The Effects of Immersive Multimedia Learning with Peer Support on Speaking Skill among Male and Female Students

Asnawi[*]

Syiah Kuala University, Banda Aceh, INDONESIA

Abstract

This study investigated the effects of immersive multimedia language learning technique on performance in English in terms of oral production skills in reading and speaking that involved six measures, namely, pausing, phrasing, stress, intonation, rate, and integration without the mediation of the first language of the students amongst both males and females. A quasi-experimental design was employed for the study. Eighty first-year university students enrolled in English as a Foreign Language (EFL) course were selected for this study and the teaching treatment was followed for eight sessions with one session per week. Data were analysed using one-way ANOVA. The findings showed that following the immersive multimedia learning, male students in the immersive multimedia group with peer support performed significantly better in four of the six measures of reading skills, namely, phrasing, stress, intonation, and integration as compared to their counterparts in the non-peer supported groups and there were no significant differences for pausing and rate. On the other hand, female students in the immersive multimedia learning with peer support group performed significantly better in all six measures of oral production for reading and speaking than their counterparts in the groups without peer support. These findings showed that the immersive multimedia technique with peer support reduced the use of code-switching strategies by the students and enabled them to develop oral production skills in English approaching the patterns of native speakers especially amongst the female students.

Keywords: Immersive multimedia, peer support, oral English skills, male and female, lemmas and lexemes.

[*]Corresponding author, email: nawi.muslem@gmail.com

1.   INTRODUCTION

1.1   Background to this Research

English has become more important in Indonesia because of globalisation and especially because of the ASEAN AEC which comes into force at the end of 2015, whereby Indonesians will have to compete with English speaking foreigners who are able to come to Indonesia either for the purpose of studying or doing other business. What's more, Indonesians will also be able to seek opportunities in other ASEAN countries where the main common language will be English (Yuwono, 2005). A major issue is that weaknesses in English are carried forward from primary school to secondary school and later to tertiary education. Many universities require mastery of English as one of the requirement for admission and/or for graduation. In addition many young learners learn English from private English courses. According to the English Proficiency Index (EPI), within the next decade, as many as two billion people will be learning English at any given time (EF EPI 2011).

English has been taught and learnt by university students for many years (Dardjowidjojo, 2002; Ibrahim, 2004). Many methods of teaching and learning have been used to improve English language skills (Krashen, 1982). However, the methods used by teachers to get better English speaking performances from their students may still be able to be improved. The use of better methods and approaches for teaching and learning English are important things to consider. One possible method to apply in the teaching and learning process to improve language skills is an immersion program (Alberta Education, 2010; McConnell, 2005). Following Levelt (1989) as simplified by De Bot, Parabakht & Wesche (1997), for good acquisition of a language, learners need a program that develops the language lexicon and semantic structure efficiently. Gibbons (2002) suggests the use of an immersive and linguistically and culturally rich environment, employing a range of learning strategies to enable meaningful learning of English language skills.

However, in countries like Indonesia, linguistically and culturally rich environments for learning English for all practical purposes are completely absent with the only inputs or drivers for English being the teachers or lecturers (Kagan, 1995). Advances in ICT and multimedia now allow for a linguistically rich learning environment to be created by compiling recorded contents to provide immersive inputs in place of the teacher. Multimedia packages for immersive learning can be the tools students use to build their language skills, knowledge, and understanding of the world. English language acquisition can be integrated in the learning of all subject areas. This goal can be achieved by providing a linguistically rich learning environment through various means: English books, newspapers, magazines, comics, videos, CDs, Youtube, radio and TV programs, posters, visuals, web sites, songs, and dramas. All can play a central role in second language learning (Alberta Education, 2010; Chapelle, 2003; Coiro, Knobel, Lankshear, & Leu, 2008; Gibbons, 2002; Harben, 2001; Kagan, 1995; Larsen-Freeman & Freeman, 2008; Met, 1987; Nguyen, 2008; Schwartz & Beichner, 1999; Salaberry, 2001).

Many Indonesian university students encounter difficulties in learning and communicating automatically and effectively in English particularly in relation to critical thinking when they continue their studies abroad (Alberta Education, 2010; Hasanah, 1997; Novera, 2004; Philips, 1994). The standard approach in teaching a

second or foreign language in universities is the use of direct method where everything about the language is explained or presented to the students by the instructors (Levelt, 1989; Novera, 2004). This study is based on first language learning theory as presented in Levelt's (1989) lexicon model of language acquisition and production. The model explains the acquisition of a language through the development of internal structures in the form of speech motor patterns, conceptual systems, articulatory motor systems and phonemization. The model takes the approach that language is a reconstruction or reproduction from learned phonological codes. De Bot (ibid) simplified Levelt's (ibid) lexicon model to clarify the early stages of learning and production in mastering a second language through inputs in the form of speech and text. According to De Bot, Paribakht and Wesche (1997), in learning, these inputs are first decoded into lexemes and lemmas that are then recombined or re-associated to form concepts and develop comprehension using various inference strategies. For oral production, the learner selects the acquired lemmas and lexemes, and encodes them into the required forms of outputs as required by the situation. As no textual inputs are used in this study, the model by De Bot, Paribakht and Wesche (1997) is modified to employ multimedia inputs in place of speech and texts, and reading and speaking outputs in place of writing and speaking.

1.2   The Research Question

Based on the background above, the research question along with the objective of the study is as follows: *"Are there significant differences in terms of oral production in reading aloud and speaking by gender between the students who received immersive multimedia learning with peer support and those who did not receive such support?"*

The objective of this study is to investigate the effects by gender of immersive multimedia learning with and without peer support on performance in English in terms of oral production in reading aloud and speaking.

2.   REVIEW OF LITERATURE

2.1   Lexicon Model Levelt's (1989) as Simplified by De Bot, Paribakht and Wesche (1997)

De Bot, Paribakht and Wesche (1997) simplified Levelt's (1989) lexicon model to clarify the early stages of learning and production in mastering a second language through inputs in the form of speech and text. According to De Bot, Paribakht and Wesche (1997), in learning, these inputs are first decoded into lexemes and lemmas that are then recombined or re-associated to form concepts and develop comprehension using various inference strategies. For oral production, the learner selects the acquired lemmas and lexemes, and encodes them into the required forms of outputs as needed by the situation. As no textual inputs are used in this study, the model by De Bot, Paribakht and Wesche (1997) is modified to employ multimedia inputs in place of speech and texts, and reading and speaking outputs in place of writing and speaking (see Figure 1).
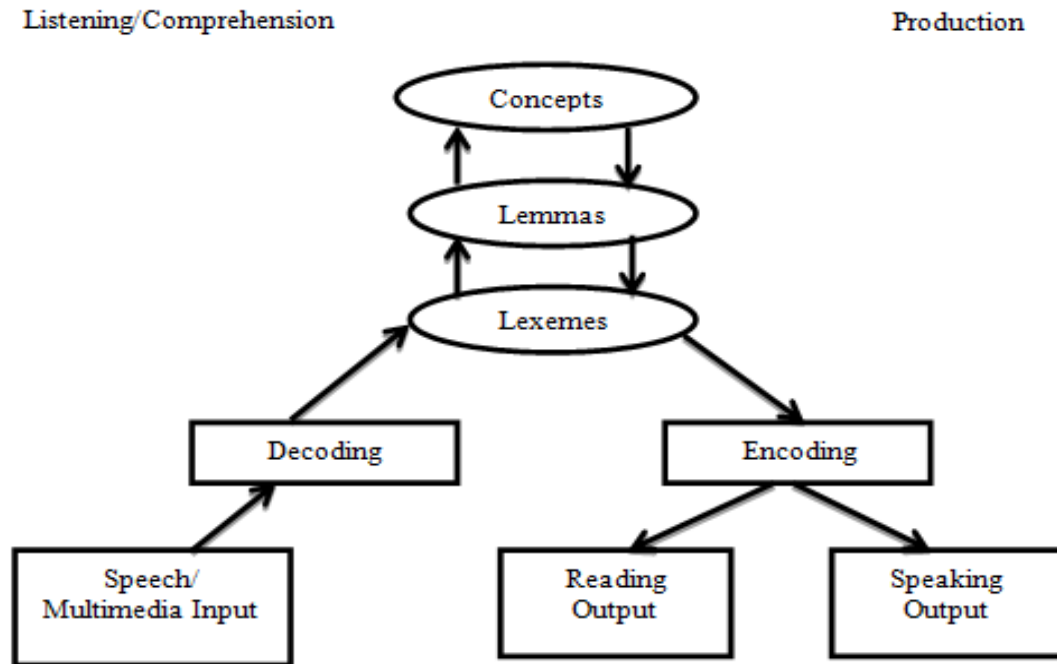
Listening/Comprehension   Production

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                          ┌─────────────┐
                          │  Concepts   │
                          └─────────────┘
                               ↑ ↓
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                          │   Lemmas    │
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                          ┌─────────────┐
                          │   Lexemes   │
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                  ┌──────────┐        ┌──────────┐
                  │ Decoding │        │ Encoding │
                  └──────────┘        └──────────┘
                       ↑            ↙           ↘
         ┌──────────────────┐ ┌─────────┐  ┌─────────┐
         │    Speech/       │ │ Reading │  │ Speaking│
         │ Multimedia Input │ │ Output  │  │ Output  │
         └──────────────────┘ └─────────┘  └─────────┘
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Figure 1. Lexical comprehension/production for oral production skills (modified from De Bot, Paribakht & Wesche, 1997).

Following De Bot, Paribakht and Wesche (1997), the flow of improving outputs from learners' processes in terms of reading and speaking oral skills is from speech multimedia inputs as a starting point. From the multimedia speech inputs, learners listen to and watch various speech inputs spoken by various recorded native speakers.

According to De Bot, Paribakht and Wesche (1997), making inferences is important in the learning process. Inference is the rational and logical point made based on the given inputs, facts or circumstances to draw a conclusion. Learners may encounter many unknown word meanings at first when they listen to and watch spoken inputs from various recorded English speakers. In this case, the ability of learners to infer meanings for unknown words from the context of discourses being listened to and watched from a multimedia speech input. The word 'interest' for instance, this word may have a different meaning when it is found in the context of banking rather than in a common context. Usually, learners know that the meaning of the word 'interest' is the feeling of desire to know or learn about something or someone. However, the word 'interest' may have a different meaning when it is found in the banking system. Learners may not understand what the word 'interest' means if they do not have any background knowledge about banking. In a banking system, the word 'interest' means money paid at a particular rate regularly for the use of money lent or for delaying the repayment of a debt.

De Bot, Paribakht and Wesche (1997) explain the meaning of inference in the context of dealing with the problem of the unknown meaning of a word found in the learning processes. To infer the meaning of words, learners actively and creatively try to identify the unknown meaning of words by making an informed guess about the meaning of word using available clues (De Bot, Paribakht & Wesche, 1997). Therefore, the ability to make inferences to anticipate problems in understanding the lexemes, lemmas, and concepts based on speeches from multimedia inputs related to

unknown or unfamiliar words in the learning process is important (De Bot, Paribakht & Wesche, 1997).

De Bot, Paribakht and Wesche (1997) further describe eight types of inferences involved in the learners' learning processes, namely: (1) Sentence Level Grammatical Knowledge, where it is related to knowledge of relationships among speech parts in a sentence as the learners listen and watch speeches from multimedia inputs. This is often marked by word order to deal with the unknown words, verbs, nouns and/or adjectives. (2) Knowledge of Word Morphology, where it is related to the learners' knowledge of the second language (L2) word derivatives such as stems and affixes, and of grammar inflection. For instance, the affixes *–tion, -ly, -ed*, and *–s,* are commonly used to help to infer the meaning of an unknown word, and (3) Punctuation.

The model by De Bot, Paribakht and Wesche (1997) explains how learners develop the feel and grounding of the new language that is difficult to be taught directly. The first path is the audition and comprehension phase and the second path is the production phase. The presence of peer support enhances the production phase. For adult second language learners who have more advanced inference-making abilities, the processes of chaining, verbal association, discrimination learning at the stage of decoding input may be sufficient to trigger the lexical processing suggested by Levelt and De Bot. Thus, this study is based on the models by Levelt (1989) and De Bot, Paribakht and Wesche (1997) of lexical processing as well as Gagne's (1985) hierarchy of learning to improve learners' oral production skills for reading and speaking fluency through a peer-supported immersive multimedia strategy.

2.2 Second Language Immersion

Students acquire their first language relatively subconsciously. They are not aware that they are learning a language at home and in their wider environment. Immersion strategies attempt to replicate this process for second language acquisition and learning. Immersion programs have been successful particularly when compared with second language subject teaching. Language immersion is a method of teaching a second language (L2) in which the target language is used as both curriculum content and the media of instruction (Pacific Policy Research Center, 2010). The need to have immersion programs for L2 or foreign languages is a result of students' achievements not being satisfactory. Many students having studied English at school find their ability to use the target language is still far from satisfactory. The focus of teaching learning processes nowadays on grammar, memorization, and drills has not provided the students with sufficient skills to work in English or to socialize with English speakers (Johnson & Swain, 1997).

The general purpose of implementing an English immersion program for Indonesian students follows the success of French immersion programs in Canada. The goals can be simplified as follows:
(1) It promotes the English language to be a second language.
(2) It promotes general educational, linguistic and cultural enrichment using English as a second language.
(3) It improves vocabulary, grammar, concepts, intonation and oral production of English as a second language (L2).
(4) It promotes heritage or cultural use of the second language (English)
(5) It is a medium for promotion of international interactions in Indonesia.

(6) It can assist with maintenance and development of indigenous languages (Acehnese, Javanese, etc.).

(7) It can enhance understanding and appreciation of the culture of home language (Alberta Education, 2010; Cummins, 1998).

To increase the number of proficient English second language speakers in Indonesia, it needs a number of immersion and other innovative language learning models aiming at developing a high level of English proficiency (Alberta Education, 2010; Lenker & Rhodes, 2007). Another goal of immersive learning is to enable learners to become functionally fluent in English at the end of the learning process. After implementation of an immersion learning program in English, students will be able to participate easily and willingly in conversations in English. It helps their communications in English for both personal and professional needs. It helps their pursuit of post-secondary and even post-tertiary education in English. It helps learners to get employment where English is the language of workplace (Alberta Education, 2010).

Social interaction plays a crucial activity in immersive learning. Cummins (1998) states that the goal of immersive learning in the process of teaching and learning is to improve the fluency and ability in English of the learners at no apparent cost to their Indonesian academic skills. Within a certain time of implementing multimedia immersive learning in English as the second language, students catch up in most aspects of English standardized test performances. Usually learners need extra time with their peers to catch up on English spelling to make sure their English test performances are better (Cummins, 1998). The focus of immersion classes is on meaningful communication. English learning in immersion is often incidental to academic learning and social interactions that make up normal classroom life (Alberta Education, 2010).

According to Johnson and Swain (1997) there are eight characteristics of the immersion learning process:

(1) The use of the L2 as the medium of instruction.

(2) The immersion curriculum should parallel the local L1 curriculum.

(3) Overt support exists for the L1.

(4) The program aims at additive bilingualism.

(5) The exposure to the L2 is largely confined to the classroom.

(6) Learners enter with similar (limited) levels of L2 proficiency.

(7) The teachers are bilingually proficient, and

(8) The classroom culture is that of the local L1 community (Johnson & Swain, 1997).

By having this immersion learning, it is expected that the learners will become bilingual. However, it is still questionable in the context of Indonesia for this to be a reality. It is important that:

(a) Any immersion learning program is a success.

(b) Resources required are available allowing the program to function adequately, and

(c) There is a continued high level of commitment of all involved in the program from policy makers to teachers, the school environment, parents, administrators and students (Cumminns, 1998, 2000).

2.4 Immersive Multimedia Learning

The immersive multimedia method in this study uses a multimedia immersion program. It means that the target language (English) is the language for instruction in

the teaching and learning activities (Lenker & Rhodes, 2007). The program is designed for first year university students. This method of teaching and learning English for any language in this world has been used for more than thirty five years (Cummins, 1998; Lenker & Rhodes, 2007; Alberta Education, 2010). However, in the current study, the role of the teacher is limited. The teacher is a facilitator or an organizer in the classroom. The students do activities either in the classroom or outside the classroom to immerse themselves by listening and watching video clips and recordings provided by the teacher. The students learn by mastering the contents of the learning materials. Multimedia teaching-learning materials play an important role nowadays in education and training as well as for the teaching and learning of languages (Chang & Lehman, 2002; Liu & Chu, 2010; Nguyen, 2008; Shahrina Md. Nordin & Mazyrah Masi, 2010; Yang, Chen, & Chang Jeng, 2010).

2.5   Peer Support and the Language Learning Environment

Reza and Mahmood (2013) conducted a study that involved 95 participants (both males & females) in actual university classes whose ages ranged from 18 to 30 years on the scaffolding of reading in an EFL context. The study revealed that there was a significant statistical difference in the performance of reading skills between the male and female learners. Additionally, many other previous studies had been conducted in terms of using peer-supported multimedia immersive methods to improve oral production in reading and speaking for pausing, phrasing, stress, intonation, speaking rate, and integration (Abu Seileek, 2007; Bahrani, 2011; Bava Harji, Gheitanchian & Letchumanan, 2014; Belenky, Clinchy, Goldberger & Tarule, 1986; Diyyab, Abdel-Haq & Aly, 2013; Ilter, 2009; Kabilan, Ahmad & Abidin, 2010; Hismanoglu, 2012; Sykes, 2008; Ullakonoja, 2009; Shih, 2010; Wu & McMahon, 2013). Many other previous studies have also been conducted in terms of using multimedia to improve students' oral production skills (Aslan, 2009; Cesur, 2008; Colley, 2001; Collins, 2011; Ehrman & Oxford, 1989; Larrabee & Crook, 1993; Ong, 1999; Slater, Lujan & DiCarlo, 2007; Varol & Yilmaz, 2010; Yalcin, 2006). The study by Klecker (2006) reported that there were differences in oral production skills in reading by gender where the reading performance of females was higher than the performance of males.

3.   METHOD

The design of this study employed two experimental groups namely, the immersive multimedia learning group with peer support, and the second group without peer support. Tests of oral production skills for reading and speaking were not administered as pre-tests to avoid revealing to the students of the elements that would be used in the final assessment, which were fluency, accents, and other qualities of oral production approaching the levels of native-speaker. This was implemented following Ary, Jacobs, Razavieh and Sorensen (2006) who stated that exposure to pre-tests would threaten the internal validity of a study by conditioning the participants to the elements being investigated and affect the participants' performance regardless of the experimental treatment. The data collection for oral production skills was conducted using audiotape recordings. Scoring of the oral production skills was done by the researcher based on these recordings.

The population for this study were students who registered for the first year at the Study Program of English Education at Syiah Kuala University, Banda Aceh, Indonesia. The 80 students who registered for this study came from four classes. All the students were from 18 to 20 years of age. Most of the students did not have strong English skills to communicate to start with since English was a foreign language for them. From the sample, 40 students were assigned to the group for immersive learning with peer support (males and females) and 40 students were assigned to the group for immersive learning without peer support (males and females). Thus, one class employed peer support activities with pair groups formed based on students choosing partners whilst the students in the other class worked individually without peer support.

The research instruments used in this study consisted of tests for oral reading and speaking. The data from the tests was analyzed by using descriptive and inferential statistical methods involving one-way ANOVA. The results of post-test were analyzed based on the assessment rubric that was developed to assess the speaking performances produced by the students. The speaking performances of the students in the oral production tests were recorded to ensure the data collected was correct and valid and could be reproduced again if required for further checking or assessment.

4. FINDINGS

4.1 Male Students for Reading

The male students who were engaged in the immersive multimedia learning with peer support performed significantly better in English in terms of oral production in reading than their counterparts who did not receive peer support. Table 1 reports the means, standard deviations, and results of the ANOVA analysis for the oral production in reading by treatment for the males. Male students in the peer supported group had higher mean scores for all dimensions of oral production in reading, and the results of ANOVA tests showed significant differences with the non-peer supported group, i.e., that $p < .05$ for phrasing, stress, intonation and integration. These findings showed that the male students in the group with peer support performed significantly better in four of the six measures of reading skills, namely, phrasing, stress, intonation, and integration as compared to their counterparts in the non-peer supported group. There were no significant differences for pausing and rate.

Table 1. Means, standard deviations, and results of ANOVA analysis for oral production in reading by treatment for male students.

Gender			N	Mean	Std. Deviation	ANOVA
Male	Pausing	With peer support	9	7.11	.78	F (1,15) = .365, p = .556
		W/O peer support	7	6.85	.89	
	Phrasing	With peer support	9	7.22	.66	F (1.15) = 5.382, p = .036
		W/O peer support	7	6.28	.95	
	Stress	With peer support	9	7.11	1.05	F (1,15) = 6.306, p = .025
		W/O peer support	7	5.85	.89	
	Intonation	With peer support	9	7.77	.66	F (1,15) = 6.045, p = .028
		W/O peer support	7	6.57	1.27	

Table 1 continued…

Male	Rate	With peer support	9	7.11	.60	F (1,15) = 1.374, p = .261
		W/O peer support	7	6.71	.75	
	Integration	With peer support	9	7.88	.60	F (1,15) = 4.900, p = .044

4.2 Male Students for Oral Production for Speaking

Male students who engaged in immersive multimedia learning with peer support did not perform significantly better in English in terms of oral production in speaking than their counterparts who did not receive peer support. Table 2 shows the means, standard deviations, and results of the ANOVA analysis for oral production in speaking by treatment for the males. Male students in the peer supported group and also in the group without peer support reported similar mean scores for all dimensions of oral production in speaking, and the results of the ANOVA tests showed no significant differences, i.e., that $p > .05$ for all oral production factors. These findings showed that the male students in the non-peer supported group scored equally well in speaking skills as compared to their male counterparts in the peer supported group.

Table 2. Means, standard deviations, and results of ANOVA analysis for oral production in speaking by treatment for male students.

Gender			*N*	*Mean*	*Std. Deviation*	*ANOVA*
Male	Pausing	With peer support	9	6.66	1.11	F (1,15) = .267, p = .614
		W/O peer support	7	6.42	.53	
	Phrasing	With peer support	9	6.22	.97	F (1.15) = 2.519, p = .135
		W/O peer support	7	5.57	.53	
	Stress	With peer support	9	5.77	1.09	F (1,15) = 1.215, p = .289
		W/O peer support	7	5.28	.48	
	Intonation	With peer support	9	6.55	.88	F (1,15) = 1.326, p = .269
		W/O peer support	7	6.14	.37	
	Rate	With peer support	9	6.55	.72	F (1,15) = 4.030, p = .064
		W/O peer support	7	6.00	.00	
	Integration	With peer support	9	6.88	.78	F (1,15) = 2.411, p = .143
		W/O peer support	7	6.28	.75	

4.3 Female Students for Reading

Female students who engaged in immersive multimedia learning with peer support performed significantly better in English in terms of oral production in reading than their counterparts who did not receive peer support. Table 3 shows the means, standard deviations, and results of the ANOVA analysis for oral production in reading by treatment for the females. Female students in the peer supported group reported higher mean scores for all dimensions of oral production in reading, and the results of the ANOVA tests showed significant differences, i.e., that $p < .05$ for all factors namely pausing, phrasing, stress, intonation, rate and integration. These findings indicate that the female students in the group with peer support scored significantly higher in all factors for the reading skills as compared to their female counterparts in the group without peer support.

Table 3. Means, standard deviations, and results of ANOVA analysis for oral production in reading by treatment for female students.

Gender			N	Mean	Std. Deviation	ANOVA
Female	Pausing	With peer support	31	7.16	.68	F (1,63) = 6.134, p = .016
		W/O peer support	33	6.66	.88	
	Phrasing	With peer support	31	6.87	.92	F (1,63) = 5.718, p = .135
		W/O peer support	33	6.27	1.06	
	Stress	With peer support	31	6.77	.84	F (1,15) = 1.215, p = .020
		W/O peer support	33	6.12	.96	
	Intonation	With peer support	31	7.70	.78	F (1,63) = 12.709, p = .001
		W/O peer support	33	6.93	.93	
	Rate	With peer support	31	7.06	.72	F (1,63) = 10.674, p = .002
		W/O peer support	33	6.39	.89	
	Integration	With peer support	31	7.61	.88	F (1,63) = 11.666, p = .001
		W/O peer support	33	6.90	.76	

4.4 Female Students for Oral Production for Speaking

Female students who engaged in immersive multimedia learning with peer-support performed significantly better in English in terms of oral production in speaking than their counterparts who did not receive peer support. Table 4 shows the means, standard deviations, and results of the ANOVA analysis for oral production in speaking by treatment for the females. The female students in the peer supported group reported higher mean scores for all dimensions of oral production in speaking and the results of the ANOVA tests showed significant differences, i.e., that $p < .05$ for all the oral production factors namely, pausing, phrasing, stress, intonation, rate and integration. These findings showed that the female students in the group with peer support developed significantly better speaking skills as compared to their female counterparts in the group without peer support.

Table 4. Means, standard deviations, and results of ANOVA analysis for oral production in speaking by treatment for female students.

Gender			N	Mean	Std. Deviation	ANOVA
Female	Pausing	With peer support	31	6.77	.66	F (1,63) = 13.660, p = .000
		W/O peer support	33	6.12	.73	
	Phrasing	With peer support	31	6.41	.62	F (1,63) = 46.977, p = .000
		W/O peer support	33	5.33	.64	
	Stress	With peer support	31	6.00	.81	F (1,15) = 22.948, p = .000
		W/O peer support	33	5.18	.52	
	Intonation	With peer support	31	6.67	.79	F (1,63) = 29.562, p = .000
		W/O peer support	33	5.54	.86	
	Rate	With peer support	31	6.87	.67	F (1,63) = 44.601, p = .000
		W/O peer support	33	5.75	.66	
	Integration	With peer support	31	7.32	.59	F (1,63) = 54.328, p = .000
		W/O peer support	33	6.15	.66	

Analyses by gender and treatment strategies found that male students in the immersive multimedia learning with peer support group performed significantly better in four of the six measures of reading skills, namely, phrasing, stress, intonation, and integration as compared to their counterparts in the non-peer supported group, but there were no significant differences for pausing and rate, and for vocabulary and grammar. On the other hand, female students in the immersive multimedia learning with peer

supported group performed significantly better in all six measures of oral production in reading and speaking than their counterparts in the group without peer support.

5. DISCUSSION

Analysis by gender and treatment methods found that male students in the immersive multimedia learning with peer support performed significantly better in four of the six measures of reading, namely, phrasing, stress, intonation, and integration as compared to their male students in the group without peer support. For male students, the method with peer support provided some improvements to their reading ability that involved repeating or reciting passages following the presentation in the clips, but did not assist them in developing deep mastery that would enable them to speak better and express meaningful responses that may go beyond the presentation in the clips.

The findings showed that despite being offered authentic inputs and peer support, it appeared that the male students in the peer support group did not benefit from the use of the recordings and other peer activities to provide assistance in developing speaking skills. This occurred because the students were only at the level of developing phonetic strings and did not engage deeply enough for the building blocks of language based on semantic structures, syntactization, phonological codes, and an articulatory motor system that later develops into parsing abilities (Levelt, 1989) to be triggered. They were only engaging at the superficial level that enabled the reproduction of phonetic strings during reading but were not able to reach the internal speech level for producing native speaker speech patterns (Levelt, 1989). Again, the findings of male students, however, must be considered with caution as the sample size for the male students for the treatment groups was also not large enough for robust statistical inferences to be made.

On the other hand, the female students in the immersive multimedia learning with peer support performed significantly better in all measures of oral production in reading and speaking than their counterparts in the group without peer support. This indicated that peer support within the immersive multimedia learning method provided for deeper engagement and mastery for female students as they could not only read better but also speak better than the female students in the individual non-peer support group. These findings are consistent with the studies by Belenky, Clinchy, Goldberger and Tarule (1986), Colley (2001), Klecker (2006), Kraft and Nichel (1995), Larrabee and Crook (1993), and Ong, (1999).

The findings further revealed that the peer support within the immersive multimedia learning method enabled female students to develop the basic phonetic strings required for reading production, and at the same time engaged very deeply to trigger the lexicon construction process involving semantic structures, syntactization, phonological codes, and an articulatory motor system that later developed into parsing abilities and internal speech (Levelt, 1989).

6. CONCLUSION

The findings showed that the immersive multimedia learning with peer support group reported significantly better performance in all measures of oral production for

reading and speaking. Analyses by gender reported that males in the immersive multimedia group with peer support performed significantly better in four of the six measures of reading skills, namely, phrasing, stress, intonation, and integration as compared to their counterparts in the non-peer supported group and there were no significant differences for pausing and rate. On the other hand, female students in the immersive multimedia learning with peer support group performed significantly better in oral production in all measures of oral production for reading and speaking than their counterparts in the group without peer support. These findings showed that the immersive multimedia technique with peer support that employs the L1 theory reduced the use of code-switching strategies among the students and enabled them to develop oral production skills in English approaching the patterns of native speakers especially amongst the female students.

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THE AUTHOR

Asnawi was born on November 5, 1974, in Seuneubok, Nisam, North Aceh. He accomplished his undergraduate in the Study Program of English Education, Faculty of Teacher Training, Syiah Kuala University, Banda Aceh, in 2000. He was appointed as a lecturer at the study program in 2001. He studied at the National University of Malaysia in Malaysia in 2004 and completed his Master's degree in the field of Teaching English as a Second Language (TESL) in 2006. He completed his Doctoral degree from Universiti Sains Malaysia (USM) Pulau Penang, Malaysia, in the field of Instructional Strategies in 2015. He is now teaching at the undergraduate of English Education Study Program, Syiah Kuala University. He also teaches at the Graduate Program in English Language Education, Syiah Kuala University, Banda Aceh.