scope. Face-to-face communication is perceived as more effective and productive, whereas the mediated interaction is suitable for providing feedback and tracking the submitted assignments, asking quick questions and exchanging information. It is saving time and effort. All the students agreed that emails should be written in a clear and direct language. Communication barriers could impede the delivery of the accurate message between the students and the supervisors.

Creating an effective electronic system could be a solution to facilitate academic supervision. The system could be generated by Kuwait University. It could have several features to enrich the verbal and written communication. The system could also allow the ability to have audio and video calls to protect the privacy of the students and their supervisors. The study also recommends using videoconferencing as a way of supervision between the student and the supervisor. Supervisors should encourage their students to express their feelings in online settings. Face-to-face meetings should be held regularly to create the social support aspect in the relationship between the students and the supervisors. The research also recommends producing a protocol for academic supervision. The protocol could have instructions or recommendations for achieving a successful communication process both face-to-face and by using technology. This protocol could be directed to the students as well as the supervisors.

This study could have implications on the supervisory process at universities. Supervisors would understand the most appropriate method of communication with their students. The correct choice of the communication channel would lead to a successful supervision. However, the small size of the sample used in this research could limit the opportunity of generalizing the findings. Future research should consider a bigger sample. It should also collecting a number of students from different specializations. Investigating the communication process between the Doctoral students and their supervisors could also be a focus for future research.

Funding: This study received no specific financial support.

Competing Interests: The author declares that there are no conflicts of interests regarding the publication of this paper.

REFERENCES

- Abrahão, M. H. M. B. (2012). Autobiographical research: Memory, time and narratives in the first person. *European Journal for Research on the Education and Learning of Adults*, 3(1), 29-41. <https://doi.org/10.3384/rela.2000-7426.rela0051>
- Aribi, I. (2017). Email as a mode of communication among Tunisian postgraduate students. *International Journal of Learning and Teaching*, 9(3), 388-409.
- Bansler, J. Å. P., & Havn, E. (2006). Sensemaking in technology-use mediation: Adapting groupware technology in organizations. *Computer Supported Cooperative Work*, 15(1), 55-91. <https://doi.org/10.1007/s10606-005-9012-x>
- Benbunan-Fich, R., & Hiltz, S. R. (1999). Impacts of asynchronous learning networks on individual and group problem solving: A field experiment. *Group Decision and Negotiation*, 8(5), 409-426.
- Bengtson, S., & Jensen, G. (2015). Online supervision at the university - A comparative study of supervision on student assignments face-to-face and online. *Tidsskriftet Læring Og Medier*, 8(13). <https://doi.org/10.7146/lom.v8i13.19381>
- Bidin, R., Tamam, E., & Ahmad, S. (2011). E-mail use and usefulness: The effect of media richness and social influences. *Journal of Public Administration and Social Policies*, 3(7), 81-94.
- Chen, C.-Y., Pedersen, S., & Murphy, K. L. (2012). The influence of perceived information overload on student participation and knowledge construction in computer-mediated communication. *Instructional Science*, 40(2), 325-349. <https://doi.org/10.1007/s11251-011-9179-0>

- Conn, S. R., Roberts, R. L., & Powell, B. M. (2009). Attitudes and satisfaction with a hybrid model of counseling supervision. *Journal of Educational Technology & Society*, 12(2), 298-306.
- Denstadli, J. M., Julsrud, T. E., & Hjorthol, R. J. (2012). Videoconferencing as a mode of communication: A comparative study of the use of videoconferencing and face-to-face meetings. *Journal of Business and Technical Communication*, 26(1), 65-91. <https://doi.org/10.1177/1050651911421125>
- Drago, E. (2015). The effect of technology on face-to-face communication. *Elon Journal of Undergraduate Research in Communications*, 6(1), 13-19.
- Driscoll, A., Jicha, K., Hunt, A. N., Tichavsky, L., & Thompson, G. (2012). Can online courses deliver in-class results? A comparison of student performance and satisfaction in an online versus a face-to-face introductory sociology course. *Teaching Sociology*, 40(4), 312-331. <https://doi.org/10.1177/0092055x12446624>
- Ensher, E. A., & Murphy, S. E. (2011). The mentoring relationship challenges scale: The impact of mentoring stage, type, and gender. *Journal of Vocational Behavior*, 79(1), 253-266. <https://doi.org/10.1016/j.jvb.2010.11.008>
- Fitri, M. (2017). Improving students' understanding of English sentences through understanding of sentence patterns. *Indonesian Journal of Integrated English Language Teaching*, 3(1), 1-18. <https://doi.org/10.24014/ijiet.v3i1.3969>
- Gray, M. A., & Crosta, L. (2019). New perspectives in online doctoral supervision: A systematic literature review. *Studies in Continuing Education*, 41(2), 173-190. <https://doi.org/10.1080/0158037x.2018.1532405>
- Habibi, A., Mukminin, A., Riyanto, Y., Prasojo, L. D., Sulistiyo, U., Sofwan, M., & Saudagar, F. (2018). Building an online community: Student teachers' perceptions on the advantages of using social networking services in a teacher education program. *Turkish Online Journal of Distance Education*, 19(1), 46-61. <https://doi.org/10.17718/tojde.382663>
- Hallajian, A. (2014). *Politeness in requests to supervisors in emails*. Master's Thesis, University of Malaya, Kuala Lumpur.
- Harwood, N., & Petric, B. (2017). Experiencing master's supervision: Perspectives of international students and their supervisors. In (pp. 256). Abingdon: Routledge.
- Heinze, A., & Heinze, B. (2009). Blended e-learning skeleton of conversation: Improving formative assessment in undergraduate dissertation supervision. *British Journal of Educational Technology*, 40(2), 294-305. <https://doi.org/10.1111/j.1467-8535.2008.00923.x>
- Howells, K., Stafford, K., Guijt, R., & Breadmore, M. (2017). The role of gratitude in enhancing the relationship between doctoral research students and their supervisors. *Teaching in Higher Education*, 22(6), 621-638. <https://doi.org/10.1080/13562517.2016.1273212>
- Hutchings, M. (2017). Improving doctoral support through group supervision: Analysing face-to-face and technology-mediated strategies for nurturing and sustaining scholarship. *Studies in Higher Education*, 42(3), 533-550. <https://doi.org/10.1080/03075079.2015.1058352>
- Könings, K. D., Popa, D., Gerken, M., Giesbers, B., Rienties, B. C., van der Vleuten, C. P., & van Merriënboer, J. J. (2016). Improving supervision for students at a distance: Videoconferencing for group meetings. *Innovations in Education and Teaching International*, 53(4), 388-399. <https://doi.org/10.1080/14703297.2015.1004098>
- Krish, P. M., & Salman, Q. (2016). Politeness in email communication among Arab postgraduate students in a Malaysian public university. *Journal of Social Sciences and Humanities*, 11(2), 174-198.
- Kuhlthau, C. C., Heinström, J., & Todd, R. J. (2008). The 'information search process' revisited: Is the model still useful. *Information Research*, 13(4), 13-24.
- Kumar, S., Johnson, M., & Hardemon, T. (2013). Dissertations at a distance: Students' perceptions of online mentoring in a doctoral program. *Journal of Distance Education*, 27(1), 1-11.
- Lee, P. S., Leung, L., Lo, V., Xiong, C., & Wu, T. (2011). Internet communication versus face-to-face interaction in quality of life. *Social Indicators Research*, 100(3), 375-389. <https://doi.org/10.1007/s11205-010-9618-3>
- Lightfoot, J. M. (2006). A comparative analysis of e-mail and face-to-face communication in an educational environment. *The Internet and Higher Education*, 9(3), 217-227. <https://doi.org/10.1016/j.iheduc.2006.06.002>

- Lucas, S. (2005). Communication topics and strategies in e-mail consultation: Comparison between American and international university students. *Language Learning & Technology*, 9(2), 24-46.
- MacKeogh, K. (2006). *Supervising undergraduate research using online and peer supervision*. Paper presented at the Huba (ed) 7th International Virtual University Conference, Bratislava 14-15 December 2006. Technical University Bratislava: Bratislava.
- Magi, T., & Mardeusz, P. (2013). Why some students continue to value individual, face-to-face research consultations in a technology-rich world. *College & Research Libraries*, 74(6), 605-618.
- Mallen, M., Day, S., & Green, M. (2003). Online versus face-to-face conversation: An examination of relational and discourse variables. *Psychotherapy: Theory, Research, Practice, Training*, 40(1-2), 155-163. <https://doi.org/10.1037/0033-3204.40.1-2.155>
- Mardah, H. (2009). *An e-supervision system in education environments*. Master's Thesis, University of Southern California, USA.
- Martin, M. M., Myers, S. A., & Mottet, T. P. (1999). Students' motives for communicating with their instructors. *Communication Education*, 48(2), 155-164. <https://doi.org/10.1080/03634529909379163>
- Merdian, H. L., & Warrior, J. K. (2015). Effective communication between students and lecturers: Improving student-lecturer communication in educational settings. *Psychology Teaching Review*, 21(1), 25-38. <https://doi.org/10.53841/bpsptr.2015.21.1.25>
- Mohamed, S., & Yang, T. (2011). *Tracking sentiment in mail: How genders differ on emotional axes*. Paper presented at the Proceedings of the 2nd Workshop on Computational Approaches to Subjectivity and Sentiment Analysis (WASSA 2011). Portland, Oregon: Association for Computational Linguistics.
- Murshid, S. F., Ismail, I. A., & Baki, R. (2019). Searching for an ideal postgraduate supervisor: Exploring Malaysian students' experience towards supervisory relationship. *International Journal of Academic Research in Business and Social Sciences*, 9(11), 384-399. <https://doi.org/10.6007/ijarbss/v9-i11/6556>
- Nelson, J. A., Nichter, M., & Henriksen, R. (2010). *On-line supervision and face-to-face supervision in the counseling internship: An exploratory study of similarities and differences*. Retrieved from http://counselingoutfitters.com/vistas/vistas10/Article_46.pdf
- Ng, K. C. (2020). Replacing face-to-face tutorials by synchronous online technologies: Challenges and pedagogical implications. *International Review of Research in Open and Distributed Learning*, 8(1), 1-15. <https://doi.org/10.19173/irrodl.v8i1.335>
- Pasquini, L. A., & Steele, G. E. (2013). Technology in academic advising: Perceptions and practices in higher education. *NACADA Technology in Advising Commission Sponsored Survey*, 6(1), 3-9.
- Perry, C. W. (2012). Constructing professional identity in an online graduate clinical training program: Possibilities for online supervision. *Journal of Systemic Therapies*, 31(3), 53-67. <https://doi.org/10.1521/jsyt.2012.31.3.53>
- Platt, C. A., Amber, N., & Yu, N. (2014). Virtually the same?: Student perceptions of the equivalence of online classes to face-to-face classes. *Journal of Online Learning and Teaching*, 10(3), 489-503.
- Prazeres, F. (2017). PhD supervisor-student relationship. *Journal of Advances in Medical Education & Professionalism*, 5(4), 213-214.
- Przybylski, A. K., & Weinstein, N. (2013). Can you connect with me now? How the presence of mobile communication technology influences face-to-face conversation quality. *Journal of Social and Personal Relationships*, 30(3), 237-246. <https://doi.org/10.1177/0265407512453827>
- Robson, L., Cook, L., & Habgood, N. (2016). *Student experience of university email communication*. Paper presented at the Proceedings of the 10th International Technology, Education and Development Conference, IATED, Valencia.
- Roets, L., & Bhembe, T. (2016). Teaching and supervising research: Challenges of novice educators. *Africa Journal of Nursing and Midwifery*, 18(2), 211-225. <https://doi.org/10.25159/2520-5293/834>
- Roghanizad, M. M., & Bohns, V. K. (2017). Ask in person: You're less persuasive than you think over email. *Journal of Experimental Social Psychology*, 69, 223-226. <https://doi.org/10.1016/j.jesp.2016.10.002>

- Ronau, R. N., & Stroble, B. (1999). Student teacher electronic network: Expenditure or investment? *Journal of Technology and Teacher Education*, 7(1), 33-55.
- Rubin, A. M. (1981). An examination of television viewing motivations. *Communication Research*, 8(2), 141-165. <https://doi.org/10.1177/009365028100800201>
- Ruppel, E. K., Gross, C., Stoll, A., Peck, B. S., Allen, M., & Kim, S.-Y. (2017). Reflecting on connecting: Meta-analysis of differences between computer-mediated and face-to-face self-disclosure. *Journal of Computer-Mediated Communication*, 22(1), 18-34. <https://doi.org/10.1111/jcc4.12179>
- Stacey, E., & Fountain, W. (2001). *Student and supervisor perspectives in a computer-mediated research relationship*. Paper presented at the Meeting at the crossroads: Proceedings of the 18th Annual Conference of the Australasian Society for Computers in Learning in Tertiary Education (ASCILITE): 9 - 12 December 2001, Biomedical Multimedia Unit, The University of Melbourne, Melbourne, Vic.
- Straus, S. G., & McGrath, J. E. (1994). Does the medium matter? The interaction of task type and technology on group performance and member reactions. *Journal of Applied Psychology*, 79(1), 87-97.
- Suler, J. R. (2004). *The psychology of text relationships*. In *online counseling: A manual for mental health professionals* (R. Kraus, J. Zack & G. Striker, Eds). London: Elsevier Academic Press.

Views and opinions expressed in this article are the views and opinions of the author(s), Asian Journal of Contemporary Education shall not be responsible or answerable for any loss, damage or liability etc. caused in relation to/arising out of the use of the content.