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An Investigation of Group Dynamics in Mixed Mode Classes among Undergraduates

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Abstract

Group work is highly important in higher education during assessment and evaluation. The stages of the learning activity are the same whether it is conducted face-to face or online. Students can develop new skills for continuous learning by working in groups. Students will be more accountable for acquiring knowledge in this way. Different strategies based on students' learning styles preferences can become effective instructional tools for improving critical thinking, communication, and implementation skills. The purpose of this research is to explore the implementation of a group dynamic approach in a small group. The research was determined using a qualitative survey. The model reflects the stages of forming, storming, norming, and performing on the group dynamics of 236 respondents of undergraduate students studying from three different faculties at University Teknologi Mara in Malaysia. The findings of this study show that these elements can be used to create a group dynamic that is suitable for small-group learning for university students. Since there has been a few study into group dynamics at the undergraduate level, it was beneficial to explore this concept in other categories of education such as master's and doctoral programmes and educators.

Keywords: Group Dynamics, Undergraduates, Learning, Mixed-Mode Classes

Introduction

Background of Study

MacRoberts & MacRoberts, 1986 defined group dynamics as forces that generate group work. Many people believe that group dynamics has specific techniques used in group work. (Lin et al., 2018) mentioned that participants are typically divided into groups to collaborate with others. Merlin et al (2020) stated in the model of group work development proposed by Tuckman (1965), each stage results in a different set of behaviors, emotions, problems, and

solutions. Rick et al (2022) indicate a new approach for improving teaching and learning techniques should be implemented to maintain the quality and effectiveness of group work dynamics in Malaysia in the post-Covid-19 era.

Statement of Problem

The study is carried out to look at the implementation of group dynamics in mixed-mode classes. Due to the Covid-19 pandemic in 2020, online learning constitutes the new era of education. Most of the learning process has to be conducted online via various internet platforms. In accordance with the mixed-mode learning environment, most students are required to perform a task face-to-face in class or online. Furthermore, learning is no longer limited to an individual but has evolved into group learning, which appears to be effective in language classes. Group work helps students develop their English language skills and respect one another's learning speed (Brown, 2008). However, some learners do not realize the benefits of group work and tend to work on their own. Group work may not be favourable in many ways such as less competent group members may occasionally let others complete the group's exercises. Previous literature has further explained that group work activities help learners improve their attitudes toward learning and their academic achievement (Sung and Hwang, 2013). On the other hand, group work has yet to be fully applied in class and the educators' role is also important in order to make it a success.

Objective of the Study and Research Questions

- This study is done to explore the motivating factors for learning among undergraduates.

Specifically, this study is done to answer the following questions;

- How does the forming stage influence group dynamics?
- How does the storming stage influence group dynamics?
- How does the norming stage influence group dynamics?
- How does the performing stage influence group dynamics?
- What is the relationship of all stages in group dynamics?

Literature Review

Demotivators for Group Work

Teamwork is defined as people working together to achieve something beyond the capacity of individuals working alone (Marks et al., 2001). Although there are many factors that contribute to motivation for group work, there are also some demotivators. There are several critical issues that can be found in demotivators for group work. The first one is role blurring. Team members have a poor understanding of each other's roles. This issue can cause a lot of conflict and may lead to ineffectiveness as a team. The next issue is communication skills. Communication skills are one of the most important skills in group work. Lack of communication skills can lead to tension between members. Lastly, leadership skills. A team leader must be chosen from a member who can implement appropriate leadership approaches and styles to lead the team member to become full responsibility for their task (Hall & Weaver, 2001).

Motivation for Group Work

There are various factors that can influence learners' motivation to collaborate in a group work. These factors may either facilitate or impede learners in collaborating successfully. Chen and Yu (2019) assert that learners' beliefs or experiences about collaborative work,

perceived value of peer assistance and group dynamics are three determinants that influence students' attitudes toward group work. Tanaka (2022) further confirms that group work environments do enhance learners' motivation in working together as a group. Positive and supportive group environments, such as strong cohesiveness and high level of members' engagement, are found to be significantly affecting learner motivation. Thus, internal and external factors are essential to motivate learners to work in groups.

Past Studies on Group Work

Many studies have been done to investigate the effectiveness of group work in class. In addition, group work allows pupils to learn while supporting one another (Hendry et al., 2005). Yazedjian and Kolkhorst (2007) carried out a small group exercise on 100 university students enrolled in a Human Development course. To obtain student feedback, they provided a task assessment sheet after the small-group activity. The results demonstrated that students increased their interest in the lecture's subject, had communication opportunities, and enhanced their social skills. Moreover, Chen & Hird (2006) did a study to explore the behavior of 36 Chinese non-English students in a group discussion in EFL's classrooms. They recorded the group discussion and asked a few questions to the participants. The results showed that students spoke more when they were in a group as well as they became natural and spontaneous in their speech. In a Malaysian context, a study by Ilias et al (2012) revealed that most students observed similar experiences, emotions, and ideas on all dimensions of teamwork to be an effective team. Thus, group work enables learners to improve their communication skills as well as build positive relationships with their friends.

Conceptual Framework

This study is replicated from the study by (Tuckman, 1965). In group work, learners gain more than just knowledge-they gain communication skills (Rahmat, 2020). According to Tuckman (1965), during group work, participants go through four main stages and the stages are (1) Forming stage, (2) Storming stage , (3) Norming stage and (4) Performing stage. Figure 1 shows the conceptual framework of the study showing the dynamics of group interaction. The first stage is the forming stage and this is the initial stage where all team members get to know one another. Then comes the second stage-the storming stage. This is often the stage where there are group conflicts. This is not uncommon when team members brainstorm ideas in the group. The third stage is the norming stage. This is the stage where the conflicts are resolved and the team members become more flexible to achieve the group's task. The last stage is the performing stage. This happens when the group has completed the assigned group task successfully. They then adjourn to go their separate ways.

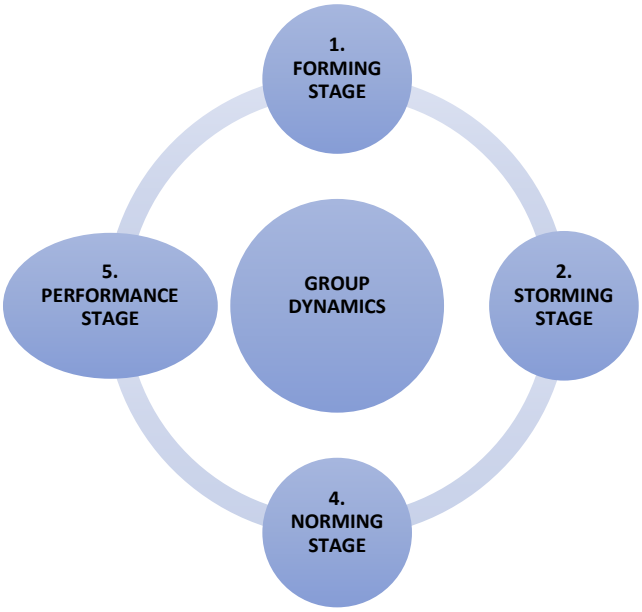

Figure 1- Conceptual Framework of the Study-Group Dynamics

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 236 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is replicated from the study by (Tuckman, 1965). to reveal the variables in table 1 below. The survey has 5 sections. Section A has items on demographic profile. Section B 7 items on forming stage. Section C has 6 items on storming stage. Section D has 8 items on norming stage and section E has 8 items on performing stage.

Table 1
Distribution of Items in the Survey

SECTION	STAGE	Items
B	FORMING	7
C	STORMING	6
D	NORMING	8
E	PERFORMING	8
		29

Table 2
Reliability of Survey

Reliability Statistics

Cronbach's Alpha	N of Items
.922	29

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .922, thus, revealing a good reliability of the instrument chosen/used. Further analysis using SPSS is done to present findings to answer the research questions for this study.

Findings

Findings for Demographic Profile

Q1 Gender

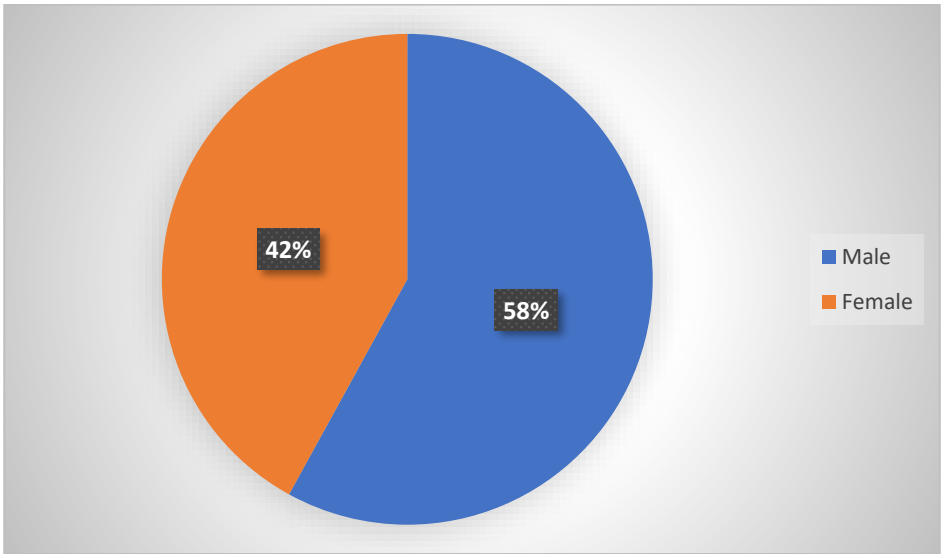

Figure 2 -Percentage for Gender

Figure 2 shows the distribution of gender. Based on gender showed that 58% are male and 42% are female. This represented the respondent by male is higher than female.

Q2 Discipline

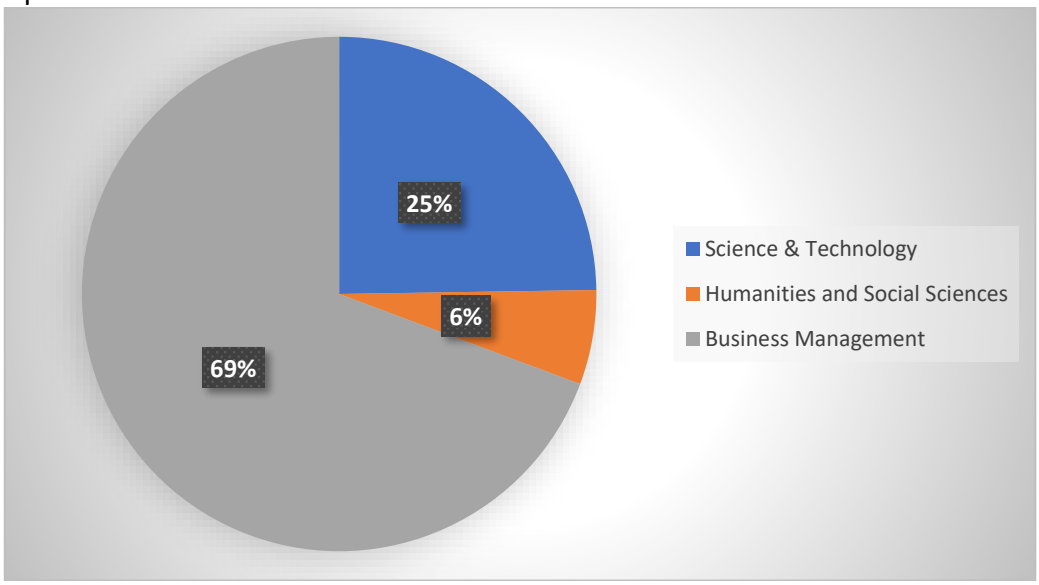

Figure 3 -Percentage for Discipline

Figure 3 shows the percentage of discipline. Based on discipline data showed that 70% are from the Faculty of Business Management, 25% are from the Faculty of Science and Technology while 5% are from the Faculty of Humanities and Social Sciences.

Q3 Class mode

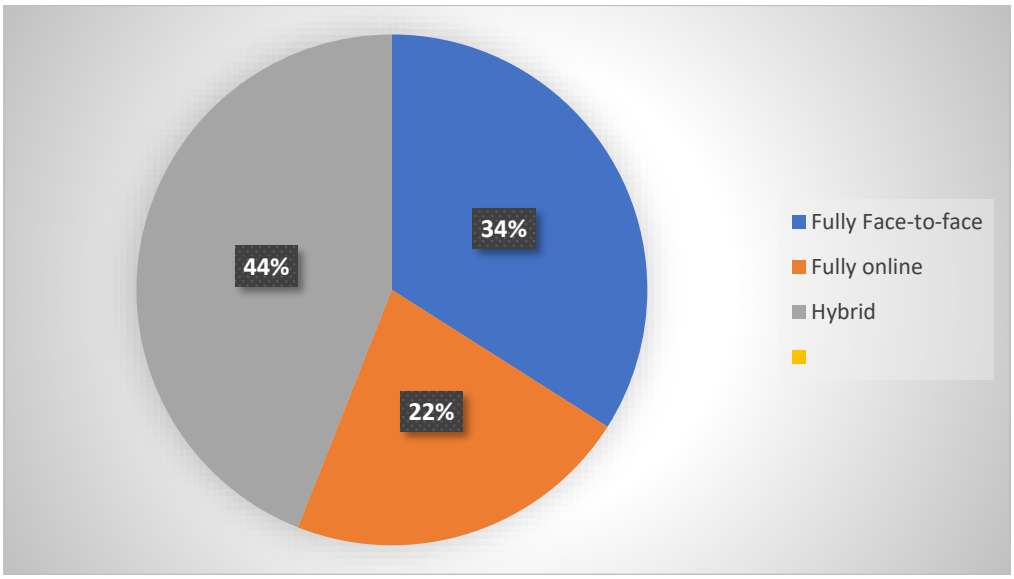

Figure 4 -Percentage for Class Mode

Figure 4 shows the percentage of class mode. There are three categories which are fully face to face, fully online and hybrid. The findings of the percentage of class mode showed the highest percentage is hybrid (44%) followed by face to face (34%) and fully online (22%).

Q4Best number of team members

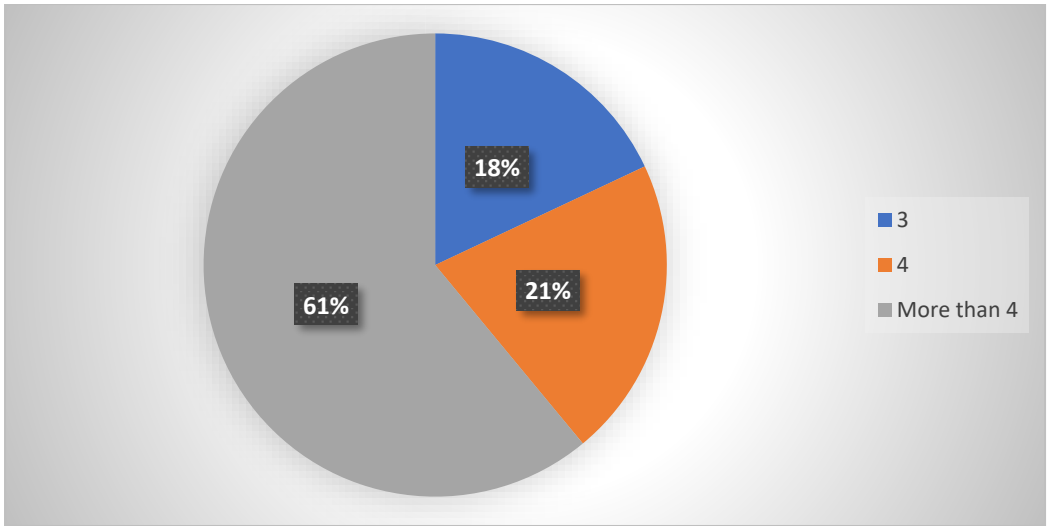

Figure 5 -Percentage for Team members

Figure 5 shows the percentage of team members. According to the percentage among team members, 61% prefer to choose teams with more than four members, followed by 21% prefer to have a group of four members, and 18% prefer to choose a group of three members.

Q5 Level of education

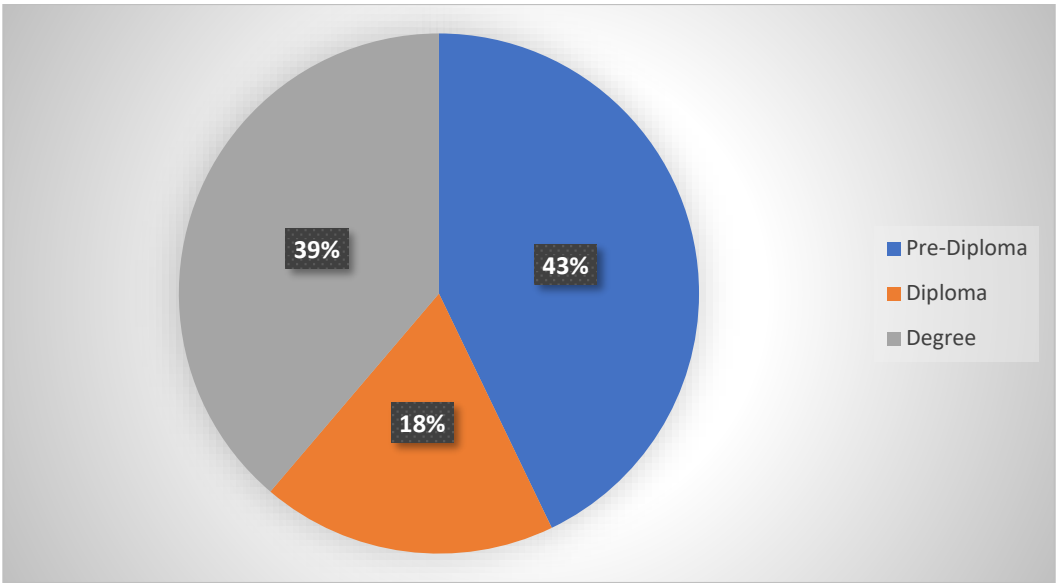

Figure 6 -Percentage for Level of Education

Figure 6 shows the percentage of levels of education. There are three levels for education: pre diploma, diploma and degree. According to the levels of education shown, the highest percentage is from pre diploma levels (42%) followed by degree levels (38%) and diploma levels (20%).

Findings for Forming

This section presents data to answer research question 1- How does the forming stage influence group dynamics?

Forming Stage

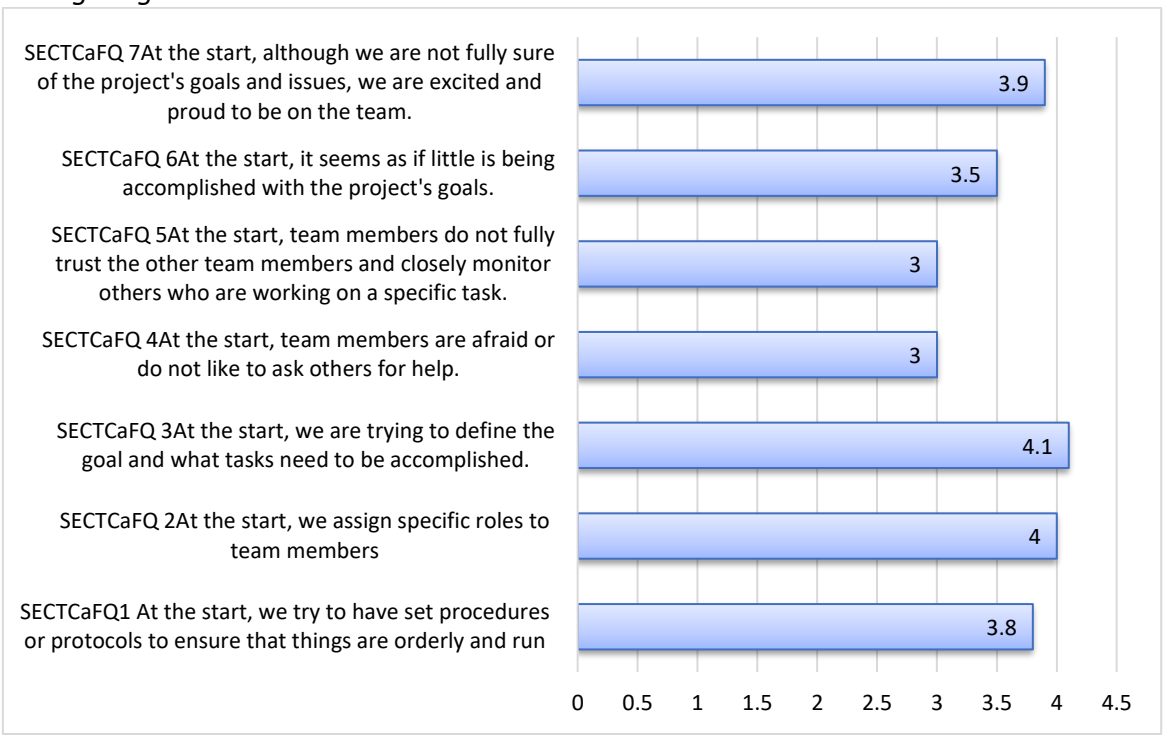

Figure 7 -Mean for Forming Stage

The second section in the questionnaire is mainly about forming stages. In the forming stage students were asked about the forming stage influence on group dynamics. Based on the figure 7 above, it can be derived that the highest mean in the forming stage is all team members are trying to define the goal and what tasks they need to be accomplished with the mean of 4.1. This followed by the second highest mean value that is 4 for the statement they need to assign specific roles to the team members. The second lowest mean value in the figure 7 is 3.5 with the statement that 'it seems as if little is being accomplished with the project's goals'. There are two forming stages that have the lowest mean of 3.0 in which members are afraid or do not like to ask others for help and team members do not fully trust the other team members and closely monitor others who are working on a specific task.

Findings for Storming

This section presents data to answer research question 2- How does the storming stage influence group dynamics?

Storming Stage

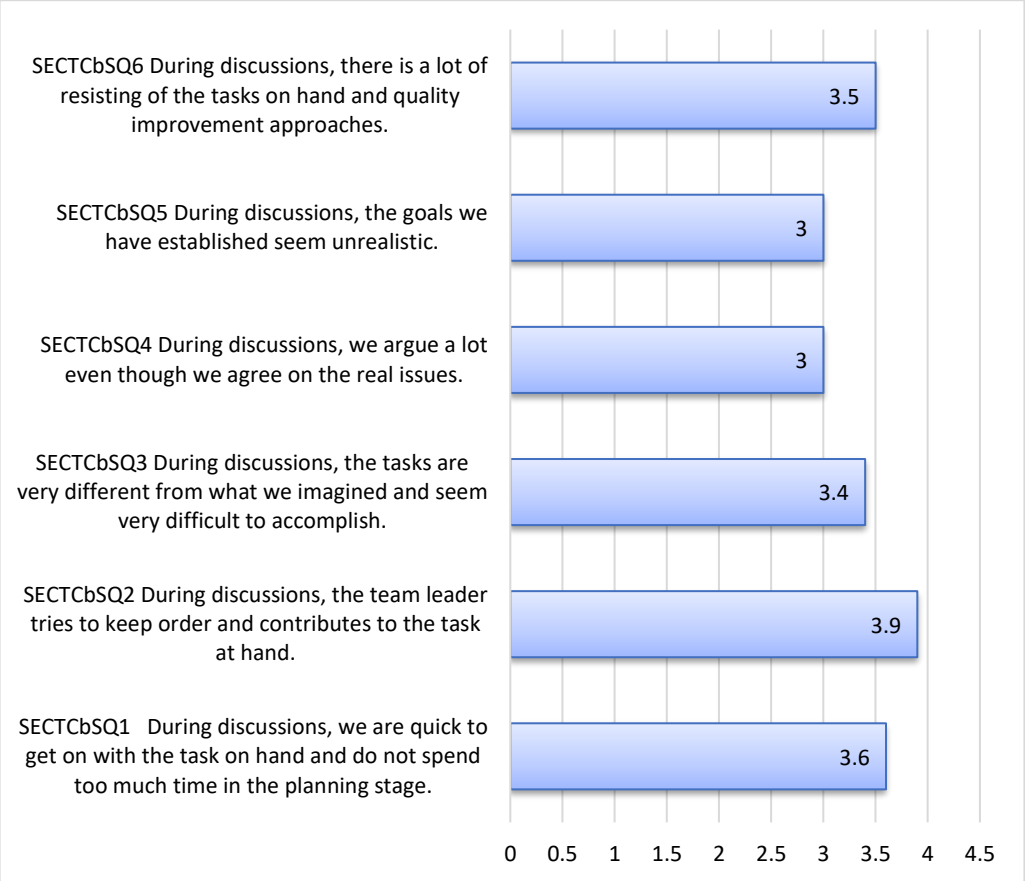

Table 8 -Mean for Storming Stage

Table 8 illustrates the mean scores for six items for the Storming stage. Item 2 received the highest mean score of 3.9, which indicated that the role of the group leader is very important and contributes to the success of group work. This is followed by Item 1 (M = 3.6), where the respondents agree that they do not spend a lot of time in the planning stage. Items 4 and 5 recorded the lowest mean score (M=3) in which they do argue sometimes on certain issues and also when they think the goals set were unrealistic.

Findings for Norming

This section presents data to answer research question 3- How does the norming stage influence group dynamics?

SECTION D- NORMING STAGE

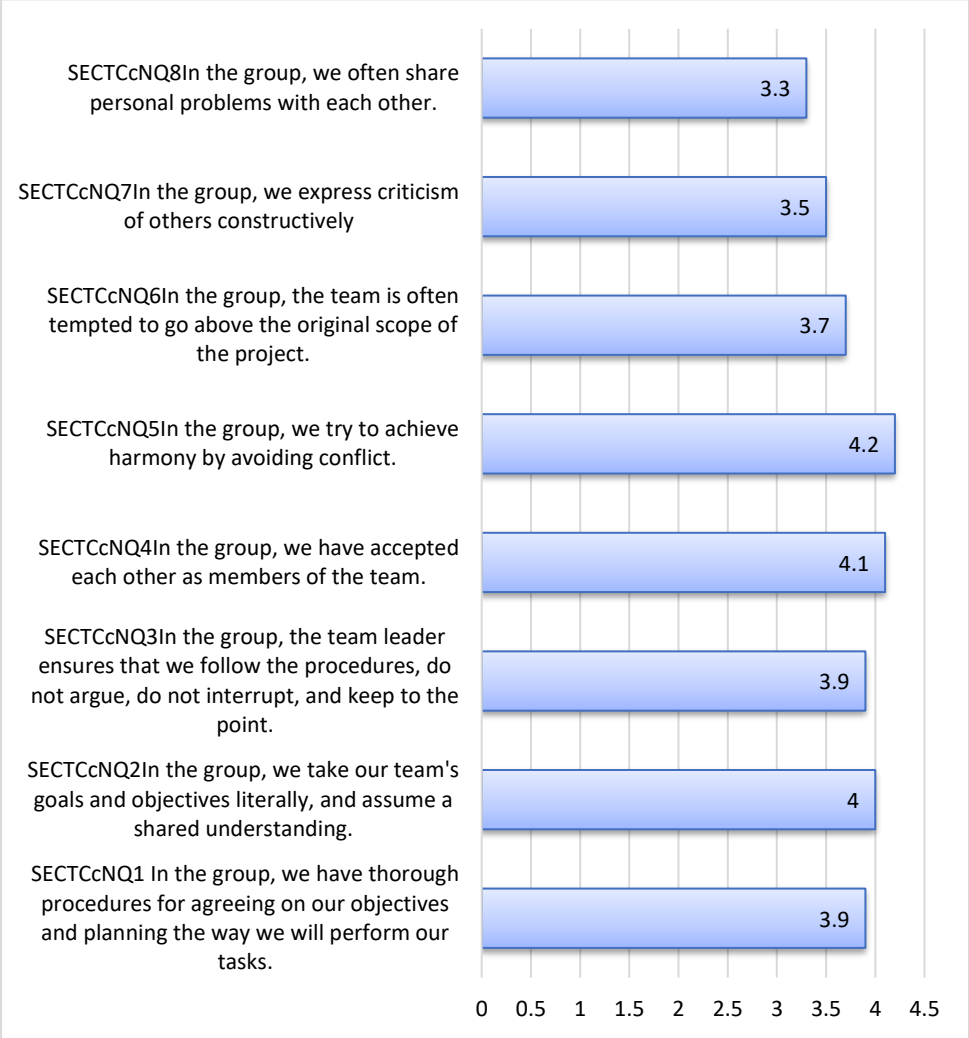

Table 9 -Mean for Norming Stage

Table 9 presents the mean score for 8 items for the Norming stage. It is shown that the respondents always try to achieve harmony in the group by avoiding conflicts with the highest mean (M=4.2) scored for this statement. This is followed by Item 4, where the group members accept each other as a group, with the mean score of 4.1. However, while in the group, they always share personal problems with each other, as shown by the mean score of 3.3.

Findings for Performing

This section presents data to answer research question 4- How does the performing stage influence group dynamics?

SECTION E- PERFORMING STAGE

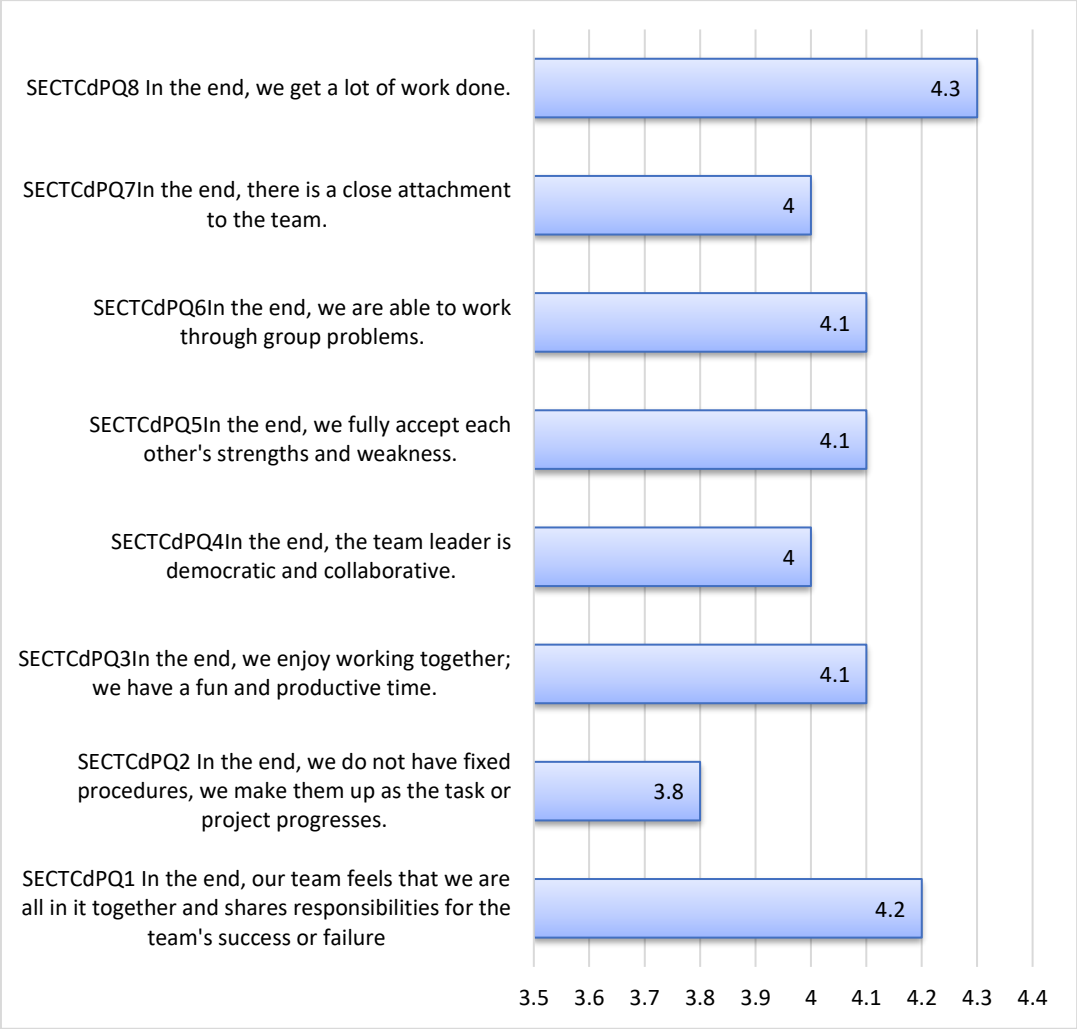

Figure 10 -Mean for Performing Stage

Figure 10 shows the mean score for the performing stage. Based on the result, the highest mean score is for item 8 as the respondents managed to perform a lot of work in groups at the performing stage (M=4.3). The second highest mean is for item 1 with a score of 4.2 in which the respondents feel that they are all together and share responsibilities for the team's success or failure. Item 4 and item 7 have the same mean score (M=4) for the former statement is 'In the end, the team leader is democratic and collaborative' while the latter is, 'In the end, there is a close attachment to the team'. On the other hand, the lowest mean score is for item 2 for a statement, 'In the end, we do not have fixed procedures, we make them up as the task or project progresses'.

Findings for Relationship of all Stages in Group Dynamics

This section presents data to answer research question 5-

What is the relationship of all stages in group dynamics

To determine if there is a significant association in the mean scores between metacognitive, effort regulation, cognitive, social and affective strategies data is analysed using SPSS for correlations. Results are presented separately in table 3, 4, 5,6 and 7 below.

Table 3
Correlation between Forming and Storming

Correlations

		TOTALFORMING	TOTALSTORMING
TOTALFORMING	Pearson Correlation	1	.528**
	Sig. (2-tailed)		.000
	N	236	236
TOTALSTORMING	Pearson Correlation	.528**	1
	Sig. (2-tailed)	.000	
	N	236	236

**. Correlation is significant at the 0.01 level (2-tailed).

Table 3 shows there is an association between forming and storming. Correlation analysis shows that there is a high significant association between forming and storming (r=.528**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between forming and storming.

Table 4
Correlation between Forming and Norming

Correlations

		TOTALFORMING	TOTALSNORMING
TOTALFORMING	Pearson Correlation	1	.541**
	Sig. (2-tailed)		.000
	N	236	236
TOTALSNORMING	Pearson Correlation	.541**	1
	Sig. (2-tailed)	.000	
	N	236	236

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4 shows there is an association between forming and norming. Correlation analysis shows that there is a high significant association between forming and norming (r=.541**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a strong positive relationship between forming and norming.

Table 5
Correlation between Forming and Performance

Correlations

		TOTALFORMING	TOTALSPERFORMING
TOTALFORMING	Pearson Correlation	1	.391**
	Sig. (2-tailed)		.000
	N	236	236
TOTALSPERFORMING	Pearson Correlation	.391**	1
	Sig. (2-tailed)	.000	
	N	236	236

**. Correlation is significant at the 0.01 level (2-tailed).

Table 5 shows there is an association between forming and performing. Correlation analysis shows that there is a high significant association between forming and performing (r=.391**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a weak positive relationship between forming and performing.

Table 6
Correlation between Performance and Storming

Correlations

		TOTALSPERFORMING	TOTALSTORMING
TOTALSPERFORMING	Pearson Correlation	1	.347**
	Sig. (2-tailed)		.000
	N	236	236
TOTALSTORMING	Pearson Correlation	.347**	1
	Sig. (2-tailed)	.000	
	N	236	236

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6 shows there is an association between performance and storming. Correlation analysis shows that there is a high significant association between performance and storming (r=.347**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a weak positive relationship between performance and storming.

Table 7
Correlation between Performance and Norming

Correlations

		TOTALSPERFORMING	TOTALSNORMING
TOTALSPERFORMING	Pearson Correlation	1	.754**
	Sig. (2-tailed)		.000
	N	236	236
TOTALSNORMING	Pearson Correlation	.754**	1
	Sig. (2-tailed)	.000	
	N	236	236

**. Correlation is significant at the 0.01 level (2-tailed).

Table 7 shows there is an association between performance and norming Correlation analysis shows that there is a high significant association between performance and norming (r=.754**) and (p=.000). According to Jackson (2015), coefficient is significant at the .05 level and positive correlation is measured on a 0.1 to 1.0 scale. Weak positive correlation would be in the range of 0.1 to 0.3, moderate positive correlation from 0.3 to 0.5, and strong positive correlation from 0.5 to 1.0. This means that there is also a storming positive relationship between performance and norming.

Conclusion

Summary of Findings and Discussions

The results show that during the forming stage, students are trying to define the goal and complete the task. This shows that students prefer to work in groups rather than alone. The leader can communicate and delegate tasks equally while in the storming stage. This will ensure that the work runs smoothly and is completed on time. The survey results also show that maintaining harmony is a major challenge, but it is considered as one strategy for ensuring group work towards a common goal. The group task will be easily completed in the final stage, which is the performing stage, when the group can understand their roles and the group ends when the goals are met (Nicolopoulou et al., 2006). It becomes a common practice by assisting group members in understanding and guiding the development process to predict outcomes on the level of growth in the group (Bonebright, 2010).

(Pedagogical) Implications and Suggestions for Future Research

Group work productivity can be increased through proper work management and the leader can distribute tasks to the work to create a stable and strong work in a group. This may help increase student awareness of the importance of group dynamics in their learning process, as well as enable educators to create healthy dynamic group dynamics to facilitate learning activities.

As this study was restricted to a small group of undergraduate students, future research should look at group team dynamics for efficient graduate-level performance. It could also be considered to improve more complex skills such as strategic thinking, critical thinking, and problem-solving skills to accomplish the primary purposes. In this way, it will help students

who engage in group dynamics develop as mature and creative individuals in their university as well as in their community life.

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