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A Study of Relationship between Variables in Group Behaviour among Undergraduates

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Abstract

Group work is one of the most predominantly teaching practices in the classroom as it facilitates students' collaboration to achieve shared learning goals. However, constructing group work is challenging in numerous ways where teachers are required to carefully consider the complexities involved which can affect the whole teaching and learning process. Therefore, this study aimed to explore the perception of learners on their use of learning strategies when conducting group work using Tuckman's Model (1965). Purposive sampling was used to carry out a quantitative survey involving 303 respondents from pre-diploma to degree level of a public university in Malaysia. The instrument used is a 5 Likert-scale questionnaire related to the four stages of group development which are forming, storming, norming and performing. From the study, it was found that these four stages of group development have a strong positive relationship and significant association towards group behaviour. It is vital to study group behaviour based on the different stages of group development as it will lead to higher quality work and the group can function more efficiently. Future researchers should look into the influence of group behaviour between different levels of study. The effectiveness of group work among students with different levels of language proficiency in a foreign language hybrid classroom would also be recommended.

Keywords: Group Behaviour, Tuckman's Model, Group Work, Interaction

Introduction

Background of Study

Understanding group work behaviour is the most important element in determining the success of a project or task assigned since a team is formed with the members having different sets of belief, mindset and working style. McShane et al (2018) defined a team as "groups of two or more people who interact and influence each other and are mutually accountable to achieve common goals related to organizational objectives and also view themselves as a social entity within an organization". Group work is when students are put into small groups so that they will be able to participate in the assigned learning task either with or without direct and immediate supervision by the teacher (Cohen & Lotan, 2014). It can comprise any learning tasks or activities involving students working in pairs or in groups/teams of three or more members. Such group work behaviour allows the students to be responsible in delegating authority and giving them the freedom to carry out the task or project in their own way nevertheless, the teacher or instructor will eventually monitor the outcome of the final product.

When students are assigned with group work, this involves active learning and engagement among group members to be able to produce a fruitful outcome. This is supported by Kamaludin et al (2022) in which group work is shown to have a positive impact towards learning as it facilitates students in studying and helps them to complete tasks given to them with the help of group members besides contributing to high engagement and being more learner-centered. Similar to Kamaludin et al (2022), it is seen as a strategy commonly employed by educators to facilitate students' learning. Collaborative learning procedures as an instructional approach have also been shown to enhance student satisfaction with the learning and classroom experience (Grant-Vallone, 2011). In other words, what makes group work successful is when the learners perceive that each group member needs to put in the effort so that they can achieve the goal together. In doing so, it encourages them to utilize their maximum learning potential.

Beebe and Masterson (2003) have outlined four possible problems encountered in group work. The first would be pressure from the group members to conform to the majority opinion thereby forcing most of them to readily give in to avoid conflict; secondly, the tendency for one of the members to dominate the discussion which will lead other members to feel unsatisfied and left out in the decision-making process. The third most common problem is when some members overly rely on others to do their work and do not fairly contribute to the group while the fourth problem would be in terms of the time taken to accomplish tasks as it requires more time to work in a group compared to working alone.

Group work and study groups have been widely used in higher education and have been shown to benefit students in terms of their performance and learning (Chen & Yang, 2019). Kirschner et al (2018) in his study found that those who contribute more in collaborative learning environments will have greater cognitive benefits. This is evident in the performing stage as highlighted by Rick et al (2022) which provides a positive impact on the cognitive presence of working in a group among the respondents in terms of integration, exploration, and resolution of the ideas that have been discussed among group mates. Zaharuddin et al (2022) suggest that the important aspect of group work is the social interaction where students are able to interact, communicate their ideas openly, collaborate to complete tasks and improve their learning capability while doing group work.

From these previous studies, it is apparent that the instructors' roles in group work is crucial since students will rely on them to execute instructions and guide them in completing the task. Time also plays an important factor so that they can digest the information conveyed better and ensure group members can bond through constant interaction with the group members. In a study by Rezaei (2017) involving 447 graduate students attending a public university in southern California, he concluded that the effectiveness of group work is determined by how the effectiveness is measured, the formation of the group and the task type assigned to learners.

This study is very much relevant to equip future graduates with the soft skills that are much sought after by prospective employees. These skills can be sharpened namely communication, leadership and teamwork which will make them good team players and contribute to the success of an organisation (Kamaluddin et.al., 2022). Due to the fact that in today's global economy, employees are expected to participate and work well in a group project and rarely, they are to work independently. Thus, by learning the strategies of group work and being able to recognise different group work behaviour in a task or project assigned to them, students will be able to apply these skills in a practical, real-world environment. Consideration should also be taken when group work is done in a hybrid classroom to ensure its effectiveness in terms of the strategies employed by instructors or lecturers to positively impact students' learning and performance.

Statement of Problem

Group work is one of the most predominantly teaching practices in the classroom as it facilitates students' collaboration to achieve shared learning goals. Group work has been shown to improve student performance and maximize the effectiveness of the learning process (Bećirović et al., 2020). It can also provide opportunities for students to enhance their communication and teamwork skills, thereby elevating the cognitive restructuring that stimulates learning (Hani et al., 2022). Thus, optimising the benefits of group work requires that instructors administer the team structures to support the students in accomplishing their learning goals (Wilson et al., 2018).

Discussions of group work, on the other hand, have been relatively limited from the literature on L2 (second language) learning and teaching (Mercer & Dörnyei, 2020). Teachers usually are incapable of designing, supervising and assessing the students appropriately in a way that is conducive to meaningful teamwork and deep collaboration (Hani et al., 2022). While constructing group work is challenging in numerous ways, teachers are required to carefully consider the complexities involved which most of the teachers may not apprehend at times (Melhuish et al., 2022). These challenges, if left uncurbed, can hinder effective learning and result in poor-quality products, inequitable distribution of workload, and accelerating conflict among team members (Wilson et al., 2018).

Under those circumstances, Costley (2021) recommended that more varied constructs should be utilized to create more focused and reliable measurements of the group work. This is to allow a deeper understanding of how the specifics of group dynamics impact learning and collaboration and further develop the interpretation of learner-to-learner interactions. Students from various disciplines that experience different coursework assessment plans and group working tasks should also be considered for broader perspectives (Rick et al., 2022; Hani et al., 2022). Thereupon, it will be apt to guide teachers to overcome the challenges they face and thus, can easily manage the group work.

Objective of the Study and Research Questions

This study is done to explore perception of learners on their use of learning strategies. Specifically, this study is done to answer the following questions;

- How does the forming stage influence group behaviour?
- How does the storming stage influence group behaviour?
- How does the norming stage influence group behaviour?
- How does the performance stage influence group behaviour?
- Is there a relationship between variables of group behaviour?

Literature Review

Disadvantages of Group Work

Any theory or practice will always have negative elements or disadvantages, which is true regarding group work. Tuckman's Model is based on theories that might not translate well into practice (Patterson, 2020). Human behaviours and instincts cannot simply be confined and categorized into set units of measurement. They are fluid and always changing. Consequently, students might experience different stages of the model and will overlap with one another. Discord and disagreement are expected effects of such situations. They will lead to competition due to the students' need to voice opinions, disagree or agree on some issues and control the narrative and discussion (Rahmat, 2020). When competing in the classroom setting and working in groups, gender can also play a role in determining the effectiveness of group work, which can be a disadvantage of this model. With regard to group work, male students tend to participate more and be eager to join the discussion. In contrast, female students' participation depends on other variables, such as the number of other female students and the gender of the lecturer. Female lecturers and having more female students in the class will allow more participation from female students. Four clusters of the preferred teaching methods were broken down by gender, with males indicating higher levels of agreement than females with regard to movies, classroom discussions, hands-on activities, and student presentations. (Murphy et al., 2018).

Advantages of Group Work

Many studies have been done to highlight the advantages of group work among university students by looking at their behaviour throughout the teaching and learning activity. Current studies have shown that there exist an advantage in terms of their level of contribution and a high germane cognitive load through group work activities (Costley, 2021). The ability to work in a group has proven to significantly improve student's performance which makes educators and teaching practitioners opt for group work as the major medium in teaching and learning and it has been widely practised all over the world (Chen & Yang, 2019). When students are active in a group, their individual performance in the context of being brave to speak, maturity and organisation skills can be developed throughout the collaborative process among the group members (Zheng et al., 2019). Based on the Self-Explanation Principle, it is proven that when students are provided with the role to explain a certain chapter, it can trigger interest and increase their comprehension level making them more prepared to master or learn a topic much earlier to be shared with other group members (Hefter & Berthold, 2020). Through this method, the group members' role can be widened not merely to listen to the explanation nevertheless, they will be actively engaged and become closer through the interaction, including during the question and answer session

which can reduce the communication gap as well as create a more interesting learning environment and the intended learning potential can then be formed (Thom, 2020).

Nonetheless, the study by Poort et al (2019) has also found that collaborative success materialise from the close relationship among the group members. This situation creates a more spontaneous collaboration of ideas and can be fully maximised without them feeling forced to conduct a task as well as the dependency will be on all the group members and not limited to only one individual member. The strength of their close relationship will be evident through the understanding, encouragement and trust among them. This situation will heighten the strength of the collaborative system within the psychological cycle among each of the group members and evaluate, share and establish a better relationship, academic and harmony among group members with different perspectives. Finally, to view the benefits of group work; other factors namely student's character, skills and language proficiency, process of preparation and support before the group work activities alongside the role of each group member for the task can serve as a catalyst to strengthen group work dynamics (Hennebry & Fordyce, 2018).

Past Studies on Group Work

Group work is the most common teaching strategy used in classrooms. Many studies have been done to investigate group work strategies and its effects on students' performance as well as on group work behaviour. Chen and Yang (2019) indicated that project-based learning or group work has a medium to a large positive effect on student's performance and learning compared to traditional instruction. Rezaei (2018) in his study highlighted the most prevalent group work strategies practised by the faculty and the favourite ones among students. Al.masri (2018) did a study on the relationship between high scores of students and learning by group work strategy, by using a descriptive approach methodology. This study revealed that group work improves the learning and performance of students which in turn improves their achievements, skills and behaviours.

Munyoro (2014) evaluated the use and significance of group work in higher education mainly on assessing student's performance and to measure the effectiveness of the lecturer's teaching. Questionnaires were used for collecting data and was analysed using Qualitative Data Analysis (QDA). Hence, the results show that working in groups was seen as a way of training postgraduate students to benefit from one another's resources and skills by asking them for information, evaluating each other's ideas and monitoring one another's work, besides teaching them that everyone succeeds when the group succeeds, both at the university and at work. Group work is also regarded as a form of team building and graduates with strong team-working skills are valued highly by employers.

From this point of view, physical or online group work plays an important role in students' achievement. The study of online group work by Kamaludin et al (2022) revealed a significant finding to prove that learners have high engagement in online learning when doing group activities or tasks. This quantitative research involved 141 undergraduates in several public higher-learning institutions in Malaysia.

The study by Rick et al (2022) shows that in the stage of storming and norming, online group work is highly favourable. The students can interact, communicate, and collaborate with their group mates to complete group tasks. The survey results also indicate that cognitive presence is found to have direct positive impacts in the performing stage. Students are braver to speak up and defend their ideas in discussions conducted online than face-to-face.

Conceptual Framework

Group work is a popular activity in classrooms; be it traditional face-to-face or online classes. The quality of group work may not lessen the product of the work nor reduce interactions among participants. However, one common occurrence in group interactions is group conflicts. Interactions in group work may sometimes lead to disagreement among participants but this may not necessarily be a negative factor of group work. According to Rahmat (2020), group conflicts may push team members to practice problem solving skills. In addition to that the conflicts may also lead to unplanned generation of idea creations. Figure 1 shows the conceptual framework of the study. It explores the behaviour within a group. According to Tuckman (1965), in group work, participants go through four stages and they are (a) forming stage, (b) storming stage, (c) norming stage and (d) performing stage. 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.

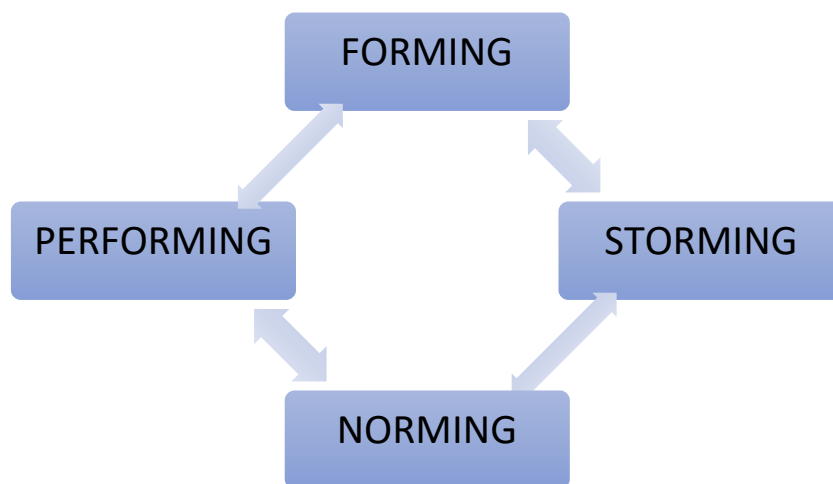


Figure 1- Conceptual Framework of the Study- Behaviour in Group Work

Methodology

This quantitative study is done to explore motivation factors for learning among undergraduates. A purposive sample of 303 participants responded to the survey. The instrument used is a 5 Likert-scale survey and is rooted from Tuckman (1965) to reveal the variables in table 1 below. The survey has 4 sections. Section A has items on demographic profile. Section B has 7 items on the forming stage. Section C has 6 items on the storming stage. Section C has 8 items on the norming stage and section E has 8 items on the 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
.890	29

Table 2 shows the reliability of the survey. The analysis shows a Cronbach alpha of .890, 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

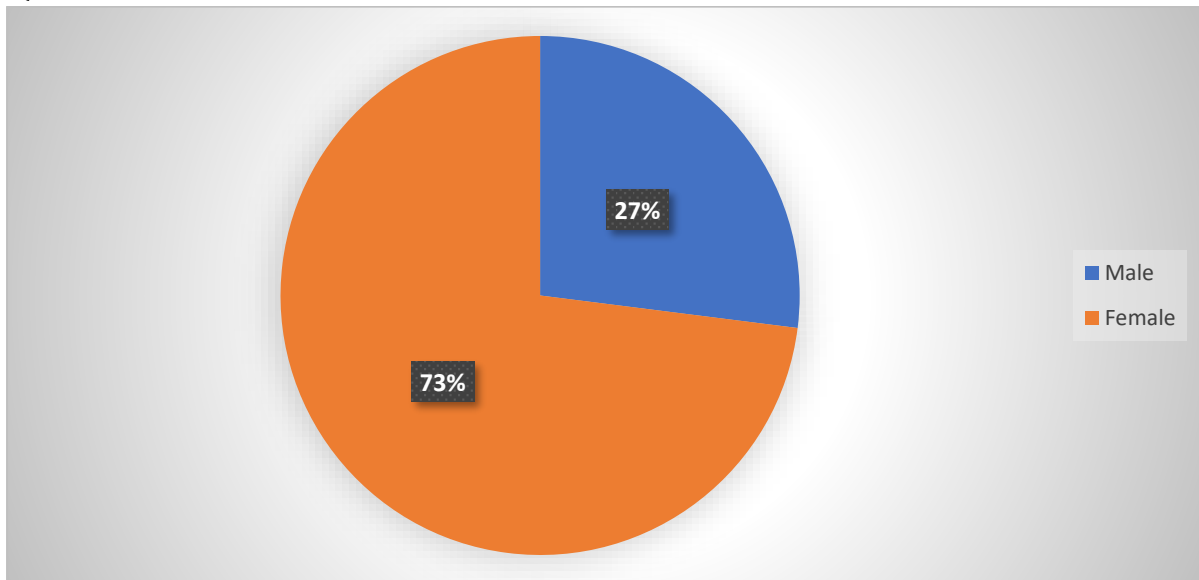


Figure 2- Percentage for Gender

According to Figure 2 on the demographic profile of the gender, out of 303 respondents who responded to the survey to identify the strategies used among students when conducting group work, 27% of them were male students while 73% were female students from a public university.

Q2 Level of Study

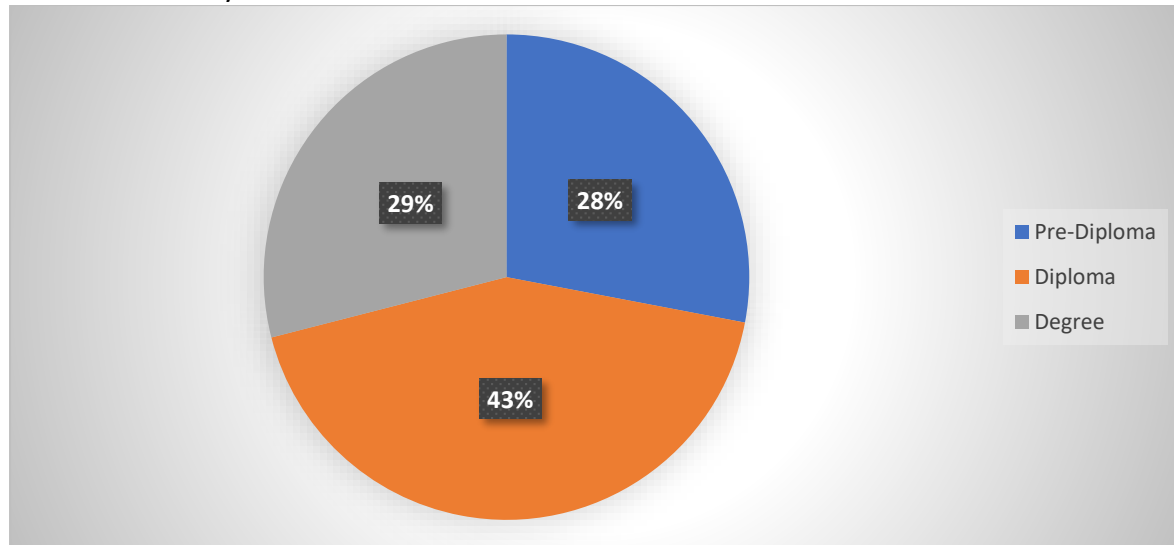


Figure 3- Percentage for Level of Study

Figure 3 presents the percentage for level of study between male and female students. From the data collected, the respondents are full-time students studying in UiTM Melaka Branch. 28% of the respondents were Pre-Diploma students, followed by 43% of Diploma students which contributes the highest number and 29% came from Degree.

Findings for Forming Stage

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

Forming Stage

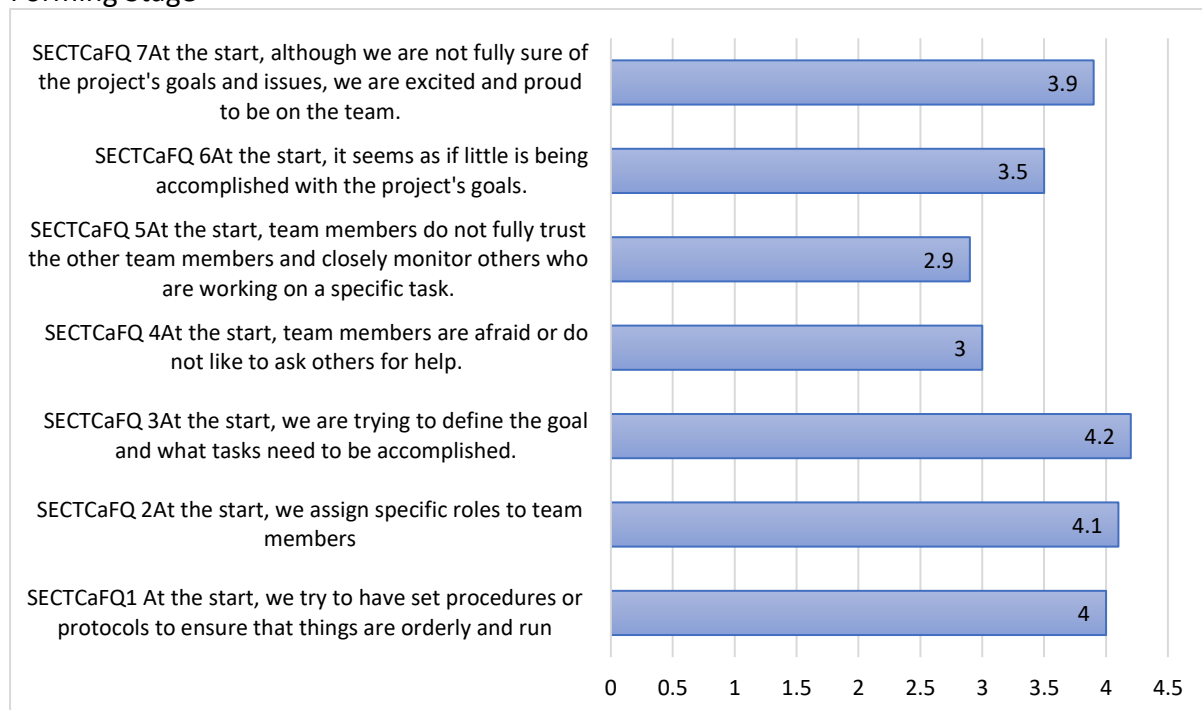


Figure 4: Mean for Forming Stage

Forming stage is the initial process of establishing the structure of the group work. It involves a period of orientation and getting acquainted with each of the members. Figure 4 indicates the mean scores for forming stage. The third statement, *“At the start, we are trying to define the goal and what tasks need to be accomplished”* scored the highest mean (M=4.2). It shows that the students prioritize the need for setting the goal and task completion clearly. They are focusing on achieving common goals and hence, it is essential to assemble an initial structure for the team and examine the needs that the team requires. It is also important to ensure that they have similar goals and values in tackling the tasks. They consider that this is crucial before establishing a set of relationships between the team members. On the other hand, the fifth statement, *“At the start, team members do not fully trust the other team members and closely monitor others who are working on a specific task”* scored the lowest mean (M=2.9). It portrays that the students try to elevate the degree of ambiguity and avoid conflict-generating situations. This is also to ensure role clarity and opportunity to access the capacities of each member.

Findings for Storming Stage

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

STORMING STAGE

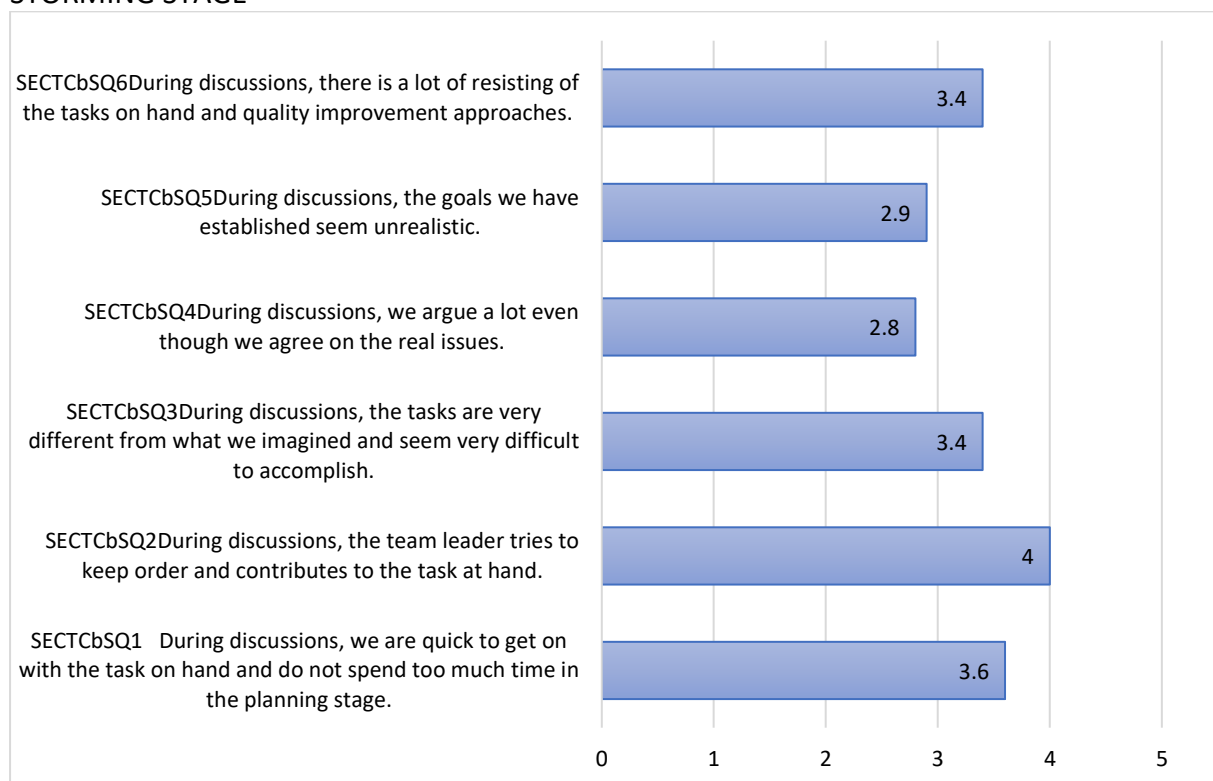


Figure 5: Mean for Storming Stage

Storming stage is essential in the formative level of working in a group. Clashes of ideas, personalities and many other confrontational facets will happen here. These factors are proven to be accurate based on the findings of this research, especially when looking at the relationship between variables in group behaviour among undergraduates. Based on the results for Figure 5 which indicate the mean scores for storming stage, the highest mean is

(M=4) with the statement *“During discussions, the team leader tries to keep order and contributes to the task.”* Given the target group, which is undergraduates, this comes as no surprise due to the fact that they are still receptive to instructions and have at least some foundational training when it comes to leadership during their developmental years at schools. On the other hand, the lowest value based on the findings is at (M=2.8) which can be found in the fourth statement *“During discussions, we argue a lot even though we agree on the real issues.”* Arguments, when an agreement is reached, could be viewed as a negative concept that most students try to avoid or do not want to admit to, given the nature of the question, which is that they argue a lot after reaching an accord. Furthermore, this would indicate a counterproductive outcome and signify that the students do not know how to work together.

Findings for Norming Stage

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

NORMING STAGE

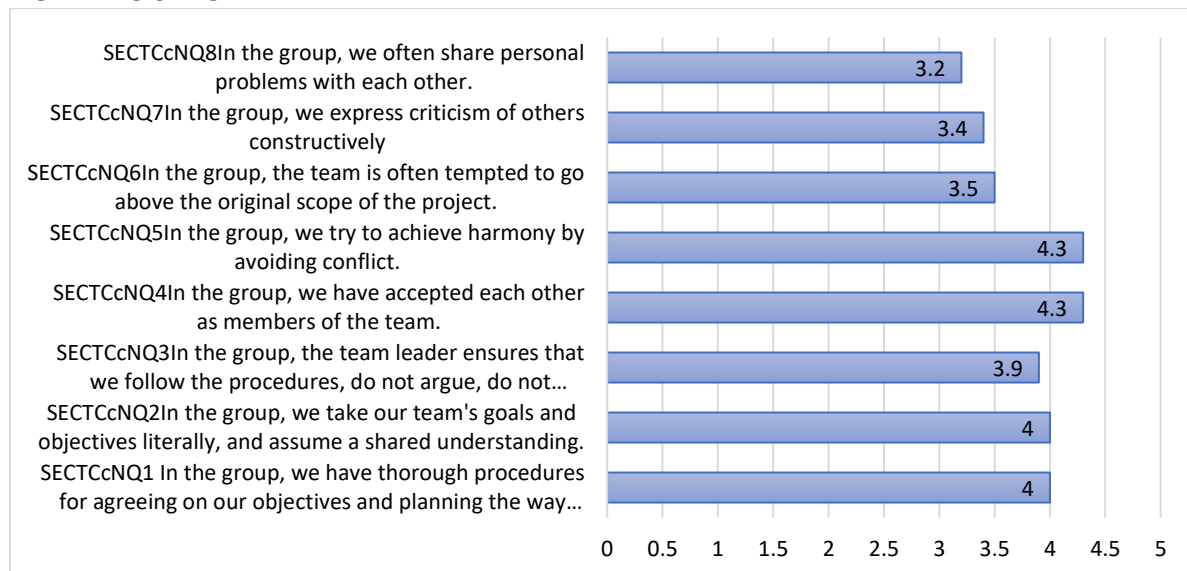


Figure 6: Mean for Norming Stage

The norming stage is where the team develops an increased sense of comfort by expressing their ideas and constructive criticism for the team's success. Members are also more conscious of the effort to achieve group harmony. Figure 6 presents the mean scores for norming stage. The fourth statement *“In the group, we have accepted each other as members of the team”* and the fifth statement *“In the group, we try to achieve harmony by avoiding conflict”*, scored the highest mean (M=4.3). Both statements implicate the existence of professionalism among the members. They resolved disagreements and personality clashes to ensure the emergence of affiliation and engagement. In this stage, they accept others as they are and make an effort to move on. However, the eighth statement *“In the group, we often share personal problems with each other”* scored the lowest mean (M=3.2). It clearly shows that the students avoid being unprofessional in completing the task. Each one of them only focuses on their goals. Even though the team members understand each other's preferences well, there is still a need for personal boundaries among them. This is to show a sense of respect between the members and to build positive professional practices. They also

know their priority in fulfilling the task rather than sharing their personal problems which can create negative norms in the group. The group leader will also ensure every member stays on track and focuses to put effort into completing the project productively.

Findings for Performance Stage

This section presents data to answer research 4- How does the performance stage influence group behaviour?

SECTION E- PERFORMING STAGE

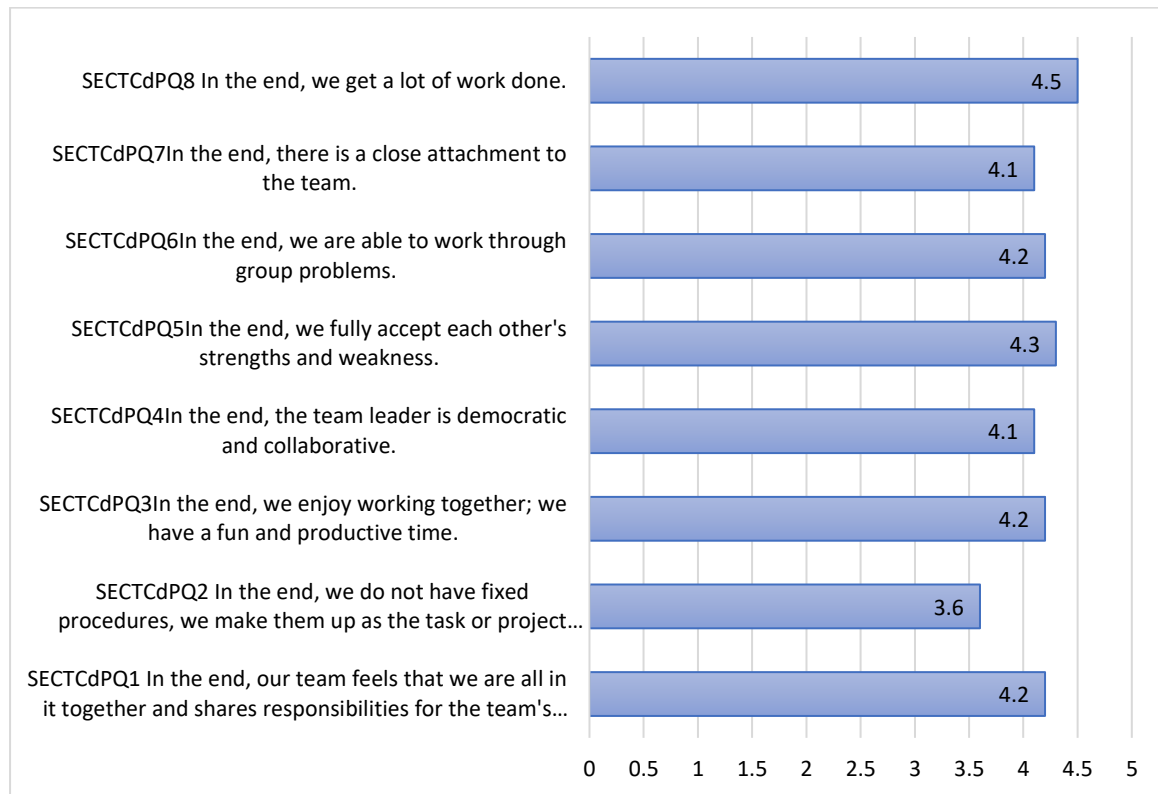


Figure 7: Mean for Performing Stage

The performing stage is where consensus and collaboration have been well-established. There is a comprehensible and stable structure, and all members are determined to do the group's task. Figure 7 indicates the mean scores for performing stage. The eighth statement, *"In the end, we get a lot of work done"* scored the highest mean (M=4.5). It exhibits that the students mark the fulfilment of the group task as the top priority. They acknowledge that the team should be in flow and performing to its full potential. They also keep themselves focused on accelerating efficacy so that they can perform an abundant amount of work. They know how to prioritize the task and work on each one individually. This way, they will not only provide better quality work but will also be able to do the work much quicker and more effectively. In contrast, the second statement, *"In the end, we do not have fixed procedures, we make them up as the task or project progresses"*, scored the lowest mean (M=2.9). It demonstrates that the students recognize the structured processes to achieve their goals efficiently. They believe inconsistent procedures could impede progress or the successful completion of the task. By having a comprehensive schedule, the details of the work timeline and required resources are of the essence to execute each task. They also understand that in

this stage, coordination among the group members needs to be maintained diligently as most of the processes go as planned.

Findings for Relationship between variables of group behaviour

This section presents data to answer research 5- Is there a relationship between variables of group behaviour?

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 and 6 below.

Table 3
Correlation for Forming and Storming

		TOTALMEAN FORMING	TOTALMEAN STORMING
TOTALMEANFORMING	Pearson Correlation	1	.578**
	Sig. (2-tailed)		.000
	N	303	303
TOTALMEANSTORMING	Pearson Correlation	.578**	1
	Sig. (2-tailed)	.000	
	N	303	303

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

Table 3 shows there is an association between forming and storming stage. Correlation analysis shows that there is a high significant association between forming and storming stage ($r=.578^{**}$) 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 stage.

Table 4
Correlation for Storming and Norming

		TOTALMEAN STORMING	TOTALMEAN SNORMING
TOTALMEANSTORMING	Pearson Correlation	1	.353**
	Sig. (2-tailed)		.000
	N	303	303
TOTALMEANSNORMING	Pearson Correlation	.353**	1
	Sig. (2-tailed)	.000	
	N	303	303

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

Table 4 shows there is an association between storming and norming stage. Correlation analysis shows that there is a moderate significant association between storming and norming stage ($r=.353^{**}$) 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 moderate positive relationship between storming and norming stage.

Table 5

Correlation for Norming and Performing

Correlations

		TOTALMEAN SNORMING	TOTALMEAN SPERFORMING
TOTALMEANSNORMING	Pearson Correlation	1	.678 ^{**}
	Sig. (2-tailed)		.000
	N	303	303
TOTALMEANSPERFORMING	Pearson Correlation	.678 ^{**}	1
	Sig. (2-tailed)	.000	
	N	303	303

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

Table 5 shows there is an association between norming and performing stage. Correlation analysis shows that there is a high significant association between norming and performing stage ($r=.678^{**}$) 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 norming and performing stage.

Conclusion

Summary of Findings and Discussions

The current study explored group work behaviour employed by undergraduate students based on Tuckman's Model (1965) and to determine the relationship between variables of group behaviour. From the findings, it can be concluded that all four stages of group development which are forming, storming, norming and performing stages exhibited high mean scores revealing a positive influence on group behaviour. In terms of the relationship between variables of group behaviour, there is a strong positive relationship for all four stages. Thus, this shows that there is a significant association in the mean scores between metacognitive, effort regulation, cognitive, social and affective strategies.

In the forming stage, students were able to establish clear goals and are aware of the tasks required to be accomplished besides, they were also able to assign specific roles to group members. These were the two highest scores to determine how the forming stage influences group behaviour. This is in line with the study by Poort et al (2020) that when group members are allowed to freely choose their group members and able to assign roles for the group, they will be behaviourally and cognitively engaged with one another making them have

clear goals that needs to be accomplished. In addition, group work as collaborative learning is made possible if the group trusts each other from the beginning with their assigned roles to be able to function and perform efficiently in the group. Furthermore, they learn how to set clear goals and to understand their roles and responsibilities making each group member feel accountable in the completion of the group task (Munyoro, 2014).

For the storming stage on the other hand, it is evident that being the group leader, he is expected to be in control and ensure that group members take part fairly in the task. Therefore, based on the findings of this study the group leader tries to maintain order by avoiding unexpected conflicts among team members and contributes to the task by playing an active role. This is line with the study by Rahmat (2020) that team members often wanted to avoid conflicts or disagreement by being accommodating to accept new ideas without reservations.

The next stage is the norming stage and it is found that the students have accepted each other as group members as expected at this developmental stage. Group members have learnt how to accept each other's differences and are more accommodating as outlined by Tuckman (1965) thus, they will interact more confidently and decisively. At the same time, they try to ensure harmony in the group by avoiding conflicts to indicate their acceptance of each other. The study by Jones (2019) supports this view that in the norming stage, group members are more accepting of each other's opinions and suggestions resulting in reduced conflicts as ideas and thoughts are more streamlined. In their study, Carrasco and Iribarra (2018) affirmed that students do not only build their interaction skills and knowledge but also acquired the skills of negotiating and compromising. In fact, open class discussions allow group members to be more tolerant and open-minded to accept differing viewpoints.

The performing stage marks the final stage in Tuckman's group developmental stage. The findings show that group members are able to perform many of the tasks assigned as this stage is also known as the problem-solving stage. Group members are more supportive of one another, become active problem-solvers, are more organised in ideas and interact more hence, they are more positive in achieving their desired goals for the group work. The final outcome of this stage is that they are focused on completing the task successfully which does support the study by (Kamaludin et al., 2022). Hence, by exposing students to active learning experiences through group work or cooperative learning will eventually pave the way for them to learn about the process of arriving at a solution and making them better problem solvers (Nur Azizah, 2022).

Implications and Suggestions for Future Research

This study has provided empirical evidence that beneficial outcomes can be achieved when students engage in appropriate group work conduct as outlined in (Tuckman's Model, 1965). For each stage, each individual member is aware of his goals and tasks so that conflicts and disharmony would not take place or even be minimised. The group leader plays a significant role in managing and controlling the group so that the group will move towards a common goal. Besides, group members are more tolerant of each other's differences and avoid discussing personal problems that might escalate into negative results however professionalism is practised by setting personal boundaries as a sign of respect towards each other. With this, more work can be carried out which will lead to higher quality work and the group can function more efficiently. It is vital to study group work behaviour based on the type of group activities that is being given to students to measure not only the success rate of the group work but the motivation level to complete a group task and its implementation.

Future researchers should look into the influence of group behaviour between social science and science and technology diploma or degree level students and whether these students from different clusters have a certain technique of working and working style in a group that can ensure that all members can benefit from it. Another aspect that could be studied is group work strategies applied by first-year and final-year students from diploma to degree level according to gender since this study is limited to only focusing on their behaviour and the relationship variables involving undergraduates without highlighting their year of study and gender. The effectiveness of group work among students with different levels of language proficiency in a foreign language hybrid classroom would also be recommended. Conclusively, the teaching and learning process can be maximised if Tuckman's (1965) developmental stages are fully implemented and used. Group work will also continue to be an effective method of assigning tasks and activities in both physical and virtual settings as part of students' assessments in higher education in order to achieve academic excellence.

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