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# **Teaching English Vocabulary to Children through Phonics in Taiwan: A Collective Action Research Approach**

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## **Abstract**

Taiwanese elementary schools have been teaching English for more than ten years. In courses in which speaking and listening are emphasized, phonics is mainly seen as an entryway system. Once teachers have instilled the basics of the English alphabet, they then directly face the challenge of teaching vocabulary.

The purpose of this study is to explore the problems and alternatives of using phonics to teach vocabulary in EFL elementary classrooms. The six participant instructors in this study majored in foreign language teaching at a college of languages. Two took on roles as instructors, and the other four acted as assistants. Their subjects were two groups of sixth-graders from two elementary schools in southern Taiwan. Data for this study were collected from their action-research reports and the minutes of their meetings. The collected data were then analyzed with Erlandson, Harris, Skipper and Allen's (1993), and Miles and Huberman's (1994) techniques for qualitative researchers.

The major finding of this study is that when using phonics instruction to teach vocabulary to elementary students, instructors found the most learning problems in the areas of pronunciation and spelling, with more pronunciation problems than those of spelling (67% vs. 33%). The study also found that pronunciation problems were mostly related to vowels, and problems with spelling were commonly associated with consonants. After the final assessment, five of the twelve action research studies carried out had an "accuracy rate" of 90 percent. The average rate was about 86 percent.

**Keywords:** phonics, teaching vocabulary, pronunciation instruction, spelling instruction, action research

## Background

In Taiwan, phonics seems to be seen as an entryway for children to learn English. Phonics has been popularly used in Taiwan since 1998, the year Taiwan's Ministry of Education (MOE) revised its English instruction policy. Previously, Taiwanese students began their study of English in their first year of junior high school. However, in 1998, MOE changed the requirement so that students began learning English earlier in third grade (Butler, 2004). Following the Taiwanese governmental policy change, many scholars saw phonics instruction as the simplest way of teaching the rules of letter-to-sound correspondences of the English language.

In the past, the K.K. phonetic symbol system—a mainstay for junior high school English instruction—required that learners memorize a complex set of alternate symbols and was perceived as potentially frustrating for a younger student demographic (Hung, 1998; Wang, 1988, 1991; Yeh, 2005). However, some scholars argued that phonics and KK are two mutually assisting methods which should be dovetailed for elementary school English instruction (Hsu, 2000; Lin, 1999; Tseng, 2010).

To further accommodate the faculties and attention span of younger children, the MOE declared that the emphases of the new English curricula would be listening and speaking instead of reading and writing (MOE, 2003, 2006). As a result, phonics instruction became

even more acceptable to teacher educators and administrators. In addition, much of the research focused on phonics instruction for elementary students concluded that phonics instruction is effective, particularly in helping entry-level students gain vocabulary (Hsu, 2004; Lin, 2003; Wu, 2005; Yen, 2003).

The growing body of research was rooted in the UK and North America. In the US, research found that phonics instruction was useful in helping children with pronunciation and spelling, both key reading skills (Adams, 1990; Anderson, Hiebert, Scott & Wilkinson, 1985; Chall 1967; Flesch, 1955, 1981; Snow, Burns & Griffin, 1998). From reports and comments that phonics instruction can benefit children learning vocabulary, people in Taiwan gained that impression that since American children can use phonics to learn English, it can be used for children in Taiwan as well.

Once teachers have instilled the basics of the English alphabet, they then directly face the challenge of teaching vocabulary. As English vocabulary often has irregular grapheme-phoneme correspondence, using phonics to teach words can result in multiple problems. Although phonics instruction has demonstrated benefits, it has gathered its share of criticism from teacher researchers in Taiwan. The debate formally started from when the Legislator Ta-Chien Sun claimed that children were using Bopomofo to transcribe English vocabulary in 2003 (Cheng, 2003; China Times, 2003; Wang, 2003). He said that many schools found that students used Bopomofo to

index the words' pronunciations because the children have no other phonetic system to help them to memorize the sound. In the wake of this public criticism, other complaints related to the use of phonics began to surface. Some teachers said that due to the constraints of class time, they do not have extra time to teach phonics in vocabulary class (Lin, 2003; Shih, 2002). Some argued that many rules taught in classes fail to apply to words in daily life (Huang, 1999). Yet others complained that phonics rules are unhelpful for students encountering new vocabulary (Lin, 2004).

These complaints may be inevitable to the “breaking-in period” of any new instruction system. However, they may also suggest that phonics is simply a poor fit for Taiwan. While phonics instruction projects in Western countries have achieved positive results, these results may not be replicable within the contexts of Asian countries. EFL learners in Asia typically have limited exposure to English input. Without an English speaking environment, English teachers in EFL countries need to take the additional responsibility of teaching pronunciation (Hsu, 2000, p. 1). As a result, it is not given that elementary children in Taiwan can benefit from phonics as a method to decode spelling and word reading. The main concern of this study is whether problems in Taiwan's phonics instruction can ultimately be solved.

### **Purpose**

The main purpose of the study is to

investigate whether phonics is suitable for beginning English learners in an EFL context such as Taiwan. The purpose of this study is to explore the feasibility and applicability of phonics instruction in teaching vocabulary to beginning English learners in Taiwan. Toward this goal, the study seeks to answer these two questions through the action research process:

1. What problems do the instructors encounter when they teach English vocabulary using phonics instruction?
2. When teaching English vocabulary through phonics, how can the instructors solve problems that they encounter?

## **Literature Review**

### **What Is Phonics?**

According to the Longman Dictionary of Language Teaching & Applied Linguistics, phonics is “a method of teaching children to read” (p. 344). Specifically, phonics is a method employed to teach sound-to-letter relationships in English. Students are taught to recognize the relationship between letters and sound. They are taught which sounds the letters of the alphabet represent. Students then try to build up the sound of a new or unfamiliar word by saying it one sound at a time (p. 344).

In phonics, most consonant phonemes are highly reliable. There are 44 English phonemes: 25 consonant phonemes and 19 vowels phonemes. Of the 26 letters in the English alphabet, 21 are by and large considered consonants: *b, c, d, f, g, h, j, k, l, m, n, p, q, r, s,*

*t*, *v*, *w*, *x*, *y* and *z*. An appearance of two consonants in a word in which each consonant still retains its own sound is called a consonant cluster. An example of a cluster is *pr* in *price* representing the [pr] sounds. On the other hand, when two consonants that appear in a word together stand for one new and unique sound that is different from either sound of each individual consonant, it is called a digraph, such as *sh* as [ʃ] and *ch* as [tʃ] (Blevin, 1998). In phonics, most consonant phonemes are highly reliable since the most common letter or spelling for each consonant usually stands for that sound. These regularities result in several generalizations or rules that are helpful in sounding out consonant phonemes (Groff, 1977; Henderson, 1967; Mazurkiewicz, 1976).

In comparison, the vowel phonemes in phonics are less reliable. As for the 19 vowel phonemes, most of them are commonly represented by the five English alphabet letters *a*, *e*, *i*, *o* and *u* although long vowels are represented by vowel digraphs (雙字母), such as, *ai*, *ay*, *ee*, *ea*, *ie*, *igh*, *oa*, and *ow*. However, many vowel generalizations or rules are not as reliable as those of consonants. Fichtner (1976) discussed that the greatest inconsistencies occur between vowel graphemes and phonemes. In general, about 20% of the English words exceed the generalization, which is a significant failure in the ability of phonics to describe the correct pronunciation of English words (Blevins, 2001).

### **History of Phonics Instruction in the U.S.**

Due to the complexity of English, U.S. educators and scholars have gone through more than a century of debate on whether phonics instruction should be taught in the beginning of children learning to read. After continual debates and comparisons with whole language approach (or, embedded phonics), most of them finally reported that systematic phonics instruction (or, explicit phonics), is an effective tool assisting children to read (Wikipedia, 2013; Hsu, 2000). The early use of phonics started from mid-18<sup>th</sup> century through flashcards by Favell Lee Mortimer. She used phonics in flashcards to teach English vocabulary and published two books *Reading Disentangled* (1864) and *Reading without Tears* (1857) to promote the usefulness of phonics.

However, some important American educators, such as Horace Mann, argued that phonics should not be taught at all in the elementary level. He argued that this would let students fall into the commonly used “*look-and-say*” approach, which in fact became popular in the mid-20th century. An early study noting this disadvantage in phonics instruction is found in Currier and Duguid’s (1916) “Phonics or No Phonics?” They examined the value of phonics in teaching reading to students in primary schools by comparing the learning effectiveness of two groups of students—one group was given phonetic drills while the other group had no knowledge about phonics. Results showed that the students who

were taught phonetics concentrated more on pronunciation than on comprehension, which caused lack of interest for the task at hand.

The devaluation of phonics seemed prevalent in the first half of the 20<sup>th</sup> century. Hahn (1964) in his *Phonics: A boon to spelling?* examined whether phonics instruction was better than conventional reading programs in teaching primary grade pupils spelling. Participants in his study were second-graders in three schools in Pennsylvania. School A was phonics-trained under the “Phonetic Keys to Reading” program while schools B and C were trained under conventional reading program. The results indicated that intensive phonetics did not elevate spelling ability at least in primary grade pupils.

Nevertheless, phonics instruction remained a reappearing topic of discussion amongst educators and scholars, partly due to the nationwide problem of America’s low literacy rate. Rudolf Franz Flesch (1955, 1981) criticized the absence of phonics instruction in his two books, *Why Johnny can’t read* and *Why Johnny still can’t read*. “Learning to read is like learning to drive a car. You take lessons and learn the mechanics and the rules of the road” (Flesch, 1981, p.3). He claimed that phonics first teaches the mechanics of reading before a child starts reading whereas look-and-say teaches reading before the instruction of the mechanics (cited in Hsu, 2000, p.10). His books became the landmark for promoting phonics instruction to the public again.

Positive results of phonics instruction

were gradually found in various research studies. For example, Swajkowski (1985) reported that phonetic analysis assists little children in articulating short vowels when reading vocabulary. He investigated the assumption that learning about word families could help ease the introduction of short vowels to first grade students. Subjects in his study were first grade students who were assigned to experimental and control groups. The control group was taught regular phonetic reading while the experimental group's reading was augmented with instruction of about 15 word families. After five weeks of instruction, the results from the posttest show that the control group's mean gain was significantly higher than the experimental group's mean gain. He concluded that instruction in word families provided less support than phonics for students’ short vowel reading.

In order to find out solid support about the phonics teaching, comparing phonics with look-and-say or whole language approach became a trend in late 20<sup>th</sup> century. Chall (1967) reviewed studies comparing a look-and-say with a phonics method through well-established and scientific approaches. She concluded her findings in *Learning to read: the great debate* and strongly advocated that systematic phonics be a valuable component of beginning reading instruction. Systematic phonics programs should be taught early, usually but not always before sight (whole) words.

Since 1984, the U.S. government has

supported many national organizations and institutions to study systematic phonics instruction as well. There were National Academy of Education's *Becoming nation of readers* by Anderson, Hiebert, Scott and Wilkinson (1985), US Education Department's *Becoming to read* by M. J. Adams (1990), National Research Council's *Preventing reading difficulties in young children* by Snow, Burns and Griffin (1998), and U.S. Department of Health and Human Services' *Teaching children to read* by National Reading Panel (2000). These studies implemented plenty of scientific studies and reported that systematic phonics instruction, which teaches rules and exception (sight words), is an effective tool on aiding children with sound of letters, word pronunciation, unknown word reading, sentences and stories reading, and spelling (Wikipedia, 2013).

### **Recent Debates in the U.S.**

Despite of these nationwide studies, the debates continued. New debates moved to focus on whether phonics instructional approach was indeed more effective than others. Not surprisingly, some studies showed that the phonics instruction did not better help with children's spelling reading performances than other methods.

In 2001, Groff examined the literature on whether a letter-to-speech-sound or a speech-sound-to-letter approach was more effective in developing beginning readers' knowledge and application of phonic rules. He nicely

summarized the pertinent thought and evidence for using letter-to-speech-sound, speech-sound-to-letter, and a combination of the two approaches for teaching phonics to beginning readers. Groff concluded that a speech-sound-to-letter approach was more feasible when teaching students learn to spell and read. He also suggested that a speech-sound-to-letter approach might be the most effective way for beginning readers to develop meaningful links between phonemic awareness and knowledge of phonics rules. However, his question of whether a letter-to-speech-sound, a speech-sound-to-letter, or a combined approach is "best" for teaching phonics to beginning readers remained left open and had not yet been resolved empirically.

Roberts and Meiring (2006) examined the effectiveness of two phonological processing contexts: children's literature and teaching spelling through phonics. Subjects were first-grade children, and their reading, writing, and spelling competencies were examined in two instructional contexts for teaching phonics through first to fifth grade. Children were randomly assigned to one of the two treatments designed to teach grapheme-phoneme correspondences, blending, and segmenting. In the first treatment, children generated spellings for words, and in the other treatment, phonics instruction was embedded in literature. Results showed that the spelling treatment was significantly better for performance in spelling and reading phonetically regular real and pseudo-words. At the end of 5th grade,

spelling-context children also had significantly higher comprehension than literature-context children.

de Graaff et al. (2009) examined the effectiveness of two phonics instruction systems for teaching reading to children. In the study, a systematic phonics approach was directly compared with a nonsystematic phonics approach for kindergarten children. The result showed that both phonics-trained groups progressed to the same extent on productive letter-sound knowledge as compared to the control group. However, on measures of spelling, phonemic awareness, and reading, the systematic phonics group made more progress than the nonsystematic phonics group and the control group.

Not all studies show positive results for phonics instruction. Pasa (2001) explored the differences of first graders' acquisition of literacy in whole language and phonic classes and found that those who received phonics instruction do not necessarily perform better than those taught a whole language approach in spelling in particular. His study revealed that, compared to phonics, whole language seemed to help children better cope with more complex material in later classes.

Another study by Joseph (2007) found that the use of phonic analysis does not help the children in word reading. His study investigated effectiveness and efficiency of phonics and word reading techniques during children's reading lessons. Sixty primary grade children who had difficulty acquiring basic

oral reading fluency skills were randomly selected to participate in one of the three word reading techniques plus repeated reading conditions. Results showed that there were no significant differences between children in the phonic analysis plus repeated reading group and children in the two whole word plus repeated reading groups. However, the group that received the traditional drill and practice plus repeated reading lessons was the most efficient in learning to read words in passages than the groups that received either phonic analysis plus repeated reading or incremental rehearsal plus repeated reading.

#### **Useful with Taiwanese Students' Pronunciation**

In Taiwan's EFL classrooms, phonics provides more help with students' pronunciation than with their reading or spelling. The function of phonics instruction differs between first-language and foreign-language contexts (Lin, 2000). In the U.S., phonics instruction functions as an aid to teach children to read. In Taiwan, however, phonics inevitably plays a part in pronunciation teaching in junior high schools (Hsu, 2000; Lin, 1999).

Various studies on different levels of students support that phonics instruction facilitates young learners' pronunciation ability (Chang, 2007; Chou, 2010; Huang, 2011; Yeh, 2007), especially after 1998 when the MOE implemented the policy of teaching English earlier in elementary school. On junior-high students, Chang (2007) explored the effects of

phonics instruction for those who have English learning difficulties. Thirty eighth-grade students from Taipei County, who were of normal IQ but nevertheless had severe difficulties in English literacy tests, were randomly assigned into the experimental group and the control group. The experimental group received phonics instruction for nine weeks, 3-4 times per week, but the control group did not. The results showed that phonics instruction appeared to have significant effect on improving performance in phoneme segmentation and English word reading.

Effects of phonic instruction are also shown on elementary-school learners. Huang (2011), Chou (2010) and Yeh (2007) all report positive findings about phonics instruction on students' pronunciation performances. Huang (2011) explored the application of remedial phonics instruction on English underachievers' word recognition and spelling ability. The participants were eight underachievers recruited from two classes of sixth graders at an elementary school in Kaohsiung City. These students received a 40-minute phonics remedial class held three times a week over four weeks. The results of the study showed that the participants improved significantly in recognizing and articulating words through applying phonics. Chou (2010) investigated fifth-graders, studying the effects of different instruction programs on the vocabulary performance of students at different proficiency levels. 104 fifth graders in four classes were randomly assigned to the control

group and to each of the other three experiment groups respectively taught through phonics, dictionary use, and memory strategy. In average-achievers' word sound (reading) performance, all three experimental groups performed better than the control group, with the phonics group scoring the highest. Similarly, for fourth graders, Yeh (2007) investigated the effect of experimental English teaching on four group types: the control group, phonics group, phonics & analogy group, and phonics & rehearsal group. 111 students from Tainan City participated in this study. The instruction group was held for 40 minutes twice a week for ten weeks. Although the result of post tests showed that there was no significant difference among the four groups, the phonics group still performed best among the four groups on the subtests of the English-Chinese translation and sentence reading.

Suspicion found in Taiwan as well

However, not everyone jumps on the bandwagon. Critics say that the effectiveness of phonics instruction to young learners' vocabulary learning remains unproven. Although phonics may help with young learners' English pronunciation significantly, some teacher researchers reported that the results of phonics instruction are not that effective compared to those of K.K. instruction in Taiwan EFL classrooms (Chu, 2006; Lin, 2003; Hsien, 2010; Hsu, 2000; Tseng, 2010; Wu, 2004). The following three instructors reported the negative results of phonics instructions as compared to (K.K.) phonetics

instruction. In four observed classrooms—two junior-high, one elementary, and one in a private language institute—Hsu (2000) investigated how phonics and K.K. phonetic symbols helped English learners in Taiwan. She concluded that phonics did provide the relationship between letters and sounds through which learners could achieve a word pronunciation directly. However, the irregularity and inconsistency in English orthography make phonics ineffective in predicting the correct pronunciation of some English words.

Chu (2006) examined the effectiveness of teaching English phonics and KK phonetic symbols on word pronunciation. She examined which method, phonics or KK phonetic symbols, was more effective in teaching word pronunciation for sixth graders who had had three years of formal English education at public schools. The results showed that students receiving KK phonetic symbols instruction outperformed those who received phonics instruction on all aspects, including monosyllabic, polysyllabic, and regular or irregular word pronunciation. Additionally, she found that students with the phonics instruction made more vowel errors, which might have been resulted from the effect of phonics generalization.

Similarly and more explicitly, Hsien (2010) provided KK instruction to 24 sixth grade students with low listening ability. After the tests, he revealed that KK phonetics instruction benefited students' listening ability

of distinguishing long and short vowels in a word, but phonics instruction did not.

In Taiwan, along with the implementation of the elementary-school English program for over a decade, the Bopomofo self-remediation has become rampant among children. While literature shows that phonics instruction can be an effective tool for children to learn to read in a Western context, its effect in EFL context, such as that in Taiwan, is rather uncertain. In Taiwan, phonics studies are largely limited to problem posing rather than problem solving. As action research is suitable for teachers to solve their problems in classrooms, more exploration about the suitability of using action research in Taiwan is therefore justified.

## Methodology

The study focuses on exploring the feasibility and applicability of phonics instruction in teaching vocabulary to beginning English learners in Taiwan. Through the action research process, the study helps to find out the problems and possible solutions for employing phonics instruction to assist vocabulary teaching in classrooms.

Action research is a systematic method of inquiry that helps teachers to improve on their class instruction and professionalism; therefore, it is also commonly called “teacher research.” Action research at its core is experience-based and oriented by a particular problem posed and the exploration for its solutions (Cohen & Manion, 1985; Corey, 1953; Schecter &

Ramirez, 1992; Wallace, 1991). This study, which focuses on the use of phonetic systems as a solution to a pedagogical issue, is especially suited for action research.

Action researchers use collaboration to enhance validity/reliability (Burns, 1999; Cohen & Manion, 1985; Reason, 1994; Schecter & Ramirez, 1992). Collaboration may involve a curriculum project with 100 schools or a community action program embracing a number of major combinations. This combination tends to yield more general knowledge and information than purely localized projects (Burns, 1999; Cohen & Manion, 1985). Because the main purpose of this study is to explore solutions to problems rather than only developing a list of problems, and because the combined experience of a group may lead to more possible solutions, the use of collaborative action research is especially appropriate.

### **Participants**

The six student teachers who participated in this study were selected from a pool of senior foreign language instruction majors at the Wenzao Ursuline College of Languages on August 22, 2008. The two instructors, Claire and Natalie, each had two assistants: Jenny and Jessica assisted Claire, and Cindy and Dorothy assisted Natalie. Prior to their teaching period, they participated in a 4-hour daily workshop (10 a.m. to noon, 1 p.m. to 3 p.m.) from August 25 to August 31, 2008. The workshop was conducted by the researcher and focused

on the phonics instruction and action research procedure.

Two classes of students from Xiliao Elementary School and two from Jhong-Jhen Elementary School, both in southern Taiwan, participated in this study. The former is located in a rural area, and the latter is in a city. Students at Jhong-Jhen had received 45 minutes of English instruction twice a week since the third grade with curriculum based on Kang-Hsuan Publishing's New Wow English. Xiliao introduced students to English in first grade with the instruction of Jainbook's English Book once a week for 45 minutes.

### **Instructional Materials**

The six participant instructors designed their lesson outlines for their experimental teaching from August 25 to 31, 2008, using excerpts from English textbooks on the market. They also designed a vocabulary textbook used in their teaching.

The textbooks covered topics on the environment, energy, science and technology, etc. There were a total of 12 units. Each unit consisted of one 50-word-length science article, ten new English vocabulary, listen-and-circle quizzes, scrambled words exercises, and matching exercises. Each unit's material was to be covered in one week.

### **Teaching Process**

The teacher first briefly introduced the contents of the lesson and then led students to read the key vocabulary. Then, teachers of each individual group would articulate the word

sound, explain the meaning of the word, and read the example sentence. During the time, if any phonics rules applied to the word, the instructors explained the rule and put it into practice in other ways. For instance, in Unit One, the word *place* (also *cave* and *same*) resulted in a phonics rule lesson: “vowel + consonant + e, the vowel is long and the letter *e* is silent.” Instructors then helped students practice applying the rule through exercises.

### Procedures

**Experimental teaching.** The duration of the teaching period was one semester, from September 12, 2008 to December 12, 2008. Instructors taught two separate classes of students in each school, and instruction for each class lasted for 45 minutes per session. In total, participant instructors provided three hours of instruction every Friday: two 45-minute sessions for Jhong-Jhen Elementary School from 10:10 to 11:40 a.m. and two for Xiliao from 1:30 to 3:00 p.m.

**Action research.** During the period of experimental teaching, each of the two participant instructors conducted three cycles of action research for each class in the two schools. They and their assistants followed up with 90-minute action-research discussion session every Friday, usually between 3:30 and 5:00 p.m.

The procedure of their action research was based on van Lier’s (1994) Cycle of Action Research. The cycle adapts Kemmis and McTaggart’s (1982) definition into a suite

of four steps: planning, acting, observing and reflecting. These steps allow researchers to systematically collect and analyze data, toward developing effective solutions. Using van Lier’s model, participant instructors implemented one step per week and discussed their progress each Friday. During the “reflection” week, participants evaluated the usefulness of their solutions and named their goal for the next cycle. Under this model, one cycle was completed per month.

### Data Collecting and Processing

Data were collected mainly from the action-research reports and tape transcripts from the meetings. From September 12, 2008 to December 12, 2008, twelve meetings were recorded and transcribed, and twelve action-research reports were collected.

Each of the two instructors conducted three cycles of action research on the two schools, for a total yield of 12 reports. Each participant instructor produced two reports per month; in other words, for every action-research cycle, the instructors, Claire and Natalie, wrote one report for each of the two schools. Each report was prepared in Chinese interspersed with English with an average length of five to six single-spaced pages.

The researcher observed responses through the audiotape recordings: 12 transcripts were collected from the weekly meetings. The researcher led the discussion forums throughout the three months of weekly

meetings, holding one discussion per week and 12 discussion sessions in total. When in a discussion session, the researcher shared professional experience and facilitated the discussions at appropriate times—for instance, by requesting clarification from a participant instructor when confusion among the discussants was apparent. Permission from discussants was obtained prior to recording, and the tape-recording procedure was monitored by a research assistant. The assistant also prepared Chinese-language transcripts.

### **Data Analysis**

To develop analyses that respect data integrity, the researcher made use of Erlandson, Harris, Skipper and Allen's (1993) and Miles and Huberman's (1994) techniques for qualitative researchers. The analysis procedure included five elements: early steps in analysis, reducing data, displaying data, drawing conclusions, and confirming findings.

The earliest step of analysis was the preparation of a preliminary coding scheme to categorize the raw data. This included putting all the instructors' action research reports together to develop a preliminary coding list based on two of the qualitative research questions. Four strategies were used to reduce data: unitizing data; emergent category designation; bridging, extending and surfacing data; and marginal remarks. For example, to display data, a thematic conceptual matrix was used to indicate the specific problems among the instructors' action research reports. On the

left of the matrix, the researcher identified two different problems in the column heading: *pronunciation problem* and *spelling difficulty*. On the top row of the matrix, the cycle, instructor's name, school, problem, solution, and solution efficacy (the rate of correctness) were listed. Then, the researcher went through the coded data of student teachers' action research reports to look for information suitable for these categories. After that, the researcher was able to arrange the cases of the reports sequentially with three sub-problem areas: *vowels*, *consonants* and *others*. The conclusions drawn were based on Miles and Huberman's (1994) techniques of noting patterns and themes, counting, and making contrasts and comparisons. For instance, the researcher drew the conclusion that while teaching vocabulary to elementary students through phonics instruction, participant instructors encountered more pronunciation problems than issues with spelling. Finally, to increase the validity of the study, the researcher used four major heuristic methods outlined by Miles and Huberman (1994) to confirm the findings. These are checking the representativeness of the data, examining researcher effects, triangulating the methods, strategies and data sources, and putting appropriate additional weight on more reliable data sources.

## Findings and Discussion

### 1. What problems did the instructors encounter when they taught English vocabulary through phonics instruction?

The number of pronunciation-related issues is twice of that of spelling. Two participant instructors used phonics instruction to teach vocabulary. The problems discovered during the course of their studies can be classified into two major categories: *pronunciation and spelling*. Of the 12 action research studies carried out, eight belong to the *pronunciation* category, which is about 67 percent of the total amount of the action research. The spelling category has just four studies, or 33 percent of the total action research (see Table 1). Problems in the pronunciation category appeared more frequently than spelling, with 67% and 33% respectively. This result supports research by Currier and Duguid (1916), which states that in

Western context, elementary children learning reading through phonics concentrated more on pronunciation rather than on spelling or reading. On the other hand, this finding reveals that teachers of English in Taiwan's vocabulary classes still see phonics instruction solely as a tool to teach pronunciation, as opposed to teach spelling or the meaning of the words.

These problems were raised by the participant instructors during the course of their action research. After receiving input from other teachers and their teaching assistants, the participant instructors attempted to implement different solutions to these problems. After the final assessment, five of the twelve action research studies carried out had an "accuracy rate" of 90 percent. The average rate was about 86 percent. The participant instructors' problems, solutions and final assessments are summarized in Table 1.

Table 1 Action-Research Problems Database

Problem Category	Cycle	Instructor	School	Problem	Solution	Solution Efficacy
Pronunciation Problem	I	Natalie	Jhong-Jhen	-vowels How to help students remember the mnemonic (u-e) e.g., refuse?	Color-coding method; new example method	Oral Test: oral pronunciation Out of 16 students with 10 questions each, 131 were answered correctly out of a total of 160. Accuracy rate: 82%
	I	Natalie	Xiliao	-vowels When are a-e pronounced [ɪ]? How can one tell? (e.g., palace)	Clarifying by examples, marking syllables with different colors; making identifying marks over syllables	Oral Test: Oral pronunciation Out of 8 students with 10 questions each, 75 were answered correctly out of a total of 80. Accuracy rate: 94%

Problem Category	Cycle	Instructor	School	Problem	Solution	Solution Efficacy
	II	Claire	Jhong-Jhen	-vowels How to aid students to correctly pronounce [ə] in vocabulary (e.g., pollution, system, etc.)?	Teaching phonics rules; unstressed syllables to eliminate guessing, emphasizing stress and accents on tests; using multiple vocabulary words to review; asking students to identify unstressed syllables	Oral test: pronouncing nonstressed syllables Out of 14 students with 5 questions each, 61 were answered correctly out of a total of 70 questions. Accuracy rate: 87%
	II	Claire	Xiliao	-vowels How to associate letters “ar” with [ɑr] (“bar”) and [ə] (“dollar”)?	The Example method and the equal emphasis method	Oral test: read the ‘ar’ in vocabulary Out of 8 students with 5 questions each, 34 were answered correctly out of a total of 40 questions. Accuracy rate: 85%
	III	Natalie	Jhong-Jhen	-vowels How to improve students’ recognition of the [e] sound (e.g., space)	Using stories to link vocabulary groups together, underlining vocabulary; correcting mistakes in vocabulary groups	Oral test: reading vocabulary Out of 14 students with 15 questions each, 193 were answered correctly out of a total of 210 questions. Accuracy rate: 92 %
	III	Natalie	Xiliao	-vowels Ways of explaining to students when the letter e in stressed syllable and unstressed syllable (e.g., effect, electric)	Identifying syllables method; underlining syllables method	Oral test: Reading vocabulary Out of 7 students with 8 questions each, 40 were answered correctly out of a total of 56. Accuracy rate: 71%
	III	Claire	Jhong-Jhen	-consonants How to help students remember the phonics rules letter g [dʒ]+ i, e, y (e.g., oxygen, huge) during tests?	Explain the phonics rules; new example method; chants; asking students to underline the correct words	Oral test: Underlining, oral pronunciation Out of 14 students with 10 questions each, 130 were answered correctly out of a total of 140. Accuracy rate: 93%
	I	Claire	Xiliao	-others Does separating syllables in words help students in spelling?	Dividing words into syllables; linking vocabulary words together	Written test: Vocabulary cloze test Out of 8 students with 30 questions each, 194 were answered correctly out of a total of 240 questions. Accuracy rate: 81%

Problem Category	Cycle	Instructor	School	Problem	Solution	Solution Efficacy
Spelling Difficulty	II	Natalie	Jhong-Jhen	-vowels How to teach students to recognize <i>oo</i> vs. <i>al</i> from hearing the [u] and [ɔ] symbols (e.g., <b>fall</b> vs. <b>fool</b> , <b>cold</b> vs. <b>cood</b> )	Using similar vocabulary words to enhance understanding	Written test: Cloze test Out of 15 students with 10 questions each, 115 were answered correctly out of a total of 150 questions. Accuracy rate: 77%
	II	Natalie	Xiliao	-consonants How to teach students to recognize ch, h, sh from hearing [tʃ], [h] and [ʃ] symbols (e.g., <b>chat</b> , <b>hot</b> , <b>shell</b> )	Using examples to reach conclusions	Written test: Cloze test Out of 8 students with 10 questions each, 76 were answered correctly out of a total of 80 questions. Accuracy rate: 95%
	III	Claire	Xiliao	-consonants Ways to aid students in correctly identifying placement of the letter 'l' in words (e.g., <b>candle</b> vs. <b>candoe</b> ).	Explaining the phonics rules and providing examples; reviewing the rule with more examples; providing pronunciations at spelling quiz; teaching the difference between [ɔ] and [ɪ]	Written test: Multiple choice Out of 8 students with 5 questions each, 36 were answered correctly out of a total of 40 questions. Accuracy rate: 90%
	I	Claire	Jhong-Jhen	-others Does appropriate stress help raise students' spelling accuracy?	Appropriate stress method	Written test: Vocabulary cloze test Out of 14 students with 30 questions each, 359 were answered correctly out of a total of 420 questions. Accuracy rate: 85 %

### Pronunciation Problem

The first category of problems is related to pronunciation. A pronunciation problem refers to a difficulty that students encounter when teachers use phonics instruction to help them learn how to pronounce vocabulary. Eight studies, 67% of all studies, are in this category. Among them, six are related to vowels, one is associated with consonants, and one belongs to the “others” category. The consonant problem

is related to letter g: “How to help students remember the phonics rules letter g [dʒ]+ i, e, y (e.g., **oxygen**, **huge**) during tests?” of Cycle III at Jhong-Jhen.

As Table 1 indicates, the six action research studies of vowels that the student teachers proposed are: 1) “How to help students remember the mnemonic (u-e) e.g., **refuse**?” in Cycle I at Jhong-Jhen; 2) “When are a-e pronounced [ɪ] (e.g., **palace**)?” in Cycle

I at Xiliao; 3) “How to aid students to correctly pronounce [ə] in vocabulary such as *pollution* and *system* ?” in Cycle II at Jhong-Jhen; 4) “How to associate letters “ar” with [ɑr] (“bar”) and [ə] (“dollar”)?” in Cycle II at Xiliao; 5) “How to improve students’ recognition of the [e] sound such as *space*” in Cycle III at Jhong-Jhen; and 6) “Ways of explaining to students when the letter *e* in stressed syllables and unstressed syllables (e.g., *effect*, *electric*)” in Cycle III at Xiliao.

The finding indicates that Taiwanese children at the elementary level made more vowel errors in pronunciation when learning vocabulary through phonics instruction. Most of the six vowel problems are related to the sounds of short vowels *a*, *e*, and *o*. While Claire aided Jhong-Jhen students to correctly pronounce [ə] in vocabulary (Cycle II), she also found Xiliao students had difficulty in associating letters “ar” with [ɑr] (“bar”) and [ə] (“dollar”) (Cycle II). In addition, Natalie desired to find out ways to explain to Xiliao students how to pronounce the letter *e* in stressed syllables and unstressed syllables, such as the *e* in *effect* (Cycle III). Claire’s and Natalie’s action research projects seem to agree with Swajkowski’s (1985) report on that phonetic analysis has little assistance with children’s short vowels articulation when reading vocabulary, and such problems also occurred in the EFL context.

Problems with the letter *e* were the most frequent one among all vowel problems. Five of the six vowel studies, or 83 percent, were

about the letter *e*. The high rate of *e* problems may be associated with its resemblance with the phonetic symbols [e] and [ə] in KK phonetics, a commonly taught pronunciation aid in Taiwan’s elementary schools. Students familiar with KK can be easily confused by the similarities of symbols used by both phonics and KK phonetics (Hung, 1998; Wang, 1988, 1991; Yeh, 2005).

### Spelling Difficulty

Spelling issues are the second category. Spelling issues refer to problems that instructors encounter when enhancing the spelling accuracy of students by using different phonics strategies. The participant teachers in this study encountered fewer spelling issues. Out of the 12 action research studies conducted in total, only 4, or 33 percent, belong to this category.

Among the four spelling problems, one is on vowel difficulty, one in *others*, and two are on consonant issues. As Table 1 shows, the “vowels” and the “others” problems are: 1) “How to teach students to recognize *oo* vs. *al* from hearing the [u] and [ɔ] symbols” in Cycle II at Jhong-Jhen, and 2) “Does appropriate stress help raise students’ spelling accuracy?” in Cycle I at Jhong-Jhen, respectively. The two consonant problems are “How to teach students to recognize *ch*, *h*, and *sh* from hearing [tʃ], [h] and [ʃ] symbols” in Cycle II at Xiliao and “Ways to aid students in correctly identifying placement of the letter ‘l’ in words” in Cycle III at Xiliao.

According to Henderson (1967), Fichtner (1976), Mazurkiewicz (1976) and Groff (1977), consonant generalizations or rules in phonics are more reliable than those of many vowels. Yet, in this study consonants appear more problematic than vowels, with only one vowel spelling problem but with two consonant issues linked to the problems of consonant and consonant diagraphs. This finding shows that some consonants in EFL children's spelling class could be as bothersome as those in vowels.

## Model Action Research Report

### 2. When teaching English vocabulary through phonics, how did the instructors solve the problems they encountered?

The following is a typical example from the problem categories listed above. This shows how the participant instructor posed the problem and how she tried to work on it through action research.

#### A Typical Report from Spelling Difficulty

The question "*Ways to aid students in correctly identifying placement of the letter 'l' in words*" was posted by Claire, the participant instructor employing phonics at the Xiliao Elementary School during Cycle III. When Claire finished her first week of teaching, she found that students were confused about *the sound of letter l after a vowel* and were not sure when to pronounce the letter "l" [l] or [ɫ]. When she finished teaching the Unit 9 vocabulary words *light*, *bulb* and *candle*, she

gave students a cloze test in which they needed to fill in the blanks with the letter "l" after hearing the teacher reading the words out loud. A few students miswrote the "l" in *candle* with the vowel "o". Apparently, they could not distinguish the difference between [l] and [ɫ]. They might not fully understand that the letter "l" is to be pronounced a devoicing [ɫ]. As a result, she aimed to teach students how to properly identify letter "l" when it appeared in a word.

During the discussion meeting, Claire gained three alternatives. Tongue placement was Natalie's suggestion. Natalie felt that by reminding students of the placement of the tongue, Claire could help students have a greater impression of the pronunciation of "l". Explaining phonics rules was from Dorothy. Dorothy felt that Natalie should first teach students the rules before emphasizing on pronunciation. Ex: the e in *candle* is silent. As a result, the "l" at the end is pronounced [ɫ]. Using examples to introduce rules came from Claire's own idea. She thought that she should remind students that under the phonics rules, the letter "l" combined with a vowel at the end of a word is pronounced [l]. She should also provide some examples to let students find out the rule by themselves as well. For instance, [ɫ]: child, owl, turtle, ball, colorful, fuel and [ɔ]: orange, cost, oar.

From the above alternatives, Claire chose to use Dorothy's method of explaining the phonics rules and her own idea of providing examples. She believed that these two

methods could be used to remind students the following two phonics rules when hearing a sound like [ɪ] or [ɔ]:

- 1) Is it after a vowel (a, e, i, o, u)? If it is, it is the letter “l”; and
- 2) Is it at the end of a vocabulary word? If it is, it is the letter “l.”

During the class of the second week, she explained the rules from the vocabulary words first, and then she used examples to supplement her teaching. She first told students that there were two rules to determine when “l” was pronounced [ɪ]. First, it could be after a vowel (a, e, i, o, u). Second, it could be at the

end of a word. Then, she provided the students with examples such as *child, owl, animal, bell, turtle, ball, fall, circle, full, cold, colorful, world and fuel*. These examples allowed students to familiarize themselves with the rules and to properly fill in words with the letter “l”. (For example: the “l” in *child* is pronounced [ɪ] because “l” is behind the vowel i.) When she wrote the vocabulary words on the board, she used yellow chalk to signify that the “l” was pronounced [ɪ]. Then, she divided the vocabulary words into three sections (see Fig. 1).



Fig. 1 Claire’s three sections of the letter “l”

In the first section, the letter “l” was behind a vowel (a, e, i, o, u). In the second section, the letter “l” was at the end of a vocabulary word (or when the letter “e” is silent). In the third (middle) section, the letter “l” was behind a vowel (a, e, i, o, u) and also at the end of a vocabulary word.

Before she began testing, she gave the students a vocabulary word ho\_e to practice. She asked them with what letter they should fill in the blank. The students told her that it was the letter “l”. When she asked why, they answered her that the blank was after the vowel “o” and it was at the end of the word followed by a silent “e”, so it should be filled with “l”.

After the practice, the students were given a cloze test of five vocabulary words with multiple choice questions. In each question, the students would decide whether the sound for the corresponding blank was [l] or [ɔ]. If it was perceived as [l], the students should choose choice a; if not, they should choose choice b. The quiz contents were randomly chosen from the vocabulary words that had been taught in class. Below is the quiz.

### Multiple choice

a. l = level or b. other letters (别的字母)

1. ( ) fa__
2. ( ) __range
3. ( ) cand__e
4. ( ) wind__
5. ( ) c__st

There were eight students in the class with five questions each for a total of 40 questions. The students correctly answered 30 questions for an accuracy rate of 75 percent. Claire was not satisfied with the accuracy rate, for students still incorrectly answered 25 percent of problems. She believed that students were still confused about the two rules for determining whether [l] should be used to pronounce the letter “l”. Namely, 1) is “l” behind a vowel (a, e, i, o, u) and 2) is “l” at the end of a word?

During the second week of discussion, the other teachers listened to her account and gave her the following two suggestions. Firstly, Frances, the supervisor, thought that Claire should provide students with the sound during the quiz; otherwise, there were too many possibilities for the words. Secondly, Natalie suggested that she might want to trace back to the root of students’ confusion and do a comparison between [l] and [ɔ].

In the third week, after Claire pondered for a few days, she decided to change the format of quiz from written test to listening comprehension. During the teaching, the rules that caused “l” to be pronounced as [l] were reviewed. At the end, a listening comprehension quiz was given. Here is an excerpt of a dialogue of the method used:

T: “All right! What sound does this red “l” make?”

Ss: “[l].”

T: “What two sounds does ‘l’ have?”

Ss: “[l] (luh) and [ɫ].”

T: “So this red ‘l’ is pronounced [ɫ]. Now, I’ll give you an example, ‘level.’ There’s an ‘l’ that makes the [l] (luh) sound and another one that makes the [ɫ] sound.”

Ss: “Level.”

T: “So we can see in this word that there are two rules for pronouncing ‘l’ [ɫ]. The first rule is that it’s after a vowel (a, e, i, o, u), and the second rule is that it’s at the end of the word. All right, let’s look at these examples! The first example is that it’s after the vowel. For example, the ‘l’ in cold is behind the ‘o’, the ‘l’ in tall is behind the vowel ‘a’, and the ‘l’ in child is after the ‘i’. All produce the [ɫ] sound.”

Ss: “Cold, tall, child.” (Students repeated)

T: “Let’s look at these three that are at the end of a word. How do we pronounce this?”

Ss: “Owl.”

T: “The ‘l’ in the second word, candle, is regarded as being in the back because ‘e’ is silent. Whistle was taught last week. Finally, the e in bottle isn’t pronounced either, so ‘l’ is regarded as being at the end!”

Ss: “Candle, whistle, bottle.”

The quiz for the third week was a yes/no test like that of the second week. Its contents

consisted of five vocabulary words taught in that week—talk, frog, window, pole and small. There were eight students and each student had five questions for a total of 40 questions. Thirty-four questions were answered correctly for an accuracy rate of 85 percent.

After the third week’s class, Claire felt that the students still had a lot of room for improvement. As she had provided the pronunciations during the quiz, students should have been able to tell more clearly whether an “l” should be filled in the blank. The second week’s accuracy rate was 75 percent, and the third week’s was 85 percent, an improvement of 10 percent.

After the third week, the other teachers listened to her ruminations and provided her with two suggestions. Cindy suggested that because most of the students got the new word window wrong, Claire should have emphasized the pronunciation of “l” more during the test. Jessica suggested that while teaching Claire should emphasize the difference between [ɫ] and [ɔ], and only then should she commence the quiz.

During the fourth week of teaching, she made only one change in accordance with the other teachers’ suggestions. She decided to teach the students the difference between [ɔ] and [ɫ] by training their listening sensitivity. Other than reminding students the [ɔ]-[ɫ] difference, her teaching was otherwise similar to the previous three other weeks.

The questions on the quiz of the fourth week were also yes/no questions. The tested

vocabulary words were all, smell, show, ball and pole. This time, the students correctly answered 36 questions for an accuracy rate of 90 percent. Comparing the 90 percent accuracy rate of the fourth week to that of the third week, the accuracy rate rose 5 percent. She could tell that students were becoming more familiar with the rule of pronouncing the letter “l” after vowel.

During the fourth week’s discussion, the other teachers listened to her thoughts and gave her the following three comments. First, Natalie thought that reminding students of the difference between [l] and [ɫ] really did help students differentiate the two sounds in words. Then, Jessica pointed out that the placement of the pronunciation was very important in determining whether students could figure out the correct pronunciation. Finally, Jenny reminded Claire that students need to continuously review the rules so as to learn new things and commit them to memory.

Claire appreciated all their comments greatly. In her future class, she decided to use examples to supplement and explain phonics rules. However, she felt that this must be paired with providing pronunciation in order to really help students correctly fill in the “l” in words. She indicated that reading out loud was very important for correct spelling. She also felt that her action research was worth her efforts indeed. Students achieved a 75 percent of accuracy rate in the second week, 85 percent in the third, and 90 percent in the fourth. Their progress was evidently steady week after week

with her action research.

## Conclusion and Implication

The purpose of this study is to explore the feasibility and applicability of phonics instruction in teaching vocabulary to beginning English learners in Taiwan. The overall findings of this study contribute to an understanding of the applicability of phonics instruction on teaching children English vocabulary. The result shows that, while teaching vocabulary to elementary students through phonics instruction, teachers of English in Taiwan encountered more pronunciation problems than that of spelling (67% vs. 33%). These pronunciation problems that participant instructors encountered are mostly related to the short vowel letters a, e and o. The letter e is the represented most frequently, in about 83 percent of the vowel problems in the pronunciation category. In contrast with pronunciation problems, problems in the spelling category appeared much less frequently. As for the characteristics of the spelling problems, most were consonant issues, as opposed to the vowel issues that dominated the category of pronunciation problems. In addition, the letters *l*, *h*, *ch* and *sh* are the major issues in the spelling category.

The findings could be helpful to vocabulary teachers at elementary in Taiwan. Further, the study can also provide caution to phonics users including teachers and students.

### **Targeting Problem Areas in Phonics Instruction**

One of the major findings of this study is that when vocabulary teachers in Taiwan employed phonics instruction in elementary school, they encountered more pronunciation problems than those of spelling. Moreover, the problems in the pronunciation category that participant instructors encountered are mostly related to short vowel letters such as a, e, o. Further, the study also reveals that the letter e is the most frequently encountered problem. These findings increase the pedagogical awareness of EFL vocabulary instructors in elementary schools. Although most teachers of English commonly realize that phonics instruction would help elementary students to learn English, this study gives deeper understanding that the vowel letters in words need to be approached with extra caution especially in pronunciation lessons. If most teachers of English in Taiwan gain this awareness and have some informed solutions, they will have a smoother time teaching vocabulary using phonics. In addition, when they see their students make errors with vowel letters, especially the letter e, they will feel less frustrated as this is a common issue. They will know to let students have additional practice.

### **Offering Solutions through Action Research Reports**

This study provides the action research conducted throughout phonics instruction. In each case, the participant instructor posed a problem and tried to solve the problem through

collaborative action research. The problems, solutions and the final assessment of each action research are listed in the findings section.

Through these action research studies, EFL teachers can learn from the alternatives that the participant instructors used since the average of accuracy rates on the tests are about 86 percent. For example, when encountering the issue of when a-e pronounced [ɪ] in the a-e [e] phonics rule in a vocabulary class, teachers of English may want to work on clarifying by examples to find more words with the a-e [ɪ] pattern, or marking syllables with different colors and making identifying marks over syllables (*e.g., c'ake, p'al'ace, l'ugg'age*) to help student tell the differences between a-e [ɪ] and a-e [e]. With these methods, students can effectively memorize the rules and read out the words more correctly. In the above typical example, when students are confused with the “l” in candle as the cost “o” fill in the blanks spelling test, teachers can explain the phonics rules of [ɔ] and [ɪ] and provide examples to help students to verify the rules. More importantly, reviewing the rule with more examples is also recommended. These alternatives brought students high accuracy rates in the final tests and are worth trying for vocabulary teachers in Taiwan.

### **Identifying Blind Spot in Pedagogy**

Participant instructors in this study encountered more pronunciation problems than those of spelling (67% vs. 33%). The relatively high rate of pronunciation problems (67%)

reveals that Taiwanese elementary teachers who taught children's reading through phonics concentrated more on the pronunciation, rather than on spelling or the meaning of the words. From this study, we can find out that in Taiwan, phonics is still seen as merely a pronunciation tool. In other words, teachers put forth much effort on using the system to improve students' word reading, but not students' spelling accuracy. This view is similar to the view held of KK phonetics symbols.

However, for a long time in the United States, scholars and researchers have recognized that teaching native tongue children phonics can improve their spelling competence as well (Roberts & Meiring, 2006; Groff, 1977, 2001; de Graaff, Bosman, Hasselman & Verhoeven, 2009). In particular, they revealed that a speech-sound-to letter, synthetic, visual, spelling-context and systematic phonics instruction is the more effective method. With this in mind, Taiwanese instructors can try to extend the function of phonics from pronunciation to spelling. Although the current goal is basic communication skills, i.e., listening and speaking (MOE, 2003, 2006), the Ministry of Education can promote this movement by revising the goal for elementary English education to place more emphasis on word spelling, since phonics is an effective tool for students to employ in enhancing their spelling.

Moreover, if the educational policy is changed, MOE can hold a series of "phonics vocabulary workshops" to provide an in-depth

methodology for teachers of English to learn what kinds of phonological processing instructions can increase spelling efficiency for Taiwanese elementary students. By doing so, elementary students would get more benefit from employing phonics to learn English in both pronunciation and spelling.

### Future Study

The researcher suggests that this study be replicated in the future with the addition of other variables, like participant students of different ages, different English proficiency levels, varying English learning experience (e.g. previous phonics background), and participant instructors of varying experience (e.g. with elementary-teaching certification). In addition to action research reports, researchers might want to add various data sources such as teaching journals, class observation or interviews. The results from these sources may be different from those found in this study.

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## 自然發音教台灣學童英文字彙：以協同性行動研究為例

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### 摘 要

台灣小學實施英語教學以來已超過十年。在課程強調聽說重於讀寫的目標下，自然發音成為首選的啟蒙發音系統。一旦教師教完基礎英文字母後，教師就直接面臨著字彙教學的挑戰。當英文字彙常是存在著不規則的字音與字母對應的狀況下，使用自然發音來教單字即可能導致許多的問題發生。

本研究目的是在發掘以自然發音來教字彙的問題及可能的解決方案。六位參與教學研究的老師是某學院主修外語教學的高年級學生，其中兩位擔任教學，四位擔任助教。參與實驗教學的學生是在南台灣的某兩校各一班的六年級學童。資料的蒐集來自於教師的行動研究報告及討論會的會議紀錄。資料分析是根據 Erlandson, Harris, Skipper and Allen 的 (1993) and Miles 和 Huberman 的 (1994) 的質化研究分析技巧。本研究主要的發現為以自然發音教學童英文字彙時，發音及拼字為主要的兩類問題。其中，老師們遇到的問題又以發音類的多於拼字類。研究也發現，發音類的問題多與母音相關，而拼字類則是多和子音的對應有關。在最後教師對學生的評量中發現，在所有 12 個行動中，有 5 個全班學生的測驗正確率達 90% (含) 以上，且總平均的正確率也到達 86%。

**關鍵字：**英文字彙、自然發音、發音教學、拼字教學、行動研究