The role of online learning in enhancing the performance of introverted female Saudi students in translation

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Abstract

Purpose – The purpose of the current study was to examine the role of distance learning in enhancing introverted students' lack of communication and social interaction to improve their performance in translation class. Cain (2013) and Kuzeljevich (2017) agreed that identifying "introverted" and "extroverted" students is important for meeting their learning needs. While extroverted students have strong social skills that allow them to interact comfortably in different learning environments, introverted students tend to be more shy, quiet, and silent, thus, requiring more careful planning in classroom settings. Therefore, educators need to support introverted students in reaching their full academic and social potential.

Design/methodology/approach – The present case study adopted a qualitative research method to explore the role of online/distance learning during the COVID-19 pandemic in enhancing introverted students' performance and communication abilities in translation classes. The researcher of the current study spent a considerable time observing and set herself as part of the group (i.e. translation students of level 6 class) to understand the phenomenon, events and the new situation of having translation students interact in online settings. Data collection was based on this observation, interviews with the participants and archival documents. To enhance the validity and credibility of this research, the researcher employed the method of triangulation.

Findings – The results (see Appendixes A, B and C) revealed the level of students interactions in translation classes and their attitudes toward online learning. Based on the observations made by the instructor, the researcher found that the involvement of the introverted students during online translation learning was remarkable, as they provided their translation outputs in the chat window of Microsoft Teams with no hesitation. Consequently, 65% of the students were providing their translation output through the chat window, which indicates that they are more introverted and preferred not to speak. Comparing this result to face-to-face translation class, the researcher found that 25% of the students provided their translation outputs through oral participation.

Originality/value – This study contributes to the field of translation and education. Previous studies have not sufficiently examined the role of distance learning in enhancing the performance and communication of introverted students in translation classes. The current study is also expected to provide insight into the field of technical translation in remote teaching and learning settings.

Keywords Introverted students, COVID-19 pandemic, Online learning, Teaching translation, Technical translation

Paper type Research paper

1. Introduction

One lasting impact of the COVID-19 pandemic is that it has increased people's reliance on technology for communication and interaction, using personal computers, iPads,

This work is dedicated to my beloved father, mother and children.

smartphones and other technology devices. The development of information and communication technology has also paved the way for online teaching and learning to be used to reexamine the objectives and methods of learning, as in the case of translation. Since modern technology facilitates access to information among teachers and students beyond traditional classrooms, online education links teachers and students in a computer network, creating a full learning community through which each learner actively participates in the learning process. Research (Hosseini *et al.*, 2019; Kiraly, 2014; Risku, 2010) indicated that the advancement of technology and communication systems has necessitated the employment of new pedagogical perspectives for online learning, including constructivist approaches and situated learning. These studies have revealed that the constructivist principles of authenticity, collaboration and scaffolding can help students become competent translators while learning to translate online. According to Kiraly (2005), translation is a "situated" cognitive activity, which requires different social settings, when translators work together with various cultural, technical and linguistic tools and resources to recreate a new text, i.e. "textualize" a new situation (pp. 1098–1111). The cooperative settings that technology provides students help them engage in numerous learning experiences to develop their cognitive, sociocultural and psychological domains. Stewart *et al.* (2010) affirm that the constructivist, cooperative approaches, employed in the translation classroom, are characterized by interdisciplinarity, multiple contexts, situatedness, problem-oriented learning and problem-solving skills. The current study examines such approaches and their impact on introverted female students, specifically during the pandemic. Before the pandemic, most academic institutions in Saudi Arabia employed face-to-face learning and technological devices were used only to complete homework tasks or share learning materials. When Saudi Arabia was in lockdown during the pandemic, all educational institutions used online platforms. The shift from face-to-face classrooms to online settings offers several advantages.

Mulenga and Marbán (2020) indicated that moving the classroom teaching and learning settings to online learning platforms helped in overcoming the obstacles to communication that students faced during the pandemic. However, translation classes require certain teaching methods that can be applied to face-to-face classes, but they are relatively hard to implement in distance/online settings, especially for introverted female students in Saudi Arabia who were studying online for the first time. In translation classrooms, the sudden shift to online classes provides instructors and researchers with the opportunity to pilot new learning methods that can be effectively employed in online learning settings and platforms to help introverted students communicate smoothly. Research (Ansari *et al.*, 2017; Coman *et al.*, 2020; Simsek and Erdem, 2020) indicated that communication is vital in education and helps to improve the cognitive perception of students and enhance their attitudes and motivations. While extroverted students tend to dominate discussions in the classroom, introverted students find the appropriate setting to hide and avoid oral participation in online classes, especially when cameras are not allowed to be used in female classes in Saudi Arabia. When introverted students remain silent and inactive, they do not pay attention to class, which can affect their attitudes, motivations, and consequently, their performance. In addition, introverted students face problems related to their comfort zones in the classroom. Therefore, academic problems that arise due to students' personalities can be observed in online classes. In the current study, the researcher reports some insights on the effect of online learning settings using Microsoft Teams software to assess introverted students' performance and communication in online translation classes.

1.1 Problem statement
Introverted students face many challenges that hinder them from achieving their educational goals, whether they study in traditional or online classrooms. Traditional face-to-face

translation classes have specific characteristics, challenges and procedures. In public and private institutions, most translation instructors are aware of these challenges (Zainudin and Awal, 2012), which include a lack of communication and social interaction. Translation is not only a cognitive activity but also a social task that requires communication skills (Saibua, 2017), and being engaged in the classroom is necessary to enhance communication and acquire translation skills (de Kellett, 2022). From the perspective of pedagogy and psychology, another problem arises when students lack communication skills and motivation. According to previous research (Kiraly, 2000; Nikolaeva and Korol, 2021; Prieto and Linares, 2010; Williams and Williams, 2011), motivation is the most important factor that helps improve learning, and formative assessment in the translation classroom showed that increasing motivation and participation among students enhanced their competence and performance. In translation classrooms, introverted students not only lack communication and social skills but also cultural knowledge because of their lack of participation in class discussions. Introverted students are less likely to be involved in classroom discussions, preferring not to share their thoughts and translation outputs with other students. Consequently, translation instructors are less able to provide instructional feedback or identify the academic and social problems among students who remain silent throughout the class. In this respect, while researchers have focused heavily on the cognitive factors that affect students' performance, they have neglected the psychological factors that stem from different personality types. Previous research (Almusharraf, 2021; Harrington and Loffredo, 2010; Lawrence, 2015; Spark et al., 2018) indicated that students' personalities, specifically whether they are introverted or extroverted, are factors that contribute to their performance and academic achievement. Therefore, the current study examines the problems that Saudi female introverted students encounter, namely lack of communication and social interaction in translation classes that are held online, to suggest appropriate solutions.

1.2 Purpose statement
This study aimed to examine the role of online learning in enhancing the communication and social interaction to improve the students' performance in translation. Cain (2013) and Kuzeljevich (2017) agreed that identifying "introverted" and "extroverted" students is important for meeting their learning needs. While extroverted students have strong social skills that allow them to interact comfortably in different learning environments, introverted students tend to be more shy, quiet and silent, thus, requiring more careful planning in classroom settings. Therefore, educators need to support introverted students in reaching their full academic and social potential. According to Sharma (2015), since classroom environments are a major source of emotion for introverted students, teachers should focus on social skills and emotional comfort to help them communicate and interact. In this respect, research (Coman et al., 2020; Kahyaoglu, 2013; Matuga, 2009; Murphy, 2020) indicated that in recent educational experiences, using online learning, especially during the COVID pandemic, introverted students were able to develop new abilities in terms of self-expression and self-regulation. Research (Hosseini et al., 2019; Kiraly, 2014; Risku, 2010; Saibua, 2017) also revealed that using technology helps employ constructivist approaches and situated learning, which provides students with new learning experiences in different sociocultural settings. Furthermore, Potts (2019) identified three important advantages of online learning, which include (1) providing numerous opportunities to help students interact with each other through online participation; (2) making teaching and learning materials easily accessible and (3) gaining new experiences using technology. While examining these advantages, the current study focused on observing how female Saudi students responded to class discussions while studying technical translation online, to identify introverted students and the effects of online learning settings on their competence and performance.

1.3 Definition of terms
1.3.1 Distance learning. Formal learning that occurs when instructors and students are geographically separated (Verduin *et al.*, 1991).

1.3.2 Introverted students. Students who navigate the world in a quiet, thoughtful, introspective manner, and who prefer to listen more than they talk, think before they speak, and observe rather than be the center of attention (Cain, 2013; Kuzeljevich, 2017).

1.3.3 Extroverted students. Students that prefer talking to listening and have stronger social skills (Cain, 2013).

1.3.4 Online learning. An Internet-based learning environment that allows students to learn in a fully virtual environment (Verduin *et al.*, 1991).

1.3.5 Technical translation. A part of specialized and institutional translations, which include topics like politics, economics, commerce, finance, medicine, science, technology, etc. (Newmark, 1988).

1.4 Significance of the study
This study contributes to the field of translation and educational technology. Previous studies have not sufficiently examined the role of distance or online learning in enhancing the performance and communication of introverted students in translation classes, especially female students who had no experience learning translation online. This research is among the few studies that examine the problems faced by introverted female Saudi students during the COVID-19 pandemic and the impact of online learning on their cognitive, social and psychological abilities. The results of the study provide empirical evidence of the positive impacts of online learning on enhancing introverted students' communication and social skills, and consequently their competence and performance in translation. The current study also provides insight into the field of technical translation in remote teaching and learning settings.

2. Literature review
The literature review includes analytical studies on the theoretical framework of the current research, issues related to the pedagogical perspectives of online learning for the translation classroom, sociocultural aspects of students in online classes, the need for introverted vs. extroverted students, and online learning during the COVID-19 pandemic. Regarding the theoretical framework of the study, it is based on integrating theories of translation into the theory of constructivism, which is used in educational technology. The translation theories examined in this study included those of Lefevere (1992), Newmark (1988), Venuti (1995), Vermeer (1996) and Toury (1995). The integration between translation theories and constructivist approaches in online translation classes can help teachers shift from using traditional teaching methods to employing authentic teaching methods to overcome the challenges of online settings. Harrington and Loffredo (2010) assumed that some educators can expect to deal with issues related to learning in an online context. However, other educators may encounter challenges in terms of unveiling students' preconceptions and cultural perspectives. These challenges negatively affect the process of communication between instructors and students (Short *et al.*, 1976).

According to Richardson (2000), applying special activities related to voice, videos and texts can enhance communication, social interaction and the entire learning process. Benedikt (1991) argued that online learning has a different cultural context, through which students show their mastery of communication norms and tools that are suitable to an online context. Anderson (2008) indicated that online learning is part of the wider concept of distance education, which provides positive experiences, as it has greater flexibility in time and space

compared to campus-based education. Ansari *et al.* (2017) showed that technology and the Internet influenced students' interpersonal communication skills. In another research, Prieto and Linares (2010) indicated that technology helped in applying constructivist approaches to teaching translation, and such a shift had a positive impact on students' competence while they played the role of translators in authentic learning settings to construct new translated texts. In this regard, Risku (2010) explored the cognitive perspective regarding technical communication and translation, indicating that embodiment and situatedness helped in improving students' performance.

Simsek and Erdem (2020) found a correlation between student and teacher communication skills and motivation. Based on Kiraly's (2014) social-constructivist perspective, learning can be co-constructed by students while interacting in authentic situations, and that teachers can enhance students' empowerment, through engaging them in project-based assignments. According to Kiraly, this collaborative approach to translation helps students complete projects and become active, independent learners.

2.1 Pedagogical perspectives of online learning

The growth of computer and communication systems facilitates teachers' and students' access to information beyond the traditional classroom. Online education links teachers and students through a computer network, creating a full learning community in which each learner plays an active role in the learning process. Previous research (Kearsley *et al.*, 1995; Majumdar, 1997; Trentin, 1997) has provided perspectives that ensure the efficiency of implementing online learning that can meet the needs of the educational and instructional targets. According to Majumdar, online learning settings can be generated from two main schools of thought: objectivist and constructivist. Each theory represents a different learning setting that can be implemented on a stand-alone basis. In this respect, previous research (Bednar *et al.*, 1995; Dick, 1995; Rowland, 1995) has presented arguments for either objectivist or constructivist instructional design models, while examining the differences between these two theories. While the objectivist theory assumes that learning is a process for representing and mirroring reality, the constructivist theory holds that learning is a process of actively interpreting and constructing individual knowledge representations (Jonassen, 1991). On the other hand, other research (Davidson, 1998; Duffy *et al.*, 1993; Schwier, 1995) has assumed that instructional designs should develop a mix of old and new learning designs to help educators solve students' learning problems.

Inglis (1996) argued that online learning that is based on objectivism stems from behavioral psychology: Learners are exposed to information and expected to retell what they learn. The goal behind this design is to create a deliberate online learning setting with guided and planned study courses. Such courses should be built with learning objectives methods, materials and evaluation criteria determined by the instructor of the course. In such course settings, the learner is expected to complete tasks individually. Majumdar (1997) indicated that this instructional setting represents the notion that knowledge can be presented to learners through explanation, whereby learners are expected to reproduce knowledge individually rather than in a social process. From another perspective, Siadaty and Taghiyareh (2012) argued that the vast emergence of online learning in higher education has contributed to providing online learning tools that are designed to build online learning content. Siadaty and Taghiyareh found that research in this area has discussed the benefits of online learning within the framework of its personal, behavioral, social and cultural features, and concluded that online learning settings have positive impacts on students' academic progress and social development.

Furthermore, Kiraly (2014) provided a comprehensive teaching method for translation classrooms adopting a social-constructivist perspective. Kiraly argued that while there are

many varieties of constructivism, social constructivism is effective in empowering students and motivating them to participate as real-world translators. When teachers design real-world classes, they help students to experience authentic real-life situations and prepare them to become professional translators. Kiraly also argued that, while teacher-centered instruction tends to control the learning process and stifle students' creativity, student-centered classrooms, which are based on social-constructivist approaches, help students acquire communication and social skills through cooperative learning. Hosseini *et al.* (2019) examined the application of the constructivist principles of *authenticity, collaboration* and *scaffolding* in teaching translation and concluded that *scaffolding* was described by translation instructors as the most common principle in their teaching approach. Alternately, students and professional translators considered *authenticity and collaboration* as the second most important principles, which means that they were profoundly lacking in the teaching approach at universities. Hence, Kiraly's (2005) project-based learning social-constructivist approach can be used as a model for situated translations to enhance authenticity and collaboration in classrooms.

Another effective approach links translation to culture when translators are viewed as transmitters of culture. Reiss and Vermeer (2014) argued that translation must provide skopos (purpose) and this purpose must fulfill the demands of the target reader. Vermeer and Reiss believed that deconstructionism paved the way for the functionalist approach, which allows translators to focus their attention away from text-based equivalence toward skopos, that is, the translation purpose, to meet the readers' cultural understanding. Lefevere (1992) proposed the theory of translation as rewriting, which allows translators to reconstruct target texts to meet the readers' requirements. Venuti (1995) argued that translators should bridge cultural gaps. According to Venuti, the translator can explain cultural differences to the target reader in extratextual ways, that is, through elements outside the text. Similarly, Toury (1995) and Reiss and Vermeer (2014) assert that target texts must be constructed culturally using appropriate genre styles and norms. Thus, these theories can be integrated into the social-constructivist approach (Kiraly, 2005, 2014) to design an online translation classroom.

2.2 Social aspect of students in online classes

Interaction and the social presence of students in online learning contexts have been recognized as important parts of the learning process. According to Anderson and Krathwohl (2001), social presence shows the degree to which students have a sense of commitment to the online learning community and their abilities to develop social skills. Short *et al.* (1976) define social presence as "the degree of salience of the other person in the interaction and the consequent salience of the interpersonal relationships" (p. 65). Previous research (Stein and Wanstreet, 2003; Stodel *et al.*, 2006; Woods and Baker, 2004) showed that in online learning contexts, students might face difficulties interacting with each other or with the instructor because most online learning contexts lack the space for students' emotions. In contrast, Lapadat (2002) argued that students should be able to express their emotions and interact with other students and instructors comfortably. According to Sung and Mayer (2012), the social aspect of a traditional classroom can be understood as the direct interaction between students and teachers, whereas the social aspect of online learning is related to the concept of social presence. In this regard, a study conducted by Hall and Herrington (2010) indicated that students in online learning might hesitate to express their thoughts or participate for fear that they may not receive positive feedback. Giving positive feedback to students' posts and responses play a crucial role in the learning process and enhances students' social presence within a discussion. Jamil and Tasir (2014) highlighted that students should be aware of the social concept and implement it in online learning contexts to effectively fulfill the social interaction between peers and instructors. Moreover, Garrison (2016) argued that the

instructors' teaching presence plays an important role in the social involvement of students and facilitates the learning process.

2.3 Introverted vs. extroverted students

In 1990, the relationship between academic performance and personality type began to attract scholars' attention. Khodareza and Taheri (2015) stated that the theory of psychological type describes an individual's personality and details its impacts on personal development. Sharp (1987) stated that Jung's model represents two main characters: extroverts and introverts. According to Sharp, an "Extrovert is an individual characterized by being outgoing, finding it easier to make friends and adapting easily to a given situation. He or she gets energy from being around people. Meanwhile, an introvert is an individual characterized by focusing on himself or herself, being calm, and only being intimate with few close friends; he or she gets his/her energy from spending time alone" (p. 13). Previous research (Burruss and Kaenzig, 1999; Dornyei, 2005; Hakim, 2015; Marashi and Dibah, 2013) indicated that the differences between extroverts and introverts are reflected in the tasks they liked to perform. Extroverts are more fluent in formal situations, while introverts are more attached to silent reading, writing and drawing. From another perspective, Murray and Mount (1996) indicated that the personality of a student can affect his/her performance and academic achievement, as in the case of learning in foreign countries' languages. However, a few studies have explored the performance of extroverted and introverted students in translation classes. Yet, these studies have focused on the product of the translators rather than the personality of the producer. For example, Hosseinzadeh and Yoosefi (2022) conducted a study on the problem-solving strategies that introverted and extroverted students implement when they translate a text. The findings of the study showed that introverted translation students applied different strategies to solving problems. While extroverted students tend to collaborate to choose the most appropriate strategies for problem-solving, introverted students prefer to work individually. In another study, Hayati (2021) compared the abilities of extroverted and introverted students in learning English and found that introverted students performed better in acquiring listening, reading and writing skills, while extroverted students were more likely to gain speaking skills.

2.4 Online distance learning translation classes during the COVID-19 pandemic

Over the past decade, the role of technology in the process of translation and translation research has evolved. Previous research (Deng, 2016; Garcia, 2013; Munday, 2016) indicated that this evolution demands new approaches to training, as these changes impact all levels of translation companies and educational institutions. Furthermore, distance learning has become increasingly common over the past decade, especially during the COVID-19 pandemic, which forced almost all educational institutions to implement synchronous and asynchronous online/distance learning. According to Stern (2020), distance learning is a suitable source for students who can utilize computers, tablets, phones or other devices, which connect them with specific information and help them understand the courses and fulfill their objectives. Hancock *et al.* (2002) indicated that online/distance learning is more student-centered than face-to-face learning, which tends to be teacher-centered. Thus, online translation education and distance learning during the COVID-19 pandemic paved the way for increasing translators' capacity for technology use. Pym (2001) indicated that e-learning can effectively improve students' technological-communicative skills in translation. However, Pym also stated that e-learning cannot solve issues such as high resource investment, students' distress, and problems of inadequate technical and linguistic capacities. To address this problem, previous research (Chan, 2014; Kim, 2019; Su *et al.*, 2021) examined online translation classes to shed light on blended learning rather than full online learning classes. Moreover, previous research

(Alwazna, 2021; Cortez and Schrijver, 2021; Khoury *et al.*, 2021; Oraif and Elyas, 2021; Su *et al.*, 2021) has concluded that teaching and learning translation remotely can fulfill the instructional and educational objectives effectively. However, Almahasees and Qassem (2021) argued that online translation education and learning cannot replace face-to-face instruction, therefore blended learning is the most effective approach. Based on previous literature, the current research is novel in that it explores online learning in translation based on the lived experiences of translation students.

3. Methodology
This study adopted a descriptive method to examine the role of online learning during the COVID-19 pandemic in enhancing introverted female Saudi students' performance and communication abilities in translation classes. This research collected data using structured interviews, observation checklists and archival documents from participants' translations posted in the chat room of Microsoft Teams. The data helped to explore the participants' lived experiences when they were studying translation online for the first time. Creswell (2014) explains that qualitative research refers to research about persons' lived experiences, behaviors and emotional interactions. The researcher spent a considerable time observing and setting herself as part of the group (i.e. translation students of Level 6 class) to understand the new situation of having translation students interact in online settings. Archival documents (see Appendix) were collected during each lecture. All screenshots of the chats were archived and included in the research data.

Furthermore, the quantitative data helped to statistically examine the impact of online learning on introverted students. To enhance the validity and credibility of this research, the researcher employed the method of triangulation. Triangulation, according to Patton (1999), refers to the use of different data sources to achieve a comprehensive understanding of a phenomenon or an event. Carr and Kemmis (1986) defined triangulation as an "attempt to map out, or explain more fully, the richness and complexity of human behavior by studying it from more than one standpoint" (p. 254). Hence, in the current study, the process of triangulation allowed the data to be examined from different perspectives, comparing the quantitative results with the themes that emerged from the interviews, analyzing students' behaviors and attitudes, and examining the impact of online learning on introverted personalities.

3.1 Research questions

RQ1. What is the difference between introverted students' performance in the online setting and that of face-to-face translation classes?

RQ2. What is the effect of online learning, in terms of communication skills, on introverted students in translation classes?

RQ3. How effective is the online learning setting on introverted students' translation skills?

3.2 Research hypothesis
The current research hypothesizes that online learning has an effective role in enhancing introverted students' performance in translation classes. Previous research (Alwazna, 2021; Cortez and Schrijver, 2021; Khoury *et al.*, 2021; Oraif and Elyas, 2021; Su *et al.*, 2021) has indicated that teaching and learning translation remotely can fulfill the instructional and educational objectives effectively, as online platforms help teachers provide students with numerous online resources and motivating activities. Such activities function as scaffolds to boost students' self-confidence in developing their communicative competence. Thus, the

current study explored the effect of online settings on the performance of introverted students in the translation department for the first time at the College of Languages and Translation, Al-Imam Muhammad Ibn Saud Islamic University, Riyadh.

3.3 Participants' characteristics
The participants of the current study were 39 students from the English Department, at the College of Languages and Translation, Al-Imam Muhammad Ibn Saud Islamic University, Riyadh, Saudi Arabia. The participants were female Saudi undergraduate students who enrolled in the translation course of Level 6 in the first semester of the 2021 academic year. It was the first time for the participants to study translation online because of the lockdown due to COVID-19 pandemic. The participants were aged between 20 and 22 years. They had been studying English and translation in college for three years. When this research was conducted, the participants took one translation course along with courses related to other academic branches in the department, such as linguistics and literature, including novel, drama, poetry, literary criticism, educational psychology and teaching methodology. They study in Level 6 technical translation. The participants were taught by the researcher, who is an assistant professor in the field of translation. The participants met their instructor twice a week for four hours, for 12 weeks, reaching 48 h, which was the duration of the current research.

3.4 The online translation course
In the Level 6 translation course, different types of texts, which are centered on the fields of politics, medicine, finance and law, were explored and translated into English and Arabic. Microsoft Teams platform was used to set up the online class for this course. The researcher (instructor) uploaded the course materials on the Microsoft Teams platform, which was provided by the Saudi Ministry of Education and administered by Al-Imam Muhammad Ibn Saud Islamic University. Using the Microsoft virtual classroom, the researcher met the participants twice a week after disabling the camera, as it was not allowed to be used owing to social constraints in Saudi Arabia. The researcher used a microphone and whiteboard in the Microsoft virtual class to identify the participants. Each participant has an identification number recorded in front of their name on the official attendance list. The researcher identified each student using their voice and identification numbers. At the end of each class, the researcher downloaded the attendance list from Microsoft Teams. The researcher could call any participant at any time to ask questions about the lesson, which helped track the participants' presence. In Microsoft Teams, when the students wanted to participate by asking questions or providing answers and translations, they had two options: either activate their microphones to speak or type their questions or answers in the chat box. The course is skill-based at its core as it aims to develop students' translation skills. The course also aimed to improve the students' awareness of solving translation problems through the implementation of translational strategies and procedures. In each class, participants were given two texts to translate: the first from Arabic into English and the second from English into Arabic.

3.5 Data collection instruments and procedures
To collect the data, the researcher used observation checklists and structured interviews. In addition, written translations and responses posted by the participants in the chat room of Microsoft Teams were collected and analyzed. Identifying introverted participants depended on using the first checklist to calculate the number of times each participant contributed to class discussions during the first four weeks of the course. After tracking their class participation

and discussions in the first four weeks, the researcher continued to record their progress in the last eight weeks of the course using the second observation checklist. These two lists helped compare their progress and observe the behavior of 39 participants during the weekly lectures using the third observation checklist, which helped in gathering the participants' written responses and translation outputs from the archival documents in Microsoft Teams platform. The observation checklists were sent to five faculty members who specialized in translation for revision and validation. Using the validated lists helped to identify the introverted students. Then, the interviews were conducted with the introverted participants to gain insight into how introverted students engage in translation classes effectively and what their attitudes toward online learning in the translation course were. The introverted participants were interviewed privately on the Microsoft Teams platform to examine their learning preferences. Twelve lectures were conducted, constituting 48 h of observation. In each class, the participants were urged by the instructor to write their translation outputs, using three to four sentences in the chat box. The instructor gave feedback whenever she found it necessary to comment or to highlight and correct any mistakes.

Regarding the interview questions, the researcher used open-ended structured questions to allow each participant to elaborate on her experience of learning translation online for the first time. The interview begins by asking each participant to introduce herself and this question helped in creating the participants' profiles. The second question was about which learning setting allows the participant to interact better with the instructor, which helped in revealing the difference between introverted students' performance in the online setting and that of face-to-face translation classes. This question also helped in getting some insights into the impact of online settings on how each participant acquired translation skills. The third question aims at revealing each participant's preference in terms of being engaged in discussion during the face-to-face or online class, which also helped in identifying the introverted students' preferences. The fourth question focuses on asking each participant to describe her involvement in participations and discussions in online translation learning class. This question helped in revealing the effect of online learning on motivating the introverted students to develop their communication skills. The fifth question examined each participant's preference and satisfaction regarding the types of class settings, whether face-to-face or online, for learning translation.

4. Results and discussion

The results of the analyzed data from the first observation checklist (see Table 1) showed the number of times each participant contributed to class participation and discussions in the first four weeks of the course. The results of observing the 39 participants using a microphone to talk, ask and answer questions or write their translations indicated the percentage of each participant in the first four weeks of the course. These results helped identify introverted students. Table 1 presents the results of the study.

As displayed in Table 1, 20 participants, including P 2, P 3, P 4, P 7, P 14, P 15, P 16, P 17, P 20, P 21, P 22, P 23, P 25, P 26, P 33, P 34, P 36, P 37, P 38 and P 39 reached 44, 44, 13, 13, 38, 44, 31, 38, 44, 31, 25, 25, 38,44, 44, 38, 44, 38,38 and 44%, respectively. These 20 participants had the lowest percentages of the class scores, which were between 44 and 13%. While 39 participants were engaged in each class when providing their translations, 20 participants scored low, reaching 51%. These results revealed the level of the participants' interactions in the translation class and their attitudes toward online learning. Thus, these results helped to identify introverted students, which reached 20 participants. Table 2 shows the progress of the 20 introverted participants during the following eight weeks of the course.

As displayed in Table 2, the results of the second observation checklist revealed that tracking the class participation and discussions in the last eight weeks of the course helped to

Participant	Week 1 (4 h)	Week 2 (4 h)	Week 3 (4 h)	Week 4 (4 h)	Total number of participation times out of 16 h in four weeks	%
P 1	4	4	6	4	16	100%
P 2	2	2	1	2	7	44%
P 3	2	1	2	2	7	44%
P 4	1	0	0	1	2	13%
P 5	2	3	4	4	13	81%
P 6	2	4	4	4	14	88%
P 7	*0*	*1*	*0*	*1*	*2*	13%
P 8	4	4	4	4	16	100%
P 9	1	4	2	4	11	69%
P 10	4	4	4	4	16	100%
P 11	4	4	2	2	12	75%
P 12	4	4	4	4	16	100%
P 13	4	4	3	2	13	81%
P 14	1	2	1	2	6	38%
P 15	4	1	1	1	7	44%
P 16	1	1	1	2	5	31%
P 17	0	2	2	2	6	38%
P 18	2	4	4	4	14	88%
P 19	2	4	5	0	11	69%
P 20	1	2	2	2	7	44%
P 21	0	1	2	2	5	31%
P 22	0	1	1	2	4	25%
P 23	0	1	1	2	4	25%
P 24	2	4	5	3	14	88%
P 25	2	2	1	1	6	38%
P 26	1	2	2	2	7	44%
P 27	4	4	4	4	16	100%
P 28	4	4	4	4	16	100%
P 29	4	4	4	4	16	100%
P 30	4	4	4	4	16	100%
P 31	2	4	4	2	12	75%
P 32	2	4	4	5	15	94%
P 33	0	2	2	3	7	44%
P 34	0	2	2	2	6	38%
P 35	4	4	2	2	12	75%
P 36	0	2	2	3	7	44%
P 37	0	2	2	2	6	38%
P 38	0	0	3	3	6	38%
P 39	0	2	2	3	7	44%

Source(s): Table created by author

Table 1.
Number of times participants contributed to discussions in the first four weeks

record the progress of the introverted participants, showing that P 2, P 3, P 4, P 7, P 14, P 15, P 16, P 17, P 20, P 21, P 22, P 23, P 25, P 26, P 33, P 34, P 36, P 37, P 38 and P 39 reached 91, 91, 97, 91, 75, 97, 81, 88, 88, 81, 81, 81, 88, 78, 84, 78, 75, 88, 81 and 75%, respectively. Thus, the highest percentage of progress was 97% and the lowest score was 75%. Furthermore, in each class, all participants were given two texts to translate: one from Arabic into English and the other from English into Arabic, allowing class discussions before writing their translations. Based on the posts written in the chat box, the number of students who preferred written chatting was higher than those who preferred to participate orally. In the first four weeks of the course, a few participants showed confidence when they gave their responses, while the remaining eight weeks of the course revealed improvement in class participation, indicating

Participant	Week 5 (4 h)	Week 6 (4 h)	Week 7 (4 h)	Week 8 (4 h)	Week 9 (4 h)	Week 10 (4 h)	Week 11 (4 h)	Week 12 (4 h)	Total number of participation times out of 32 h	%
P 1	4	4	4	4	4	4	2	2	28	88%
P 2	4	3	3	3	4	4	4	4	29	91%
P 3	4	3	3	3	4	4	4	4	29	91%
P 4	0	4	3	3	4	4	4	4	30	97%
P 5	3	3	4	4	4	4	4	4	30	97%
P 6	4	4	4	4	4	4	4	4	32	100%
P 7	0	2	3	2	2	4	4	4	29	91%
P 8	4	2	4	4	2	4	4	4	30	97%
P 9	0	4	0	4	4	3	4	4	24	75%
P 10	4	4	4	2	2	4	4	4	28	88%
P 11	4	2	2	2	2	4	4	4	28	88%
P 12	2	4	4	4	4	2	2	4	26	81%
P 13	4	4	4	4	4	4	4	4	32	100%
P 14	4	4	0	4	4	4	2	2	24	75%
P 15	4	4	4	4	4	4	4	2	30	97%
P 16	2	4	4	4	2	2	4	2	26	81%
P 17	4	4	4	4	4	4	2	2	28	88%
P 18	4	4	4	4	4	4	4	2	28	88%
P 19	4	2	2	2	2	4	2	2	26	81%
P 20	4	2	4	2	4	4	4	4	28	88%
P 21	2	2	2	4	4	4	4	2	26	81%
P 22	3	3	4	4	4	2	4	4	26	81%
P 23	2	2	2	4	4	4	4	4	26	81%
P 24	4	4	4	4	4	4	4	4	30	97%
P 25	4	4	4	4	2	4	2	2	28	88%
P 26	4	4	3	3	3	4	4	2	25	78%
P 27	4	4	4	4	4	4	4	2	30	97%
P 28	4	4	4	4	4	4	4	4	32	100%
P 29	4	2	4	4	4	4	4	2	28	88%
P 30	4	2	2	4	4	4	4	2	26	81%
P 31	3	3	4	4	4	2	4	2	26	81%

Table 2.
Results of introverted
participants' class
participations in
eight weeks

Table 2.

Participant	Week 5 (4 h)	Week 6 (4 h)	Week 7 (4 h)	Week 8 (4 h)	Week 9 (4 h)	Week 10 (4 h)	Week 11 (4 h)	Week 12 (4 h)	Total number of participation times out of 32 h	%
P 32	4	4	4	2	2	4	4	4	28	88%
P 33	3	3	3	4	3	3	4	4	27	84%
P 34	4	4	3	3	3	4	4	2	25	78%
P 35	4	4	4	4	4	4	4	2	30	97%
P 36	4	4	0	4	4	4	2	2	24	75%
P 37	4	2	4	4	4	2	4	2	28	88%
P 38	3	3	4	4	4	4	4	2	26	81%
P 39	4	4	0	4	4	4	2	2	24	75%

Source(s): Table created by author

that the online classes gave the participants the courage to write their responses, as no one could see or judge them personally. The stress experienced in face-to-face classes was alleviated in an online setting. Additionally, in online classes, students can check their responses before writing them in a chat box using different applications such as online dictionaries and Google Translate. Based on the results of the third observation checklist, the researcher found that the involvement of the introverted students during online translation learning improved as they provided their translation outputs in the chat window of Microsoft Teams with no hesitation. Table 3 shows the results of the third observation checklist.

Table 3 shows the results of the third observation checklist regarding introverted participants' behaviors in terms of attention, motivation and asking questions, revealing the level of their interactions in the translation class and their attitudes toward online learning. The number of weeks under each scale (*very poor,poor, average, good* and *very good*) represents the participants' behaviors and attitudes during these weeks, showing that they were not consistent throughout the semester. Sometimes, the participants did not show up due to technical problems with Internet connections or with their laptops or mobile devices, while at other times, they were lazy and not motivated. In the category of paying attention, the "*average*" scale was 4 h representing 17%, the "*good*" scale was 8 h reaching 33% and the scale of "*very good*" was 12 h reaching 50%. In the category of motivation efforts, the scale of "*good*" and "*very good*" was 12 h, respectively, reaching 50%. In the category of asking questions, the scales of "*average*" and "*good*" was 12 h, respectively, reaching 50%. Based on observations made by the instructor, the researcher found that the involvement of introverted participants during online translation learning improved as they provided their translation outputs in the chat window of Microsoft Teams in each class without hesitation (see Appendix).

During online classes, almost all students provided their translation outputs through the chat window of Microsoft Teams and got the chance to read their peers' translation outputs and listen to the instructor's feedback. Based on the researcher's observation and the students' interactions and levels of participation, specifically among introverted students, the results showed that the dynamic of the online translation class enhanced their translation abilities effectively, using the online tools, which helped them to improve their translation skills when translating a given text. While involved in the process of translation, the Internet provided them with online resources, such as online dictionaries and Google Translate, which scaffolded their learning. In this respect, Newmark (1988) noted that translation is

Check appropriate rating regarding introverted students' behaviors	Very poor	Poor	Average	Good	Very good	Total observation hours
a – Pays attention in class	0	0	2 lectures (4 h)	4 lectures (8 h)	6 lectures (12 h)	24 h
b – Motivation and effort	0	0	0	6 lectures (12 h)	6 lectures (12 h)	24 h
c – Asking questions when they do not understand	0	0	6 lectures (12 h)	6 lectures (12 h)	0	24 h
Source(s): Table created by author						

Table 3.
The results of introverted participants' behaviors and attitudes

coextensive with the rise of technology. The results of this study are consistent with Newmark's findings. The present study results also showed that students were able to interact with each other more easily, as they read their peers' translation outputs in the chat window. The participants had the opportunity to interact with their peers by following the instructions given by their teacher. The instructor always asked the students to comment on their peers' translation output before giving her feedback. Therefore, the results reinforce the instructor's role in engaging the students in learning experiences that can improve their online interactions. These results were consistent with those of previous studies. According to Garrison (2016), instructors can facilitate learning experiences and interactions by providing clear and direct instructions. Further, Jannah (2017) conducted a study to examine the process of collaborative writing using Google Docs and found that 80% of students feel comfortable seeing other students' posts and editing the content they share with their peers. The findings of the current study revealed that most of the students had positive attitude toward learning translation in online classes.

Regarding the results of the interview questions, only 20 participants, who constituted the introverted students, were interviewed. The results showed that 16 participants preferred the online setting, reaching 80%, and 4 participants preferred the face-to-face learning environment, reaching 20%. Regarding the third question, four participants said they were afraid of making mistakes, reaching 20%. Five participants said they did not like to speak in public, reaching 25%, and five participants said they found translation classes boring, reaching 25%. Four participants said they felt shy, reaching 20%. Five participants said it was good to use the online class, reaching 25%, whereas six participants said it was very good to use the online class, reaching 30%. Nine participants said online learning provided them the opportunity to participate with no fear of being judged, reaching 45%. Moreover, 12 participants, with the percentage of 60% preferred online translation classes because they helped them improve their translation skills and use online tools, which means the introverted participants gained translation skills while studying online. However, 8 of the 20 introverted participants, constituting 40% preferred face-to-face learning settings because they liked to interact directly with their instructors and peers, and 12 (60%) preferred online learning settings. Moreover, 12 participants (60%) preferred not to use the microphones to speak and provided their translation output in writing through the Microsoft Teams chat window, indicating that they were introverts who were too shy to speak. The 20 introverted participants constituting 100% expressed their satisfaction with receiving instant feedback from the instructor in Microsoft Teams chat room. Thus, introverted participants preferred online translation learning because they feel more comfortable when providing their translation output through the chat window. The interview results also indicated that there were more introverts (20 participants), i.e. 51% in the class than extroverts. However, as Jung (as cited in Cain, 2013, p. 14) stated, "there is no such thing as a pure extrovert or a pure introvert. Such a man would be in the lunatic asylum." Moreover, the results help in answering the first research question concerning the difference between introverted students' performance in the online setting and that of face-to-face translation classes, indicating that introverted students prefer the online setting, as 60% of the 39 participants showed better interactions in online classes. Based on the results of this study, most students, regardless of their characteristics, preferred online translation learning, which allowed them to provide their translations or clarify ambiguous issues by writing freely and easily in the chat window. According to Rovai (2002), when students feel accepted in a healthy learning environment, they develop feelings of trust that help them to participate effectively.

Moreover, the results support Zainuddin's (2016) argument, which indicated that introverted students are more likely to have writing abilities because they use conceptual strategies, including reflective, attentive and observation tools. In the current research, the

results revealed that the researcher (instructor) spent 48 h, in the total of 12 weeks observing the introverted participants' behaviors. The results are presented in Table 4.

Table 4 shows the number of hours the researcher (instructors) spent observing introverted participants' behaviors, attendance, punctuality, relations with the instructor and relationships with their peers. The number of hours reached 48 h in each category. Table 5 presents the observation checklist for these skills.

Table 5 shows the observation checklist that the researcher used to observe the introverted participants' skills, understanding of the materials, completing the translation of the texts from English into Arabic and vice versa, and writing their participation in the chat room. The researcher (instructor) met with her students for four hours, twice a week, for 12 weeks, and taught four hours each week for 48 h. The date of each lecture was recorded using Microsoft Teams. Furthermore, the analysis of the qualitative data collected from their translations in the chat inbox (see Appendix) revealed emergent themes regarding the use of online translation classes for the entire class, constituting 39 participants. These themes are presented in Table 6.

As shown in Table 6, the 39 participants' problems regarding the use of online translation classes include lack of training (72%); difficulties in using online resources (77%); difficulties in adapting to online environments (31%); problems in using the online collaborative platform (26%) and negative attitudes toward online classes (26%). Table 7 summarizes the emergent themes of translating technical texts.

As shown in Table 7, the 39 participants' problems in translating technical texts include translating technical words (54%); difficulties in using technical style in TL (77%) translating neologisms (69%); difficulties in using technical dictionaries (46%); problems of using translation procedures (31%) and difficulties in choosing translation methods (36%). Table 8 presents the emergent themes of using online resources for translation.

As displayed in Table 8, the emergent themes that show the 39 participants' problems of using online resources for translation include difficulties in using digital materials (44%);

Observation item		No. of lectures	Total of 12 lectures
d – Behavior			12 lectures (48 h)
e – Attendance	1 lecture	10 lectures (40 h)	12 lectures (48 h)
	1st week of the semester		
f – Punctuality			12 lectures (48 h)
g – Relations with instructor			12 lectures (48 h)
h – Relations with peers			12 lectures (48 h)
Source(s): Table created by author			

Table 4.
Items and number of observation hours

Check the appropriate rating regarding introverted students' skills	Poor	Average	Good	Very good	Excellent	Circle if not applicable
a – Understanding class material				12 lectures		N/A
b – Translating into English			4 lectures	3 lectures	5 lectures	N/A
c – Translating into Arabic				7 lectures	5 lectures	N/A
d – Oral participation	8 lectures	4 lectures				N/A
e – Written participation (chatting)				6 lectures	6 lectures	N/A
Source(s): Table created by author						

Table 5.
Observation checklist of introverted participants' translation skills

problems of using online data banks (51%); difficulties in using online references (62%) and problems of using online translation software (36%). Table 9 shows the emergent themes regarding the most frequent procedures that the participants used in translating technical texts.

As shown in Table 9, the emergent themes that show the 39 participants' most frequent translation procedures include transference (77%); borrowing (74%); modulation (26%) and naturalization (62%).

As displayed in Table 10, the emergent themes of the 39 participants' methods of translation for technical texts include word-for-word translation (82%); literal translation (85%); free translation (62%) and adaptation (41%). Thus, the results of the current study ensure the effectiveness of online learning in terms of improving introverted students' communication and translation skills. Thus, the findings help in answering the second research question regarding the effect of online learning, in terms of communication skills, on introverted students in translation classes. The results showed that in the first four weeks of the study, the introverted participants' involvement in class discussions was low, pointing to the lowest percentages in the class scores, which were between 44 and 13%. However, these scores improved in the following eight weeks of the semester, showing a percentage of 75% as the lowest, which means an improvement of 62%. Such progress is due to using an online platform that allowed students to feel comfortable and free of fear to interact and share their thoughts. The Microsoft Teams platform helped the introverted students to understand the importance of being present. The option to either use the microphone to speak or

Emergent themes	N	% of participants
Lack of technology training in translation	28	72%
Difficulties in using online resources	30	77%
Difficulties in adapting to online environments	12	31%
Problems in using the collaborative platform online	10	26%
Negative attitudes toward online classes	10	26%
Source(s): Table created by author		

Table 6.
Emergent themes in online translation class

Emergent themes	N	% of participants
Problems of translating technical words	21	54%
Difficulties in using technical style in TL (Target Language)	30	77%
Problems of translating neologisms	27	69%
Difficulties in using technical dictionaries	18	46%
Problems of using translation procedures	12	31%
Difficulties in choosing translation methods	14	36%
Source(s): Table created by author		

Table 7.
Emergent themes of translating technical texts

Emergent themes	N	% of participants
Difficulties in using digital materials	17	44%
Problems of using online data banks	20	51%
Difficulties in using online references	24	62%
Problems of using online translation software	14	36%
Source(s): Table created by author		

Table 8.
Emergent themes of using online resources for translation

write in the chat room gave the shy students flexible tools that are appropriate to their personality type. Gradually, these students were able to overcome the obstacles of being shy and were able to participate easily. These results are consistent with previous research. For example, Sudrajat *et al.* (2019) addressed the role of using online tools in translation classes, and concluded that online learning helped students to acquire communication skills, asserting that students prefer online translation classes because it helps them implement online tools and increases interactions with their peers. Khalaf *et al.* (2022) examined the limitations of traditional methods of teaching translation while exploring the process of translation regarding the cognitive challenges which students and professional translators encounter during translation activity. Khalaf's study suggests to develop an embedded situational context model for enhancing translators' cognitive performance through employing functional concepts from translation approach, which helps in improving motivation and self-confidence in translation practice. Furthermore, the current study findings help in responding to the third research question concerning the effectiveness of online learning setting on introverted students' translation skills. The emergent themes indicated that students had access to online resources for translation through the availability of digital materials that helped them to solve the translation problems. Online learning provides students with various tools such as online dictionaries, Google Translate, Google Search and Google Scholar which assist them to understand the text before they translate it. Having access to information motivates students to read, think, interact and share their knowledge with confidence.

Online learning also helps students to overcome the difficulties of communication and interaction through collaboration. In the current study, the majority of the participants (80%) pointed to their preference of online learning because it allowed them to experience working together as translation teams, and that they were able to acquire translation skills in identifying the translation problems and making appropriate decisions to solve them. These findings are in consistency with previous research, including that of Blum *et al.* (2020) and Deng *et al.* (2019), which point to the benefits of online learning using different platforms such as Learning Management System, or Massive Open Online Courses, which provide social media discussions to support interactions among learners. Therefore, the present study suggests that the designers of course specifications in institutes and universities that provide courses on translation should consider both online classes and blended translation programs to ensure that all types of students interact and share their thoughts and learning outputs effectively.

Emergent themes	N	% of participants
Transference	30	77%
Borrowing	29	74%
Modulation	10	26%
Naturalization	24	62%
Source(s): Table created by author		

Table 9.
Emergent themes in participants' most frequent translation procedures

Emergent themes	N	% of participants
Word-for-word translation	32	82%
Literal translation	33	85%
Free translation	24	62%
Adaptation	16	41%
Source(s): Table created by author		

Table 10.
Emergent themes of participants' methods in technical translation

5. Conclusion

The current study contributes to the fields of translation and educational technology by highlighting the role of online learning in enhancing social and communication skills for helping introverted students acquire translation skills, thereby elevating their learning performance and translation output using online settings. Although this study has some limitations, it provides evidence supporting the use of online settings in translation classes. The study limitations include the findings that cannot be generalized for all students at the university level because they only reflect a relatively small proportion of the population, namely, those using one synchronous online platform (Microsoft Teams). Other online platforms with different features may or may not help involve translation students in other ways or with other degrees of effectiveness. The sample of the present study was limited to female students who had used online learning for the first time. Thus, future research should investigate the impact of online learning on male students. The current study is also limited to the instruments of observation, interviews, checklists and archival documents. Future research could apply different tools to examine the use of online learning in translation and its impacts on students in different translation institutions.

The present study provides empirical evidence on how modern technology and communication systems can be useful tools for applying new pedagogical perspectives to online learning, including constructivist approaches and situated learning. Using the Microsoft Teams platform to create an online translation class in the current research shows that the constructivist principles of authenticity, collaboration and scaffolding can be easily integrated into translation theories and practice helping introverted students develop their communication and translation skills. The study also shows that translation is a "situated" social activity, allowing introverted students to use interactive social settings, when translators work together with various tools and resources that the Internet and technology provide, and that is how they can recreate a new text, construct it, while textualizing a new situation.

Another implication is that cooperative settings provided by technology for introverted students can motivate them to engage in new learning experiences and develop their cognitive and psychological abilities. Interacting with their peers in the online classroom, introverted students are able to experience how to identify and solve the translation problems. The current study shows that shifting traditional classroom teaching and learning settings to online learning platforms can help overcome the communication obstacles faced by introverted students. The online platform enhances introverted students' social presence and gives them self-confidence to communicate and interact. The results of the study revealed that introverted students benefit from the online setting, which does not force them to speak through their microphones, but rather share their translation outputs in Arabic and English through the chat box. The instructor gets the opportunity to evaluate and comment on their written responses through the microphone easily. The current study implies that online translation courses can fulfill the instructional and educational objectives because all students can interact and develop their translation skills regardless of their personalities.

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(The Appendix follows overleaf)

Appendix
Samples of using Microsoft chat room in online translation class
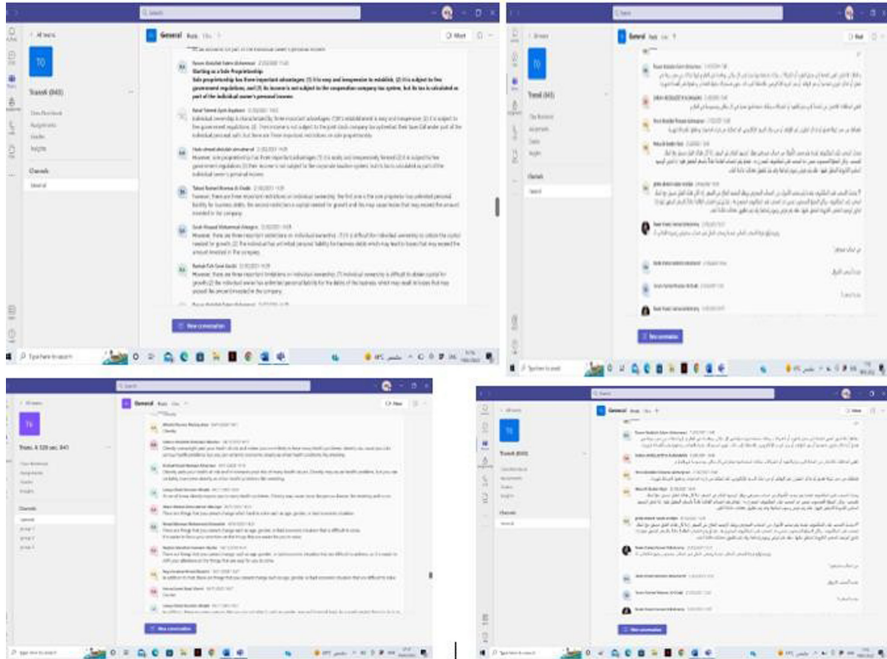
Source(s): Figures collected from the author's virtual class on Teams platform

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