

CHAPTER 2

LITERATURE REVIEW

Chapter 2 presents the theoretical grounds for utilizing the method, “syllable-awareness based phonics instruction,” in spelling multi-syllable words for EFL 7th graders. It includes four sections --- English orthography, phonics instruction, phonological awareness (including syllable awareness), and related studies in Taiwanese EFL context. The first section explores the complexity and predictability of English orthography. Then, the superiority of using phonics instruction on spelling is explained in the second section. In the third section, the importance of phonological awareness on spelling and the reasons in adopting syllable-awareness for spelling multi-syllable words are provided. Finally, previous related studies in Taiwanese EFL context are reviewed.

English Orthography

Since English is a phonetic language, its orthography ought to match its sounds. However, due to changes with the English language and foreign language influence, English orthography does not establish a one-to-one relationship between symbols and sounds (O'Grady & Dobrovolsky, 1987). This inconsistency troubles every English learner. Table 1 illustrates some of these problems.

Table 1 Problems with English Orthography (O'Grady & Dobrovolsky, 1987)

PROBLEM	EXAMPLE
1. Some letters do not represent any sound in a particular word.	through <u>h</u> , sign, give, pal <u>m</u>
2. A group of two or more letters can be used together to represent a single sound.	<u>th</u> ink[θ], <u>ch</u> ip[tʃ], <u>sh</u> ip[ʃ]
3. A single letter can represent a cluster of two or more sounds.	Sax <u>x</u> phone [ks], ex <u>l</u> e [gz]
4. The same letter can represent different sounds in different words.	<u>o</u> n[ɑ], b <u>o</u> ne[o], <u>o</u> ne[wʌ]
5. The same sound can be represented by different letters in different words.	<u>r</u> ude, <u>l</u> oop, <u>s</u> oup, <u>n</u> ew, <u>s</u> ue, <u>t</u> o, <u>t</u> wo [u]

Although English orthography reveals its complexities in its organization, Chomsky & Hall (1968) considered English orthography highly regular. In fact, the research of Hanna, Hanna, Hodges & Hanna (1971) revealed that of the 17009 most frequently used English words, about 84% contain regular letter-sound correspondences. Wolfram & Johnson (1982) also pointed out that though more difficult than decoding, there is still considerable predictability in encoding English and think that “understanding the basis for the different patterns of symbol-sound correspondence” offers both learners and instructors a possible approach to reading and spelling (p.198). In other words, the rules of English orthography can be instructed and spelling can be improved by building the concept of spelling patterns with regular letter-sound correspondence.

Phonics

Phonics, which emphasizes mastering letter-sound correspondence, is regarded as one of the most powerful tools in improving spelling (Blevins, 1998). According to Blevins' notes (1998) in *Phonics from A to Z*, studies show that half of

all English words can be spelled with phonics rules that relate one letter to one sound. Thirty-seven percent of words can be spelled with phonics rules that relate groups of letters to one sound. The remaining 13 percent must be learned by memorization. In short, 87% English words can be spelled through phonics. This is apparently the reason why phonics is stressed as an important basic skill in MOE's Guidelines of Grades 1-9 Curriculum for Elementary and Junior High School Education (MOE, 2006).

However, Blevins (1998) noted that instead of spelling problems, phonics originally is used to solve native speakers' reading problem. It focuses on the teaching of letter-sound correspondences, so native learners can come up with an approximate pronunciation of a written word and then check it against his or her oral vocabulary (Blevins, 1998; Lloyd, 1995). For example, learners are taught *h* for /h/, *a* for /æ/, *t* for /t/ first (letter-sound correspondence). Then, when these learners see the written word "hat", they can sound out the word as /hæt/. Furthermore, since native speakers of English can match the sounds with their oral vocabulary, they could get the meaning of the word easily. Through the process, step by step, learners can recognize more words in reading. In other words, phonics is designed to help native learners recognize words to enhance their reading ability.

It is believed that letter-sound correspondence, which is addressed in phonics, also benefits learners not only in reading, but also in spelling (Chall, 1996; Frith, 1980; Graham, 1983; Panel, 2000; Yin, 2000). After hearing the sounds of the target words, English learners can spell them if they have captured the letter-sound correspondence. In fact, Adam (1990) found that English-speaking learners who received phonics instruction could spell better than those who did not. Similar result was also found on EFL learners. A number of local researches confirm that

phonics can facilitate learners' reading as well as spelling (Chang, 2003; Hsu, 2003; H. L. Lai, 2004; Lee, 2004; Wu, 2004). As shown in Lin's research (2002), 30.2% elementary school English teachers (221 out of 731) thought that phonics instruction affected more on the EFL students' spelling ability, rather than reading. It not only helped learners to spell, but also enhanced their motivation and confidence (Z. L. Huang, 1999; C. J. Wu, 2005). In brief, phonics is clearly a familiar and useful spelling tool for EFL elementary and junior high school students.

Phonics Instructions

There are two major approaches to phonics instruction --- the synthetic approach and the analytic approach (Blevins, 1998). The synthetic approach is known as explicit phonics, and the analytic approach as implicit phonics.

Explicit phonics follows the bottom-up model (part-to-whole approach) to explicitly teach children to "convert letters into sounds (phonemes) and then blend the sounds to form recognizable words (Panel, 2000, p.8)." It is a synthetic process rather than a context analysis. For example, in order to teach the letter *a*, the teacher directly teaches the students *b* for /b/, *a* for /æ/, and *t* for /t/ one-by-one first. Then, students are expected to blend the letters from left to right to read out an unknown word, such as *bat* for /bæt/. After that, students would practice reading more words containing letter *a* (and other known consonants), such as *dad*, *cat*, *fat*, until they can automatically match the correspondence (Stahl, Duffy-Hester, & Stahl, 1998). Research has demonstrated that the synthetic approach can make students understand letter-sound correspondence effectively (Adams, 1990; Anderson, Hiebert, Scott, & Wilkinson, 1985; Blevins, 1998). However, Gunning (1996) stated that it is unnatural for learners to pronounce the consonant sounds like /b/, /t/

in isolation. Some teachers also believed that if children can discover the letter-sound correspondence by themselves, they can internalize the correspondence even more easily (Blevins, 1998). For this reason, an alternate approach--implicit phonics is recommended.

Unlike explicit phonics, implicit phonics uses a top-down model (a whole-to-part approach) to teach children to find out letter-sound correspondence themselves. In fact, implicit phonics advocates regard “meaning” as the focus of teaching reading. They think that through context analysis (implicit phonics) learners can identify an unknown word and get its meaning (Eldredge, 1995). Thus, students are taught to “analyze letter-sound correspondence in previously learned words to avoid pronouncing sounds in isolation (Panel, 2000, p.8).” For example, in order to train students to recognize *s*, the teacher reads several words *sad*, *sat*, and *sun* (all containing the target sound *s*) to students and asks them to break down each of the words into parts (/s/, /æ/, and /d/ for *sad*). Students could then realize that all words start with the same sound *s*. However, one of the drawbacks of this method is that some students, who lack phonemic awareness, may not be able to segment words into individual sounds easily at the onset. As a result, these students might fail to learn or use the implicit phonics (Lapp & Flood, 1997).

As an alternative to pure explicit or pure implicit phonics, Gunning (1996) proposed a combined approach to teach phonics --- the implicit-explicit instruction. It is an instruction designed for both native and EFL children. She believed that it is important for novice readers to discover the letter-sound correspondence by themselves as well as to hear the sounds in isolation from their teacher. Furthermore, in the discussion of a local study by Lin (2002), the implicit-explicit phonic instruction is also regarded as a better instruction for EFL learners in Taiwan.

The teaching process may proceed as the following. First, the teacher provides a set of words, all containing the target letter, for students to discover the target letter-sound correspondence by themselves. Then, he/ she directly shows the target letter-sound correspondence with students (explicit phonics). Finally, he/ she offers some exercises, such as listening (minimal pairs), reading (sentences, rhymes, songs), and dictation (M. Y. Lin, 2002).

Generally speaking, explicit phonics instruction is favored by most scholars and teachers for its teaching efficiency (Adams, 1990; Anderson et al., 1985; Blevins, 1998). But the implicit-explicit combined phonics instruction is recommended for beginning EFL learners because it can help them overcome their difficulty in isolating phonemes and utilizing letter-sound correspondence during the early stage. It can be modified to suit the EFL learners' needs but still serves theoretically and practical purposes (Gunning, 1996; M. Y. Lin, 2002).

However, whether either instruction is adapted, Hu (1999) indicated that only focusing on letter-sound correspondence can not guarantee EFL learners' success in spelling, a skill they will need to develop eventually. She stressed that what should be built on the foundation of phonics instruction should be phonological awareness, an essential skill every successful speller should master.

Phonological Awareness

Stackhouse (1997) defined phonological awareness as the ability to reflect on and manipulate the structure of an utterance (e.g. into words, syllables, or sounds) as distinct from its meaning. The sensitivity to phonological awareness is probably the most essential in early spelling (Bradley, 1988; Donald & Cornwall, 1995; Goldsworthy, 1998; Leong, Hau, Cheng, & Tan, 2005). Su (1999) investigated L2

college students' spelling and found that good spellers' misspellings were closely related to some regular phonics patterns. As a result, he concluded that phonological awareness could predict spelling proficiency and that there was a causal link between phonological awareness and spelling. Furthermore, plenty of reports on L1 or L2 learners proved that it has been more successful if phonological awareness is implemented with phonics to improve learners' reading and spelling (Chu et al., 2007; W. T. Lai, 2003; Schommer-Aikins et al., 2005; Stage & Wagner, 1992).

In fact, phonological awareness is an umbrella term. It consists of a heterogeneous set of skills. Many researchers consider that the skills of phonological awareness are acquired hierarchically rather than emerge a whole. According to Goswami and Bryant (1990), phonological awareness comprises three levels: 1) awareness of syllables, 2) awareness of intra-syllabic units—onset and rime, and 3) awareness of phonemes. Goldsworthy (1998) explains the 3 levels specifically as:

Level 1: Increasing word awareness: dividing sentences into words.

Level 2: Increasing syllable awareness: dividing words into syllables.

Level 3: Increasing sound awareness: dividing syllables into sounds.

In detail, Chard and Dickson (1999) divided phonological awareness into 5 stages from sentences into individual phonemes. The process is illustrated in Figure 2.1 and it reflects children's sensitivity to sounds from larger to small units (from less complex to more complex activity). The beginning skills of phonological awareness are rhyming songs and sentence segmentation. Then, syllable segmentation and blending is developed for big or long words. Further, learners will find words and syllables are made up of even smaller units. Thus, they finally develop the skills of onset-rime and individual phoneme blending and segmentation.

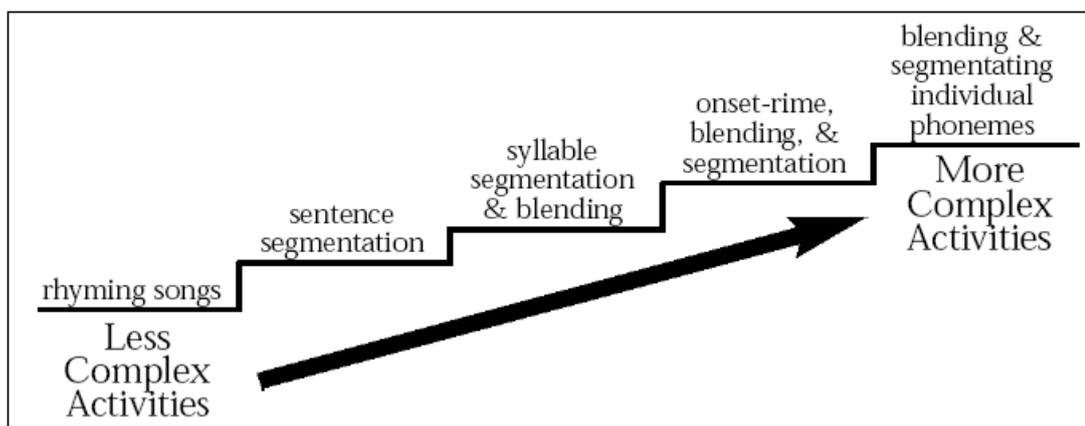


Figure 2.1 A Continuum of Complexity of Phonological Awareness (Chard & Dickson, 1999)

According to the above hierarchical classification of phonological awareness skills, after learners are aware of the words in sentences, they may move on to segment and blend syllables in multi-syllable words and start the development of syllable awareness.

Syllable Awareness

Syllable awareness is in the middle of phonological awareness developments. It assists to build up the concept of syllabification as a multi-syllable word can be segmented into several monosyllables. When we speak multi-syllable words, we can segment individual syllables because “the natural speech breaks separating them (Lloyd, 1995, p.51).” We can isolate each syllable without distorting speech. Thus, it is easier and more “natural” to manipulate sounds with it (Frith, 1980; Tse, 1998).

Syllable awareness instruction enhances learners’ spelling skill. Adam(1990) stated “whether to extract spelling from speech or to translate spelling to speech,...it is the syllable with which one must start”(p.302) , and continued to stress that “syllable awareness is an important mediator between children’s attention to the sound structure of English and its relationship to spelling” (p.303). Hutchinson (1962) also thought learning how words are divided according to its syllables is a

dependent way of improving spelling. It not only helps learners generate the letter-sound correspondence of unfamiliar words but also increases their memory for the correct spelling of syllables in words that have studied. Wang (2003) proposed that syllable awareness helped to reduce the fear in dealing with long and polysyllabic words. Some researchers even noted that phonics instruction would not be valuable to handle polysyllabic words if learners fail to develop syllable awareness or can not use syllabification (Blevins, 1998; Carney, 1994; Lloyd, 1995).

In a more recent experiment, Bhattacharya & Ehri (2004) also confirmed the claim that syllable awareness helps learners to read and spell words. They examined the effects of different methods on struggling adolescent readers' reading and spelling. These readers were divided into three groups. One group received the instruction on analyzing syllables units in words, another group would be instructed to read words as unanalyzed wholes, while the third group got no special instruction. Finally, the posttests revealed that the first group outperformed the other two and that syllable analysis could help learners remember the spelling of words and how to read words in practice.

Although syllable awareness is important for learners to spell words, there are different viewpoints for teaching it to L1 or L2 learners. Many researchers think that, for L1 learners, since syllables are physically distinguishable from one another, syllable awareness can be developed naturally in many children even before receiving instruction (Lieberman et al, Bradley & Bryant, 1983, Maclean, Bradley & Bryant, 1987, cited in Adam 1990). Scholars, thus, consider it unnecessary for teachers to give syllable awareness instruction on L1 learners. However, for L2 learners to develop the concept of syllables may not be so easy. Liow & Lau (2006)

investigated the development of bilingual children's early spelling in English and found that English language background (LB) (English-L1, Chinese-L2) and Malay LB (Malay-L1, English-L2) children both performed significantly better than Chinese LB (Chinese-L1, English-L2) children on bi-syllabic words. In addition, the number of syllables did not have any effect on the Chinese LB children. They explained that it may be related to the characteristics of Chinese language --- Chinese is mostly monosyllabic and many syllables are open syllables. On the contrary, the Malay or English LB children have plenty of experience in using multi-syllable words from their native languages.

In reviewing the studies in Taiwan, we can get the same result --- many EFL students, including junior high school students, lacked the concept of syllables. Huang (1999) indicated that phonics can not be taught effectively in Taiwan, due to the differences in students' environments. Unlike native speakers or ESL students who learn to spell in an English environment, EFL students in Taiwan are confined in a non-alphabetic native language and lack the concept of stress and syllable. In fact, researches found that many 7th graders even had trouble counting syllables (S. L. Huang, 2002; Wu, 2004). Clearly, L2 learners, unlike L1 learners, seem to need more time and exercise on the development of syllable awareness. Unfortunately, this aspect is often neglected in local studies on phonological awareness and spelling skills.

Related Studies in Taiwanese Context

In Taiwan, a number of studies have been conducted on the effects of phonics and/or phonological awareness on the spelling ability of elementary and junior high students. Some of these researches focus on the effects of phonics on spelling mono-syllable words, while others on multi-syllable words. We shall examine them in the following sequence. First, studies on phonics instruction on spelling mono-syllable words will be reviewed. What follow will be researches on spelling multi-syllable words. Introduced finally are several studies on the effects of phonics instruction combined with phonological awareness (including onset-rime, phonemic, syllable awareness) on spelling.

The following researches are related to phonics instruction on spelling mono-syllable words. Take for example, Lai (2004) conducted an action research on forty 7th graders with phonics instruction. After the instruction for a semester, the 7th graders significantly improved on spelling mono-syllable words. In another study, Hsu, M. H. (2004) investigated the effects of strong phonics instruction on twenty-four 2nd graders who were divided into two groups. One group received 20-minute phonics instruction (strong phonics instruction) and the other (ordinary phonics instruction) got 10-minute phonics training. In addition to more instruction time, the group of strong phonics instruction emphasized more on the content and students were provided with reading materials where decoding skills can be applied. After four months, the group of strong phonics instruction significantly outperformed the group of ordinary phonics instruction in spelling letters written in mono-syllable words. In a third study, Wu (2004) investigated the effects of phonics instruction on

sixty 7th graders' decoding and encoding ability on mono-syllable words. Three tests were conducted --- questionnaire, oral production test, and written test. The administration of the questionnaire aimed to select the subjects. Then, two oral production tests, one with 64 unfamiliar words and the other with the same 64 words but marked with stress. Finally, the written dictation test of 69 mono-syllable words was given to the subjects. The total scores were computed and students were placed into three groups (high proficiency group, intermediate proficiency group, and low proficiency group) for analysis. The findings of her research showed that most 7th graders had poor decoding and encoding ability on mono-syllable words. In conclusion, she suggested that further researches should be conducted on encoding multi-syllable words.

In addition to the aforementioned studies on mono-syllable words, a number of researches were conducted to tackle spelling multi-syllable words with phonics. First of all, Chang (2003) examined the effects of phonics instruction (experimental group) and reading-writing instruction (control group) on sixty EFL 4th graders' word recognition and spelling ability (dictation of 34 mono-syllable words and 2 bi-syllable words). Both instructions lasted for sixteen weeks (thirty minute per class, four classes a week). According to the pre- and posttests, the result showed the group of phonics instruction performed significantly better than the group of reading-writing instruction. In another study, Hsu (2003) investigated the effects of three instructions (phonics instruction, KK phonetics instruction and phonics plus KK phonetics instruction) on seventy 5th graders' phonemic awareness, word recognition,

and spelling (dictation of 10 mono-syllable words and 4 bi-syllable words). After 25 weeks (15 minutes per class, two classes a week), the posttests shows there was no significant difference among these three groups. In a more recent study, Yeh (2006) estimated the effects of experimental English teaching on four group-types: control group (no special instruction), phonics group, phonics & analogy group, and phonics & rehearsal group. The subjects were all 4th graders and the instruction was held for 40 minutes twice a week for 10 weeks. The result revealed that the phonics & rehearsal group had better performance than other groups on spelling words through dictation.

Although the above three researches started to discuss the effects of encoding multi-syllable words, very few multi-syllable test words were included in their studies : 2 in Chang's thesis, and 4 in Hsu's thesis. Furthermore, all the three studies have only focused on the effects of phonics instruction while neglecting the fact that phonological awareness needs to be considered to improve the encoding ability of students.

Reviewed below are three researches discussing the findings from onset-rime awareness based phonics, phonemic awareness based phonics, and the correlation between the three types of awareness and phonics on spelling.

In the first study, Lee (2004) conducted a research about onset-rime based phonics instruction on EFL beginners' oral reading and spelling. The study aimed to examine the effectiveness of phonics on spelling 6 mono-syllable words with the training on onset-rime awareness. The result showed that the 3rd graders with this

special training did not perform better than other students who were instructed with phonics only. In another research, Lai (2003) examined the effects of phonics instruction with phonological awareness activities (mostly phonemic awareness activities) on spelling skills of some remedial EFL 8th graders in an English resource program. Two experimental groups were selected in two different schools over different periods of time. One with 22 subjects lasted for fourteen weeks, and the other with 9 subjects for ten weeks. Four spelling tests (two for pretests, and two for posttests) for the two groups were carried out¹. After the correlation examination, the result showed that both groups significantly improved on spelling words. However, Lai's research did not include syllable awareness activities and most important of all, there was no control group for comparison. Consequently, the result might need reexamining.

Finally, an earlier study (Chien, 2002) investigated 34 elementary school students to observe the relationship between phonological awareness, spelling and reading. The subjects were given a variety of tasks, including phonological awareness tasks, two spelling tasks² and two reading tasks. Unlike other experimental researches, no instruction was included in the research. The result of this study showed that there was a strong correlation between phonological awareness and spelling/ reading skills. However, the findings showed that it was phonemic awareness, instead of syllable awareness or onset-rime awareness, which kept the

¹ All the spelling dictation tests had 15 test words. The pretest on the first experimental group included 3 mono- and 12 multi-syllable words and the posttest had 5 mono- and 10 multi-syllable words. As for the second experimental group, the pretest was the same as the posttest in the first experimental group which contained 5 mono- and 10 multi-syllable words.

² The 2 spelling tasks included a real word and a pseudo word task. In the real word spelling task, 54 mono- and 6 multi-syllable words were used and in the pseudo word test, 17 mono- and 8 multi-syllable words were provided.

highest correlation with spelling and reading. The high percentage of mono-syllable test words in the 2 spelling tests might lead to the ineffective performance of syllable awareness.

On the whole, all the above researches on phonological awareness based phonics instruction seemed to neglect the problems in spelling multi-syllable words which many 7th graders or advanced learners need to face. On the other hand, syllable awareness, which is essential to treat multi-syllable words, was also overlooked. Even though L2 learners, unlike L1 learners, seem to need more time and exercise on the development of syllable awareness, this aspect is often neglected in local studies on phonological awareness and spelling skills. The present study is thus designed to evaluate an instruction of syllable-awareness based phonics for 7th graders, hoping to find a possible solution for their problem in spelling multi-syllable words.