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Kindergarten Learners' Mastery of English Dental Fricatives by Using Audiovisual Media in Bali Star Academy

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Abstract*

This research aims to 1) identify and describe the ability of kindergarten learners in producing English dental fricatives and 2) identify and describe the effect of audio-visual media for kindergarten learners' ability in producing English dental fricatives. This research used experimental approach with Intact Group Comparison design. The subject of this research was kindergarten learners in Bali Star Academy. The data of this research was collected through documentation method and was analyzed by using qualitative description. The result showed that control group had higher result compared to experiment group during the pre-test with 60.71% average score for the control group and 17.71% average score for the experiment group. After the audio-visual media applied for the experiment group, the result changed into 76.28% average score for the experiment group and 67.85% for the control group.

1. Introduction

Language is one of important aspects for human in order to communicate in their social life. According to Halliday in Tompkins and Hoskisson (1995), language's functions are to express opinion, thought, attitude, affect people's attitude or opinion, make contact, maintain social relationship, give information, fulfill and conduct aesthetic taste, gain information, and to express desire. Based on those functions, language has to be learned formally or informally in education in order to achieve the communication's goals. In this globalization era and the development of science and technology, Bahasa Indonesia is not the only language that can be learned or taught in Indonesia's education environment. One of the biggest foreign languages as learning and teaching subject in Indonesia is English. English in education in Indonesia has been learned and taught since the lowest level (kindergarten) until highest level (university). In early childhood education, children will absorb many sounds, words, and grammar in their environment. The children will learn all those things consciously (Montessori edited by Gutek, 2004:227).

Using English especially for non-native speakers has given some difficulties. Some factors that affect the pronunciation are the native language, the age factor, the amount of the language exposure, phonetic ability, attitude and identity, and motivation (Kenworthy, 1987:4-8). One of the factors stated before is pronouncing or producing the correct sound of the language related to the influence of mother language. For example, some Indonesians are likely to pronounce the sound [θ] in the word thank as tank without producing the correct sound of [θ] because the sound of [θ] is rarely used by Indonesian. However, there are many developments of teaching methods used by the teacher to help the learners to fix the problem. The method applied was mostly related to technology such as audiovisual media. This media is related to sounds and pictures, and the learners will learn through hearing and creating the meaning through visualization.

This research was conducted based on two problems; how the ability of kindergarten learners at Bali Star Academy is characterized in producing English dental fricatives and what the effect brought by the use of audiovisual media in kindergarten learners at Bali Star Academy in producing English dental fricatives is. Generally, this research aims to gain knowledge or information directly about a learning process which relates with linguistic study, the proper method used in learning process, and the kindergarten learners' ability in English. Specifically, this research aims to know the ability of kindergarten learners in producing English dental fricatives and to know the effect of audiovisual media for kindergarten learners' ability. Theoretically, this research will give contribution to the development of linguistic theory and practically it will give some information about the use of audiovisual media for kindergarten learners'.

2. **Research Methods**

This study used experimental approach with Intact Group Comparison design. In this method, one class was divided into two groups; one group as experiment group (treatment given) and the other as control group (treatment is not given). The data in this study was collected through documentation method. The instruments used were tape recorder, earphone, laptop, and journal for note-taking. The recording was focused on learners' skill in producing English dental fricatives and the effect of audio-visual media towards learners' ability during the post-test. The subject of this research was 14 kindergarten learners in Bali Star Academy and the learners were divided into two groups with 7 learners in each.

The collected data was analyzed by using qualitative description. This method gave detail description about the childhood learners' ability in producing English dental fricatives and the effect of audio-visual media applied in the class. Kindergarten learners' skill in producing English dental fricatives was analyzed based on the phonological system theory and supported by the use of speech analyzer to provide the physical form of learners' ability before and after the treatment. The effect of the audio- visual media was used as the supporting statement in creating a good teaching and learning process for early childhood learners

3. Discussions

3.1 English Dental Fricative Pronunciation Ability of Kindergarten Learners at Bali Star Academy

There were six words of voiceless dental fricative [θ] and six words of voiced dental fricative [ð] had to be pronounced correctly by 14 learners.

No.	Word	Standard Pronunciation
1.	Path	[paːθ]
2.	Math	[maθ]
3.	Mouth	[maʊθ]
4.	Thank	[θæŋk]
5.	Thumb	[θʌm]
6.	Birthday	[ˈbɜːθdeɪ]
7.	That	[ðæt]
8.	This	[ðɪs]
9.	The	[ðəː] or [ðiː]
10.	Father	[ˈfɑːðə(r)]
11.	Mother	[ˈmʌðə(r)]
12.	Together	[təˈgeðə(r)]

Table 3.1.1: List of Dental Fricatives words

These 14 learners were labeled as L1-L14. During the pre-test, most of the learners were unable to produce the dental fricatives sound correctly. The result was listed below.

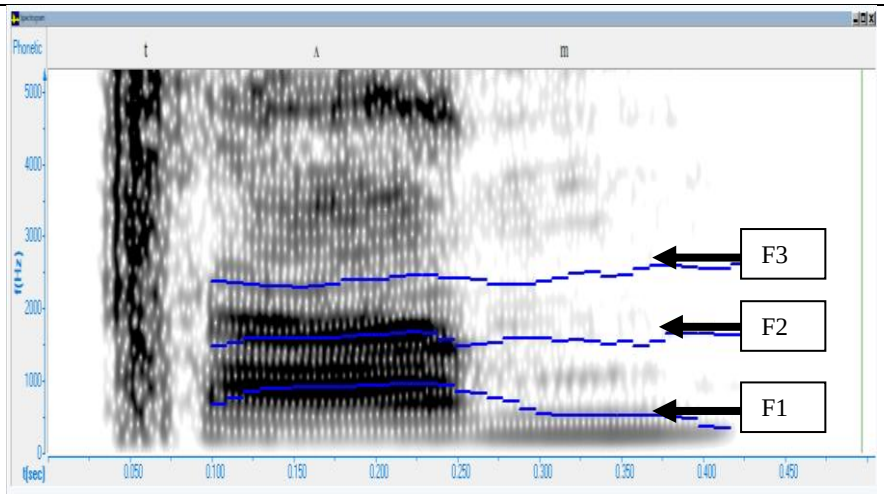
[θ] Word	Standard Pronunciation	Incorrect Pronunciation	Total of Learners
Path	[paːθ]	[pat]	4
Math	[mæθ]	[mat]	6
Mouth	[maʊθ]	[maʊt]	7
Thank	[θæŋk]	[tæŋk]	6
Thumb	[θʌm]	[tʌmb]	10
Birthday	[ˈbɜːθdeɪ]	[bɜːdeɪ]	8

Table 3.1.2: List of Total Learners' (θ) Incorrect Pronunciation

[ð] Word	Standard Pronunciation	Incorrect Pronunciation	Total of Learners
That	[ðæt]	[dæt]	9
This	[ðɪs]	[dɪs]	9
The	[ðəː] or [ðiː]	[diː]	12
Father	[ˈfɑːðə(r)]	[ˈfɑːdə(r)]	9
Mother	[ˈmʌðə(r)]	[ˈmʌdə(r)]	9
Together	[təˈgeðə(r)]	[təˈgedə(r)]	9

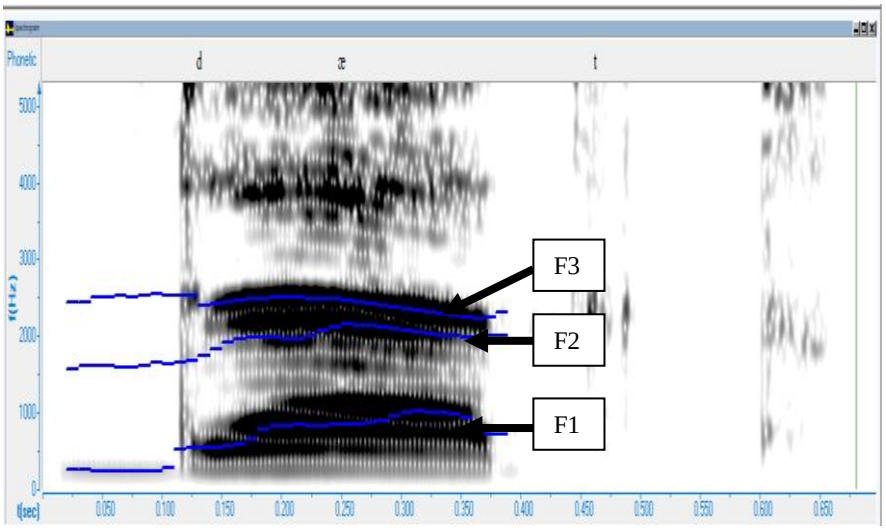
Table 3.1.3: List of Total Learners' (ð) Incorrect Pronunciation

To support the pre-test result above, the sounds of the learners and the native speaker were analyzed by using speech analyzer as well. The spectrogram was closely related to acoustic phonetic that are focusing on the sounds waves produced during the speaking activities. The sound could be differed based on its pitch, loudness, and quality. The pitch on the spectrogram was showed by the Hz (hertz) which related to frequency. On each spectrogram, the arrow showed the resonances of the vocal tract called as formants. Each spectrogram has 3 formants labeled with F1, F2, and F3.



Spectrogram 3.1.1: The sound (θ) by the learner

The spectrogram above represents the word [θʌm]. The [θ] sound in the word [θʌm] was produced by the learner as [tʌm]. The sound [t] on the word [tʌm] had a burst of air. The burst of [t] in the beginning had a higher frequency range. At the beginning of the word [tʌm], the first formant goes up, the second moves very little, and the third moves slightly down. If a word started with the third formant fall and the second format only had small movement, it showed the sound [t] (Ladefoged, 2001:50-51).



Spectrogram 3.1.2: The sound (ð) by the learner

The spectrogram above represents the word [ðæt]. Furthermore, the [ð] sound in the word [ðæt] was produced by the learner as [dæt]. The formants were being produced while the stop closure was being formed or was opening. Similar to the sound [t], the first formant goes up, the second moves very little, and the third moves slightly down on the sound [d]. The movement of the second and the third formant were the distinguishing characteristic of the [d] sound. [d] is a stop consonant and it was marked by the movement of the first formant. The frequency of the first formant was increasing at the beginning of the syllable and falls at the end. If the second formant had small movement and the third formant fell, it showed [d] sound (Ladefoged, 2001:49-50).

The result of English dental fricatives sound production of each learner was used as the pre-test result. Thus, seven learners; L1-L7 were included as control group and another seven

learners L8-L14 were included as experiment group. The pre-test result was counted based on the average score. The score for each group was listed below.

	Code	Words	Correct		Incorrect	
			Total	%	Total	%
1.	L1	12	11	92%	1	8%
2.	L2	12	5	42%	7	58%
3.	L3	12	9	75%	3	25%
4.	L4	12	4	33%	8	67%
5.	L5	12	9	75%	3	25%
6.	L6	12	7	58%	5	42%
7.	L7	12	6	50%	6	50%
	Total:			425%		275%
	Mean:			60.71%		39.28%

Table 3.1.4: Control Group Pre-Test Result

	Code	Words	Correct		Incorrect	
			Total	%	Total	%
1.	L8	12	3	25%	9	75%
2.	L9	12	1	8%	11	92%
3.	L10	12	5	42%	7	58%
4.	L11	12	1	8%	11	92%
5.	L12	12	1	8%	11	92%
6.	L13	12	3	25%	9	75%
7.	L14	12	1	8%	11	92%
	Total:			124%		576%
	Mean:			17.71%		82.28%

Table 3.1.5: Experiment Group Pre-Test Result

3.2 The Effect of Audio-visual Media on Kindergarten Learners' Ability in Producing English Dental Fricatives

The treatment for the experiment group was using audio-visual media and supported by contextual learning. The result of producing English dental fricatives by the experiment group after the eight times treatment was listed based on the amount of correct pronunciation during pre-test and post-test to compare the result before and after the treatment given.

[θ] Word	Correct Pronunciation	Total of Learners in Experiment Group	
		Pre-test	Post-test
Path	[paːθ]	2	5
Math	[mæθ]	3	5
Mouth	[maʊθ]	2	4
Thank	[θæŋk]	4	7
Thumb	[θʌm]	2	7
Birthday	[ˈbɜːθdeɪ]	3	4

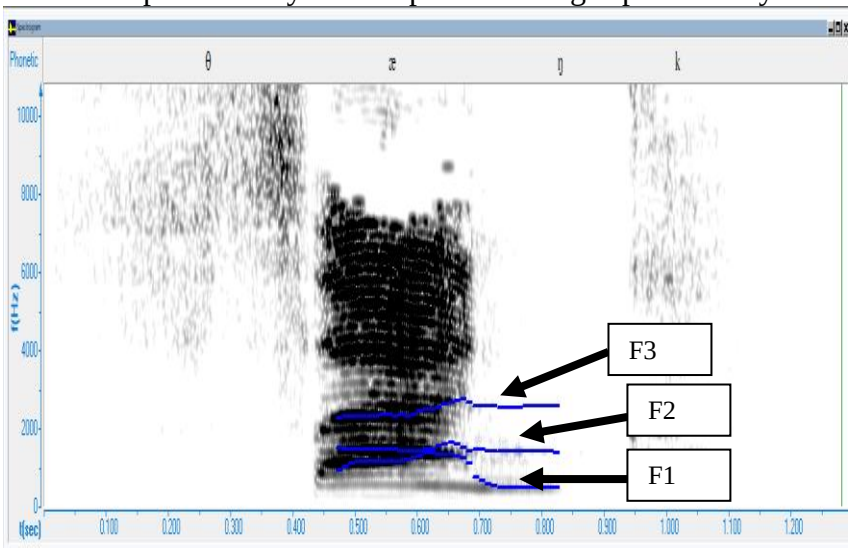
Table 3.2.1: Voiceless Dental Fricatives Result Pre-Test & Post-Test

[ð] Word	Correct Pronunciation	Total of Learners in Experiment Group	
		Pre-test	Post-test

That	[ðæt]	1	7
This	[ðɪs]	1	7
The	[ðəː] or [ðiː]	0	5
Father	[ˈfɑːðə(r)]	1	4
Mother	[ˈmʌðə(r)]	2	5
Together	[təˈgeðə(r)]	1	4

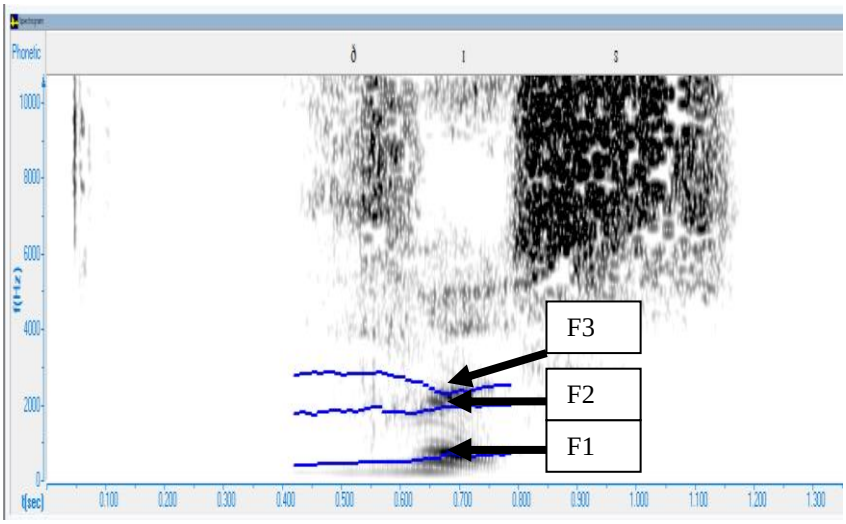
Table 3.2.2: Voiced Dental Fricatives Result Pre-Test & Post-Test

In table 3.2.1 and 3.2.2, there was an improvement of the learners' ability of the experiment group in producing voiceless dental fricatives [θ] sound correctly compared to the pre-test. The post-test resulted by the learners in experiment group was also being compared to the dental fricatives sound produced by native speaker through speech analyzer.



Spectrogram 3.2.1: the sound [θ] by the learner

The spectrogram represented the word [θæŋk]. The voiceless dental fricative [θ] sound had no vibration produced by the vocal folds. The noise of [θ] was produced by the friction and the resistance to the air as it rushes through a narrow gap. The voiceless dental fricative sound had energy over a wide range of higher frequency and usually in the beginning of the word; the second formant was fairly at 1.250Hz. The [θ] sound is less loud than the other fricative sound; therefore, the darker mark in the upper frequency range on the spectrogram was unclear. The learner's spectrogram showed the characteristic of [θ] sound and it can be concluded that the [θ] sound was produced correctly by the learner.



Spectrogram 3.2.2: the sound [ð] by the learner

The spectrogram 3.2.1 and 3.2.2 represented the word [ðɪs]. Voiced dental fricatives were produced by pulses from the vocal folds and more random energy produced by forcing air through a narrow gap (Ladefoged, 2001:58). The [ð] sound had very faint formant on the initial position and little random energy on the higher frequencies. The learner's spectrogram showed the characteristic of [ð] sound and it can be concluded that the [ð] sound was produced correctly by the learner.

After eight times of treatment for the experiment group, the post-test was done for control group and experiment group, thus the result was analyzed. The post-test result of the control group and the experiment group was also listed below.

			Correct		**Incorrect**	
	Code	**Words**	**Total**	**%**	**Total**	**%**
1.	L1	12	12	100%	0	0%
2.	L2	12	6	50%	6	50%
3.	L3	12	9	75%	3	25%
4.	L4	12	6	50%	6	50%
5.	L5	12	9	75%	3	25%
6.	L6	12	8	67%	4	33%
7.	L7	12	7	58%	5	42%
	Total:			475%		225%
	Mean:			67.85%		32.14%

Table 3.2.3: Control Group Post-Test Result

			Correct		**Incorrect**	
	Code	**Words**	**Total**	**%**	**Total**	**%**
1.	L8	12	9	75%	3	25%
2.	L9	12	10	83%	2	17%
3.	L10	12	8	67%	4	33%
4.	L11	12	9	75%	3	25%
5.	L12	12	11	92%	1	8%
6.	L13	12	11	92%	1	8%
7.	L14	12	6	50%	6	50%

Total:	534%	166%
Mean:	76.28%	23.71%

Table 3.2.4: Experiment Group Post-Test Result

Table 3.2.3 showed the post-test results of the control group (L1-L7). During the pre-test, the control group result in producing dental fricatives sound correctly was 60.71% as the average score. However, there was 11% improvement during the post-test and the result changed into 67.85% as the average score. The 11% improvement for the control group was not expected due to the fact that no treatment was given for the control group during the research. On the other hand, table 3.2.4 showed the post-test results of the experiment group (L8-L14). During the pre-test, the experiment group's result in producing dental fricatives sound correctly was only 17.71% as the average score. However, there was 77% improvement during the post-test and the result changed into 76.28% as the average score.

During the eight times of treatment for the experiment group, the researcher was using some audiovisual media such as videos and songs, and supported by LCD and laptop in the class. The media applied for the experiment group were mostly taken from children songs or kids phonics theory in *Youtube* with colorful pictures or animations. These songs are listed below.

	Title of the song	**Source**
1.	Please and Thank You	The Singing Walrus Channel (https://www.youtube.com/watch?v=zXIxDoCRc84)
2.	Happy Birthday	The Kiboomers – Kids Music Channel (https://www.youtube.com/watch?v=90w2RegGf9w)
3.	My Eyes Nose Mouth Ears	Muffin Songs Channel (https://www.youtube.com/watch?v=lVINkMH0BUA)
4.	I Love Math	Grace Daley & Ramona Lewis (https://www.youtube.com/watch?v=-co8GdLsAtM)
5.	Where is Thumbkin	Pinkfong! Kids' Song and Stories Channel (https://www.youtube.com/watch?v=zeNF-ymZGR0)
6.	The More We Get Together	The Learning Station Channel (https://www.youtube.com/watch?v=lldmkrJXQ-E&t=58s)
7.	Voiceless and Voiced Digraph /th/ Sound – Phonics	TurtleDiary Channel

Table 3.2.5: List of Songs

The songs listed above were chosen based on its context with learners' daily life. The songs were mostly related to learners' activity and behavior in their daily life. This is one of the educational process aimed to help the students in seeing the meaning of their academic subjects with the context of their personal, social, and culture (Johnson, 2002:25) For example, the song *Please and Thank You* was in fact about teaching kids to say *please* and *thank you* in every situation, the song *I Love Math* was closely related to one of the subject at school, and etc. On the other word, this learning and teaching concept helped the teacher to associate the learning material with the life knowledge and to encourage the learners to create relationship between their knowledge and its application in their life contexts.

In this research, 12 words contained English dental fricatives were given to the learners during the pre-test to be pronounced without any additional words or sentences that helped them to undertand the word. Meanwhile, during the eight times of treatment by using audiovisual media, there were some additional information, sentences, practices, songs, and motions that

related to the 12 English dental frictives words. Each word had its own sentences, questions, and additional informations to encourage and help the learners to associate the words with their life contexts. Therefore, the learners was able to create sharp memory about the learning materials. For example, the learners were stimulated to remember the Science lesson about body parts to learn (θ) sound in the word /mouth/ and /thumb/.

4. Novelties

Based on the result, kindergarten students around the age of 4-6 are capable to produce the uncommon sounds in their native language. Dental fricatives are sound that never being used in communication especially for Indonesian. Moreover, due to the development of technology these days, the learning and teaching process are supported by many technologies to make the process easier and understandable for the students. One of the examples is the use of audio-visual media in the classroom for the learning process. The object of this research is kindergarten students and the learning approaches have to be compatible with their age. The audio-visual media used in this research is videos taken from an online video-sharing platform. These videos contain of colourful animations, sounds, and text. Consequently, the kindergartens students are improving their ability in producing English dental fricatives after 8 times drilling treatment by using audio-visual media.

5. Conclusion

Based on the results of the research, the control group had higher results compared to the experiment one during the pre-test. The control group had 60.71% average score, meanwhile the experiment group had only 17.71% average score. However, the result was changed during the post-test especially for the experiment group due to the use of audiovisual media as the treatment in the class. As a result, the experiment group had 76.28% average score on the post-test. It was improved 77% compared to the pre-test result. Meanwhile, the control group was showing 11% improvement with 67.85% average score on the post-test without any treatment given to the control group. The improvement of the experiment group was above 50% and it can be concluded that the audiovisual media used during the learning process had given an effect or influences toward the learners' ability in producing the unfamiliar sounds in their language system, especially the English dental fricatives [θ] and [ð] sound.

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References

Armawan, I Ketut. Suyasa, Made Dharma Susena. 2015. Kajian Akustik Bunyi Frikatif Mahasiswa Semester II Jurusan Bahasa Inggris Diploma III. Singaraja: Universitas Pendidikan Ganesha.

Brown, H. Douglas. 2000. *Principles of Language Learning and Teaching, Fourth Edition*. San Francisco State University.

Brown, H. Douglas. 2006. *Principles of Language Learning and Teaching, Fifth Edition*. Pearson Education.

Dewi, Dian Utami. Ali, Muhammad. Sutarmanto. 2013. Penggunaan Media Audio Visual untuk Meningkatkan Perolehan Kosakata Bahasa Indonesia Anak. Pontianak: FKIP Untan

Gerald, Kelly. 2000. *How to Teach Pronunciation*. Longman.

Gutek, Gerald Lee. 2004. *The Montessori Method.* USA: Rowman and Littlefield Publishers.

Handbook of the International Phonetic Association: A guide to the use of the International Phonetic Alphabet. Cambridge University Press.

Johnson, Elaine B. 2002. *Contextual Teaching And Learning: What It Is and Why It's Here to Stay*. California: Corwin Press.

Kenworthy, Joanne. 1987. *Teaching English Pronunciation*. London: Longman.

Krashen, Stephen D. 1982. *Principles and Practices in Second Language Acquisition.* University of South California.

Ladefoged, Peter. 2001. *Vowel and Consonants: An Introduction To The Sounds of Languages*. Los Angeles: University of California.

Marsono. 1999. *Fonetik*. Yogyakarta: Gadjahmada University Press

Roach, Peter. 1991. *English Phonetics and Phonology: A Practical Course*. Cambridge Univeristy Press.

Stern, H.H. 1983. *Fundamental Concepts of Language Teaching*. Oxford University Press.

Tompkins, G.E. dan Hoskisson, K. (1995). Language Arts: Content and Teaching Strategies. Ohio: Prentice Hall**.**

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