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Students' Experiences of Group Work in an Online Early Childhood Education Course

Reem Thani AlDhaheri

College of Humanities and Social Sciences, Zayed University, Dubai 19282, United Arab Emirates

ABSTRACT

Groupwork is one of the learning strategies used by educators to engage university students in active learning. University students, however, often perceive group work as overwhelming and as extra work. There is a need to investigate how students perceive working in groups in online learning environments, particularly in the context of the United Arab Emirates (UAE). This study investigates the experiences of female undergraduate students with online group work in an early childhood education course in a federal university in the UAE. A cross-sectional approach was employed using a study-specific questionnaire that was designed to solicit the perceptions of 31 female Emirati undergraduate students and their perspectives of group work that was part of an online course. The questionnaire included multiple-choice questions as well as open-ended questions. The analysis was conducted using descriptive statistics as well as content analysis. Results indicated that students generally held a positive attitude towards working in groups online. The most reported skills developed through online group work according to the participants were time management (88%) and teamwork (81%). Despite these benefits, students reported some challenges for working in online groups, the most important being low contributions (31%) and poor commitment (28%) from some team members. To address the challenges reported by students, the study suggests carefully designing online group assignments and projects to ensure maximum participation from all students. This includes using strategies such as explicitly educating students about the benefits of working in groups for skill development, scheduling regular check-up meetings, and ensuring timely and specific feedback is given to students.

Keywords: Online Education; Online Learning; Group Work; Student Perceptions; Group Project

*CORRESPONDING AUTHOR:
Reem Thani AlDhaheri, College of Humanities and Social Sciences, Zayed University, Dubai 19282, United Arab Emirates;
Email: reem.aldhaheri@zu.ac.ae

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1. Introduction

Equipping students with group work skills is crucial for preparing them for the world of work. As a teaching method, group work has become a common practice because educators view it as an effective tool to promote students' learning and achievement. For example, group work helps students achieve core competencies, including critical thinking and problem-solving skills and the capacity to solve complex problems[1]. Today, higher education institutions adopt various educational technology tools such as Blackboard, Webex and Zoom to provide online or hybrid instruction either as part of their teaching methodologies or as contingency plans when face-to-face instruction becomes difficult. Although online learning in general can increase students' engagement, as they become more independent and responsible for their own learning, students have reported challenges in maintaining group dynamics and communication in online environments[2, 3]. Collaborative learning is seen as an essential 21st Century skill where students are enabled to actively interact with each other and co-construct knowledge by working in groups[4]. Group work is one of the methods teachers adopt to help students discover knowledge through collaborating with their peers. Students' attitudes and experiences in groups influence their learning outcomes.

While some students find groups beneficial to their learning process, some have negative attitudes due to negative past experiences. Several studies were conducted to explore students' experiences of working in groups in face-to-face settings in higher education in the United Arab Emirates (UAE)[5–10]. However, there is limited research that explores the issue in online settings[11]. It is important to elucidate students' positive and negative views of working in online groups to understand why group work is or is not effective in online learning environments. This Scholarship of Teaching and Learning (SoTL) study therefore focuses on the experiences of undergraduate students enrolled in an online course in an early childhood education program at a university in the UAE. The study's research questions are:

1. What attributes of group work do students recognize as beneficial in the learning process?
2. What attributes of group work do students recognize as challenging in the learning process?
3. What recommendations can be made for instructors to enhance online group work experiences for undergraduate students?

2. Literature Review

2.1. Online Group Work

Group work is defined as "more than one person working together to complete a task or an assignment"[12]. It is an active learning strategy where "students work in teams to construct knowledge and accomplish tasks through collaborative interaction"[13]. This definition of group work builds on the principles of constructivism as a learning theory, which posits that learning is an active process where people construct their own knowledge through interaction and experiences, and link new ideas to what they already know[14]. Teaching methods in constructivism, therefore, focus on activities that help students find their own answers, with teachers working as enablers and facilitators[15]. Social constructivism stressed the importance of interaction with peers in constructing knowledge and understanding through collaborative work[16]. In classrooms, this manifests in group work, where students are expected to co-construct knowledge through communication, interaction, and collaboration which can have a positive impact on their learning[17].

Many factors affect online group work dynamics and students' experiences and attitudes towards it. These include the group size, group member assignment, types of tasks, individual accountability, and the extent of communication. According to Wai et al., the success of group work depends on a) essential communication and interaction, b) a collaborative team, c) knowledge enrichment, d) development of intellectual skills, and e) tutor involvement[18]. With the global increase in adoption of online education in colleges and universities, the need for effective methods to increase students' engagement and achievement in online learning environments has also grown. Online group work can be an effective teaching and learning tool to facilitate cooperation and collaboration amongst students and optimize their learning[19]. Some research suggests that online group work can be as effective as face-to-face group work[20]. For instance, Myers et al.[21] concluded that the development of group work skills in online courses can be as effective as in face-to-face courses for information and communication

technology (ICT) students. This is echoed by Dissanayeke et al. and Jacobs et al.[22, 23], who stated that students develop transferable skills such as teamwork, digital literacy and communication skills through online group work. In asynchronous learning environments, group work assignments can increase students' motivation and sense of community[24]. On the other hand, online group work has its unique challenges and drawbacks: It lacks physical presence and verbal and non-verbal communication cues, and usually feedback from group members is lacking or delayed[19]. Students also often feel isolated in online learning environments which makes it difficult to interact effectively with their peers to achieve the learning outcomes[21]. There is also a perception that soft skills development is overlooked in online programs and is not as strong as in face-to-face situations[25]. Skills such as the ability to build positive relationships and resolving conflict can be enhanced in online group work activities if those activities were implemented effectively by instructors[26].

2.2. Students' Perceptions of Online Group Work

The perceptions of group work by students inform their level of involvement, and consequently their success in group work, in both the face-to-face and online classroom environments[27]. Research indicates that the perception towards group work by students is influenced by their previous experience[7, 19]. The attitudes and intentions of students towards online group work are determined by their past experiences positive or negative ones[28]. Some studies identified group work being disliked by the students in online learning environments and found that they prefer individual work[29, 30]. This may be since they usually fail to appreciate the significance of group work to their learning and future and are overwhelmed by the practice[26]. In the research conducted by Favor and Kulp[29], online students said that teamwork did not add value to their learning. The students are also more affected when it comes to communication in the virtual environment compared to the physical environment[19, 31]. Communication and accountability of individual tasks by members of the groups becomes an even more elusive task due to the lack of physical presence. Favor and Harvey concluded that despite an organised group project planning process, students taking part in their study did not alter their negative interpretation of online group work using their previous experiences[29]. Similarly, Hiromori, stated group work dynamics in online groups were poor especially in a situation where there is no one to be appointed the group leader[32]. According to Garratt-Reed et al., the only aspect the students of an online undergraduate course in psychology did not appreciate in the course was a group assignment[25]. It was also discovered by Konak et al., that online students show more negative attitudes towards group work compared to face-to-face[27].

Conversely, other research claimed that the students showed a general favourable attitude towards online group work. As an example, Hysaj, reached a conclusion that the attitude of the students towards working in groups on an online academic writing course was positive[33]. Donelan and Kear, found out that the attitudes of students towards group projects were not bad in general[34]. Goñi et al., also discovered that the challenges of engineering students perceived by the students in both online and face to face setting matched[35].

3. Materials and Methods

3.1. Participants and Procedures

The study follows a cross-sectional quantitative survey design and the sample consisted of 31 female undergraduate students enrolled in an early childhood education program in a Federal University in the UAE. The sample comprised of younger and mature learners who were aged between 19 to 46 years with the means of 22.39 years (SD = 4.78). Regarding geographical distribution, 64.5% (n = 20) resided in Abu Dhabi and 35.5 % (n = 11) were resided in Dubai. Most students were in their fourth year (41.9%, n = 13) and third year (38.7%, n = 12) of study. Students in this study were only females as only female students joined the mentioned program. This is the case with education colleges in the UAE as national males joining the teaching profession has significantly declined over the years. All students were enrolled in a required early childhood education course that was offered completely online. The author of this paper was the instructor of the course. The course was 16 weeks long and was delivered synchronously using Zoom and asynchronously using Blackboard. **Table 1** shows the demographic data of the study's participants.

Table 1. Demographic Data of Participants.

Characteristic	Category	n	%
Gender	Female	31	100
Age	19–46 years (M = 22.39, SD = 4.78)	–	–
City	Abu Dhabi	20	64.5
	Dubai	11	35.5
Year of Study	Year 2	2	6.5
	Year 3	12	38.7
	Year 4	13	41.9
	Year 5	4	12.9

During the eighth week of the semester, students were placed randomly in groups of 3 to 4 members to work on the final group project, which involved creating a thematic unit for early childhood classes focusing on integration of language and content. The project title is Content and Language Integrated Learning (CLIL) project. The random assignment to groups was the students' choice after the instructor gave them the option of being assigned randomly or choosing their own groups. Students were required to come up with a theme for the unit, write the unit's learning objectives, then design a number of lessons incorporating what they had learned in the course related to integrated learning of content and language for early childhood education. The project consisted of seven parts, all of which received a group grade, except for the seventh part, which students worked on individually and was individually graded. Students were shown a YouTube video on how to effectively work in groups. The final submission and group presentation were due in week 14 of the semester, which gave the students six weeks to work on the project. Ethical approval was secured from the university's Ethics Committee. Students were notified that their participation in the study was completely voluntary and anonymous and were assured that their participation would not affect their grades on the course in any way. The survey was sent to all the students in the course after they submitted the final drafts of the project.

3.2. Data Collection and Analysis

Data was collected using an online self-administered questionnaire which was created after consulting relevant literature on group work. The research questionnaire was designed to explore the unique experiences of the participants in the context of this study. There questionnaire consisted of two sections. first section included 13 multiple-choice and open-ended questions specifically written for this study to evaluate students' experience of the CLIL project group work. This section included questions to understand the dynamics, advantages and disadvantages of working on the CLIL group project as perceived by the participants. The second section of the questionnaire included three demographic questions. The questionnaire was reviewed by experts to ensure the appropriateness and clarity of its questions. The questionnaire was back-to-back translated from English to Arabic by a professional translator and both versions were made available for the students to choose from. Thirty-five students took the survey; however, the number of surveys included in the final data analysis were 31 completed surveys.

Quantitative data was analysed using Jamovi (v2.6) and R (v4.4). All the item-level responses of the 31 participants with complete answers were calculated as descriptive statistics (counts, percentages, means, medians and standard deviations). The open-ended responses were analysed using the content analysis procedure. This entailed becoming familiar with the responses, initial coding, and bringing the codes to themes and selection of representative quotes. Coding was done by the author of this study.

4. Results

4.1. Attitudes Toward the Online CLIL Group Project

When the students were asked to state how they perceived the online CLIL group project as a contribution to their understanding of what was taught in the classes, 75 percent of the students said that it better contributed to their understanding of the classes, and 59 percent of the students

stated that it enabled them to learn more than they otherwise the students queried only a single student found the project to be mere busy work. The open-ended question that asking students for what they thought were advantages of the group project, the prominent theme that emerged was sharing and exchanging ideas. Some of the comments were as follows:

> *"We exchanged opinions and ideas"*
> *"Share ideas and critical thinking"*
> *"Getting to know students closely and share with ideas regarding the project"*

Another theme that emerged from the responses was the cooperation between group members to achieve the goal of completing the project. Students expressed this as follows:

> *"Working together on the project"*
> *"We finish it as a group at a good time"*
> *"The hard working to achieve the final assignments"*

On the other hand, students also shared what they disliked about the online CLIL group project. The most stated dislike was lack of commitment and participation from some group members. The following were some of the comments shared by students:

> *"Some of the group members were not sharing ideas and were doing little and simple tasks and left the heavy ones to the rest"*
> *"Some students kept it to the last minute"*
> *"Team members who didn't contribute and who didn't 'commit' to the due date".*

Although the students in this study indicated that they found working on the online CLIL group project was beneficial, they also highlighted that it had its challenges, of which low contribution and commitments form some group members was the main challenge.

4.2. Online Group Work Dynamics

One of the questions asked students to indicate what strategies they used to collaborate as group members. They stated that they created a WhatsApp group (93%), brainstormed ideas as a group (75%), held regular meetings (65%), exchange files and documents (65%), Sat down and work together -face to face or online- (46%), and had informal chats about the project (28%). Regarding the communication tools they used as a group they mentioned WhatsApp (84%), Zoom (46%), and Google Docs (18%). Only one group stated that they met in person and once (See **Figures 1** and **2**).

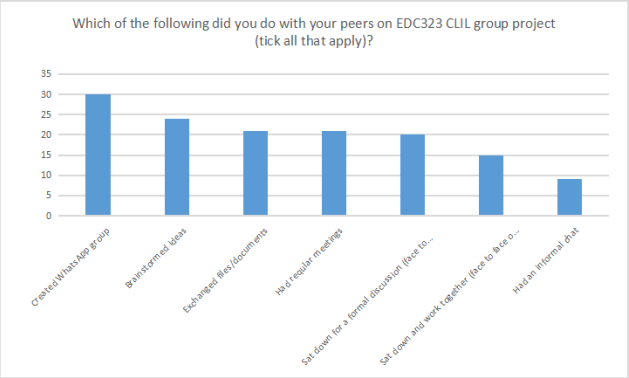


Figure 1. Strategies used by students while working on CLIL group project.

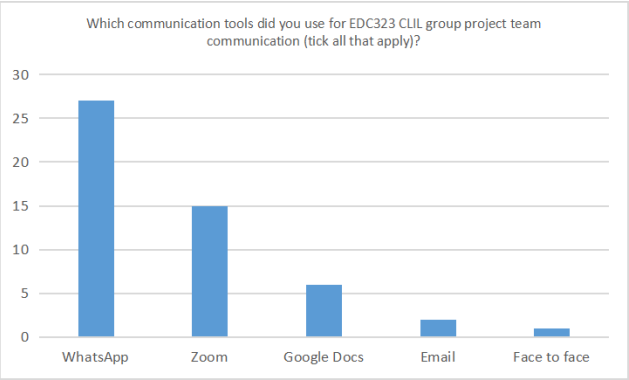


Figure 2. Communication tools used by students while working on CLIL group project.

4.3. Skills Developed in Online Group Work

As shown in **Table 2**, most respondents (88%) identified time management as a top skill acquired through CLIL group project. Teamwork skills came second in the list, with 81% of students identifying it as a skill developed in group work. Moreover, 78% of students identified leadership as a skill acquired in the context of the project. Interpersonal skills and communication were equally rated, as both received acknowledgment from 69% of students that these two skills could be developed through group work.

Table 2. Skills Developed through CLIL Online Group Project.

Skills You Can Develop in Group Work	Frequency	Percentage
Time management	28	88%
Teamwork	26	81%
Leadership	25	78%
Interpersonal skills	22	69%
Communication	22	69%
Academic development	19	59%
Self-development	13	41%

4.4. Drawbacks Experienced in Online Group Work

Interestingly, 44% of students reported experiencing no drawbacks while working on the CLIL project, indicating a positive perception of their group work experience. The most reported drawbacks by the other students were low contribution from some group members (31%), poor commitment (28%), poor attendance at group meetings (25%), and poor communication (22%) (See **Table 3**).

4.5. Ensuring Fair Contribution to Online Group Work

The student's perceptions of fairness were focused on the theme of individual contribution. Most of the students (81%) preferred splitting work among group members, instead of working together on all the tasks (See **Figure 3**).

Table 3. Drawbacks of CLIL Project Online Group Work.

Drawbacks Experienced During Group Work	Frequency	Percentage
No Drawback	14	44%
Low contribution from some group members	10	31%
Poor commitment	9	28%
Poor attendance at group meetings	8	25%
Poor communication	7	22%
Poor attitude	6	19%
Getting credit without doing equal work	6	19%
Different grade expectations	5	16%
Lack of formal leadership	3	9%
Some Students worked lot and more than the others	2	6%

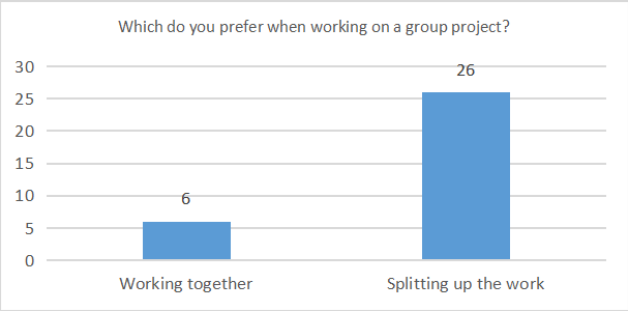


Figure 3. Students' preference of collaborative/cooperative dynamics.

Although this trend was in favour of splitting the group work tasks, students in this study demonstrated their readiness to contribute to the group even if it was more than their fair share. Most students responded that they would be glad to contribute more than their fair share to enhance the overall grade of the project (53%) or to assist the rest of group members (46%). To promote fair contribution and participation from all group members, the most important strategies indicated by students included sharing ideas and information (87%), helping one another (84%) respecting peer opinion (81%) (See **Figure 4**).

Finally, in terms of evaluation, the need to be fair would be the priority. A majority (65%) clearly indicated that the members of the group who did not contribute greatly to the group should be given a grade that correlates to his/her contribution and not the same grade as the other members (See **Figure 5**).

When asked to indicate their feelings about working within a group but then submitting their work individually, most of the students were in favour of this strategy (See

Figure 6).

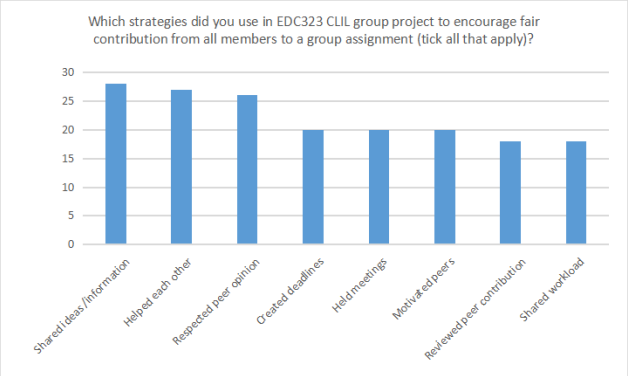


Figure 4. Strategies used by students to promote fair contribution.

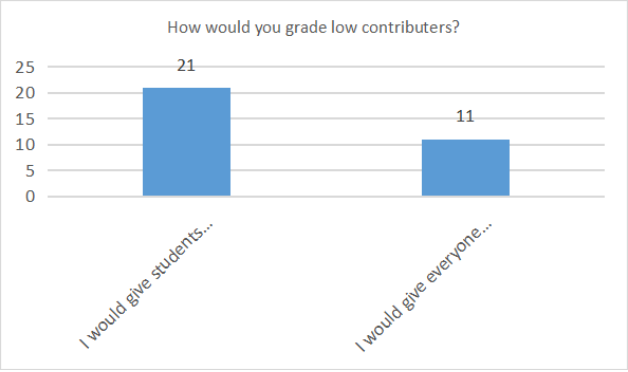


Figure 5. Students' preference for grading low contributors in the group.

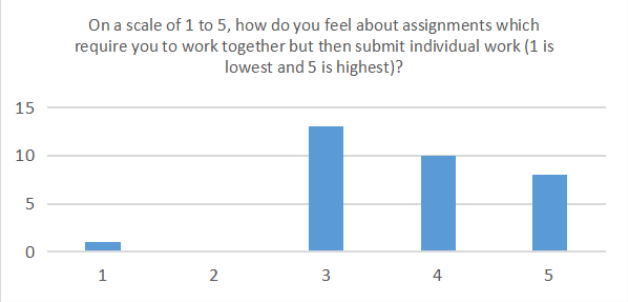


Figure 6. Students' agreement level with submitting group work assignments individually.

5. Discussion

The findings of this study suggest that while student held a generally positive attitude towards the online group work component of the course, this was counterbalanced by significant challenges related to member accountability. This positivity can be proven by the fact that 75% of the students felt that the project allowed them to grasp concepts in class and the great importance of skill development, especially time management (88%) and teamwork (81%). Creating collaborative learning environments in the classroom is paramount for students' learning and is also considered important for preparing them for employment [20]. One of the questions always raised by employers in the UAE is whether university graduates are equipped with the required skills for the world of work, and teamwork is considered one of the essential skills. It is therefore important that students are given ample opportunities to develop teamwork skills while they are at university. Students' perceptions and attitudes of group work can positively or negatively impact their learning and development of teamwork skills [28]. The findings of this study show that students have a positive attitude towards online group work and believe that it helps them develop their teamwork skills. This agrees with the results reported by Alharahsheh et al. [36], who concluded that Emirati students perceive teamwork positively and as an important skill for employment.

Informing students about specific group work skills and how to effectively work in groups can promote greater skill use [37]. The findings of this study show that students believe that their teamwork, leadership, and time management skills are the most likely skills to be developed through online group work assignments and projects. This is in line with the findings of Pienaar et al. [38], who concluded that students could develop leadership skills through the distinct roles they play in online projects. It was surprising that students ranked time management high on the list. It could be that the accountability experienced while working in a group helped them appreciate time better and, therefore, manage their time effectively. Most of the students in this study believed that working in groups on the CLIL project would help them in their future career. Most of them also indicated that working in a group on the project helped them understand what was taught in class and directly apply the class concepts. Students in this study also found sharing and exchanging ideas was one of the benefits of working on the CLIL group project. This is consistent with the findings from several studies that concluded that students viewed online group work as beneficial for their learning [39, 40].

One of the characteristics of group work is the varying levels of interest, commitment, and contribution by group members [36]. Although most students in this study indi-

cated that they usually make strong contributions to group work, low contribution from some group members, poor commitment, and poor attendance at group meetings were mentioned as the most faced challenges. More motivated students tend to resent the additional work they must do to compensate for the low contribution and commitment of low-standard students[37]. Students in this study indicated that they would encourage fair contributions from all group members by respecting their opinions, sharing ideas and information, and helping each other. The results of this study also show that most students were happy to contribute more than their fair share of work, because they wanted to improve the group grade, learn more from the experience or help other group members. The culture of UAE nationals is collectivist in nature. It was, therefore, not surprising that most of the students in this study were ready to sacrifice their own needs in order to avoid conflict and maintain harmony in the group.

Chang and Brickman's (2018) study concluded that students in low-performing groups assigned harsh ratings to their low-performing group members[41]. When asked if they would give notably low contributors an individual grade in the CLIL project, most of the students in the present study indicated that they would give them a grade that truly reflected their low contribution, rather than a similar grade regardless of their contribution. Some instructors are also in agreement with this method as they indicated that they would find a mechanism to individualize grades for students who are notably and evidently low contributors[42].

Although students in this study perceived group work in a positive manner, the majority (81%) of them preferred splitting up the work between group members instead of working together. Some students end up with negative experiences of group work because of lack of clarity on aspects such as rules and ways of cooperation[37]. The faculty's role as indicated by students is important in resolving conflict as their preference is not to do so on their own. A strategy that can minimize conflict within online groups is to give students the autonomy to choose their group members when assigning group work projects. Students in this study showed a high preference for this choice. In general, conflict and conflict management in online group work projects is a topic that should be investigated using qualitative methods for a better understanding[35].

5.1. Implications for Practice

Students underestimate the importance of acquiring group work skills because they don't understand how important these skills are for their future careers. University instructors need to explain the importance and relevance of group assignments and projects to their students before assigning them. As indicated by students in this study, strategies such as lectures about the importance of group work and practical workshops on group work dynamics such as conflict management can enhance their experiences of working with other students. Instructors can also help their students understand the importance of working in groups by facilitating classroom discussions on the topic. Classroom discussions are also instrumental in understanding students' viewpoint about group work, thus enabling instructors to tailor specific interventions based on this understanding. Furthermore, online group work experience can be improved if instructors set up clear rules, roles and expectations. Once groups are assigned, instructors should teach their students how to assign roles among group members. This can be facilitated using group agreements where specific tasks are assigned to each group member. Whether students work collaboratively or cooperatively is an important expectation to clarify from the beginning. At times of conflict, students should be encouraged to consult their group agreements as reminders of what they collectively signed up for and agreed upon. Group agreements can also include expectations of group members regarding communication norms, meetings, deadlines and so on. Instructors should encourage their students to include as many details as possible in their group agreements to avoid conflict in the future. It is also important for instructors to closely supervise group work to ensure all group members are always contributing. Scheduling regular check-in points is a good strategy to do that.

Regular check-in is also important as it ensures instructors will provide timely feedback, which is one of the strategies to enhance students' group work experiences. Instructors can use online platforms as well to give timely feedback. Tools such as Google Docs, which students in this study indicated they used to work on the project, can be very useful to check students' progress and give timely and constructive feedback. Students in this study mentioned that they used WhatsApp groups as a means of communication. By knowing how students communicate as a group, instructors can

choose to join the group -in this case the WhatsApp group- upon students' approval if they wish to closely monitor how the group is working together.

Students in this study also reported low commitment and contribution from some group members as one of the main challenges of online group work. This issue is one that is usually reported as one of the main challenges of working in groups. The isolating nature of online learning can make this issue even more challenging. To prevent low commitment and contribution, instructors need to design ice-breaking activities to initiate effective connections between group members. Instructors also need to clearly define group member tasks and responsibilities based on each member interests and strength. Instructors should also allow in-class group meetings for the same reason[41]. Another strategy to avoid low contribution is to include a peer-assessment component as part of the grade. For students, knowing that their performance will be assessed by their peers can enhance their performance and completion of their allocated tasks and responsibilities[41].

5.2. Recommendations for Future Research

This study provided insight into the experiences of Emirati female students working in groups in an online undergraduate course. The study is very context-specific and provides insights into the experiences of a specific population which is Emirati female undergraduate students. Further research that includes a bigger sample from various higher education institutions with both genders, diverse nationalities, programs, and courses is suggested. Using qualitative methods such as interviews and students' reflections for a deeper understanding of their experiences of online group work is also recommended. To provide a better understanding, research is also needed that investigate instructors' perceptions and experiences of facilitating students' experiences of group work in online courses.

5.3. Limitations

The main limitation of this study is the small number of participants who were enrolled in one specific course. Although the results provided an understanding of participants' experiences working in groups online, these results are context-specific and can't be generalized due to sample size and narrow demographics of participants. Another limitation is the use of one data collection method, which is the self-reporting questionnaire. The study could have produced richer data if other data collection methods such as reflective journals were used.

6. Conclusions

This study aimed to investigate undergraduate students' experiences with group work as part of an online course at a federal university in the UAE. The results showed that, overall, students had a favorable attitude toward the online group project. Although students thought that online group work was beneficial for their learning, several challenges were raised as part of their experience. The experience of working in online groups can be enhanced to ensure maximum benefits. Instructors can do this by carefully designing online group assignments and projects to ensure meaningful contributions from all group members. Students' previous experiences with online group work should also be considered when designing such assignments and projects. Instructors should encourage students to reflect on these experiences to provide a better understanding of their attitudes toward online group work.

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Institutional Review Board Statement

The study was conducted in accordance with the Declaration of Helsinki, and approved by the Ethics Committee of Zayed University (ZU22_014_F/8th February 2022).

Informed Consent Statement

Informed consent was obtained from all subjects involved in the study.

Data Availability Statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Conflicts of Interest

The author declares no conflict of interest.

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