

From Forming to Performing: Analysing Group Collaboration using Tuckman's Model

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ABSTRACT

This study examines group interactions in group work activities in Arabic, Chinese and English language courses at a Malaysian university using Tuckman's (1965) model. A quantitative research design was employed with data collected using a questionnaire distributed to 182 undergraduate students. The instrument adapted from Tuckman showed good reliability (Cronbach's $\alpha = .831$). The findings of this study indicate that majority of students preferred group work for idea sharing, motivation and relationship-building whereas some others preferred individual work for independence and efficiency. Meanwhile, across the forming, storming, norming and performing stages, clear role assignment, effective leadership, conflict avoidance and prioritization of task completion become their main goals. Paired samples t-tests revealed significant differences in group interactions between Arabic and Chinese classes at the forming and performing stages. The results from this study reveal the relevance of Tuckman's model in group collaboration and with its effective integration, instructors can structure for successful group work activities. It is suggested for future research to explore the final stage of this model that is adjourning stage, analyse the model using cross cultural analysis and conduct action research in language pedagogy.

Keywords: group interactions, group collaboration, group work activities, Tuckman's model

INTRODUCTION

A. Background of Study

The concept of group work has existed since the development of humanity where it was first observed in the hunter-gatherer communities. These communities were known with their ability to collaborate to ensure survival. A similar concept can be seen among footballers who coordinated ball-kicking tactics too (Vaida & Serban, 2021). The concept of collaboration is not limited to these examples only but group work has also been our greatest tool in the academia and it has gained momentum in higher education since the early 1980s (Loh & Ang, 2019).

In the 21st century where competencies such as critical thinking, collaborative skills and global awareness are principal, educational institutions would need to better provide students with opportunities to actively participate in their education (Johnson, et al., 2014). Therefore, understanding the stages of group development is considered the most important cornerstone in forming an effective group and these techniques can later be applied professionally when students embark on their career paths.

This emphasis on collaboration is also supported by learning theories especially in the social constructivist tradition. Knowledge acquisition is constructed through cooperative effort and Vygotsky (1978) believed that social interaction is an integral part in the acquisition of knowledge and information. This could ideally occur when students cooperatively work with more capable peers as they will help students to achieve higher potentials (Jacobs et al., 2006). However, these potentials can only be materialised with cooperation and

contribution from every member of the group. Otherwise, it could lead to discouragement and obstructions in achieving the intended goals of the group (Johnson & Johnson, 2009).

While theorists like Vygotsky highlight why interaction is important, Bruce Tuckman (1965) has proposed a practical framework to understand group development. His model outlines four stages (forming, storming, norming and performing) that all groups must navigate to reach their full potential. A decade later, Tuckman introduced a fifth stage, known as the adjourning stage and in this final stage, the focus shifts to the group separation. This model has since become a widely recognised framework for analysing and improving group work activities.

The benefits of group work are evident across academic fields. With its dominant effect on collaboration, it helps transform students from carrying a passive to a more active role in the learning process. It also enables them to analyse problem from multiple facets and this will develop their critical thinking skills (Kilgo et al., 2015). For instance, timid students who would usually refrain themselves from asking questions directly to teachers often feel more at ease seeking clarification from group members. This is because peer conversation allows them to learn better as the explanations occur in a more familiar and student-centered language (Johnson et al., 2000).

Despite these benefits, it is notable that cooperation is not something innate and it is to be learnt and acquired. Based on a report from Payscale (2016), 36 percent of managers found that fresh graduates lacked interpersonal and teamwork skills. This finding suggests that more group assignments should be added to higher education curricula and instructors can play their roles to establish the willingness and ability in students to work effectively in groups. Johnson et al. (2013) identify five essential elements to implement for successful cooperation in a group which are positive interdependence, face-to-face interaction, interpersonal and small group skills, individual group accountability and group processing. These elements provide a foundation to structure group work and set for an exploration of how group development influences group effectiveness.

B. Statement of Problem

Research on group work has been ongoing for over three decades and little doubt is left over its benefits for self-esteem, interactions and learning (Buchs et al., 2011). In group activities, students are expected to work together in order to reach common learning goals. This process fosters a strong sense of responsibility for their own learning and promotes a strong positive interdependence on group members as they depend on one another to complete the set goal (Davidson, 1994). In this whole process too, constructive student interactions are essential and this is where learning is improved. Beyond academics, group work has been shown to foster non-academic skills like social skills (Suryadi et al., 2024) and to contribute to psychological well-being such as by reducing the prevalence of substance abuse (Van Ryzin et al., 2023). These new findings suggest that the benefits of group work extend beyond academic context as it is broader into other aspects of life like relations.

However, despite the consensus over group work effectiveness, cooperation is not an innate skill but one that must be learnt and practised. Without guidance, group work can lead to conflicts, unequal participation and ultimately will reduce its effectiveness (Holli & Garcia-Bayonas, 2008). Thus, understanding all the stages of group development offers a valuable framework for identifying the challenges and addressing them constructively. This study seeks to explore group formation and all the stages involved and provide insights in designing group activities to enhance learning capacity.

C. Literature Review

Group Interaction and Stages in Group Work

Group work plays a pivotal role in developing social skills particularly in the context of interaction and collaboration (Ramirez et al., 2023). Educational settings provide platform for students to practise and strengthen these skills (Heinimaki et al., 2021). Nonetheless, the process of group formation varies as some groups are randomly assigned (Chapman et al., 2006), others self-select (Connerley & Mael, 2001), some are

teacher-guided (Blowers, 2003) or a mix of the approaches. These methods of formation influence social cohesion and group stability which in turn affect students' opportunities to develop skills like conflict resolution and effective communication. These skills will not only be valuable in academic settings but also in life settings (Johnson et al., 2014). To better understand this group formation process, Tuckman (1965) proposed a widely recognised model of group development comprising forming, storming, norming, performing and adjourning stages. The first three stages are seen as the most critical because they establish the foundation of the developed group. The storming stage although characterised by tension and conflict, is a necessary step in clarifying roles and expectations, preparing the group for constructive teamwork in the norming and performing stages. The final stage that is adjourning stage reflects the separation of a group (Bonebright, 2010).

Past Studies on Group Dynamics in Group Work

In forming a group, group dynamics are considered essential to ensure the effectiveness of group work. A study conducted by Wan Yadri et al. (2024) found a significant link between stages of group growth with group dynamics and learning outcomes. With 178 participants involved, the study revealed that competent leadership in handling the storming stage as well as communication roles and trust in the forming and norming stages play significant roles in group dynamics and productivity. These findings are consistent with Che Hassan and Mohammad Nor (2024) whose study with 105 participants highlighted a high level of collaboration across the stages of group development. These studies reinforce the importance of understanding group dynamics through the Tuckman's model.

Beyond educational settings, group dynamics are also crucial in professional contexts such as job hiring and promotion (Fittipaldi, 2020). University, a place often viewed as the final pitstop before students enter the workforce, widely integrates group projects into its curricula to mould employable graduates who have experience in group collaboration. In Fittipaldi's (2020) research involving more than 46 peer-reviewed empirical studies, it is discovered that upfront team instruction is crucial for establishing effective group processes. Moreover, it is also paramount to keep the group small and there must also be engagement from the class instructors to further support the group growth.

Further extending the discussion, Zirar et al. (2023) examined Tuckman's model through interviews with 27 interviewees in lean team development. The study illustrates that forming a group involves excitement, anticipation and acceptance in the early stages. Nevertheless, there will always be a stage where frustration, competition and the need for individual recognition exists. As that stage passes, the element of sadness when the group disbands is something that cannot be avoided especially in the adjourning phase. Their findings here suggest that Tuckman's framework remains relevant particularly in organizational context within lean team development lifecycle.

Despite all the benefits of group work like fostering time management, problem solving, cooperation, critical thinking skills and exposing students to diverse perspectives (Freeman, 1996), conducting group projects is still deemed challenging as instructors are often faced with resistance from students as they expressed grouphate. Grouphate could stem from various reasons such as concerned over working with disliked peers (Taylor, 2011), lack of cohesion and consensus in a group, unmotivated members to contribute to the group task and group members' social loafing (Burtis & Turman, 2006). These challenges suggest that productive group work is not easily achieved and requires careful facilitation. In light of this complex process, applying Tuckman's model provides a useful framework for instructors to guide students through productive group development and effective collaboration.

Conceptual Framework

This study adopts Tuckman's (1965) model of group development as its conceptual framework. Originally proposed by a psychologist, Bruce Tuckman, the model outlines a four-stage process that a group must go through to achieve its full potential. The four stage model of group development includes forming, storming, norming and performing:

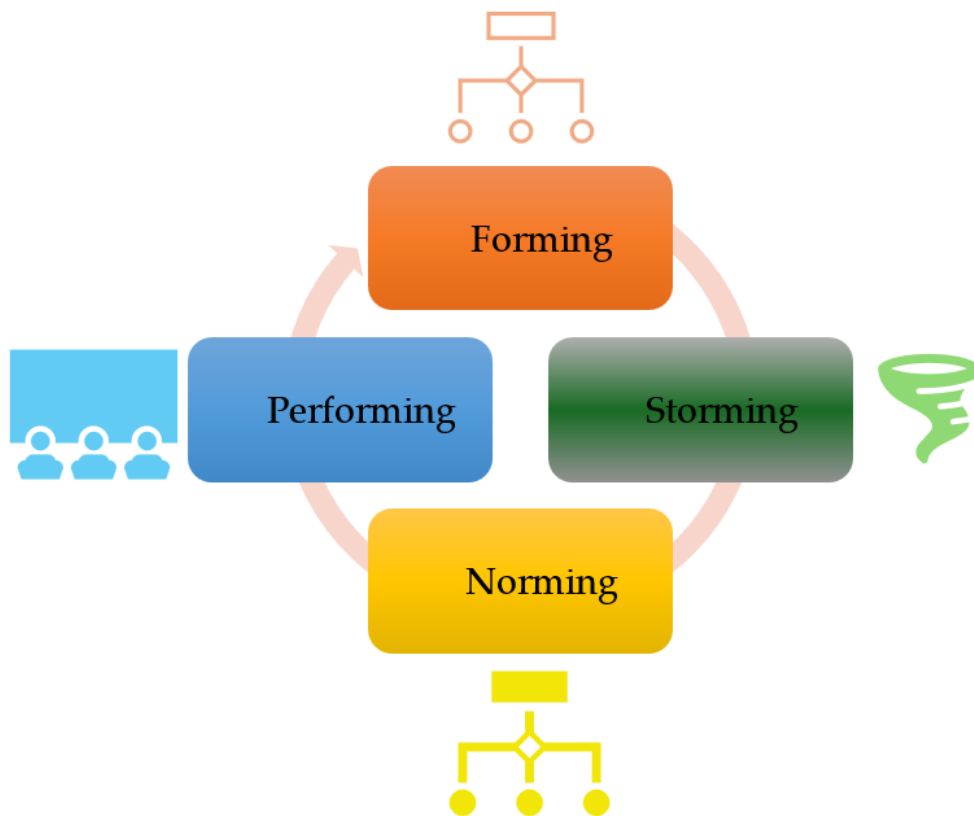


Fig. 1 Four stage model of group development by Tuckman (1965)

These four stages highlight how groups develop maturity, establish relationships and approach leadership.

For example, in the first stage that is forming, group members are required to meet, become acquainted and begin defining their roles. This is crucial because clear role definition sets behavioural expectations from each member (McShane et al., 2018). During this stage too, feeling of excitement for being part of the group will be high and creating clear goals and directions within group members will also happen. The group leader must be clear in providing direction and establishing group norms in this forming stage (Abudi, 2015). Furthermore, this stage requires organization, orientation and icebreakers adoption as these can alleviate students' negative beliefs about group work.

The second stage or storming is where group members form opinions about one another and it is typically marked by conflict and a lack of unity stage. This phase will carry all the conflicts and challenges towards moving to task completion. During this stage, phenomena such as groupthink or social loafing can arise, the latter referring to a decrease in individual effort due to the social presence of others (Latane et al., 1979). This is the time where instructors can introduce conflict resolution strategies and take measures to protect students from social loafing behaviours (McGowan-Kirsch & Lohiser, 2021). When conflicts are managed and group members start to develop trust and cohesion, the group transitions to the norming stage. In this stage, roles are getting clearer, collaboration improves and group members are willing to accept responsibilities. Group leader can gradually step back to allow group members to contribute based on their skills in the group.

Finally, when groups are already comfortable and cohesive, they are ready to embrace the last stage that is performing stage. In this stage, the group becomes a problem solver and the group members will produce the most work (Chidambaram & Bostrom, 1996). Groupthink phenomenon too could be transformed to groupthink in this stage. This is because the group becomes cohesive and the members try to become conflict-avoidant. As the group performs the task, they may feel a sense of accomplishment and the group leader's role shifts to a facilitator, ensuring effective decision making and task completion.

By applying this framework, the study examines how instructors can guide students through each stage. This in turn will foster productive group work and overcome challenges that may arise.

METHOD & MATERIAL

A. Data Collection

The study employed a quantitative research design by using a questionnaire as a research instrument for data collection. Convenience sampling was applied to collect data from Malaysian undergraduate students undertaking language classes at their university. The advantage of convenience sampling is it maximizes the number of willing research respondents, resulting in a high number of responses (Dörnyei, 2007). The research instrument employed in the research was a questionnaire adapted from Tuckman (1965, 2016) which consisted of close-ended and open-ended questions related to students' demographic backgrounds in part A, students' involvement in group activities in their language courses in part B, students' perceptions of the group work stages in part C, and students' perceptions of working as a group in part D. The items related to students' perceptions of the group work stages were measured using a 5-point Likert scale ranging from strongly agree to strongly disagree.

182 Malaysian students enrolled in three language courses, Arabic, Chinese, and English participated in the survey. They were undergraduate students studying in different social science and social technology programs at a public university in the east coast of Malaysia. 21 percent of the respondents were male students and the majority of them, 79 per cent were female students. Only 12 percent of the respondents were enrolled in science and technology programs and the others were enrolled in social science programs.

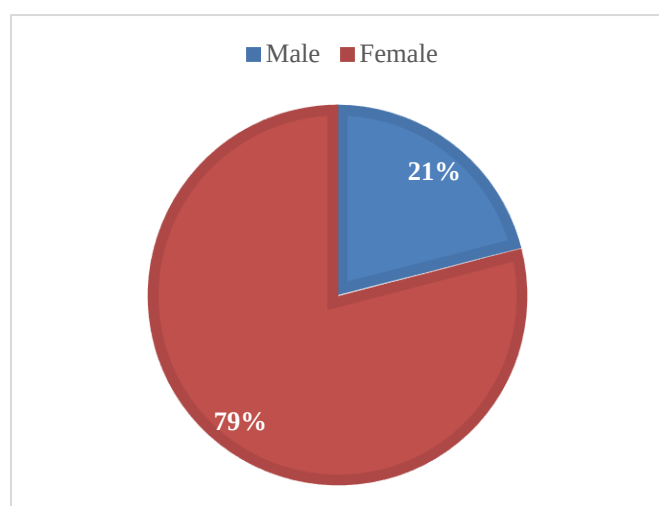


Fig. 2 Respondent gender

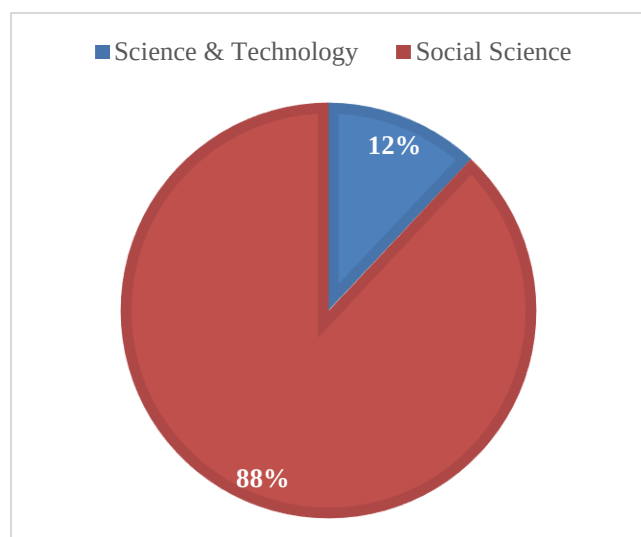


Fig. 3 Programs

B. Findings

Table 1 shows the reliability of the survey. The analysis shows a Cronbach alpha of .831, thus, revealing a good reliability of the instrument used in the study.

TABLE I RELIABILITY ANALYSIS OF THE SURVEY

Reliability Statistics	
Cronbach's Alpha	N of Items
.831	87

The respondents were asked to share the types of activities that involved group work in their language classes. Based on their responses, all language courses conducted at their university implemented various activities for language learning that involved group participation. These activities were carried out for all four major skills in language learning, listening, speaking, reading and writing. Various group work activities were implemented to in speaking lessons such as public speaking, discussion, mock interview and role play. In writing classes, the respondents stated several group activities such as essay writing and report writing. However, for listening and reading lessons, the respondents did not specify the group activities implemented most probably because these two were receptive skills and require less group interaction.

The students were further asked to state their type of involvement in their language classes. Only 19 percent of the respondents had the role as a group leader, and the rest were often assigned as group members. This is indicated in Figure 4.

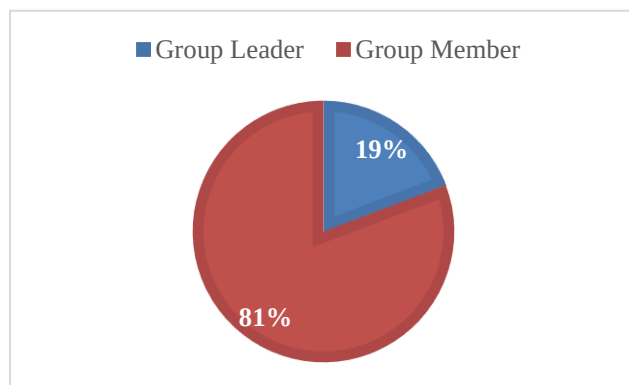


Fig. 4 Role assignment in group work

The students were also asked about the individual who made the decision in appointing them as a group leader or group member. More than half of the respondents, 57 per cent, stated that the decision was made by themselves. This result suggested the students' autonomy in making decisions for their language learning experience.

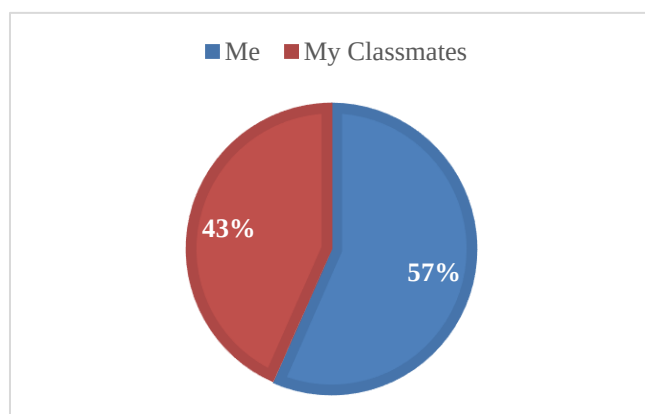


Fig. 5 Decision of appointment as group leader or member

Students' Work Preferences

The students were also asked to indicate their preferences for working in group or working individually. The majority of them, 43% reported that they preferred working in group. 36% of the students indicated their preferences for working on their own. Meanwhile, 21% of the students stated that they preferred both styles.

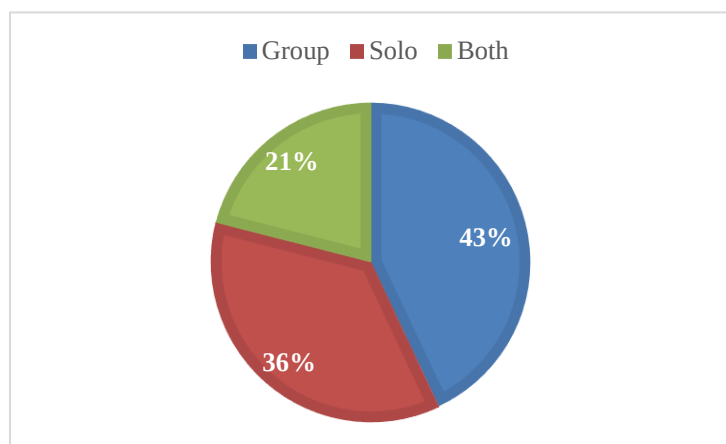


Fig. 6 Students' work preferences

There were various reasons stated by the students to explain their preferences. The reasons can be organized into several themes. According to students who preferred working in group, their reasons were based on the opportunities to share ideas and learn from others. They deem these important for the brainstorming process in order to have diverse ideas from different members who had different abilities. They also stated that by working in group, they could distribute the work among the group members which would result in faster work completion compared to doing the same work alone. Besides, the students thought that working in group was more motivating and supportive as they could offer encouragement to each other and the work process would be less stressful as they could have more fun with their group members. Another set of reasons for the students' group work preferences was related to relationship building. The students stated that working in group allowed them to have more opportunities to communicate more with their peers and strengthen their bond. They considered teamwork highly important in selecting working in group over working individually.

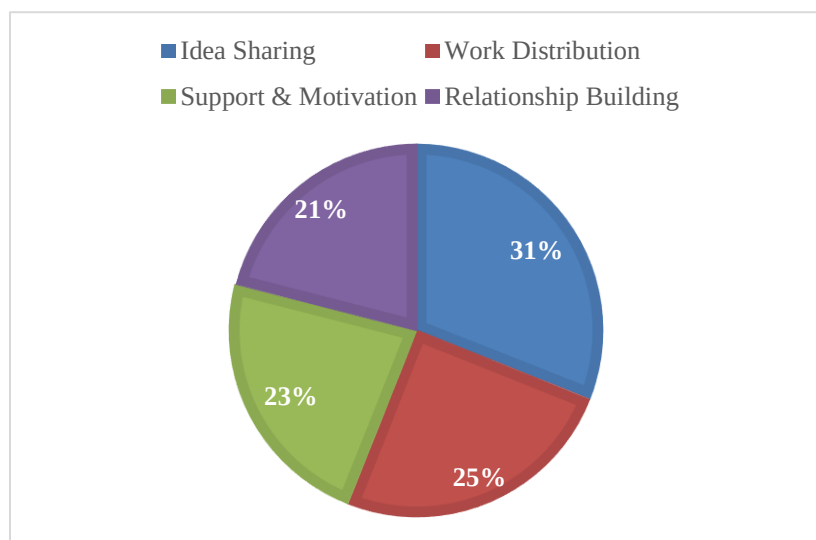


Fig. 7 The reasons for group work preference

Meanwhile, for students who stated that their preferences for working individually cited reasons related to being independent. These reasons were generally the opposite of the reasons cited for working in group. The students believed that by working solo, they had full self-control and full responsibility over an assigned task. With this, they did not have to depend on their peers to complete a certain task. These students also reported

higher time efficiency by working individually. They could do their work at their own pace, more quickly and more flexibly. Other reasons were related to the students' need for higher concentration while doing their work, hence, reduced their anxiety because they did not have to rely on others or worry about others' perceptions. The last set of reasons was related to the students' strategy of avoiding unforeseen issues with their peers. These reasons were cited based on the students' past experiences with their group members. By working on their own, the students stated that they could avoid free riders who often benefited from the contribution of other committed members. Thus, the students believed that working individually would prevent delays in work progress and interpersonal conflicts with their peers which could escalate to more serious issues.

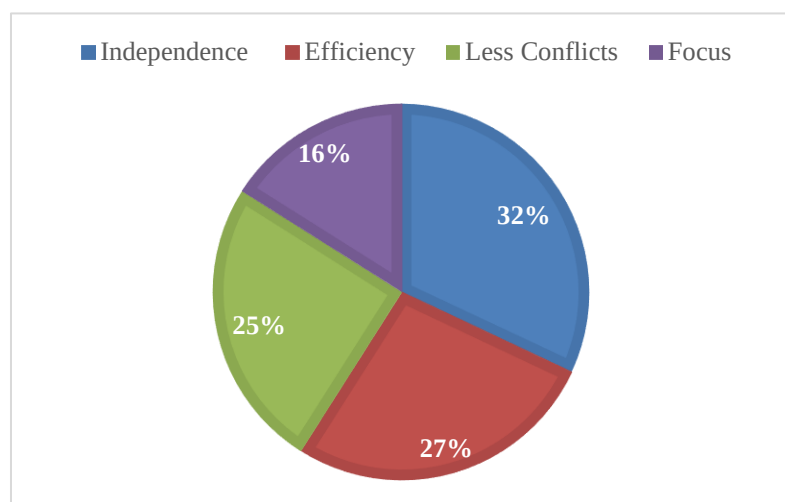


Fig. 8 The reasons for individual work preference

As for students who preferred both working styles, their reasons were a combination of the reasons presented above. Their reasons also depended on the type of task assigned by their lecturers. For example, they preferred doing writing activities individually, whereas for presentation activities, they preferred doing them in group as they would gain more confidence and support from their group members. These students indicated a balance between independence and collaboration in doing language activities.

The Forming Stage

This section presents the findings of group interactions at the forming stage in the three language courses. For this stage, the highest mean reported for group interactions in the Arabic and English language courses was for the students' involvement and interactions about assigning the roles to everyone in their groups. The mean value for the Arabic course was 4.2582 and for the English course, 4.3132 which indicated the students' particular attention to ensuring every group member was assigned to a specific role in carrying out any group activities in their Arabic and English language courses. As for the Chinese language course, the highest mean value for the forming stage was reported for determining the goals and tasks that a group had to accomplish. The mean value yielded for this item was 4.4121.

TABLE II MEAN VALUES FOR GROUP INTERACTIONS AT THE FORMING STAGE

	N	Min	Max	Mean	Std. Deviation
AFA2 At the start, we assign specific roles to team members.	182	2.00	5.00	4.2582	.76115
AFC3 At the start, we are trying to define the goal and what tasks need to be accomplished.	182	3.00	5.00	4.4121	.67346
AFE2 At the start, we assign specific roles to team members.	182	1.00	5.00	4.3132	.85122

The Storming Stage

The findings for the storming stage are presented in Table III. At this stage, the highest mean yielded for group interactions which occurred at the storming stage was reported for group leaders' involvement in leading their groups. The highest mean value reported was 4.0385 for the Arabic language course and the same value reported for both Chinese and English language courses, 4.0714. This result suggested that all the group leaders appointed to lead group activities in all the language courses played their roles well as they managed to maintain their groups' structure and helped to carry out their group tasks.

TABLE III MEAN VALUES FOR GROUP INTERACTIONS AT THE STORMING STAGE

	N	Min	Max	Mean	Std. Deviation
BSA2 During discussions, the team leader tries to keep order and contributes to the task at hand.	182	2.00	5.00	4.0385	.78216
BSC2 During discussions, the team leader tries to keep order and contributes to the task at hand.	182	1.00	5.00	4.0714	.89835
BSE2 During discussions, the team leader tries to keep order and contributes to the task at hand.	182	1.00	5.00	4.0714	.78688

The Norming Stage

The results for group interactions at the norming stage are shown in Table IV. In all the three language courses, the highest mean was reported for interactions that could maximize groups' harmony and minimize conflicts. In the Arabic language course, the highest mean value was 4.3022, whereas for the Chinese language course, the value was 4.5165 and for the English language course, the value was 4.4176. These results suggested that all group members prioritize harmony in their interactions as this was crucial for task completion.

TABLE IV MEAN VALUES FOR GROUP INTERACTIONS AT THE NORMING STAGE

	N	Min	Max	Mean	Std. Deviation
CAN5 In the group, we try to achieve harmony by avoiding conflict.	182	3.00	5.00	4.3022	.75208
CNC5 In the group, we try to achieve harmony by avoiding conflict.	182	1.00	5.00	4.5165	.68710
CNE5 In the group, we try to achieve harmony by avoiding conflict.	182	2.00	5.00	4.4176	.69036

The Performing Stage

The performing stage was the final stage before the groups were adjourned or dissolved. At this stage, the highest mean value was reported for group interactions that were aimed for task completion in the three language courses. The highest mean value for the Arabic language course was 4.3956, whereas the value for the Chinese language course was 4.5934 and 4.5440 for the English language course. The results indicated that all group members considered interactions that would contribute to task completion was most important. Furthermore, completing the assigned tasks was crucial as this would determine their academic grade at the end of the semester.

TABLE V MEAN VALUES FOR GROUP INTERACTIONS AT THE PERFORMING STAGE

	N	Min	Max	Mean	Std. Deviation
DPA8 In the end, we get a lot of work done.	182	3.00	5.00	4.3956	.74149
DPC8 In the end, we get a lot of work done.	182	3.00	5.00	4.5934	.60345
DPE8 In the end, we get a lot of work done.	182	3.00	5.00	4.5440	.64435

Paired samples t-test was carried out to determine the mean differences in the students' group interactions within the forming, storming, norming and performing stages across three language courses, Arabic, Chinese and English. The results are displayed in Table VI.

TABLE VI PAIRED SAMPLES T-TEST OF GROUP INTERACTIONS IN ARABIC, CHINESE AND ENGLISH LANGUAGE COURSES

		Paired Differences					t	df	Sig. (2-tailed) = p-value
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Forming	English – Arabic	.08713	.68580	.05083	-.01318	.18743	1.714	181	.088
Forming	English – Chinese	-.03218	.73135	.05421	-.13915	.07478	-.594	181	.553
Forming	Arabic – Chinese	-.11931	.77515	.05746	-.23268	-.00594	-2.076	181	.039
Storming	English – Arabic	.05128	.84211	.06242	-.07188	.17445	.822	181	.412
Storming	English – Chinese	-.03022	.86974	.06447	-.15743	.09699	-.469	181	.640
Storming	Arabic – Chinese	-.08150	.96370	.07143	-.22245	.05945	-1.141	181	.255
Norming	English – Arabic	.02335	.81061	.06009	-.09521	.14191	.389	181	.698
Norming	English – Chinese	-.07349	.73559	.05453	-.18108	.03410	-1.348	181	.179
Norming	Arabic – Chinese	-.09684	.89609	.06642	-.22790	.03422	-1.458	181	.147
Performing	English – Arabic	.09135	.75914	.05627	-.01969	.20238	1.623	181	.106
Performing	English – Chinese	-.08448	.70183	.05202	-.18713	.01817	-1.624	181	.106
Performing	Arabic – Chinese	-.17582	.79078	.05862	-.29148	-.06016	-3.000	181	.003

Based on the results shown in Table 6, statistically significant differences were indicated only in the forming stage and in the performing stage between Arabic and Chinese languages. In the forming stage between Arabic and Chinese languages, the difference is -0.11931 (SD = 0.77515), with a p-value of .039, suggesting a significant difference between the two languages. In the performing stage, the result shows a mean difference of -0.17582 (SD = 0.79078), and the p-value, .003. This also suggests a significant difference between Arabic and Chinese languages.

C. Discussion

The study has examined students' perceptions regarding group interactions in group work activities carried out in their Arabic, Chinese and English language courses. First, the study showed that the respondents most often had the role as group members rather than group leaders, with the decision in selecting the role was mainly made by themselves. This result suggested the students' autonomy in making decisions for their language learning experience. Learner autonomy which fosters students' ability to control their own learning is essential for successful learning (Zhong, 2021). The students believed that for them to succeed in their language learning, they should be in charge of their personal actions which included making decisions in their

roles, either as a group leader or group member. Moreover, participating in group activities helps develop learner autonomy among students as they discover ways they can contribute effectively to their own groups (Koudenburg et al., 2017).

At the forming stage, the students in Arabic and English language courses placed highest importance on interactions for determining the roles for their group members. The same result was reflected in Che Hassan and Mohammad Nor's (2024) study. The students realized that assigning a role to every member in their groups is crucial to achieve unity and to carry out responsibilities within the groups (Fujimoto, 2016). Furthermore, assigning the right role to the right individual in the group will promote collaborative dependence, individual responsibility and awareness of group members' contribution and group achievements (Fujimoto, 2016).

Moving on to the storming stage, students in the three language courses expressed highest agreement with the role played by their group leaders. This finding indicated that students who were in charge of leading group discussions understood their responsibilities and managed to deliver it well in the language learning through group discussion process. Students' leadership skills fall into three categories – hard competencies, soft competencies and mixed competencies (Asbari et al., 2020). In the language learning process, students should be able to project their leadership skills. Assigning students to the role as a leader will help develop good leadership qualities that will enhance their social skills – demonstrated in the interactions with their group members and lecturers (Uaikhanova et al., 2022). Based on the findings, the group leaders have proven that they were able to coordinate the assigned tasks and direct their group members to carry out the tasks appropriately in order to achieve the established goals collaboratively (Cáceres-Reche et al., 2021).

At the norming stage, the students reported that they made efforts to avoid conflicts within the group as a way to achieve group harmony. Considering all the students' backgrounds, it was not surprising to find the importance of group harmony as perceived by them. As a society, Malaysia is categorized as a collectivistic society which fosters strong relationships and cooperation with their fellow society members (Chen et al., 2021; Hofstede Insights, n.d.). In their group, students demonstrated interdependence with their group members. This is a characteristic that can be observed among collectivistic societies which is essential for strengthening the bond among the members and increasing acceptance by others (Merkin, 2015).

The final stage of group work – the performing stage showed that the students were able to achieve their objectives and complete their work. The same result was reported in several studies on group work involving Malaysian students (Che Hassan & Mohammad Nor, 2024; Mohammad Nor & Che Hassan, 2023; Wan Yadri et al., 2024; Zakaria et al., 2023). This finding suggests that students may have encountered conflicts throughout their process of completing the assigned tasks. Despite their conflicts, the students managed to overcome them and achieve one of their group objectives – to complete the work. As preserving group harmony is a priority, Malaysian students opt for employing non-verbal communication to express their disagreement to minimize conflicts which result from misunderstanding among group members (Sim et al., 2020). Thus, the finding of the present study shows that the students can work collaboratively to improve their work performance in order to finish their tasks.

The paired samples t-test shows significant differences in the forming and performing stages between Arabic and Chinese language courses. These differences could be owing to the influence of the students' experiences in learning the two languages. Among the students, more of them were more familiar with the Arabic language since they had experience learning Arabic in secondary school. Meanwhile, more students began studying basic Chinese language at the university. Despite the difference in their duration of exposures to both languages, the functions of the Chinese language are more prominent in the Malaysian context particularly for workplace communication in the urban and professional occupational settings (Carstens, 2018). This factor drives Malaysian public universities to offer Chinese language courses for undergraduate students as their third language (Terng et al., 2015). Therefore, the students were highly motivated in learning Chinese in order to secure future employment compared to learning Arabic. This is because in the Malaysian context, Arabic language is less frequently used and had limited workplace functions as opposed to Chinese language which has wider functions. In Malaysia, Arabic is more useful for Islamic jurisprudence, pilgrimage, and tourism

purposes among others (Ghani, et al. 2019). Hence, these factors explain the higher value of students' group interaction in the Chinese language course at the forming and performing stages. Students might be highly motivated at the beginning and final stages of their group activities.

CONCLUSION

The present study has shown the important functions of interaction in group work activities in three language courses – Arabic, Chinese and English language among Malaysian university students. By employing Tuckman's model to examine students' interaction in four phases of group work, the study confirms the usefulness of the model which can be incorporated in language learning specifically in activities that require group participation such as public speaking, role play, essay writing and report writing. Betts and Healy (2015) propose that for integration of Tuckman's model in a language class, students must be introduced to the model for them to discover, experience and reflect on the several stages involved in group work. This will improve students' understanding and appreciation of the model dynamics.

Therefore, future studies can be carried out by extending and addressing the limitations of the present study. First, future studies may include the fifth stage of group work – adjourning which is a process of disengagement from the created group. This stage was added in the later expansion of the model by Tuckman and Jensen (1977). Second, future studies may conduct a cross-cultural analysis of group work interaction within each stage among students from different countries or cultures. This can be done by identifying cultural differences based on high-context and low-context cultural communication (Hall, 1976) or national cultural dimensions (Hofstede et al., 2010). Lastly, if language instructors intend to integrate Tuckman's model in their language activities, they may conduct an action research and examine the effectiveness of the strategy through pre- and post-tests.

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