PHONOLOGICAL AWARENESS THERAPY THROUGH ARTICULATION TRAINING STRATEGY FOR YOUNG ENGLISH LEARNERS

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Abstract

The production of English speech by particularly Balinese students must be essentially focused on their phonological awareness, therefore misarticulation that influences meaning and intention of utterance can be avoided. The aim of the research was to determine if articulation training strategy could result specific and generalized improvement in English phonology awareness. The method was investigating the speech of 35 junior high school students of SLUB Bilingual Denpasar and applying three strategies of Vertical – Horizontal - Cyclical technique. Data collection consisted of five subtests: rhyme matching, word initial matching, blending phonemes, word initial segmentation/matching and consonant deletion. The result shows that the deficit in articulation of English Phonemes was 532 in total. It consisted of 23% deficit in fricative, 72,7 % deficit in allophones, and 0,75% deficit in vowel. Types of deficit were omission (35,3 %), addition (6,01 %), misinformation (51,5 %) and disordering (7,14 %). The causes of deficit were 18 % overgeneralizations, 31,01 % incomplete applications of rules 25 % false concepts hypothesized and 25,37 %) ignore of rule restriction. The application of phonological awareness through articulation training strategy has improved their weaknesses. It shows that the deficit decreased into 85% or only 80 deficit.; 20 deficit in fricative sounds, 57 deficit in allophone, 3 deficit in vowel production. It can be concluded that phonological awareness has significantly influenced students' awareness in English phonology

Keywords: Phonemes, Allophones, Therapy, Phonological awareness

Abstrak

Pengujaran Bahasa Inggris oleh siswa SLUB Bilingual Denpasar di Bali semestinya dititikberatkan pada kesadaran fonologi. sehingga kesalahan pengucapan yang mempengaruhi makna ujaran dapat dihindari. Tujuan penelitian ini adalah untuk menentukan apakah strategi pelatihan artikulasi dapat mengasilkan perkembangan spesifik dan berlaku umum berdasarkan kesadaran fonologi Bahasa Inggris. Penelitian ini menggunakan pendekatan kuantitatif dan kualitatif -deskriptif. Sumber data diambil dari hasil terapi awal ujaran 35 siswa dalam bentuk kata dan klausa melalui teknik vertikal, horisontal dan siklus. Alat pengumpulan data berupa tes mencocokkan bunyi, penggabungan fonem, segementasi awal kata, dan penghilangan konsonan. Akurasi dan ketepatan artikulasi bunyi diukur melalui penilaian objektif. Hasil penelitian pada terapi awal menunjukkan bahwa total kesalahan fonologis yang dihasilkan siswa berjumlah 532. Kesalahan itu terdiri dari 23% pada pengasilan konsonan frikatif, 72,7 % pada variasi bunyi, dan 0,75% pada pengasilan bunyi fonem. Jenis kesalahan dalam penghilangan yaitu 35,3 %, penambahan sebanyak 6,01 %, kesalahan pada misinformasi 51,5 % dan salah kaidah sebanyak 7,14 %. Penyebab kesalahan untuk overgeneralisasi sebanyak 18 %, realisasi tidak tepat sebanyak 31,01 %, kesalahan kaidah sebanyak 25 %, dan 25,37 % pada pengabaian kaidah. Penerapam kesadaran fonologis melalui strategi pelatihan artikulasi telah dapat menurunkan kesalahan pengucapan mencapai 85% atau hanya 80 kesalahan, 20 kesalahan pada frikatif, 57

kesalahan pada alofon, 3 kesalahan pada vokal. Dapat disimpulkan bahwa kesadaran fonologi berpengaruh positive dalam peningkatan kemampuan artikulasi bunyi bahasa Inggris.

Kata Kunci: *fonem, alofon, Terapi Kesadaran fonologi*

1.   INTRODUCTION

One of the most prominent aspects in English speech mastery is the accuracy of pronunciation and stressed syllables. English pronunciation which involves phoneme articulation is absolutely different to Indonesian. Schane and Bendixen (1992) argues that phoneme is the smallest feature that distinguishes meaning in a language. The words 'ban' and 'pan' shows different meaning because the segment in each word exists in identical contrast environment which starts with a distinctive feature, called voicing. Sound [p] is voiceless bilabial stop consonant and [b] is voiced bilabial stop consonant. Other example is in the word of "*know*" /nəu/ which has two segments; alveolar nasal stop consonant [n] and diphthong [əu] and the rules that velar stop consonant [k] is deleted before alveolar nasal sound in initial position. Lexicon, either in Indonesian or in Balinese does not particularly use fricative consonants sounds, such as: /f/, /v/, /ʃ/, /dʒ/, /Ɵ/, /ð/. In addition, both languages also do not have any allophonic features on stop bilabial sounds /p/, /t/, /k/. In English, these segments will be aspirated ([pʰ], [tʰ], [kʰ]) if it occurs in initial position.

Recent literature has explored the hypothesis that children with developmental phonological deficit (PE) may have a deficit of phonological awareness (or metaphonological ability) which is associated with the speech output problem and potential future literacy difficulties (Stackhouse & Wells 1997). This hypothesis is supported by group studies of PE children showing poor performance on phonological awareness tasks compared with normally speaking controls (Bird & Bishop 1992, Webster & Plante 1992, Bird *et al*. 1995, Stackhouse *et al*. 1997, Major & Bernhardt 1998). However, these papers do not claim that all PE children have metaphonological deficit. In fact, they have indicated the existence in PE children of a wide range of metaphonological ability that overlaps to a large extent with the range shown by their normally speaking peers. An additional factor is that PE may often be accompanied by general language meaning impairment, which is in turn associated with poor or delayed phonological awareness and with later literacy problems. It may be the case that children with good metaphonological skills are those with a relatively poor (Leitao *et al*. 1997) or less complex (Stackhouse *et al*. 1997) speech output problem, but this needs further investigation. The status of the relationship between PE and phonological awareness therefore remains unclear.

From this condition, many young learners of English have crucial problems in articulating English phonemes accurately. Instead of that, they also find difficulties in understanding how the alteration occurs when the segments are combined morphologically to form words. The difficulties of English sound mastery may definitely occur to most young students in SLUB Bilingual Denpasar. They actually do not know how the English sound is articulated and combined into phonological process which is different from theirs. The aim of the research was to determine if articulation training strategy could result specific and generalized improvement in English phonology awareness. This research is expected to provide information about the PE spoken by students and how articulation training strategy can encourage their phonological awareness which refers to empirical works that is referred to this study.

Phonological awareness is real knowledge about sound structure from words into syllables, from syllables into phonemes. Meanwhile phoneme awareness is subtype of phonological awareness that refers to awareness of every segment of words. Phonemic awareness involves the identification of word onset and matches, counts or controls the movement and alteration of phonemes (Bowen, 2015; Hesketh, 2009). On the other side, Paul R. (2006) states that Phonological awareness is speaker's knowledge about sounds of spoken language or speakers' ability to cultivate string

of speech sounds and syllable structure. Phonological awareness is an ability to manipulate sounds and words, phoneme mutation, phoneme duplication or phoneme alteration (Knobelauch, 2008). The phonological awareness therapy according to Hesketh (2010) is used to encourage the students' preexisting ability in articulating the correct sound by stimulating them through Articulation Training Strategy (ATS)

The intervention includes words-sound introduction, segmental syllables in sentences, and combinations or deletion of syllables. Phonological awareness training has been a welcome innovative addition to the therapeutic toolkit, but it is also important that all new interventions should be evaluated and applied efficiently to those children who will benefit from them. Results of clinical research so far have shown positive effects of intervention for speech deficit in general (Gierut, 1998; Law *et al*. 1998). For example, group studies show positive effects of minimal contrast therapy (Lancaster 1991, Almost and Rosenbaum 1998) and the Metaphon programme (Reid *et al*., 1996). However, Gierut's review (1998) found that comparative efficiency of treatment regimens for PE children (in contrast to efficacy) had been relatively unresearched, as has the optimal timing of intervention (Bowen & Cupples, 1999) and the subcomponents of the therapy process (Fey, 1999). Overall, there is little research specifically on phonological awareness therapy (with the exception of initial data on Metaphon; Reid *et al*. 1996), nor yet into its efficiency in comparison with other treatment regimens.

2.   RESEARCH METHODE

To establish norms for the acquisition of phonological awareness, 35 junior high school students of SLUB Bilingual Denpasar considered as Subjects of study based on normal academic and linguistic ability. These children completed a metaphonological abilities battery (MAB) devised by the experimenters to represent increasing levels of difficulty in the development of metaphonological abilities. This consisted of five subtests: rhyme matching, word initial matching, blending phonemes, word initial segmentation/matching and consonant deletion. Test items were named for the children to control for vocabulary and no spoken output was required (Hesketh et al, 2000).

The study applied quantitative experimental research with descriptive method due to the aim of the study is to find out the preexisting ability or PE and to measure the improvement or any change after Articulation Training Strategy was applied. The steps of the study are arranged from defining the aim of the study, designing the research, collecting the data and reporting the result. In this study, the study is only focused on PE, ATS and the improvement of Phonological awareness. PE was only the articulation of English phonemes, such as ([f], [ʃ], [ʧ], [Θ], [v], [ʒ], [z], [ʤ], [ð], [pʰ], [tʰ], [kʰ]) and other suprasegmental elements. The data were obtained from spoken test by recording the speech, checking the acuracy, counting the deficit by using the following average score formula (Furqon, 2002):

$$X = \frac{\Sigma p}{q.\tilde{N}} * 100\%$$

The next step was counting main score of the phonemes production deficit ([f], [ʃ], [ʧ], [Θ], [v], [ʒ], [z], [ʤ], [ð], [pʰ], [tʰ], [kʰ]) by using the formula (Furqon, 2002):

$$X = \frac{\Sigma p\text{Phoneme/suprasegmental}}{q\text{Phoneme/suprasegmental} . \tilde{N}} * 100\%$$

3.   FINDINGS AND DISCUSSION

3.1 Pretherapy

After administering the rhyme matching, word initial matching, blending phonemes, word initial segmentation/matching and consonant deletion is recommended to stimulate the subjects' awareness in speech sound (Hesketh et al, 2000). Afer the test were given, the scores were calculated. The total deficit were 532 which was derived from 132 or 23% for fricative consonants,   387 or 72,7 % for allophones. Meanwhile, there were 4 deficit or 0, 75% for vowels, 11 or 2,1% for intonation and 7 or 1,3% for stressed syllables. Furthermore, the deficit were identified and classified into the causes of deficit that were produced by students. There were four types of the causes of deficit: deletion, addition, misnaming, and phonological rule deficit. From the 532 deficit produced by students, there were 188 or 35,3 % for deletion, 32 of 6,1 % from 532 deficit for addition 274 or 50,5% for misnaming, and 38 or 7,14% of 532 for phonological rule deficit. The third analysis was conducted by classifying the cause of deficit into over generalization, Rule inappropriateness, Misconceptualized hypotheses and Ignorance of phonological rules (McIntosh, et al, 2007).

Based on the calculation of the cause of deficit category, it shows that   96 or 18% of 532 of deficit produced by students was over generalization, 165 or 31,01% for Rule inappropriateness, 133 or 25% for Misconceptualized hypothesis and 138 or 25,37% for Ignorance of phonological rules.

Tabel 1 Summary of the findings in pretherapy

No	Summary of the result	Percentage
1	Articulation deficit	
	a. Fricative sound articulation	23 %
	b. allophones	72,7 %
	c. Vowel sound articulation	0,75 %
	d. Intonation	2,1 %
	e. Stress	1,3 %
2	Types of Articulation deficit	
	a. deletion	35,3 %
	b. addition	6,01 %
	c. misnaming	51,5 %
	d. rule deficit	7,14 %
3	The cause of Articulation deficit	
	a. Over generalization	18 %
	b. Rule unappropriateness	31,01 %
	c. Misconceptualized hyphotese	25 %
	d. Ignorance of phonological rules	25,37 %

From the table above, the error analysis in the lingual unit can be described below.

Test item no. 1

Sentence : She thinks that the shoes have big size laces

Key answer   *: /ʃI: Ɵɪŋks ðæt ðə ʃu:s hæv bIg saIz leIsIs/*

Students'answers   : */Si: tiŋks det də su;s hep big leIses/*

Types of Deficit : Misnaming

The cause of Deficit   : Misconceptualized hyphotese

Test item no. 2
Sentence : The fisherman has fifty five fresh fish in the fridge
Key answer   : /ðə *fɪʃ*əmən hæz fifti fa*ɪv freʃ fɪʃ* in ðə *frɪ*dʒ/
Students'answers   : /*də fisərmen hæɔs pifti faip fres fis in də frid*/

Types of Deficit : Addition
The cause of Deficit   : Rule unappropriateness

Test item no. 3
Sentence : The weather in Yorkshire seems bit colder than usual
Key answer   : /ðə *weð*ə *in yo:k ʃ*ə si:ms bɪt kəʊldə ðæ*n u*ʒuəl/
Students'answers   : /*də wedə in yoksə sims bit koldə den yusuəl*/

Types of Deficit : Deletion
The cause of Deficit   : Ignorance of phonological rules

Test item no. 4
Sentence : Magic stick makes the rusty iron collector rich
Key answer   :/ *meɪdʒɪk stɪk meɪks* ðə r∧sti aɪən kolektə riʧ/
Students'answers   : /*meijik stik meiks də rasti airen kolektor rits*/

Types of Deficit : misnaming
The cause of Deficit   : Misconceptualized hyphotese

Test item no. 5
Sentence : Polite people plan their speech level before they talk.
Key answer   : / *pʰəlaɪt pʰipl pʰlæn* ðeɪr spi: ʧ levl bɪfo: ðeɪ tʰo:lk/
Students'answers   : /*polait pipəl plen deir spits levəl bifor dei to:k*/

Types of Deficit : rule deficit
The cause of Deficit   : Over generalization

To make the findings clearer the graph is used to capture the ability of the students in articulating the English Phonemes.

Figure 1. The graph of pretherapy

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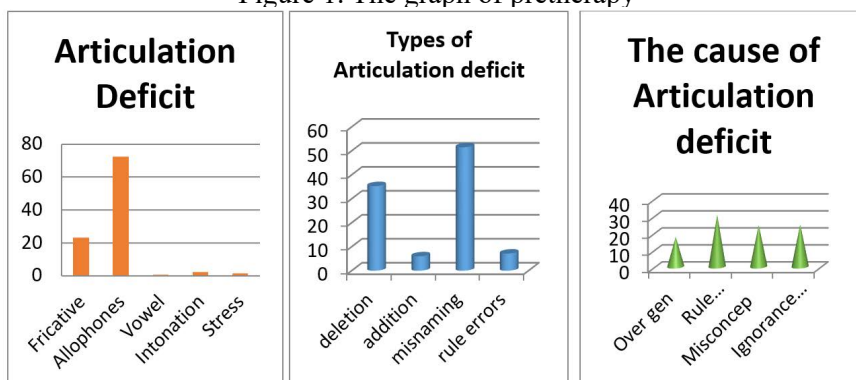
3.2 Post therapy

The application of phonological awareness through articulation training strategy has improved their weaknesses. It shows that the deficit decreased into 85% or only 80 deficit; 20 deficit in fricative sounds, 57 deficit in allophone, 3 deficit in vowel production. It can be concluded that phonological awareness has significantly influenced students' awareness in English phonology.

Sentence 1 : She thinks that the shoes have big size laces
Key answer   : /ʃI: ɵIŋks ðæt ðə ʃu:s hæv bIg sa*Iz leIsIs/*
Students'answers   : /ʃI: ɵIŋks ðæt ðə ʃu:s hæv bIg sa*Iz leIsIs/*

Sentence 2 : The fisherman has fifty five fresh fish in the fridge
Key answer   : /ðə *fIʃ*əmən hæz fifti fa*Iv freʃ fIʃ* in ðə *frIʤ/*
Students'answers   : /ðə *fIʃ*əmən hæz fifti fa*Iv freʃ fIʃ* in ðə *frIʤ/*

Table 2. The decreasing deficit after the ATS was applied

No	Summary of the result	Amont of deficit
1	Articulation deficit	
	a. Fricative sound articulation	20
	b. allophones	57
	c. Vowel sound articulation	3
	d. Intonation	0
	e. Stress	0

3.3 Discussion

Based on the analysis of pretherapy and posttherapy, it can be clearly found that the students were strongly encouraged to dig deep their phonological awareness that resulted the improvement of their English articulation ability. The intervention of an action towards students' weaknesess was conducted consistently through concentrating every single phonemes and a bit information how the phonological process woks out. The total deficit were 532 which was derived from 132 or 23% for fricative consonants,   387 or 72,7 % for allophones. Meanwhile, there were 4 deficit or 0, 75% for vowels, 11 or 2,1% for intonation and 7 or 1,3% for stressed syllables. Furthermore, the deficit were identified and classified into its causes. There were four types of the causes of deficit: deletion, addition, misnaming, and phonological rule deficit. From the 532 deficit produced by students, there were 188 or 35,3 % for deletion, 32 of 6,1 % from 532 deficit for addition 274 or 50,5% for misnaming, and 38 or 7,14% of 532 for phonological rule deficit. The third analysis was conducted by classifying the cause of deficit into over generalization, Rule inappropriateness, Misconceptualized hypotheses and Ignorance of phonological rules. The application of phonological awareness through articulation training strategy has improved their weaknesses. It shows that the deficit decreased into 85% or only 80 deficit.

4.   CONCLUSION

It can be concluded that phonological awareness has significantly influenced students' awareness in English phonology. The intervention of an action towards students' weaknesess was conducted consistently through concentrating every single phonemes and a bit information of how the phonological process woks out. Some ethical and practical issues must be overcome in setting up future research studies for PE treatment. Given the paucity of data on relative efficiency of therapy for these children it seems that this must now be a priority.

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