

Online group presentation – A comparison of perceptions of diploma aircraft engineering students and degree students from other programmes

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Abstract

This paper explores the challenges and benefits of online group work by comparing the perceptions of two groups of learners (Diploma and Degree students). Group work has become an accepted component of the assignments handed to online learners. The students were given a questionnaire to record their perspective after completing a group project, which requires them to present their findings online using Microsoft teams. The findings show that the similarities include a fair understanding among group members regarding their challenges of responsibilities given to each member and decision-making skills. It can be concluded that the benefits outweighed the disadvantages. It is hoped that the findings would assist lecturers to improve their methodology when including group project work using an online platform.

Key Words: *Collaborative Method; Group values; Digital skills; Social media apps; Normative stage*

1.0 INTRODUCTION

Group work has become a compulsory part of online education. Group work includes students who are required to interact independently and who work together to complete a certain task. The current pandemic has forced educators to use online tools as a central mode of teaching and learning (Mulyanti et al, 2020). Research has posited that working in groups improves the ability, communication and allows flexibility while students learn (Griffith et al, 2003). Computer mediated communication technology has changed the way information is shared and presented today by learners. This has affected the group dynamics and relationships among group members (Flanagin & Waldeck, 2004). The purpose of this study is to compare the perspectives of two cohorts of students, one in the Diploma and the other Degree programmes, while making presentations using an online platform and to help instructors to explore the benefits and challenges faced during these presentations.

Online group work includes working together in a small group using a collaborative method. Students need to use electronic media and work together with students from different locations and time zones (Chinowsky & Rojas, 2003). While working in a group, students need to discuss, negotiate and give feedback. By investigating the viewpoints of students, it would be possible to identify strategies that would help students to complete the online group work effectively. Students are forced to depend on electronic communication when dealing with team members who are in a

different geographical location. In addition, COVID 19 has forced institutions and students to use online tools in order to continue with their education. Group projects are part of the assessment and students find that they have to use these communication tools to negotiate, discuss, organize and propose ideas (Wang & Member, 2015, Hamdan et al, 2017).

Instructors believe that students face many challenges when group members are in different geographical locations (Whatley et al, 2001). Instructors need to facilitate and advice to make sure that the group is able to complete the work effectively. An effective group need to include the following characteristics (University of Melbourne Law School, (2015); Abarca et al, 2000):

1. All members should have a common goal;
2. Roles and responsibilities need to be given to members. These roles may change according to the work;
3. Group values – each member needs to be aware that their actions can affect others in the team;
4. Communication – all members should be encouraged to share ideas;
5. Unity – members should be able to complete tasks individually yet be given support while completing the task.

To work in an online group, members need to have important behavioral factors (Abarca et al, 2000):

1. Team members need to cooperate with each other;
2. Each member is responsible to contribute towards the completion of the task;
3. Members need to encourage each other and give positive feedback;
4. Members need to communicate with each other;
5. Members need to reflect on completed work and process techniques to make improvements.

Besides this, Abarca et al (2000) inform that for a team to be effective, the members need to help each other, be responsible, encourage each other, and communicate. The team members also need to reflect on the work being done. In addition, a group would work well together if the members are aware of their roles and responsibilities. However, despite following all these steps, members need to be aware of the challenges. Some students may lack motivation or skills that would help them work in the group. The other challenges include the presence of free riders, conflicts among members and some members may stop participating (Roberts & Mcinnerney, 2007). The authors further emphasized that educators were apprehensive that the lack of traditional lectures would affect students' learning skills as some topics are difficult to teach using online tools. In Bangladesh, a survey noted that only 40% of students attended online classes (Tariq and Fami, 2020). The biggest challenges were unreliable internet access, increase in costs, lack of digital skills and lack of participation. Students informed that online classes made them tired and they found it difficult to be attentive (Pandey, 2020). Instructors informed that the institutions did not have adequate technical resources (Iqbal & Ahmad, 2010). Giving feedback was time-consuming and course materials needed to be modified to suit the new methodology; however, the materials available were not suitable (Yang & Cornelius, 2004).

It is interesting to note that learners are becoming more familiar with the use of online tools despite the increase in costs, inadequate network connection and a lack of access to computers. In a study by Al-amin et al., (2021) 486 students experienced 50% difficulties in maintaining connectivity due to load shedding and unstable internet connections.

2.0 METHODOLOGY

This study is essentially quantitative and the questionnaire was given to two cohorts of learners. The researcher collected the data from the Questionnaire adapted from The London Leadership Academy (n.d.) using a five-point Likert scale (ranging from 1=strongly disagree to 5=strongly agree).

The first cohort included 20 students in the Diploma in Aircraft Maintenance. The second, were 20 Degree students who were in the Graduate Preparatory Course class, which is a compulsory subject. The Degree students included 5 from the Human Resource Management programme, 5 from the Marketing programme, 3 from the Electrical Engineering programme and Information Technology programme, respectively and 2 each in the Computer Engineering and Business Administration programmes, which also totalled to 20 students. There were 11 Malaysians and 9 foreigners in the Diploma in the Aircraft Maintenance cohort and 15 Malaysians and 5 foreigners in the Graduate Preparatory Course. Both cohorts included learners from 19 to 26 age groups.

Both the cohorts were given a group presentation project to complete. The questionnaire was given when the group presentations were completed in week 10, to note the perception of the students on the effectiveness of learning and of their experience of working as a group. The students formed the groups within the first week of online classes. They were given one week to discuss independently and plan a presentation on the topic chosen by the group. They were required to prepare PowerPoint slides and were given 20 minutes to present using Microsoft Teams. The oral presentations were held in week 10.

The purpose of the study was to record the perception of the students in order to note issues with regard to online group projects by comparing the perceptions of 2 cohorts, Diploma and Degree students. This may help instructors to facilitate students with online group work.

The researchers aim to note the students' perception in the following key areas:

1. What factors of online group work are perceived to have challenges by two cohorts of learners?
2. What factors of online group work are perceived to have similar benefits by the two cohorts of learners?

3.0 FINDINGS

3.1 Perceived Challenges of the two cohorts

Item 12: Team members understand one another's role.

70% of the Degree students agreed that they were clear about their responsibilities when completing the group assignment. However, 5% indicated that they were not clear regarding the roles assigned to them. This points out that there are a few students who may still find it difficult when adapting to the group. This could be because they are not very inter active or may have poor language skills.

The Diploma students were clear about their roles (95%). This indicates that Diploma students are more communicative and realize the importance of “dividing and conquering” when doing group work. It has been noted that for a team to be affective they need to include a “scribe, a facilitator and a liason” (Teamwork & Working Teams, 2002). The Degree students in this study seem to overlook the importance of disseminating work among members.

Item 25: Members consistently monitor results.

Degree students perceived that the group members did constant checks on the group assignment (90%). The Diploma students seem to overlook the need to monitor the work while preparing the material for the presentation (70%). Besides, both groups acknowledged and did check on the work from time to time. Most students were noted to cooperate when they needed to read articles that may be needed to complete the group work; however, it was difficult to plan group discussions or presentations as the students were not prepared before the group online meetings (Prakash & Samu, 2017).

Massey et al (2003) discussed about the importance of process interaction. Process interaction facilitated when completing a task. It includes the manner in which a team uses to give support to get the information needed to complete an assignment. Another strategy mentioned by Burdett (2003) is that members should be given short-term tasks in the first three weeks. By doing this, learners develop skill by keeping a check as they progress with an assignment. This lessens the stress when working in a group.

Item 26: Members give each other constructive feedback.

This item is closely related to Item 25 and supports the importance given by learners regarding monitoring of the assignment. 95% of the Degree students communicated with each other, were as only 70% of Diploma students gave feedback to their peers. Again the lack of importance given to communicating among group members could be noted among the Diploma students. Almost 20% among the Diploma group chose 'strongly disagree'. In addition to peer feedback, Schweizer, et al., (2001) stressed that instructor feedback contributed in helping learners understand about organizing the information to be presented.

Item 31: Members work towards collaborative decision-making.

The lack of interaction is further represented in the perception among the Diploma students. Degree students chose Agree and Strongly Agree (95%) and Diploma students (80%), respectively. Although the percentage was higher here for the Diploma students, it indicates that instructors should note that Diploma students seem to have poorer communicative skills or do not seem to feel it was necessary to communicate with group members. This increased the possibility of another problem, which would affect collaboration. A group could include a "free-rider". Learners were reluctant to inform the instructor if a member was not collaborating and contributing. If this happens it could affect the morale of the group (Levin, 2002).

Item 39: For online group presentation, members do a 'mock' presentation using online media within the group.

The response for this item indicates that the Degree students were more motivated to improve on their group assignment. Even though the percentage was lower than the earlier items, the Degree students seem to be more pro-active when doing group work (70%). Very few Diploma students chose strongly agree and Agree (30%). From this low percentage it can be assumed that Diploma students need more encouragement regarding communicating when doing group assignments. In fact, 50% of Diploma students chose Disagree. This would indicate that the Diploma group need more encouragement on collaborative work because if the techniques are encouraged they would be able to obtain higher scores for the assignment.

This is further supported in the research by Harasim (2014). In this study, collaborative work improves if the components followed the Constructivism Theory. To be able to do this, learners need to work together by following “3 phases”. In the first stage, ideas are presented. Next, these ideas are organized and discussed by group members. Finally, the group members share the intellectual knowledge (Weiberger, et al., 2007).

3.2 Perceived similarities and benefits of the two cohorts

There were more similarities regarding completion of group work among the two cohorts. This clearly points out that students are more comfortable with the use of apps and collaborative work.

Item 1: Our team has shared purpose

Item 7: Members are committed to achieving goals

Both cohorts strongly agreed that they were clear of the purpose for the group work. This is because the instructor has clearly outlined the requirements and another factor would be because it is a requirement and can help to improve the grades for course work. In a paper about the influence of achievements a significant influence was found regarding motivation in a study by Abu Bakar et al. (2010), which was conducted at University Putra Malaysia. Motivation towards learning and personal factors play important roles in learning. The above two items point out that purpose here was a shared goal.

Omar et al., (2018) noted the common strategies used to achieve goals. First, the group members gathered ideas. Next, they interpreted these ideas and finally they need to ‘ratify’ the information before posting. By checking the information before posting, they were able to present their ideas clearly. This corresponds with the Online Collaborative Theory by Harasim (2014).

Item 9: Members address and resolve issues immediately

Item 10: Members are effective listeners

Item 15: Communication is open and honest.

Item 18: Every member value each member’s contribution

Here again both groups unanimously agreed that they worked as a team and listened to each other regarding issues while doing the assignment. This would indicate that all learners use online tools effectively to complete the assignment. It is interesting to note that the learners accepted that honesty was needed when communicating as this improved team work as they trusted each other. Students used the online platform to communicate and agreed that they respected each member’s point of view. Koh and Hill (2016) informed that students enjoyed online discussions because of the flexibility. In this study there were 14 (Diploma and Degree) students who were foreigners. These students were able to communicate with other group members. Omar et al., (2018) informed that learners formed discussion groups using ‘WhatsApp’. The students were comfortable posting questions and were able to clarify ideas. The authors stated that use of social media enabled them to reduce any miscommunication when they shared ideas.

Item 23: Members view mistakes as an opportunity to learn and grow.

There was a slight difference between the response of the Degree students and the Diploma students (80% and 95%, respectively). The Degree students seemed to be more critical of mistakes.

This could be because being older students they were more focused and hoped to get higher scores for the completed assignment. The importance of feedback is discussed in a study by Krish (2006). This study noted that by getting feedback using other media, learners were able to correct their errors and improve their ideas for the given assignment. By discussing online, learners were more confident to express and share ideas (Shahsavari & Hoon, 2011).

Item 34: Members willing to include weaker members in the group.

Item 35: Members willing to share the work with each other

Even though some members in both cohorts chose disagree. The overall score was high (from 80% to 85%) and both cohorts seem to strongly agree with both the above items. This points out that both groups have a positive attitude towards completing the assignment. Online work allowed students to take advantage of the flexibility and it encourages student autonomy, and reflection (Sharpe et al, 2006). In a study it was pointed out that students need to be enlightened about human dynamics and how to negotiate when dealing with individuals from a different culture. In addition, at the normative stage learners develop useful collaborative skills while completing the online group projects (Duarte and Snyder, 2001).

4.0 DISCUSSION

From this study it was noted that both cohorts perceived group projects as a beneficial method while learning a subject. Online project work increased the flexibility of time barriers (Battacharya & Sharma, 2007). In a study in Pakistan it was noted that e-learning techniques improved the learning experience (Siddiqui, 2001). Instructors need to note the challenges and similarities, as this would help in the planning of the methodology needed when including group projects.

Among the perceived challenges among Degree students, the perceptions indicated that learners were clear of their responsibilities. Instructors need to note that a few (5%) needed feedback as despite discussions some members were unclear of their part in the group. One of the reasons students were unclear could be because they were unable to manage their time effectively. They were unable to join the discussions. So, even though members did check the work, not all members were present for the online discussions. So, they did not know their part of the group project. During online communication, messages can be garbled or delayed due to networking issues. Besides, most discussions were made looking at a screen image. This increased the barriers in communicating as members did not have the benefit of looking at the body language signals given by the speaker. In addition, 2 or more people talking at the same time created noise, which made it difficult to hear the idea given by a group member (Morris, 2020).

It is interesting to note that the Diploma students were more communicative during the discussions. They were more inter-active and able to clarify ideas with group members. The challenge faced by this group was they were unable to monitor the progression of the assignment. The reason for this could be because Diploma students did not possess sufficient communicative skills while negotiating ideas contributed by members (almost 20%). Another issue faced by the group was the presence of free-riders. Group members found it difficult to discuss about this issue with the instructor. This would affect the presentation of the group assignment as group members may lose confidence in the group.

The similarities of the two cohorts regarding their skill of collaboration during group work was noted. Both groups had presented other group assignments, so they did understand about the responsibilities in completing the work. Both cohorts included discussions. These discussions improved the trust among members and support given to make changes in the project work. Degree students were more critical during discussions. Nevertheless, both cohorts agreed on the importance of honest feedback. Feedback allowed members to improve their ideas presented for the group project. In addition, both groups were positive about the flexibility and time given for reflection while completing a group project. Communication is important to enhance discussion among members and between the instructor and group members (Roddy et al., 2017).

5.0 CONCLUSION AND RECOMMENDATIONS

The purpose of the study is to examine the perspective of learners with regard to their preparedness in an online learning environment when completing a group project. The author examines the challenges and similarities of two cohorts of learners (Diploma and Degree) with regard to their perceptions when completing a group project. It was noted that online learning promotes cognition and understanding among learners. Two strategies were noted from their perceptions: 1) Both the groups discussed ideas using social apps before posting. 2) Both groups faced challenges during discussion before posting. The Degree group found this more stressful.

The steps taken before posting the final assignment included: A) explaining ideas to members using social apps; B) making decisions on the main ideas and information given by members using social apps such as, WhatsApp; C) facing challenges when clarifying suggested ideas; D) facing challenges with time management arranged for discussion using social apps. This correlates with the study noted by Omar et al., (2018). However, it was noted that an online environment requires an increase in feedback strategies and skill competencies. Time was an additional stress factor. In addition, learners perceived that the weakness in communication affected the team work.

Most of the learners in both the groups agreed that positive communication skills improved teamwork. They noted that communication skills helped to improve their confidence when communicating ideas. The challenges faced by some learners included lack of knowledge in using the tools to access information. This increased stress and affected their emotional well-being (Prakash & Shahabuddin, (2020).

It is recommended that instructors need to examine the pedagogical characteristics and focus on the individual learner. Attention is needed regarding potential barriers which include isolation, family commitments, lack of motivation and technical shortcomings. Besides students need to be aware that they need to develop independent learning skills and prioritize on deadlines (Roddy , et al., 2017). Learners need assistance in establishing a community to overcome shortcomings and to help them to move forward from their comfort zones so as to express ideas. Besides, instructors need to assist students regarding the exchange of large and complex files.

Lack of technical support systems can affect the quality of the assignment as learners find it difficult to share ideas due to poor communication skills (Hakkinen, 2004) Learners need assistance in establishing a community to be able to share ideas. In addition there is a need to establish an instructional design for encouraging project work (Carabajal, et al., 2003). It is apparent that students perceive that online group projects improve their self-confidence. The benefits need to be considered by instructors when designing the course content when planning

group projects. It is important to further study online groups that have been given group work. This would benefit instructors and students to develop better online strategies so that students can become independent learners

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