

## **The Usage of Direct and Indirect Learning Strategies Fostering Interactions in Group Discussions**

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### **ABSTRACT**

*The 4IR has influenced learners in many ways and one of them is the ability to learn collectively and from each other. A large number of students have resorted to learning individually without considering the benefits of studying in groups. The purpose of this study was to examine learners' usage of direct and indirect learning strategies when they interacted in group discussions. It added to the present degree of knowledge and understandings pertaining to the principle behind an effective group work and learning strategies in higher institutions and is centred on students' involvements in group work that included acquiring knowledge in groups. The participants for this study comprised of students from selected English proficiency courses. They responded to a survey, and the data from the survey was then analysed using the SPSS. The result shows that students were able to develop knowledge on various content-based topics and they have also learnt to interact and improve their social skills using direct and indirect learning strategies in group work activities. The activities in the ESL classrooms incorporated group work for maximum group and social interaction. The findings for this study show positive implications for group interactions in the ESL classrooms.*

**Keywords:** : ESL learners; interaction; direct strategies; indirect strategies; group work

## INTRODUCTION

The Fourth Industrial Revolution (4IR) sees the rise in the use of electronics and information technology in all sectors. The education sector is trusted with the responsibility of training learners to meet the demands of 4IR. In fact, learners need to be empowered with skills that would enable them to face these demands. However, with the introduction of electronic and information technology, many students have resorted to becoming individualistic learners (Ogihara, 2018). However, Brown-Martin (2017) stated that learning does not take place in isolation but instead, learners learn better when they are involved in group activities. According to the researcher, one model of education which can be adapted is the constructivism model where education is viewed as a ‘reconstruction of knowledge’ and learning is experimental within a professional and social context. Shared activities give learners the opportunity to have discussion, impart knowledge and solve problems. This notion implies that students will benefit more from learning in groups, in comparison to learning individually.

### *Background of Study*

In ESL classrooms, group work provides a platform for learners to discuss, share knowledge and solve problems together. According to Brown (2002) as cited in Taqi and Al-Nouh (2014), group work creates an environment where learners can learn with ease without feeling stressed. It also allows learners who are nervous to be more confident as they learn from one another. In addition, group work helps learners to improve their social skills as they have the opportunity to include new networks to learn collectively. Rezaee and Azizi (2012) specified that in group work activities, learning takes place based on the socially organised exchange of information among learners. The researchers further stated that in group work activities, learners are responsible for their own learning as well as that of the other members in the group. Thus, the achievement in learning is interdependent among all the learners in a particular group.

The learning process that takes place in group work is often explained by Vygotsky’s (1978) Zone of Proximal Development (ZPD). ZPD is the gap between what a learner has learned, his real level of development and what he is able to achieve when he is assisted by more capable peers or facilitators. Wass and Golding (2014) mentioned that ZPD is a process of learning where learners can complete tasks which they are unable to do on their own, with the help of more able peers or facilitators. Group work activities involve cognitive, motivational, affective and social skills. When learners interact in groups, they use their own strategies to learn and construct knowledge (Beccaria et al., 2014). Oxford (1990) grouped learning strategies into two key categories: direct strategies and indirect strategies. Direct strategies are strategies that influence learners directly in learning. Indirect learning strategies are approaches which indirectly have an effect on learning. This study looked at how learners used direct and indirect learning strategies when interacting in group discussions.

### ***Statement of Problem***

Besides utilising and interacting with technology in innovative ways, the 4IR era requires graduates to incorporate technology into every aspect of human lives. The ability to communicate ideas and function effectively in a society is thus, a necessity. Communication and social skills are therefore crucial to accomplish this.

The current need for online and distance learning may emphasise more on the ability to learn and work independently but to what extent learning and social interaction is taking place is unknown. Many students have resorted to learning individually without considering the benefits of studying in groups. As a result, more individuals are experiencing difficulties in adapting to working collectively, which then damages their interpersonal relationships and their well-being (Ogihara, 2018).

Group interactions in language learning settings may be the key to how learners become confident communicators and problem solvers in the workplace. Thus, a research into the learning strategies employed by learners during group work is vital to understand the practice and impacts of group activities in ESL classrooms and beyond.

### ***Objective of Study***

This study examines how learners use direct and indirect learning strategies when they interact in group discussions. It adds to the existing level of knowledge and understandings pertaining to the principle behind effective group work and learning strategies in higher institutions and is centred on students' involvements in group work and studying in groups.

### ***Research questions***

This research is conducted to answer the following questions:

1. Are there any significant differences in learning strategies and social interaction across grade?
2. Does direct learning strategies influence group work?
3. Does indirect learning strategies influence group work?
4. Does group work influence social interaction?

## **LITERATURE REVIEW**

Group work to some extent is seen as a form of collaborative learning although the concepts may differ. Lin (2014, p. 19) explains that in a study conducted by Woolfolk (2004), group work is the concept of several students merely working together but may not even be seen as cooperating. Group work is, however, the initial stage into making students collaborate with one another and is in the end, effective.

Chappell (2010) mentions the rationales for engaging group work in second language classrooms. According to the researcher, firstly, group work offers a prospect for learners to practise the target language and concurrently allows teachers to take a break from talking and explaining. Secondly, group work helps in increasing quality talk as students are not merely answering questions from the teachers, thus creating a more natural and less pressured situation that allows a more successful discourse. In addition, conversational management skills are

developed when students are given the chance to navigate their conversations and explore the different language functions. In addition to that, engaging in group work permits students to practise interacting at their own pace that leads to the fourth benefit or rationale, which is encouraging an emotionally conducive environment. Chappell (2010) also believes in the motivational quality of engaging in group work. Moving away from the traditional method of learning English where students receive instructions and learn inactively from lessons given by their teachers, Usman (2015) echoes Vygotsky's 'social scaffolding' in which he believes that learning is mostly done in group settings as opposed to "listening to that voice in our head."

In ESL classrooms, group work is employed as one of the methods to practise communication in the second language. It is often assumed that group speaking practices and activities lead to grammatical competence in the target language. Spada and Lightbrown (1989) state that there is a lack of evidence to support this view, however, Rivers (1987) believes that group work promotes communicative competence instead (cited in Bell, 1998).

### ***Learning Strategies***

Learning strategies is not a new concept in language learning. According to Griffiths & Oxford (2014) research on learning strategies dates back to the 1970s with researchers like Rubin (1975). The research continued into the 1980s with Chamot (1987) and into the 1990s with Oxford (1990) and Wenden (1991). The authors also add that the research on learning strategies still remains relevant as literature as the concept is still available in this era (Cohen, 2011; Cohen & Macaro, 2007; Griffiths, 2008, 2013; Oxford, 2011). This has led to the many different definitions of learning strategies. Rubin (1975) as cited in Griffiths and Oxford (2014) states that learning strategies are methods or devices that are used by learners to obtain knowledge. O'Malley et al. (1995) as cited in Griffiths and Oxford (2014) describes learning strategies as processes learners employ to assist in language acquisition, retention, retrieval and performance. Although there are various definitions of learning strategies, it can be concluded that learning strategies are strategies that learners employ to facilitate their learning.

The classification of learning strategies also varies among researchers. Rubin (1975) as cited in He et al. (2014) groups learning strategies into strategies that affect learning directly and indirectly. Direct learning strategies comprise of clarification, monitoring, memorisation, guessing/inductive inferring, deductive reasoning and practice while indirect learning strategies include making prospects for training and production activities. O'Malley and Chamot (1990) as cited in He et al. (2014) classify learning strategies into cognitive strategies, metacognitive strategies and social/affective strategies. According to the authors, cognitive strategies include processing language in the brain and metacognitive strategies encompass thinking about the learning processes. Social/ affective strategies indicate the ways of handling the affective and social aspects in learning situations. Oxford (1990) as cited in He et al. (2014) groups the strategies into two central classifications which are direct strategies and indirect strategies.

### ***Direct strategies***

Oxford (1990) as cited in He et al. (2014) divides the strategies into two central classifications namely the direct strategies and the indirect strategies. Direct strategies are made up of strategies

that contribute directly to learning. With reference to Table 1, the subdivision of direct strategies comprises the memory, cognitive and compensation strategies.

***Indirect strategies***

Indirect learning strategies are strategies which indirectly affect learning. The subdivision of indirect learning strategies include metacognition, affective and social strategies. The classification of leaning strategies that is adapted from Oxford (1990) is shown in Table 1.

Table 1  
*Classification of Learning Strategies*

DIRECT STRATEGIES	Memory Strategies	<ul style="list-style-type: none"> <li>▪ Forming mental connections</li> <li>▪ Using images and sound</li> <li>▪ Revaluating well</li> </ul>
	Cognitive Strategies	<ul style="list-style-type: none"> <li>▪ Practicing</li> <li>▪ Getting and sending messages</li> <li>▪ Examining and reasoning</li> <li>▪ Forming structure for input and output</li> </ul>
	Compensation Strategies	<ul style="list-style-type: none"> <li>▪ Predicting intelligently</li> <li>▪ Overcoming limitations in speaking and writing</li> </ul>
INDIRECT STRATEGIES	Metacognitive Strategies	<ul style="list-style-type: none"> <li>▪ Focusing</li> <li>▪ Arranging and planning learning</li> <li>▪ Assessing learning</li> </ul>
	Affective Strategies	<ul style="list-style-type: none"> <li>▪ Reducing anxiety</li> <li>▪ Encouraging oneself</li> <li>▪ Taking emotion temperature</li> </ul>
	Social Strategies	<ul style="list-style-type: none"> <li>▪ Asking questions</li> <li>▪ Cooperating with others</li> <li>▪ Empathizing with others</li> </ul>

Source: Adapted from Oxford (1990)

Group work is applied for the purpose of gaining knowledge at all stages in the educational structures. Based on past studies, there is clear scientific support to show the advantages of having students learning and studying in groups.

### ***Past studies on group work***

A study done by Gillies and Boyle (2011) examined the thoughts and ideas of seven lower intermediate teachers who had focused on group learning in their social science curriculum over two years to explore their feedbacks to teaching practice, and to determine their observations of how students with behavioural and learning requirements reacted to it. Based on the interviews data it was found that all teachers deemed that their lessons were more attention-grabbing. The children gained more knowledge and were more assertive and used non-verbal communication during the learning sessions. Nonetheless, all teachers agreed that group learning entailed a strategic teaching plan, students are required to be prepared to contribute in group activities, and teachers' expectations are required to be explicitly specified if the values attributed to group work were to be developed.

In another study, Chiriac and Granstrom (2012) analysed students' capabilities and perceptions of high-quality and low-quality group effort in college, and how students between the ages of 13 to 16 portray good and weak group work. The study showed that concrete group work is portrayed by group collaboration on assignments specified by the instructor. The results reveal the students' inner comprehension on classroom activities that concluded in a classification of crucial situations for superior group work. Findings also revealed that they improved in their language skills.

Group work has effective theoretical foundation in a study carried out by Sharan (2015). In the constructivist idea of learning, students are able to understand better when they are successfully occupied in the learning development and participate in a combined effort with diverse groups of learners to attain a collective goal. Cooperative learning employs students' own involvement to comprehend information and learning becomes more significant when there is interaction.

A study was done by Alfares (2017) to investigate learners' observations on the benefits and also the struggles they encountered in group work (GW) in EFL lessons. The rationale for the study was to observe the effects of GW. A diversified approach method using data gathered from 188 students from five private language institutes was used in the study. From the sample, 20 students were interviewed. The findings showed that a number of learners agreed that the benefits of GW were related to (a) cognitive aspects (advantages that assist students in the learning process), and (b) emotional aspects (enhance motivation). However, there were some learners who experienced difficulties that were predominantly associated with learners' behaviours.

### ***Past studies on learning strategies***

In past studies, there is a collective understanding that students cultivate the knowledge, approaches, values and skills required to build reliable and suitable decision involved in their own learning method throughout the course of learning independently (Bates & Wilson, 2002; Williams, 2003). Learning strategies are encouraged by allowing possibilities and experiences that support learner interest, inquisitiveness, self-assurance and resourcefulness, and is built on the discernment by learners of their own concerns and values. Learning strategies for independent learning involves clear thinking for educators on learning outcomes and learning

stages and design that enable positive surroundings which promotes learning outcomes (Gorman, 1998).

When it comes to learning strategies, dependent learners perceive the instructor as the main person with influential source of knowledge and expertise. Winne and Jamieson-Noel (2002) stated the division involving the independent and the dependent learner with the ability to correlate processed information and information that is in the process without an educator's involvement is wide. The presence of a completely independent learning that focuses on learning strategies in groups, is a topic that is still being deliberated (Schunk, 2005), and so the prospect and interest in attaining the conclusive standard should be studied further.

A study was conducted by Habok and Magyar (2017) to examine language learning strategy used in connection with a foreign language approach, competence and overall school accomplishment involving the lower secondary learners in Years 5 and 8 (n-868). The study made use of an adapted approach for the Strategies Inventory for Language Learning survey in the data compilation. The outcomes revealed that the Hungarian learners were primarily engaged in metacognitive strategies in both the years. The variations between additional and fewer proficient language learners' strategy routine were also discovered. Looking at the outcome of language learning strategy on foreign language approach, the foreign language grade and college accomplishment, path analysis specified a useful result for the two years. The metacognitive, memory and social approaches predominantly shaped the foreign language outlooks including the results in Year 5. The metacognitive strategies showed insignificant effects on the college accomplishment and on the foreign language results. The researchers exhibited the major outcome of metacognitive strategies together with the lower outcome of memory strategies in Year 8. Besides, metacognitive strategies affected the foreign language grades as well. The study conveyed that the usage of language learning strategies does differ across age groups.

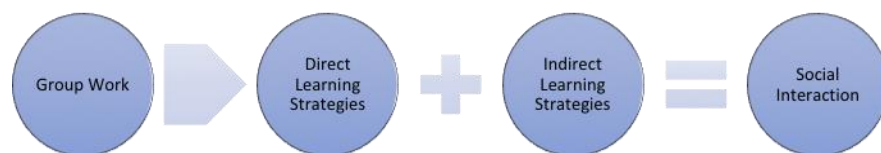
Learning strategies are employed in carrying out all language skills and employing the right learning strategies is important. A study comparing the effects of direct and indirect learning strategies on vocabulary learning among Iranian EFL learners suggest that students at upper-intermediate level have higher tendency of using indirect learning strategies (Taghinejad et al., 2016) whereby this strategy also improves their vocabulary learning. On the other hand, Parnrod's and Darasawang's (2018) study on group work and learning strategies employed by EFL engineering undergraduates with different cognitive styles revealed that the nature of the task and students' cognitive styles affect the use of learning strategies.

### ***Research hypothesis***

Learners with different language proficiencies who work in groups by utilising both direct and indirect learning strategies are more likely to react better to social interactions.

### ***Theoretical framework of the study***

Learners participate in the activities using either direct or indirect learning strategies.



**Figure 1: Conceptual Framework of the Study**

**Figure 1** shows the conceptual framework of the study. The effective use of the two strategies can improve social interaction among ESL learners, and vice versa.

## **METHODOLOGY**

To elicit students' responses to group work learning activities, a survey was conducted. Their responses were analysed using SPSS and the findings were then discussed in relation to the usage of direct and indirect strategies in group work in ESL classrooms.

### ***Population and sample***

The respondents for this study were students registered for the academic writing course. Hence, 40 respondents (10% of the actual population) were chosen for this pilot study. Twenty respondents were selected from the faculty of Music and 20 from the Faculty of Business Management. Among the respondents, 19 were male students and 21 were female students. The respondents were also from various semesters. There were 28 respondents from semester four, 7 respondents from semester three and 5 respondents from semester five. There were 13 respondents who obtained Grade A in their Sijil Pelajaran Malaysia (SPM) examination, 13 respondents who obtained Grade B, 10 respondents who obtained Grade C and 4 respondents who obtained Grade D.

### ***Instrument***

Questionnaires designed by the researchers were used in the study to analyse the usage of direct and indirect learning strategies on group work in ESL classrooms. The survey questions were divided into three sections. Section A comprised of the demographic profile, section B was focused on the language learning strategies, and section C looked into the social strategies. Cronbach's alpha was conducted to test the reliability of the instrument. Cronbach value showed 0.9 thus indicating relatively high internal consistency.

### ***Method of data analysis***

SPSS version 23 was used to analyse data collected from the questionnaire. One-way Anova was done to establish the significant differences of the data. Mean scores were also used to report the frequency of responses.



## DISCUSSION AND FINDINGS

This section discusses the findings of the study based on the four research questions.

Research Question 1: Are there any significant differences in direct and indirect learning strategies and social interaction across grade?

### *Language learning strategies*

Table 2  
*Mean Scores by SPM English Grades*

<b>Grades</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>
A	13	26.09	6.32
B	13	28.47	6.62
C	10	30.48	4.58
D	4	26.65	6.69
Total	40	28.02	6.09

A one-way ANOVA involving the groups was done to investigate if there are differences in language learning strategies used by students based on their SPM English Grades. Students were compared by using their SPM English Grades which are grades A, B, C, and D. The mean scores for students' SPM English Grades composition are displayed in Table 2.

Table 3  
*One-Way ANOVA on Language Learning Strategies by SPM English Grades*

Source	Sum of Square	df	Mean Square	F	Sig.
Among groups	119.354	3	39.785	1.078	.371
Within groups	1329.098	36	36.919		
Total	1448.451	39			

The one-way ANOVA outcome in Table 3 reveals negative statistically substantial distinction at the  $p < .05$  category in the mean language learning strategies for the SPM English grades,  $F(3, 36) = 1.078$ ,  $p = .371$ . The result size intended using eta squared, was 0.08. This specifies that there is an average variance in mean language learning strategies between groups. This finding is in accordance with the finding by Habok & Magyar (2017) who also found that the usage of language strategies does differ across language proficiency. This means learners with different language proficiencies learn language in different ways.

**Social Interaction**

Table 4  
*Mean Scores by SPM English Grades*

<b>Grades</b>	<b>n</b>	<b>Mean</b>	<b>SD</b>
A	13	6.31	1.47
B	13	6.23	1.91
C	10	6.15	2.17
D	4	6.75	1.46
Total	40	6.29	1.75

A one-way ANOVA among groups was done to investigate whether there are differences in social interaction on learners based on SPM English grades. Students were compared by SPM English grades which are grades A, B, C, and D. The Mean scores by students' SPM English grades composition are offered in Table 4.

Table 5  
*One-Way ANOVA on Social Interaction by SPM English Grades*

Source	Sum of Square	df	Mean Square	F	Sig.
Between groups	1.092	3	.364	.110	.953
Within groups	118.602	36	3.294		
Total	119.694	39			

The one-way ANOVA outcome in Table 5 signifies that there was no statistically substantial disparity at the  $p < .05$  degree in the mean social interaction for the SPM English grades,  $F(3, 36) = .110, p = .953$ . The result dimension that was calculated using the eta squared, was 0.009. This specifies that there exists minor variance in mean social interaction between groups. This is also supported by Sharan (2015), who found positive benefits of cooperative learning on social interaction. This means, social interaction has an impact on how learners learn a language. The findings indicated that learners with different language proficiencies react differently to group work carried out in classes.

**Direct language strategies**

Research Question 2: Does direct learning strategies influence group work?

An analysis of mean scores for direct language learning strategies was carried and the results are shown in Figure 2.

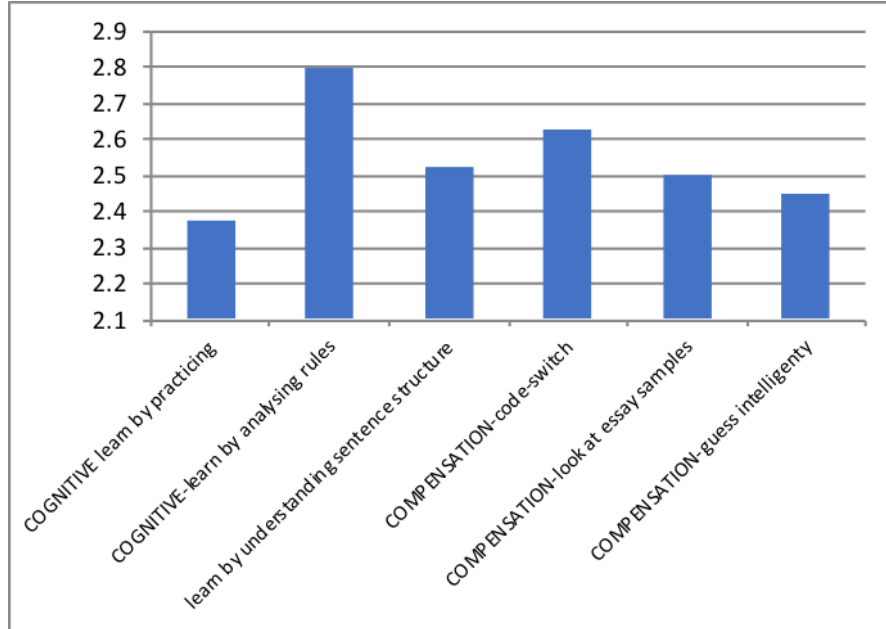


Figure 2: Mean Score for Direct Language Learning Strategies

Figure 2 shows the mean scores for direct language learning strategies. The survey revealed that learners employed either Cognitive Strategies (learnt by practicing and analysing rules) and also Compensation Strategies (use code-switch and guessing). The highest mean is for cognitive strategies (learnt by practising – 2.3750 and analyse rules -2.8 and also learn by understanding – 2.5250). This finding is in accordance with the study by Alfares (2017) who also agreed that cognitive strategies is used most during group interactions.

Research Question 3: Does indirect learning strategies influence group work?

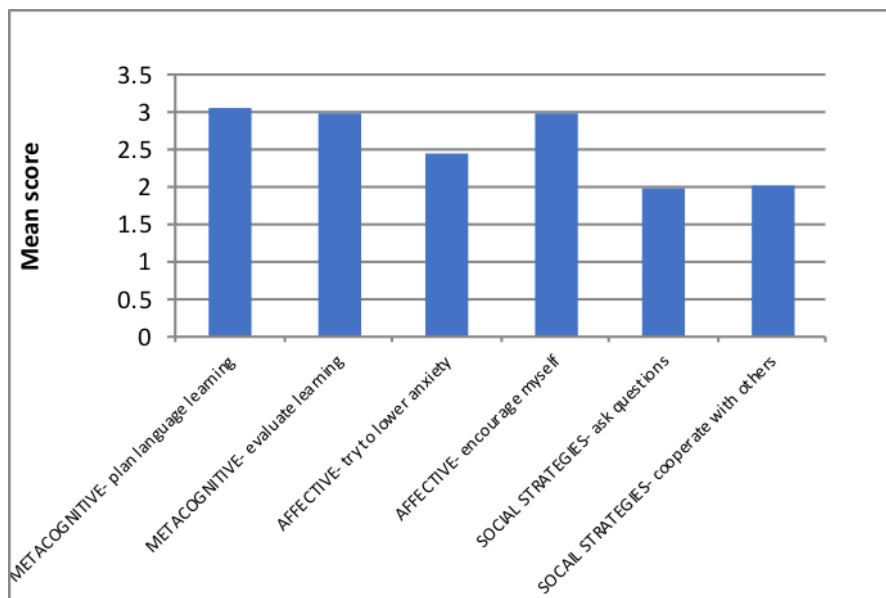


Figure 3: Mean Score for Indirect Language Learning Strategies

Figure 3 presents the mean scores for indirect language learning strategies. The highest mean is for metacognitive (plan language learning-3.0750 and evaluate learning-3.0) and affective (lower anxiety-2.4 and encourage themselves -2.45) strategies. This finding outcome is in line with the research conducted by Habok & Magyar (2017) who also reported that both metacognitive and affective strategies are mostly used in social interaction during group work.

Research Question 4: Does group work influence social interaction?

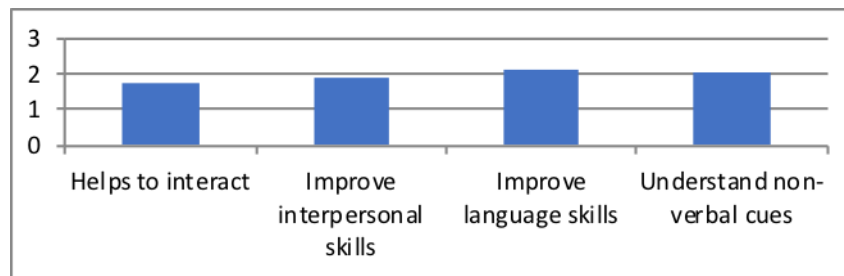


Figure 4: Mean Scores for Social Interaction

Figure 4 reports findings for social interaction. Findings revealed highest mean for “improve language skills” (2.1250) and “understand non-verbal cues” (2.0500). Chiriac and Granstrom (2012) found that social interaction improved language skills among learners. Group interaction allowed learners to practice the language use. In addition to that, Gillies & Boyle (2011) also reported that social interaction encouraged learners to use non-verbal cues to improve communication.

## CONCLUSION

With proper design, group work is effective in encouraging and enhancing critical thinking skills, decision-making, active learning, and communication skills in the targeted language. Hence, the success of group activities or group interactions in completing given tasks depends greatly on the type of work or activities carried out in classrooms.

As a whole, this study revealed that learners with different language proficiency level (SPM grade) respond differently during group interaction and the communication among peers of different levels helped improve the motivation among learners to use the language for interaction. The findings support the hypothesis that learners with different language proficiencies react positively to group work carried out in classes.

### *Direct strategies*

This study found that learners used cognitive and compensation strategies to communicate in groups.

### ***Indirect strategies***

Learners were reported to use metacognitive, affective and social strategies during group interaction.

All in all, group work is significant in creating an avenue to practise the intended language as well as for learners to learn to collaborate with each other to get their work done.

### ***Pedagogical implications***

Understanding methods employed by students during group work, especially in the use of direct and indirect learning strategies can help to gauge the effectiveness of this method of teaching and learning in ESL classrooms. Findings of the research has led to several pedagogical implications in the language learning classroom.

Firstly, it is imperative that teachers and instructors include materials that are suitable to use in group activities. Some materials may not be suitable to use in group work. For instance, it takes up longer time to complete a given task or the materials do not promote collaborative learning or help to solve anything together, hence less interaction with each other. So, it is vital to include appropriate teaching materials. Secondly, teachers and instructors can observe the learning strategies that work the best in class when it comes to group work. Depending on the students' background such as their proficiency level or specialisation like Engineering or Business Management, some strategies may work better than others. Hence, group work may need to revolve around this factor which means students' learning styles need to be considered. This could also mean that existing teaching and learning materials need to be adapted to suit the needs of students yet still fulfil the course objectives and outcomes. Lastly, the study overall suggests that students find group work effective in improving their communicative abilities and language skills. Consequently, there is a need to revise the existing language course curriculum and syllabus to incorporate more group work that promote learning of the second language through communicating and collaborating with one another.

### ***Recommendations for Future Research***

This research must be further conducted with a larger number of respondents from both public and private institutions to ascertain that the result of this study is consistent. In relation to students' group collaboration, the analysis on the effectiveness of group work, language acquisition and critical thinking is highly commended. Higher learning institutions should integrate and research on learning strategies in their professional development programmes specifically in language skills.

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