

Innovative in Teaching Mandarin through Scaffolding Strategies

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ABSTRACT

The arrival of advanced communication and information technologies has changed the method of teaching and learning in the 21st century. Thus, different types of impactful teaching approaches have been applied by educators to ensure that the focus of education is not only to deliver knowledge but also to cultivate students' problem solving, creativity, collaboration and communication skills. In view of a subject which is totally new to students, they need time to learn and practise the skills learned which include listening, speaking, reading and writing. However, the credit hour for the particular subject is only two hours per week, which is a challenge for the lecturer to guide students in achieving the learning outcomes of the subject and to implement the teaching and learning process. Therefore, the scaffolding teaching method was chosen as an action research to see the impact on student's learning. The focus of the study was Introductory Mandarin Level 1. The new roles of teachers were applied through a mechanism including self-learning, group discussion, and presentation. Lecturer had designed and created self-learning notes as a reference to help students understand the particular lesson, facilitated students using effective questioning skills and summarized the lesson at the end to scaffold students' learning. At the end of the semester, students were required to answer a survey questionnaire regarding teaching and learning. This approach gave a positive result which showed that it managed to motivate students to participate in class. Students enjoyed the activities in class and were more active and confident to express their ideas as they understood the topic well during their discussion rather than one way lecture in the class.

Keywords: *Scaffolding, Google Slides, Google Classroom, Online Distance Learning*

1.0 INTRODUCTION

The education system in Malaysia is gradually moving into 21st century learning. According to Partnership for 21st Century (2009), the main 4Cs skills of learning and innovation are creativity, collaboration,

communication, and critical thinking and students who are well prepared and those who are not for the complex working environments and life in the 21st century are increasingly being recognized separately.

The United Nations Educational, Scientific, and Cultural Organization (UNESCO) also stated that the 21st century ultimate goal of education is to produce a lifelong learner (Collins, 2009). Various teaching pedagogical competencies are required by language teachers to equip themselves in facilitating students to learn Mandarin language (Jafri & Manaf, 2020).

According to Buletin Anjakan Bil. 4 (2015), the most significant difference is that 21st Century learning is centralized and non-teacher-centered. The application of various teaching and learning strategies as well as activities emphasizes more on group collaboration to allow students to exchange and share their opinions and ideas.

In an unprecedented turn of events, COVID-19 pandemic which started in 2019 has changed the education system around the globe rapidly (Chung et al., 2020). Covid-19 outbreak has led to widespread closing of schools in 2020 which seemed to shock the educational circle where teachers have been scrambling to adjust their teaching pedagogy in shifting to “emergency remote teaching” (Hodges et al., 2020, para. 5). Due to the change of teaching platform from face-to-face classes to online learning, the process of delivering knowledge becomes more challenging. Lecturers do not only have to prepare their teaching plan as usual, but they also have to learn new instructional methods for online learning. Hence, the use of technology has become imperative in teaching to ensure students’ continuity of learning across spatial and temporal boundaries.

Fortunately, blended learning, which is a mix of online learning and face-to-face classes has been adopted in Universiti Teknologi MARA (UiTM) since many years ago, thus the online approach is not totally new to lecturers in the university. The concern of how lecturers can be better trained and ready to design a quality learning environment for this global pandemic has become an important issue among the educational community. One of the popular teaching and learning methods implemented by lecturers is scaffolding through online tools to provide better preparation and support for students’ effective learning. In terms of effective learning, the scaffolding teaching approach is considered to be important in assisting students to become active learners in a digital environment and collaborative learning as well as building students’ autonomy in learning.

Individual learning, group collaboration and discussions under scaffolding strategies are intended to promote interactions of learner-learner and learner-instructor. (Cho & Summers, 2012; Dabbagh & Kitsantas, 2005). Three main characteristics of scaffolding shown in Figure 1 were defined by Van de Pol et al. (2010). An instructional support, scaffolding, where the less experienced learners are helped by more advanced individuals in maximising their potential (Vygotsky, 1978). It is a method where instructors provide appropriate support to learners by monitoring their participation and progress, encouraging learners and providing necessary feedback and help to them (Contingency). The idea is that when students are provided with appropriate help they need in learning new things, they have greater opportunity of successfully utilizing that experience. Then, instructors withdraw their scaffolding support gradually to enable learners to perform their tasks more independently and provide more space for learners to explore new knowledge (Fading). Lastly, responsibility is transferred to learners for their performance of a task gradually (Transfer of responsibility).

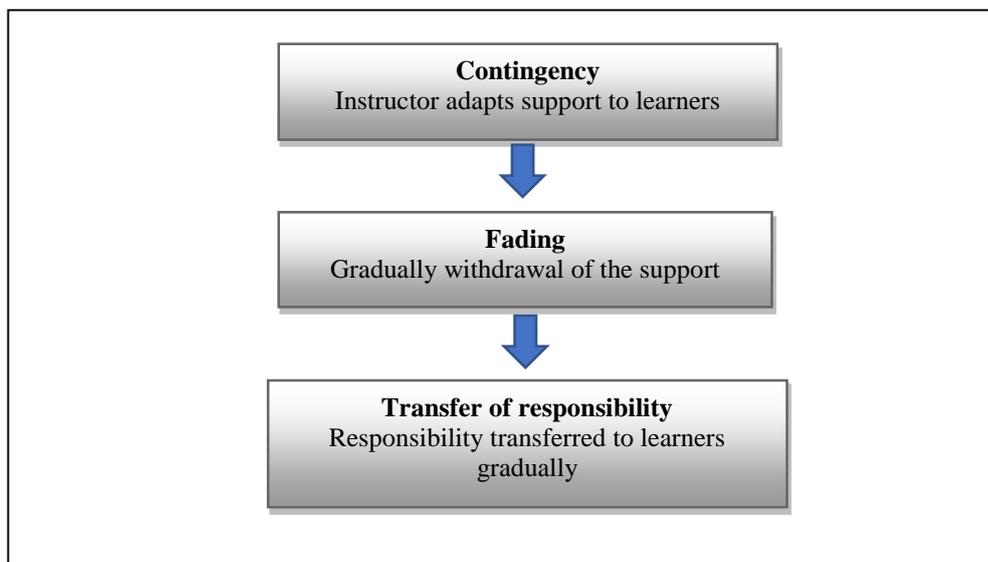


Figure 1: Central characteristics of scaffolding

Through the process of scaffolding teaching methods, we can see that a contingency is used to support or clarify how the lecturer influences the learner. Hence, understanding students' current level of skills is the key for the lecturer to select and deploy an effective contingency which enables students to become more confident and motivated in their learning journey.

1.1 Problem Statement

It is crucial for educators to employ impactful teaching strategies due to the advancement of technology in 21st century education and to ensure the education always prepares students for the future. However, the rapid growth and development in teaching and learning of Information and Communication Technology (ICT) is taken as a paradigm shift in education brought by COVID-19 tremendously. UNO (2020, August) report showed that nearly 1.6 billion learners in the world are affected by COVID-19 pandemic and disrupted in their education systems. Academic institutions have been affected with the Open Distance Learning (ODL) teaching and learning mode where students perform their course assessment without physical and social interaction with group mates and lecturers in their learning activities (Allam et al., 2020). The biggest challenge in online teaching for most lecturers is to enhance students' participation in virtual classrooms. Since the Mandarin language subject emphasizes on students' reading, listening, writing and speaking skills, thus the interaction between teacher and students is important to ensure students are engaged throughout their learning progress. The effort to maintain good performance of students in Introductory Mandarin Level 1 calls for a need to ascertain a teaching method that will improve the achievement of students. Therefore, the target in the research is to explore the impacts of the scaffolding method using Google Applications as a teaching strategy in Introductory Mandarin Level 1 which totally replaced face-to-face learning mode.

2.0 LITERATURE REVIEW

A successful scaffolding is that students work within their proximal development area (ZPD), which is defined as "the distance between the actual level of development as determined by independent problem solving and the potential level of development as determined by problem-solving under adult guidance or in collaboration with more capable peers" (Vygotsky 1980, p. 86). Scaffolding is the support given to learners, which might include clues, encouragement, providing examples and modelling for learning and problem solving which allow students to grow independently.

In support of the above, a study by Rokhmat and Marzuki (2019) that designed to improve students' problem-solving abilities; namely selecting, understanding, determining, differentiating, identifying, and applying by using Causalitic-Thinking Approach to look into the development of scaffolding learning

strategy. An experimental sample of 33 senior high school students (12-males, 21-females) with two-phase was embedded. Results showed that the implementation of scaffolding was effective and successful to increase students' problem-solving abilities.

Another study by Imam et al. (2020) showed that (1) the implementation of scaffolding strategy increased students' learning achievement from 33.0% to 34.5%; (2) students' mathematics anxiety level was decreased by 90.4%; (3) students succeeded in reflecting and correcting mistakes to solve previous problems through scaffolding. In conclusion, Professor Yusup Hashim of Instructional Design and Technology, Asia and University stated that teachers play an important role of facilitating students in growing autonomous, self-managed, and learner-centred education (2014).

Moreover, a study by Padmadewi and Artini (2018) stated that scaffolding strategy reveals an obvious improvement in students' learning, not only students' interests and attitude, but also the writing quality in their assessment. Scaffolding leads students to be more responsible and confident throughout the learning process and promotes students' learning autonomy in using the language. The research result implied that students' writing competency has been improved by using scaffolding teaching methods.

3.0 METHODOLOGY

A descriptive study was conducted to find out the effectiveness and impact of scaffolding teaching and learning methods among 139 full time undergraduates who had registered this course in a government university. The subject chosen was Mandarin Introductory Level 1 among undergraduates from the Faculty of Hotel and Tourism Management and Faculty of Business and Management. During the class, they were taught using Google Applications which are Google Classroom, Google Meet and Google Slides.

The teaching and learning flow as shown below were applied during class to scaffold students' learning in each lesson. As shown below, the lecturer gave support to students by providing learning materials on Google Classroom for their self-learning and group discussion through Google Slides (Contingency). Then, the lecturer gradually withdrew the support from students from group discussion activity to presentation through Google Meet (Fading). Lastly, responsibility in performance was transferred gradually to the students after individual or group presentation, where the students had to complete the assignments with minimum supervision from the lecturer (Transfer of responsibility).

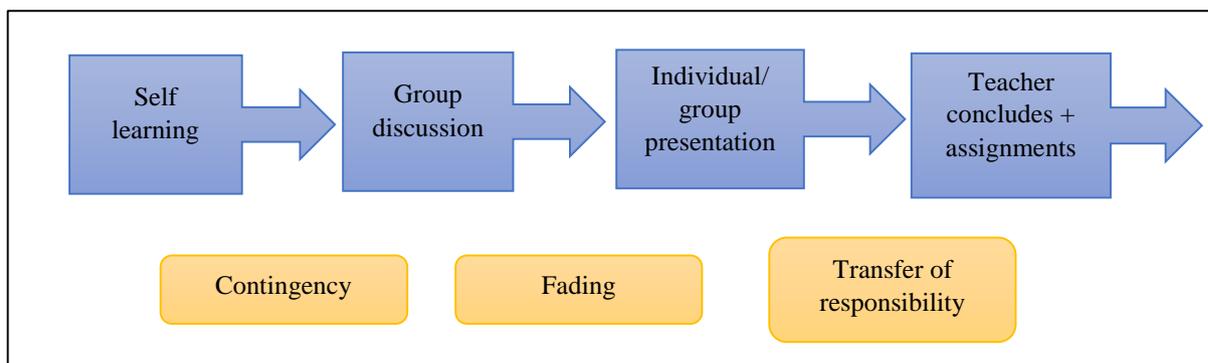


Figure 2: Teaching and learning flow

For this study, a survey questionnaire was circulated to the students via Google Form at the end of the particular semester to collect data from students regarding their experiences shifting to online scaffolding teaching and learning methods. Central scaffolding characteristics were implemented in creating the questionnaires (Van de Pol et al., 2010). Feedback from students was required regarding the classes they attended. The survey then was analysed using a descriptive analysis method by the researcher. 10 questions were asked to the students with a scale ranging from (1) as strongly disagree, (2) as disagree, (3) as neither agree nor disagree, (4) as agree, and (5) as strongly agree as shown in Table 1.

Table 1: Google form survey questionnaire

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1. I enjoy the experience through Google Slides with my teammates in collaborative learning.
 2. I have benefited from using Google Slides to interact with my teammates.
 3. My motivation in learning increases when interacting with other teammates.
 4. Google Slides collaboration positively influences my learning.
 5. Lecturer's feedback via Google Slides helped me understand grammar mistakes better.
 6. Working with my team helps me produce better project quality than working individually.
 7. Dealing with the Google Classroom application was convenient with regard to keeping track of my learning.
 8. I have prepared well through reading the course materials uploaded in Google Classroom.
 9. I feel it is easy to access Google Classroom for the course materials.
 10. I prefer learning Mandarin Level 2 through Google Classroom application in the coming semester.
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3.1 Google Slides Implementation

Google Slides as an online platform enables lecturers and students to create and present their ideas and allows people to work with each other. Users are able to share, open and edit the content on the slide simultaneously. Moreover, users are able to see from slide to slide and do editing together with other collaborators. Lecturers are not only allowed to give instant feedback, but also able to have collaboration with students through image and text form when they are online at the same time. Students may refer to the feedback given by the lecturers to gain more understanding regarding the topic learned and do amendment promptly. Students can be divided into a group of 4 members by online breakout session to discuss a question set up by the lecturer. They are given instruction and demonstration by the lecturer before the discussion. After the discussion, students are more confident and active in participating and presenting their ideas.

3.2 Google Classroom Implementation

A blended learning platform like Google Classroom is a very user-friendly tool which allows lecturers to upload teaching materials, post announcements, distribute assignments, comment and send feedback for the classes created on Google Classroom. Students are able to receive the feedback from their lecturer through the platform and do collaboration with others in improving their language skills (Zeiadee M. Khalil, 2018). It is an alternative teaching and learning approach to the traditional methods. Students are also able to practise reading, writing, listening and speaking skills repeatedly on their own after class by getting the course materials from Google Classroom.

4.0 RESULT AND DISCUSSION

A total of 118 first year undergraduates from Faculty of Hotel and Tourism Management and Faculty of Business and Management responded to the questionnaire. At the end of the course, the student should be able to:

1. Interact using Mandarin language to indicate social skills at Introductory Level I.
2. Interact with the language norms using Mandarin language at Introductory Level I.
3. Read, speak, write, and listen to various discourses in Mandarin language at Introductory Level I.

75.4% students were from the Faculty of Business and Management and 24.6% from the Faculty of Hotel and Tourism Management. There were about 16.9% (20) male and 83.1% (98) female students. Many of the students never learned Mandarin before. 83.1% (98) and 10.2% (12) students have learned Mandarin in less than one year. The rest of the students stated that they learned Mandarin before for less than 3 years, 6 years and 10 years.

Positive students' feedback were shown in the survey results on the scaffolding method used for teaching and learning through virtual classrooms. Due to students' different level of proficiency in small groups, lecturers may face difficulties in diagnosing students' understanding and their ability of adapting knowledge. (Janneke, Neil, & Monique, 2019). Therefore, scaffolding can be said to be an effective teaching and learning tool for students because lecturers are able to communicate with them directly to understand their difficulties and answer their doubts during the discussion session.

As shown in Table 2, the percentage of "Agree" and "Strongly Agree" is high with above 90%. This result shows a good impact of scaffolding teaching methods in students' learning. The highest percentage is from Q5 "Lecturer's feedback via Google Slides helped me understand grammar mistakes better" and Q8 "I have prepared well by reading the course materials uploaded in Google Classroom" with 97.46% (115), followed by Q3 "My motivation in learning increases when interacting with other teammates" and Q4 "Google Slides collaboration positively influences my learning" with 95.77% (113). The result shows students' positive feedback when they are assigned a task in small groups to understand and learn a new knowledge. Previous research showed that students' interactions in small groups significantly affect students' learning result (e.g., Hogan, Nastasi, & Pressley, 1999; Volet, Vauras, Salo, & Khosa, 2017). Table 3 also reflects that students' feedback from Question 1 to Question 10 are positive where the mean achieved is 4.4 and above out of 5.

Table 2: Frequency and Percentage Distribution of Students to each Statements

Question No.	Strongly Disagree		Disagree		Neutral		Agree		Strongly Agree	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Q1	0	0	0	0	7	5.93	41	34.75	70	59.32
Q2	0	0	0	0	7	5.93	46	38.98	65	55.08
Q3	0	0	0	0	5	4.24	37	31.36	76	64.41
Q4	0	0	0	0	5	4.24	41	34.75	72	61.02
Q5	0	0	0	0	3	2.54	25	21.19	90	76.27
Q6	0	0	0	0	8	6.78	27	22.88	83	70.34
Q7	0	0	1	0.85	6	5.08	38	32.20	73	61.86
Q8	0	0	0	0	3	2.54	40	33.90	75	63.56
Q9	0	0	1	0.85	5	4.24	33	27.97	79	66.95
Q10	1	0.85	0	0	4	3.39	28	23.73	85	72.03

Table 3: Mean and Standard Deviation for each Statements

Question No.	Mean	SD
Q1	4.5339	0.6090
Q2	4.4915	0.6097
Q3	4.6017	0.5720
Q4	4.5678	0.5770
Q5	4.7373	0.4966
Q6	4.6356	0.6086
Q7	4.5508	0.6352
Q8	4.6102	0.5396
Q9	4.6102	0.6137
Q10	4.6610	0.6300

Based on these findings, the proposed teaching and learning framework discloses that scaffolding method has a positive impact on Introductory Mandarin Level 1 class. The students could understand the grammar, demonstrate and teach each other during the small group discussion. The students were supported by learning materials that the lecturer provided on Google Classroom where they could be well-prepared before the lesson started. Figure 3 shows the course materials uploaded on Google Classroom for students' reference before, during and after class based on students' need. Students could easily access or print out the notes according to their preference any time and any way. Those students who did not read the learning materials yet still could easily catch up in group discussion. In other words, lecturers only need to provide a minimum supervision to students, then they could apply the knowledge they learned and teach each other in the group to understand and catch up with the new lesson.

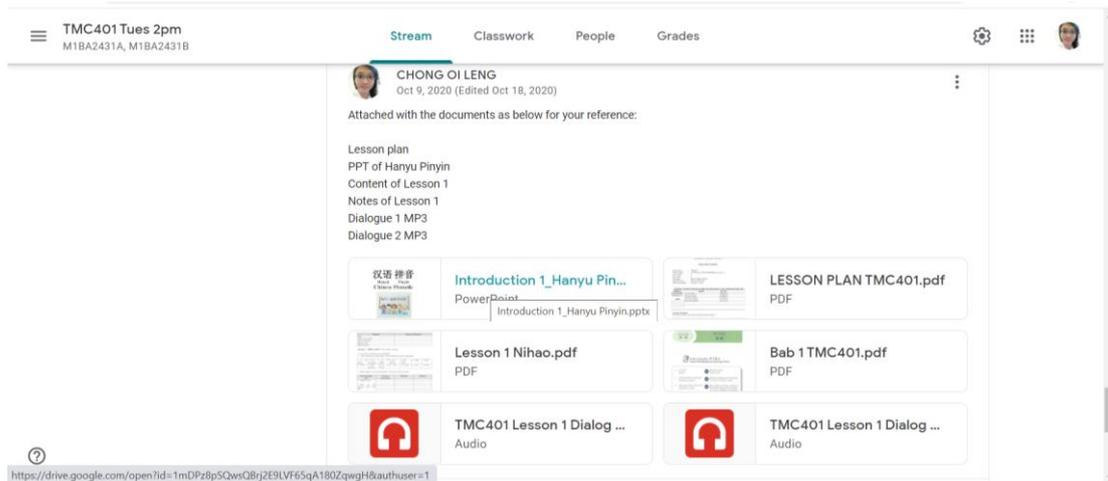


Figure 3: Google Classroom course materials

Then, students were given a task to understand the lesson by doing exercises assigned on Google Slides. Students may discuss and collaborate with their group mates to complete the exercises given. In this situation, those fast learners can teach the slow learners that students may feel more comfortable to ask and discuss their doubts regarding the lessons. Lecturers can also go through students' answers to correct their mistakes and give comments just the same method they will do in face-to-face class where lecturers can provide immediate feedback to students. Students' participation can be observed through Google Slides and breakout rooms. This interactive learning boosts up students' motivation and confidence throughout the learning process.

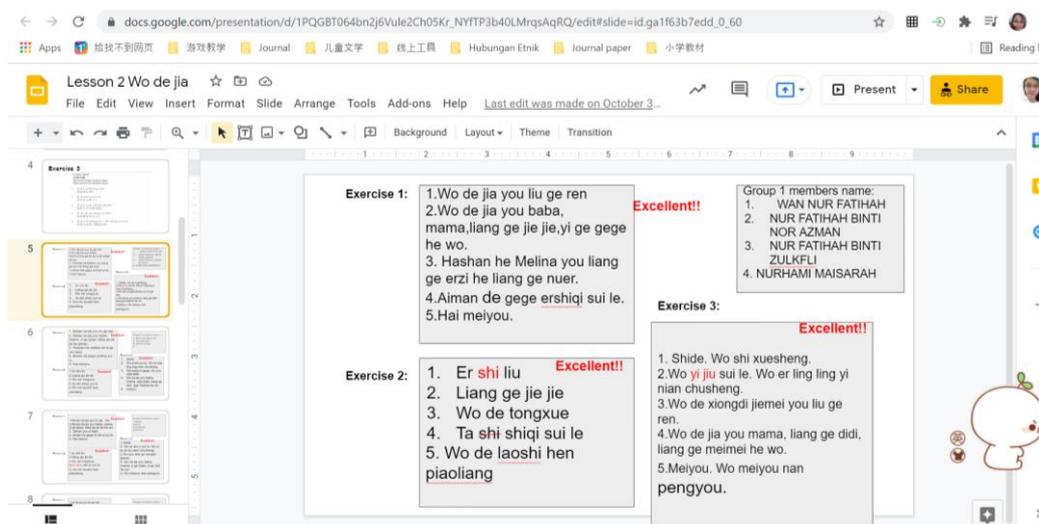


Figure 4: Google Slides exercises

During discussion time, lecturers entered students' breakout rooms group by group to observe their learning progress and communication among the students. Lecturers can make students feel comfortable to seek guidance and share their difficulties or opinions regarding the lesson learned. In addition, students are monitored and observed by lecturers all the time which can prevent them from being absent during class.

After discussion, students were also assigned to present the new knowledge which will help them to consolidate their memory of the lesson indirectly. Lecturers can find out how students learned and understood the lesson, then replenished the necessary notes during students' presentation. In the meantime, lectures are not only able to check students' understanding but also their pronunciation. Students' learning is scaffolded from the beginning and the support will be withdrawn gradually towards the end of the lesson where students have to digize the knowledge and present it in class on the same day. After class, those students who need more practice still can access the online worksheet for further revision. Assignments and assessments will be given to students for evaluation purpose time by time.

As compared to traditional teaching method which is more to one-way communication, students always be the listeners and it is easier for the lecturers to control and conduct the class based on their schedule. However, the percentage of knowledge that students received and understood can only be checked after the final examination. It is even worse if the students are passive and do not know how to ask questions and express their opinion in class.

Also, it should be emphasized that even though students' attendance and responses during lectures are good, the expected results are not always good. Although the students have tried their best to enjoy the class and the lecturers are committed to his or her work, the learning outcomes may still appear low. This is because listeners' concentration in learning at the beginning is high, falls significantly 15-20 minutes after lecture, and will be at the lowest at the end of the class (Stuart & Rutherford, 1978).



Source: National Training Laboratories, Bethel, Maine

Figure 5: Learning Pyramid

Dreikurs concluded that the teaching form in 1972, where only one speaks and the others listen is a classical memorizing class, is the weakest learning method. As shown in the learning pyramid above, if the lecturer only gives lecture in class, students will only have a 5% rate of remembering. If the learning process is by reading, the rate of memorizing is up to 20%. Then followed by the use of "audio visual" 20%, "demonstration" 30%, "discussion group" 50% and "practice by doing" which showed us the rate of memorizing up to 75%. Learning by "teaching others" is the best source in the learning pyramid which achieved a 90% rate of remembering. This situation can be interpreted as an active learning method when the learners, in general, retain a 90% rate of memorizing learning.

In the light of the aforementioned situation, innovative and creative attempts need to be implemented to improve this situation. The scaffolding teaching method enables students to learn step by step the lecturer builds a scaffold for students before, during and after the class to assist students in learning. Students were

provided hand-outs and MP3 in each lesson where they were able to read and do revision any time they preferred.

Scaffolding teaching strategy is a pedagogy which encourages, enhances, and enables students' learning. This teaching strategy also helps students to master the new knowledge effectively in the classroom. Implementation of the scaffolding teaching method in class has urged students not only to become active learners but also good problem solvers. The idea for this teaching method is to give students a learning strategy to master the new knowledge with their exploring, collaboration, discussion and presentation of the subject.

Scaffolding is not limited to the improvement of the students' reading, writing, listening and speaking skills, the way that scaffolding is provided by the lecturer also affects the success. Based on the progress of the students' understanding, they are able to be independent to achieve their learning purpose, the scaffolding will then be removed gradually according to the development of students. It is confirmed and defined by Majid and Stapa (2017), scaffolding means the lecturer removes gradually the support through instructions, modelling, questioning, and feedback throughout students' learning process.

The advantage of scaffolding is also incarnated in promoting students' learning autonomy. Promoting learning autonomy refers to the responsibility of one's learning that provides a positive impact to learners. Students are gradually and slowly led to becoming independent and clear in learning something new by themselves in scaffolding. As stated by Padmadewi (2016), scaffolding is activities that guide students to learn autonomy and have a sense of responsibility and self-confidence to increase their independence in their learning issues. Therefore, scaffolding strategies must be properly designed and implemented according to students' development and learning progress.

Similar to Shin et al. (2020), scaffolding teaching strategy in Introductory Mandarin Level 1 class has shown its effectiveness on teaching and learning. Students were satisfied as the results showed with the rate cumulatively more than 90% for Agree and Strongly Agree. As an educator, we have to always be innovative and creative in teaching to get the millennial generation to focus on their learning. Thus, it could be assumed that teaching and learning through scaffolding strategy is more efficient and interesting, which can equip students with soft skills through the new technologies for the future.

5.0 CONCLUSION

In brief, teaching and learning through scaffolding are more fascinating and successful as students always observe and learn in classrooms through self-learning, discussing and presenting. Students are more confident and willing to encounter the challenge in their learning process rather than listening to lectures. The trust and affirmation from the lecturer are very important for students to accomplish their mission because they feel more confident and respected in learning. As educators for the 21st century, we should embrace innovation and the latest pedagogy with the new and advanced technology.

As educators in the millennial era, lecturers have to furnish students with competencies and skills to build up their confidence and help them succeed in the new world. As educators, we have to always step outside our comfort zone to learn, unlearn, and relearn the process. In order to see the effectiveness of teaching and learning, this approach should be replicated and tested for different syllabuses and students. Comparison of different fields and characteristics like social science, economic and engineering subjects using the same approach could also be tested for future research.

Scaffolding in teaching Mandarin as foreign language can be a variety of methods based on students' needs. Scaffolding in teaching Introductory Mandarin Level 1 reflected positive impacts on students' learning outcome. It is proven by the survey through 118 students which gained positive feedback from students and lecturers' observation along the teaching and learning process. Scaffolding is an innovative and creative teaching approach to promote students' learning autonomy which encourages students to be more confident, active and responsible in their learning process and helps them apply the language in their daily life.

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