

英語韻文及唸謠的不同教學法對初學英語的

台灣學童尾韻覺識的影響

**Effect of Teaching English Nursery Rhymes and Chants on
Young Taiwanese EFL Beginners' Rime Awareness**

by

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摘要

本研究旨在探討英語韻文及唸謠的不同教學法對初學英語的台灣學童尾韻覺識的影響。此外，本研究亦探討三個參數：研究對象的音樂智能、語文智能及對英語韻文及唸謠的態度，對學習者尾韻覺識的影響。

研究對象為於本研究之前，尾韻覺識程度相當的兩班國小二年級 59 位學童，其中男生 33 人，女生 26 人。一班為本研究的實驗組，另一班為對照組。兩組學習同樣的英語韻文及唸謠。然而，只有實驗組接受介紹押韻概念的教學，對照組則否。兩組均接受每週一次 20 至 25 分鐘的教學，為期 10 週。研究使用工具包括：尾韻覺識前測、尾韻覺識後測、研究對象的音樂智能及語文智能調查表，以及研究對象對英語韻文及唸謠的態度調查表。

所得資料以單因子獨立樣本變異數分析及相依樣本 t 考驗分析。所有統計顯著測試的顯著水準為 .05。單因子獨立樣本變異數分析顯示實驗組及對照組的尾韻覺識並無顯著不同 ($p = .207$)。基於兩者接受的相同教材本身的押韻特色可能是此不顯著結果的可能原因，本研究改採相依樣本 t 考驗比較各組的尾韻覺識前、後測以探討教材加教法對各組尾韻覺識的影響。結果顯示第一組（即原實驗組）前後測有顯著不同 ($p = .021$)，但是第二組（即原對照組）前後測並無顯著不同 ($p = .231$)。相依樣本 t 考驗比較兩組的音樂智能高低組、語文智能高低組及態度正負面組各自的尾韻覺識前後測，所得結果指出，第二組的任何分組的尾韻覺識前後測無顯著不同；第一組的音樂智能及語文智能各組的尾韻覺識前後測均呈現顯著差異（分別是 $p = .031$ 及 $p = .046$ ）。

本研究顯示，雖然英語韻文及唸謠內容有許多押韻字，對初學英語的台灣學童而言，對尾韻概念的介紹在其尾韻覺識的發展似乎是必須的。此外，本研究結果顯示，在介紹尾韻概念的教學中，學習者的音樂和語文智能可能對他們尾韻覺識的發展有影響。基於研究對象有限的英語能力，本研究只探討他們聽辨同尾韻字的能力。未來研究可針對英語能力較高的學習者，將識字融入尾韻覺識的教學，探討是否能加速學習者對尾韻覺識及字與音關聯的概念。

Abstract

The purpose of this study was to examine the effect of English nursery rhyme and chant instruction on young Taiwanese EFL beginners' rime awareness. In addition, the effect of three components (participants' musical intelligence, linguistic intelligence, and attitudes toward English nursery rhymes and chants) on these young learners' rime awareness was examined in view of different instructional methods.

The participants in the study were 59 second graders from two classes (33 boys and 26 girls) with about the same entry level of rime awareness. One class served as the experimental group and the other as the control group. The same English nursery rhymes and chants were introduced to both groups. However, the experimental group received explicit instruction on rimes whereas the control group did not. The instruction for each group included 10 weekly sessions, each of which lasted 20 to 25 minutes.

A one-way ANOVA and Paired-Samples T Tests were used to analyze the data. The significance decision level $\alpha < .05$ was used for all statistical significance tests. A one-way ANOVA, with $p = .207$, did not show statistical significance between the experimental and control groups on the Rime Awareness Posttest. The lack of statistical significance might be partially due to small sample size (a total of 57 participants). Another possible factor was that the instructional methods per se did not significantly influence learners' acquisition of rime awareness since both groups used the same instructional materials, which might arouse learners' rime awareness to some extent in both groups. To find out whether there would be any significant difference due to the combined effect of instructional methods and instructional materials, the research design of the study was revised with the two-group design being switched to two one-group designs. The original experimental group was termed Group One in the revised design, and the control group was termed Group Two. Paired-Samples T Tests were performed on each group's rime awareness pretest and posttest. The results showed a statistically significant difference, with $p = .021$ for Group One, and no significant difference, with $p = .231$, for Group Two.

Paired-Samples T Tests were also performed on the rime awareness pretest and posttests between the subgroups of salient versus weak musical intelligence, salient versus weak linguistic intelligence, and positive versus negative attitudes toward English nursery rhymes for Group One. Significant difference was found both between the subgroups of salient versus weak musical intelligence, with $p = .031$, and between the subgroups of salient versus weak linguistic intelligence, with $p = .046$.

Although rhyming words are a common feature of many existing English nursery rhymes and chants, the findings show that explicit instruction on rimes seems necessary if young Taiwanese EFL beginners are to develop rime awareness. The findings also suggest that, along with the explicit instruction on rimes, these learners' salient musical and linguistic intelligence may have an effect on their development of rime awareness. Due to the participants' limited English proficiency, this study only focused on their auditory discrimination of rhyming words. Future studies are suggested to incorporate written letter recognition in the instruction for learners with higher English proficiency to see if that accelerates the development of learners' rime awareness and learning of letter-sound correspondence.

Key words:

English nursery rhymes, chants, rime awareness, musical intelligence, linguistic intelligence, attitudes

CHAPTER 1

INTRODUCTION

Motivation for the Study

As part of the effect of globalization, English has become the international language of communication among people throughout the world. Following this inevitable trend, English was incorporated into the curricula of elementary education in Taiwan in 2001. In the “Grades 1-9 Curriculum Guidelines” stipulated by the Ministry of Education, English songs and rhymes are among the foci of English education. According to the competency indicators requirements of the four skills, students are expected to be familiar with simple songs, rhymes and chants, to understand the content and to identify frequent vocabulary in the songs, rhymes, and chants (Grades 1-9 Curriculum Guidelines, 2001).

The emphasis on songs and rhymes in primary English education seems reasonable because it is learner-centered and covers linguistic as well as cultural aspects of language learning. First, songs and rhymes are closely related to children’s daily life (Cakir, 1999). Many children start to listen to rhymes and chants in infancy. As they grow older, songs and rhymes are still important in their playtime—when they are jumping rope, for example. Second, some songs and rhymes contain features of foreign cultures. This enables children to know more about cultures other than their own (Curtain, 1993). Third, songs and rhymes are easy to remember because they are musical, rhythmic, and often rhymed (Buchoff, 1994; Cakir, 1999; Curtain, 1993; Martin, 1972; Serafine, Davidson, & Crowder, 1986; Yeston, 1975; Chi, 2002). Cook (2000) mentioned that rhythms were empirically found to stimulate the brain to release pleasurable endorphins so that people are attracted and impressed by rhythms and anything that accompanies them. His study also pointed out that our love for language play in infancy and childhood continues into adulthood. Pop music and commercial jingles are examples that feature rhymes and rhythms. Chi (2002)

conducted a study of the influence of different features in commercials on customers' memorization. The findings showed that rhyming jingles enhanced customers' memorization of the product features.

Despite these merits of songs, rhymes and chants as well as their current popularity in the local market, few studies have been done on the use of English songs and rhymes on young Taiwanese EFL learners of English. In the past two years, a few local studies indicated the value of English nursery rhymes, songs, and chants in English teaching and learning (Hu & Kai, 2000; Lo, 2001; Wu, 2001). Wu (2001) conducted a collaborative action research to investigate the effect of English songs and rhymes in primary English education. The results indicated that English songs and rhymes did motivate students to learn. Lo (2001) investigated the effects of primary English teachers' belief in the teaching of songs and rhymes and its relation to their own musical intelligence. Her study indicated that most teachers valued English songs and rhymes in English teaching. However, the teachers surveyed only used them to develop students' listening and speaking skills—not in the development of literacy. Lo thus suggested that teachers use songs and rhymes to develop students' reading and writing skills as well. Hu and Kai (2000) pointed out the same limited understanding of the use of songs and rhymes in current language classrooms. Teachers adopted activities like reading stories with examples of alliteration and reciting nursery rhymes because they thought “children would enjoy a rhyme with its cadence and rhyming repetitive phrases. Not many teachers recognize the role of these activities in triggering the development of phonemic awareness” (Hu & Kai, 2000, p. 507).

Actually, in English speaking countries, English nursery rhymes have been empirically proven to be related to children's reading success. For example, Bryant, Bradley, MacLean, and Crossland's (1989) 3-year longitudinal study indicated that 3-year-old native English speakers' knowledge of nursery rhymes was strongly related to their success in reading and spelling while variables such as social background, I. Q. and subjects' phonological skills at the onset of the study were

controlled. According to their findings, rhyme, as one of the prominent features in nursery rhymes, was related to emergent phonological awareness and even word recognition. This point was supported by other studies as well (Bradley & Bryant, 1978, 1983; Bryant et al., 1990a, 1990b; Goswami, 1986, 1990, 1991; Goswami & Mead, 1992; Maclean et al., 1987; Peterson & Haines, 1992).

The impetus for these studies lies in the importance of phonological awareness on the literacy development of an alphabetic language system-- English, for example. Many studies have demonstrated that children's phonological awareness—the ability to detect sound structure of spoken language—is related to their literacy development (Bradley & Bryant, 1983, 1985; Bradley, MacLean, & Bryant, 1990; Chaney, 1998; Muter, Hulme, & Tylar, 1998). However, this ability is not always spontaneously acquired. Lyon (1995) indicated that around 20% of children have difficulty developing phonological awareness (as cited in Goldsworthy, 1998). Being aware of this problem, many researchers have advocated explicit instruction of phonological awareness, either given as a training program or as activities implemented in the classroom (Ball, 1997; Blachman, 1991; Hatcher et al., 1994; Lundberg et al., 1988). The findings of many training studies have indicated that phonological awareness can be trained (Bradley & Bryant, 1983; Bryant & Goswami, 1987; Hatcher, Hulme, & Ellis, 1994; Lundberg, Frost, & Peterson, 1988; Majsterek, Shorr, & Erion, 2000; Peterson & Haines, 1992; Robert & Corbett, 1997). Lundberg et al. (1988) investigated the effects of training on phonological awareness. They found that children trained in phonological awareness performed better in reading than those in the control group. Hatcher, Hulme, and Ellis' (1994) longitudinal study on 7-year-old low-level readers revealed that instruction in phonological awareness did help their literacy development, especially when the teaching of reading was incorporated into the instruction.

Although training in phonological awareness showed positive results, it had at least two limitations—the small number of students and the lack of meaningful context. Studies that showed positive results of training, such as Bradley and Bryant

(1983) and Bryant and Goswami (1987), often involved small numbers of students. Can phonological awareness training have the same positive effect in a larger class of students? In order to answer this question, some researchers have conducted classroom instruction in phonological awareness, and the findings of their studies confirmed the effect of classroom instruction on students' phonological awareness (Lundberg, Frost, & Peterson, 1988; Roberts & Corbett, 1997; Majsterek, Shorr, & Erion, 2000).

However, Majsterek, Shorr, & Erion's (2000) study showed that instructional methods influenced the effect of training on learners' phonological awareness. Their study on 4- to 5-year-old native English speakers' auditory discrimination of rhyming words showed that explicit instruction in rime awareness was necessary to foster learners' acquisition of rime awareness even though both the experimental and the control groups were implicitly introduced to rhymes by singing songs that contained rhyming words.

Some researchers pointed out that instruction in phonological awareness should also be considered with ESL or EFL learners because they are learning a new language system which might be quite unlike their L1 (Holm & Dodd, 1996; Hu & Kai, 2000; Read, Zhang, Nie, & Ding, 1986). Read, Zhang, Nie, and Ding's (1986) study compared the performance of Chinese adults who had never learned alphabetic symbols with those who had on one subcategory of phonological awareness tasks—phoneme segmentation tasks. Their findings showed that the ability to segment words into phonemes required some alphabetic literacy training.

In Taiwan, however, there have been few studies on the effect of classroom instruction on learners' English phonological awareness. Chien (2002) investigated the relationship between young Taiwanese EFL learners' English phonological awareness and English literacy development. Her study showed that their English phonological awareness was strongly related to early literacy development. However, Chien's study focused on the correlation between pupils' performance on several phonological awareness tasks and reading and spelling tasks. Therefore, the effect of

classroom instruction in phonological awareness on Taiwanese EFL pupils was not explored.

Information on effective classroom instruction in phonological awareness is vital because the classroom setting is quite different from laboratory training. Classroom instruction introduces knowledge through relating it to students' lives and using activities to reinforce the target concept for students to digest and internalize. In this sense, it is more meaningful than laboratory training.

However, as the classroom is part of the authentic environment, the effects of instruction are determined by some uncontrollable factors—participants' intelligence profiles and attitudes toward the instructional materials, for example.

Purpose of the Study

In light of the interrelationship among nursery rhymes, rhymes, phonological awareness and literacy, the need for instruction on phonological awareness, the value of classroom instruction over training and the effect of instructional methods, the purpose of this study was to investigate the effects of instructional methods of English nursery rhymes and chants on young Taiwanese EFL beginners' emergent phonological awareness—rime awareness. Because rhyming is a prominent linguistic feature of English nursery rhymes and chants, this study used them as teaching materials and focused on participants' rime awareness. In addition, participants' musical and linguistic intelligences were examined because nursery rhymes and chants are rhythmic and often rhymed. Furthermore, participants' attitudes toward the English nursery rhymes and chants were investigated to see if their attitudes toward the instructional materials affected the relationship between instructional methods of rimes and participants' rime awareness.

Research Questions

1. Does explicit instruction on English nursery rhymes and chants have a significant effect on young Taiwanese EFL beginners' rime awareness?

2. Does young Taiwanese EFL beginners' musical intelligence have a significant effect on the relationship between instruction on English nursery rhymes and chants and their rime awareness?
3. Does young Taiwanese EFL beginners' linguistic intelligence have a significant effect on the relationship between instruction on English nursery rhymes and chants and their rime awareness?
4. Do young Taiwanese EFL beginners' attitudes toward English nursery rhymes and chants have a significant effect on the relationship between instruction on English nursery rhymes and chants and their rime awareness?

Research Hypotheses

H0 (1): There is no significant group mean difference in rime awareness between the young Taiwanese EFL beginners who receive explicit instruction on English nursery rhymes and chants and those who do not.

H0 (2): There is no significant effect of musical intelligence on the relationship between instruction on English nursery rhymes and chants and young Taiwanese EFL beginners' rime awareness.

H0 (3): There is no significant effect of linguistic intelligence on the relationship between instruction on English nursery rhymes and chants and young Taiwanese EFL beginners' rime awareness.

H0 (4): There is no significant effect of young Taiwanese EFL beginners' attitudes toward the English nursery rhymes and chants on the relationship between instruction on English nursery rhymes and chants and their rime awareness.

Operational Definition of Terms in This Study

Nursery rhymes. Nursery rhymes are short and simple verses customarily told

or sung to small children (Danielson, 1990). In this study, nursery rhymes were selected from *Mother Goose Jazz Chants* (Graham, 1994).

Chants. “A chant is any group of words that is recited with a lively beat” (Buchoff, R., 1994, p. 26). In this study, the selected rhymes were deemed as chants as well due to their rhythm and stress.

Phonological awareness. Phonological awareness is “the ability to reflect on and manipulate the structure of an utterance (e.g., into words, syllables, or sounds) as distinct from its meaning” (Stackhouse, 1997, p. 157).

Rimes. Within a monosyllabic word, the vowel and any following consonant(s) are called the rime of the word. For example, in the word ‘cat’, the rime is ‘at’.

Rime awareness. Rime awareness is the detection, among a group of words, of those sharing the same rime. It is one subtype of emergent phonological awareness. In this study, it was measured by two rime awareness tests: a pretest and a posttest. For each test item, participants heard four words— three of them sharing the same rime. They were asked to identify the odd one among the four words. For example, the researcher read: *sad, Dad, mad, pen*. Participants were to identify the word ‘pen’ as the odd one.

Entry level of rime awareness. In this study, participants’ entry level of rime awareness refers to their rime awareness ability prior to instruction.

Musical intelligence. Musical intelligence, one dimension within Gardner’s (1983) theory of *multiple intelligences*, refers to the sensitivity to rhythm, pitch, and timbre, and the liking of musical patterns. In this study, participants’ musical intelligence was measured by a modified version of Yeh and Hsieh’s (2000) ‘Multiple intelligences inventory’ (cited in Jiang, 2001). For example, one statement was ‘I can learn a new song at ease’. Participants were given four options to choose from and the four options reflected the degree of musical intelligence they possessed.

Linguistic intelligence. Linguistic intelligence, another dimension within Gardner’s (1983) theory of *multiple intelligences*, refers to the sensitivity to speaking and writing, the ability to master several languages, and the ability to use a language

for specific purposes. In this study, participants' linguistic intelligence was measured by a modified version of Yeh and Hsieh's (2000) 'Multiple intelligences inventory' (cited in Jiang, 2001). For example, one statement was 'I am good at storytelling'. Participants were given four options to choose from and the four options reflected the degree of linguistic intelligence they possessed.

Attitudes. "Attitude is a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993, p.1). In this study, participants' attitudes toward English nursery rhymes and chants were evaluated through their responses to an attitude survey created by the researcher. For example, one statement was 'I like the rhymes and chants learned in class'. Participants were given four options to choose from. The four options reflected degrees of positive or negative attitudes they possessed.

Instructional methods. In this study, two kinds of instructional methods were used. In the first method, explicit instruction, the concept of rimes was explicitly introduced by having participants tune in to the ending sounds of words in nursery rhymes and chants. There were follow-up activities to reinforce the learning of the concept. In the second method, implicit instruction, the concept of rimes was not explicitly pointed out. Follow-up activities did not involve the learning of the concept. The only clue was that the rhyming words at the end of each line were replaced by flashcards. For example, the word 'tea' was replaced by a picture of tea. If the meaning of the rhyming word was abstract, it was replaced by a flashcard with the word written on it. For example, the word 'again' was replaced by a flashcard with the word 'again' on it.

Significance of the Study

By investigating the effects of different instructional methods (of English nursery rhymes and chants) on young Taiwanese EFL beginners' rime awareness, this study may help teachers to know what to use and what to avoid when using English nursery rhymes and chants to develop students' emergent phonological

awareness. If students' phonological awareness is established, the awareness will aid in their word decoding. Also, the investigation of the effect of learners' intelligence profiles and attitudes toward the teaching materials on the relationship between instructional methods of rimes and learners' rime awareness may help us to see whether internal factors play significant roles in learning.

CHAPTER 2

LITERATURE REVIEW

The following sections detail four vital concepts in this study—phonological awareness, rhyme, multiple intelligences, and attitudes. In the section on phonological awareness, topics cover how it differs from phonemic awareness, its importance, its relation to literacy, the need of training, its incorporation into classroom instruction, its importance for English learners, and tasks of different levels. In the section on rhyme, the concept and related studies of onsets and rimes, the effect of rhyming materials on learning, and measurements of rhyme awareness are elaborated. In the section on multiple intelligences, an overview of the theory, relevant studies on classroom instruction and English teaching, and the influence of musical and linguistic intelligences in this study are elaborated. In the section on attitudes, an overview of the concept, their importance in learning, and studies on attitudes and language learning are presented. The last section is a recapitulation of the above four concepts and their relation to this study.

Phonological Awareness

The Difference between Phonological Awareness and Phonemic Awareness

Phonological awareness is a term that refers to the awareness of sound features in spoken language. According to Eldredge (1995), it includes awareness of the following units:

1. words within sentences
2. rhyming units within words
3. beginning and ending sounds within words

4. syllables within words
5. phonemes, or sounds, within words (phonemic awareness)
6. features of individual phonemes such as how the mouth, vocal cords, and teeth are used to produce the sound

As the above list indicates, phonemic awareness, a term often confused with phonological awareness, is just a subcategory under phonological awareness. According to Ericson and Juliebo (1998), children who possess phonological awareness can identify words of the same initial or ending sounds, individual phonemes in words and make use of them in language play.

The Importance of Phonological Awareness

Phonological awareness is crucial in the learning of an alphabetic language system, such as English. Many studies have indicated that phonological awareness is strongly related to early reading acquisition in English (e.g., Adams, 1990; Bradley & Bryant, 1983, 1985; Bradley, MacLean, & Bryant, 1990; Chaney, 1998; Muter, Hulme, Snowling, & Taylor, 1998; Wagner & Torgesen, 1987). These studies indicated that children who possess phonological awareness could make a better connection between sounds and print than those without such awareness. Bradley and Bryant's (1983) study investigated 403 four- and five-year-old children's sound categorization ability in relation to their reading and spelling ability 3 years later. The results showed a strong correlation between their sound categorization scores and their reading and spelling success, even when variables such as I.Q. and verbal intelligence were controlled. Chaney (1998) conducted a longitudinal study on 41 monolingual 3-year-old English children's linguistic skills, metalinguistic skills, and family background as factors in the prediction of reading success after the first grade. The results showed that specific metalinguistic domains, such as phonological and structural awareness, were better predictors of reading success than word awareness.

Relationship between Phonological Awareness and Literacy

Although earlier studies have confirmed that phonological awareness is related to early literacy development, in terms of the relationship between phonological awareness and literacy development, statistical evidence has indicated three different interpretations. According to Bryant, MacLean, Bradley, and Crossland (1990), the first model, proposed by Morais, Bertelson, Cary, and Alegria (1986), held that instruction on reading and spelling resulted in awareness of phonemes, which was more strongly related to later reading and spelling success than rhyme awareness was. Morais, Bertelson, Cary, and Alegria's (1986) study supported this model. In their study, the performances of illiterate and literate Portuguese adults on phoneme deletion and addition tasks were investigated. The finding showed that illiterate Portuguese adults performed poorly on those tasks whereas literate adults had no difficulty. It suggested that awareness of phonemes resulted from literacy instruction. The second model, proposed by Bryant and Bradley (1985), predicted that sensitivity to rhyme stimulated phonemic awareness, which, in turn, led to reading and spelling success. Bryant and Bradley's (1985) longitudinal training study on sixty-five 4- and 5-year-old children's sound categorization ability supported this model. Participants in their study were divided into 2 experimental groups and 2 control groups. One experimental group was trained on sound categorization only; the other was trained on sound categorization and was taught with the help of plastic letters. One control group was trained on conceptual categorization; the other received no training. The findings indicated that experimental groups performed better than control groups on reading and spelling 2 years later. The third model, proposed by Goswami (1986, 1988), postulated that sensitivity to both rhyme and phonemes contributed to reading and spelling success though the two (rhyming awareness and phoneme awareness) followed independent paths. Goswami's (1986) study supported this model and compared the competence of 5- to 7-year-old children at three different reading levels by using analogy as a strategy for reading new words. Participants were divided into three groups. Group 1 included 5-year-old prereaders, Group 2 included

6-year-old early readers, and Group 3 included 7-year-old early readers. The results indicated that, given the presence of clue words, children at all levels could successfully make use of analogies in reading words. The prereaders of Group 1 were able to use analogies in reading words with the same rimes.

In order to find out which of the above models was valid, Bryant, MacLean, Bradley and Crossland (1990) conducted a longitudinal study on sixty-five 4-year-old children. The findings suggested a combination of the second and third models. On the one hand, sensitivity to rhyme preceded the awareness of phonemes, which, in turn, contributed to reading progress. On the other hand, sensitivity to rhyme directly contributed to reading words of the same word families.

The Need for Phonological Awareness Training

However, phonological awareness is not always spontaneously acquired. Lyon (1995) indicated that around 20% of children have difficulty developing phonological awareness (as cited in Goldsworthy, 1998). Studies have shown that problems of poor readers include the lack of phonological awareness and failure to link phonological awareness and print (Bradley & Bryant, 1979; Olson & Griffith, 1993). Bradley and Bryant (1979) compared the performance of sixty 10-year-old backward (slow) readers and the performance of thirty 6-year-old normal readers on auditory discrimination. The tests included consonant-vowel-consonant (CVC) words that differed in first, middle, or final letter. Results showed that backward (slow) readers performed significantly worse than normal readers on the tests. The researchers thus inferred that lack of phonological awareness would cause reading difficulty. Greaney and Tunmer (1996) investigated children's use of onset-rime sensitivity when reading words. In their reading age match design, the experimental group involved 9- to 12-year-old low-level readers whereas the control group included 7- to 10-year-old normal readers. The finding demonstrated that though poor readers performed as well as normal readers on orally presented onset and rime tasks, they could not make use of the onset-rime division in reading new words.

Their results corresponded to those of Olson and Griffith (1993).

Recognizing the possible impact of phonological awareness on reading, researchers have conducted training studies on phonological awareness (Ball & Blachman, 1991; Bradley & Bryant, 1983, 1985; Cunningham, 1990; Fox & Routh, 1975; Goswami, 1986, 1990, 1991; Goswami & Mead, 1992; Gross & Garnett, 1994; Hatcher, Hulme, & Ellis, 1994; Lundberg, Frost, & Peterson, 1988; MacLean et al., 1987). Despite the same positive training effect, these training studies differed in two main areas: the participants and the training instruction. In terms of the participants, some studies involved early readers (Ball & Blachman, 1991; Cunningham, 1990; Goswami & Mead, 1992; Hatcher, Hulme, & Ellis, 1994) while some focused on preschoolers (Fox & Routh, 1975; Lundberg, Frost, & Peterson, 1988; Gross & Garnett, 1994). Although both types of studies indicated affirmative results, Lundberg, Frost, and Peterson (1988) pointed out that studies on early readers could not justify the pure relationship between training on phonological awareness and later literacy success. For this reason, Lundberg, Frost, and Peterson (1988) conducted an 8-month longitudinal training program of metalinguistic games and exercises with 235 Danish preschool children who had no reading experiences at home or school. In the program, the experimental group received 15-20 minute daily training by engaging in metalinguistic exercises and games. The control group followed the regular preschool program that did not include reading. The results indicated that training fostered their reading and spelling acquisition in first and second grades. Hence, the predictive effect of phonological awareness training on literacy was established.

In terms of the training instruction, some studies targeted auditory training only (Bradley & Bryant, 1983; Gross & Garnett, 1994; Lundberg, Frost, & Peterson, 1988) while some involved reading as well as auditory training (Ball & Blachman, 1991; Bradley & Bryant, 1985; Goswami & Mead, 1992; Hatch, Hulme, & Ellis, 1994; Hohn & Ehrh, 1983). Although both types of training affirmed positive effects, the latter type showed that the introduction of letter names and sounds accelerated the

acquisition of phonological awareness (Ball & Blachman, 1991; Bradley & Bryant, 1985; Greaney & Tunmer, 1996). Ball and Blachman (1991) investigated the effects of training in phoneme segmentation and of instruction on letter names and sounds on kindergarteners' reading and spelling proficiency. The participants were divided into three groups. The first group received instruction on phonemes, letter names, and sounds. The second group received instruction on letter names and sounds. The third group received no training. The results showed that the first group performed significantly better than the other two groups in reading and spelling. The other two groups did not improve in either phoneme segmentation or reading and spelling skills. Hatcher, Hulme, and Ellis (1994) conducted a 20-week longitudinal training study on one hundred and twenty-eight 7-year-old low-level readers. The participants were divided into 3 experimental groups and 1 control group. The first experimental group received instruction on phonological awareness and reading. The second experimental group only received reading instruction. The third experimental group was only instructed on phonological awareness. The control group received regular school instruction without any modification in materials or instruction related to this study. Findings showed that the third experimental group performed better than the other groups on phonological awareness tasks. However, the first experimental group performed better than the other groups on reading tests. Bradley and Bryant's (1985) longitudinal training study of sound categorization on sixty 4- and 5-year-old children indicated the same results. Participants in the study were divided into 2 experimental groups and 2 control groups. One experimental group was trained on sound categorization only; the other was trained on sound categorization and was taught with the help of plastic letters. One control group was trained on conceptual categorization; the other received no training. The finding indicated that the two experimental groups performed better than the two control groups on reading and spelling 2 years later. However, the experimental group taught with plastic letters performed better than the experimental group receiving instruction on sound categorization only. The researchers inferred that training combined with letters

amplifies the effect on later reading and spelling because the use of plastic letters made sounds concrete and tangible.

Although training involving letter names and sounds proved to be effective, empirical evidence has shown that training on pure auditory discrimination can still benefit later literacy development. Bradley and Bryant's (1983) study investigated four hundred and three 4- and 5-year-old children's sound categorization ability in relation to their reading and spelling ability 3 years later. The results demonstrated a strong correlation between their sound categorization scores and their reading and spelling success, even when variables such as I.Q. and verbal intelligence were controlled. Bryant, MacLean, and Bradley (1990) conducted a longitudinal study on the relationship between 3- and 4-year-olds' general language abilities and metalinguistic abilities and their reading and spelling ability 2 years later. The finding indicated that children's phonological skills were related to their reading performance 2 years later, even when variables such as linguistic skills, I.Q., and social background were controlled. Gross and Garnett (1994) conducted a study on 5-year-old prereaders who had no awareness of rhyme and alliteration. All the participants came from the same class. In the study, they were randomly assigned to either the experimental or the control group. Both groups were instructed together on rhymes and word plays in the same class. However, the experimental group was recruited 3 to 5 times a week for a short period of explicit instruction on auditory identification of alliteration by engaging in picture sorting games. The training lasted for half a semester. Fifteen months after the training, all participants took a spelling test and a word recognition test. The finding showed that the experimental group scored higher than the control group on all the tests. Hence, it suggested that explicit instruction on phonological awareness was necessary even though rhymes and word plays were used as the teaching materials.

Phonological Awareness Training in the Classroom

Despite ample evidence of the affirmative effect of training, one pitfall of

training, as Bradley and Bryant (1985) mentioned, was its artificiality. Most training studies were done on individual or small groups of participants. However, the positive effect can not easily be maintained in classroom settings, which include larger numbers of students. In order to investigate the effects of explicit classroom instruction in phonemic awareness and phoneme-grapheme correspondence on students' phonological awareness skills, Lundberg, Frost, and Peterson (1988) conducted an 8-month longitudinal classroom training study of metalinguistic games and exercises on 235 Danish preschool children who had had no prior reading experience. In the program, the experimental group received 15-20 minute daily training by engaging in metalinguistic exercises and games. The control group followed the regular non-reading preschool program. The results indicated that the training fostered their reading and spelling acquisition in first and second grades. Other classroom training studies also indicated affirmative results (Roberts & Corbett, 1997; Majsterek, Shorr, & Erion, 2000). Roberts and Corbett (1997) conducted an 8-week classroom study on 2 classes of kindergarteners. One class (the experimental group) received instruction on phoneme awareness and the alphabetic principle 4 to 5 times a week, 20 minutes per session. The other class (the control group) received daily introductions to alphabet songs and chants. One important feature in the two classes was the language background of the participants. Both groups included non-native English speakers. In the experimental group, 16 out of the 27 children spoke Hmong as their L1. In the control group, 17 out of the 29 children spoke Hmong as their L1. The findings showed that the experimental group's phonological awareness was significantly enhanced, and they showed greater improvement on phonological awareness than the control group did. Besides, the explicit phonological instruction also benefited English learners. Majsterek, Shorr, and Erion (2000) conducted a classroom intervention study on forty 4- to 5-year-old children who were native speakers of English. They were randomly assigned to either one of 2 experimental groups or one of 2 control groups. The experimental groups received nine 10-minute sessions of instruction, which involved singing

activities and rhyme detection activities. The length of instruction sessions for the control groups was the same as for the experimental groups. However, besides singing, the intervention focused on synonyms, comparative-superlative, position in space and reasoning activities. Before and after the instruction, all participants took a rhyme detection test. The findings showed that posttest performance of the experimental groups was better than that of the control groups. It was suggested that, though both groups were implicitly exposed to rhymes, explicit instruction was necessary to foster children's phonological awareness.

The Importance of Phonological Awareness to English Learners

Although most studies on phonological awareness were done with native speakers of English, some statistical evidence has indicated that phonological awareness is vital to non-native English learners as well (Holm & Dodd, 1996). Holm and Dodd (1996) pointed out that phonological awareness training is vital to ESL or EFL learners because they are learning a new language system, which might be quite unlike their L1. Chiang (2002) used a training approach to investigate the effects of articulation training on Chinese children's phonological awareness in both Chinese and English. The results indicated that even though subjects' English proficiency was weaker than their Chinese, their Chinese phonological awareness still transferred to their English phonological awareness. Because interlanguage transfer also occurs with phonological awareness, when learners' L1 writing system is quite different from their L2, the transfer becomes a hindrance. They found that EFL learners transferred their literacy processing skills from their first language into English and that those with a non-alphabetic written language background faced difficulties due to the incorrect transfer.

Hu and Kai (2000) pointed out the importance of training for Taiwanese EFL children because of the morpho-syllabic nature of Chinese orthography, which is quite different from English orthography. Some research evidence has supported this concern (Huang & Hanley, 1994; Huang, 1997). Huang and Hanley (1994) examined

the relationship between one hundred thirty-eight 8-year-old children's phonological awareness, visual skills, and reading ability. Participants included children from Britain, Hong Kong, and Taiwan. Hong Kong and Taiwanese children were included because they were learning Chinese, a logographic writing system, not an alphabetic writing system. However, the Chinese instruction for Hong Kong children and Taiwanese children was different. Taiwanese children received ten weeks' instruction on Chinese phonetic symbols before learning Chinese characters whereas Hong Kong children did not receive such instruction. The findings indicated that, despite the slight difference in Chinese instruction between Hong Kong and Taiwanese children, their Chinese reading ability was significantly related to their visual skills, but not their phonological awareness. Huang (1997) conducted a 3-year longitudinal study to examine the relationship between 44 Taiwanese first graders' phonological awareness and their later Chinese character recognition ability. Although their early phonological awareness was strongly related to their ability in Chinese character recognition one year later (during that year they received instruction on Chinese phonetic symbols), the findings revealed that children's early phonological awareness did not predict their ability in Chinese character recognition three years later.

Taiwanese EFL learners' phonological awareness has been proved to be related to literacy development. Chien (2002) investigated the relationship between 34 Taiwanese EFL children's English phonological awareness and their English reading and spelling proficiency. The findings indicated that participants' phonological awareness was strongly related to later literacy development and showed that phonological awareness is vital to young Taiwanese EFL learners.

Tasks of Phonological Awareness and Their Relative Difficulty Levels

Being aware of this need, the first question that researchers and teachers face is: With which subtype(s) of phonological awareness should they begin? In fact, research findings have shown that subcategories of phonological awareness differ in

terms of difficulty levels (Stanovich, Cunningham, & Cramer, 1984; Yopp, 1988). Yopp (1988) compared 96 kindergarteners' performances on 10 commonly used phonological tasks and found that, in terms of the cognition process required for successful performance, phonological awareness tasks were of different difficulty levels. Their relative difficulty is shown in Table 1.

Table 1

Relative Difficulty of Tests of Phonemic Awareness from Least to Most Difficult

Test	Converted M
Rhyme (Yopp)	.714
Auditory discrimination (Wepman, 1973)	.699
Phoneme blending (Roswell-Chall, 1959)	.652
Word-to-word matching (Yopp modification)	.631
Sound isolation (Yopp modification)	.589
Phoneme counting (Liberman et al., 1974)	.584
Phoneme segmentation (Yopp-Singer)	.535
Phoneme segmentation (Goldstein, 1974)	.530
Phoneme deletion (Rosner, 1975)	.463
Phoneme deletion (Bruce, 1964)	.265

(Yopp, 1988, p. 169, Table 3)

As Table 1 shows, rhyme is the easiest task, followed by auditory discrimination, phoneme blending, and word-to-word matching. Phoneme deletion is the most difficult one. Tasks in the midrange are: sound isolation, phoneme counting and phoneme segmentation.

Many studies done on young native speakers of English paralleled the difficulty level of different tasks in Yopp's (1988) study. MacLean, Bryant, and Bradley's

(1987) study showed that children, by the age of five, could successfully complete rhyming and alliteration tasks. Treiman (1992) demonstrated that many of the phonemic manipulation tasks were difficult for second graders. Morais, Cary, Alegria, and Bertelson's (1986) study on both illiterate and literate Portuguese adults' performances on phone deletion and addition tasks indicated that awareness of phones resulted from literacy instruction. Read, Zhang, Nie, and Ding's (1986) comparison between the performance of Chinese adults who never learned alphabetic symbols and those who had on segmentation tasks reached the same conclusion. They pointed out that "segmentation is inherently difficult because speech is more like a stream than like a row of buckets: what we think of as discrete phones actually overlap and influence each other" (p. 32). Muter, Hulme, and Snowling's (1998) longitudinal study examined 38 children's performances on rhyming tasks, segmentation tasks and letter-sound knowledge in relation to their later reading and spelling proficiency. They found that segmentation, not rhyming, was a better predictor of students' reading success. In addition, students' rhyming skills, though not predictive of early reading, indicated predictive effect on their spelling at the end of the second school year.

Rhymes

Onsets and Rimes

One of the features of phonological awareness is the awareness of onset and rime—the components of spoken syllables. This onset-rime division of words was empirically proved to be the division subconsciously applied by adults and children (Goswami, 1986; Treiman, 1983, 1985, 1986; Wise, Olson and Treiman, 1990). To investigate the internal structure of spoken syllables, Treiman (1983) conducted seven experiments on native English speaking university students' performance on novel word games. The results indicated that adults followed the onset/rime division.

In order to find out whether the onset-rime division applies to children as well, Treiman (1985) conducted four experiments on children. One experiment indicated that 8-year-olds learned word games that followed the onset-rime division more easily than other types of word games. Besides, for first graders, consonant-consonant-vowel-consonant (CCVC) words were more difficult to decode than CVC words. Treiman's (1986) study showed that adults' and children's tendency to read words by onset-rime division also applied to the reading of real words and three-consonant onsets. Corresponding with these empirical findings, other studies showed that reading by analogies of onsets and rimes was natural and easy for children as well as adults (Goswami, 1986, 1991, 1993; Goswami & Mead, 1992).

The Importance of Onsets and Rimes

The onset-rime division in monosyllabic words has also been shown in children's reading development. Goswami (1986, 1991) found that, in the initial stage, children read words by analogy instead of by sequential decoding. In other words, children started to read by decoding words that share the same onset or rime. As mentioned on page 17, Goswami's (1986) study on 5- to 7-year-old children at three different reading levels indicated that, given the presence of clue words, children at all levels could successfully make use of analogies in reading words.

Studies on Rhymes

Studies on the relationship between rhymes and learning have demonstrated different results. Higbee (1976) pointed out that rhyming mnemonics enhance children's memory. However, others indicated that rhyming stimuli had little impact on preschool children's memory (Brown, 1977; Conrad, 1971; Hayes & Schulze, 1977; Locke & Locke, 1971). They found that children could not recall much of the story plot when the story contained many rhymed lines. Hayes, Chemelski, and Palmer's (1982) findings pointed out that the reason rhyming stimuli impede

children's content memory was their tendency to draw children's attention toward the phonological aspects of words. Indeed, rhymes have been empirically proven to be related to emergent phonological awareness and even word recognition (MacLean, Bryant, & Bradley, 1987; Bryant, Bradley, MacLean, & Crossland, 1989).

In an attempt to determine the beginning of phonological awareness, MacLean, Bryant, and Bradley (1987) conducted a 15-month longitudinal study to investigate the relationship between 3-year-old children's knowledge of nursery rhymes and later phonological awareness. The finding indicated a significant correlation between early knowledge of nursery rhymes and later performance on phonological awareness tasks, even when variables such as I.Q. and mothers' education level were controlled. However, since a longitudinal study cannot in itself establish a causal connection, researchers conducted a study on teaching children about nursery rhymes to determine their effects on phonological awareness. Bryant, Bradley, Maclean, and Crossland (1989) conducted a 3-year longitudinal study on the relationship between 3-year-old children's early knowledge of nursery rhymes and later phonological awareness as well as reading and spelling success. The results showed that children's early knowledge of nursery rhymes enhanced their performance on rhyme and phoneme tasks. In addition, their knowledge of nursery rhymes was strongly related to reading and spelling success even when variables such as social background, I.Q., and children's initial phonological skills were controlled. Based on these findings, the researchers suggested that children's early knowledge of nursery rhymes enhanced their phonological awareness, which, in turn, contributed to their reading and spelling success.

Instruments of Rhyme Awareness

In English speaking countries, studies on the awareness of onsets and rimes often used the following instruments:

1. Rhyme oddity tasks (Bradley & Bryant, 1978, 1983)
2. Rhyme detection tasks (Lenel & Cantor, 1981)

3. Rhyme production tasks (Calfee, Chapman, & Venezky, 1972; MacLean, Bryant, & Bradley, 1987)
4. Forced-choice rhyme task (Knaflle, 1973,1974; Read, 1978)
5. Analogy clue word tasks (Goswami, 1986, 1988)

Among the above types of tasks, the first four types focus on auditory discrimination, while the last type focuses on word recognition. For tasks that focus on auditory discrimination, Bradley and Bryant's (1978, 1983) sound categorization is the one most often adopted in later studies. In that task, the researcher would say four (or three for very young subjects) monosyllabic words. Three of them share a common sound that the other one lacks. The participant has to choose the odd one. For example, after hearing *weed*, *peel*, *need*, *deed*, the participant is to identify the odd one 'peel'. Two or three practice trials are given before the experimental trials to ensure the participants understand how to perform the task. In Bradley and Bryant's (1978, 1983) studies, the task was conducted without the aid of pictures. However, in one of their later studies (Bryant, Bradley, MacLean, & Crossland, 1989), pictures were added in order to decrease the very young participants' memory load. In that design, each participant was shown pictures of the three words (e.g., fish, dish, book) while hearing the three words. The participant was asked to tell the researcher which word was the odd one.

In Read's (1978) forced-choice rhyme task, a hand puppet, named *Joe*, was used in the process. In the task, participants were told that Joe liked words that sounded like his name, such as *bow* and *slow*. Then, the task conductor would say some words and they had to tell the task conductor which one Joe would like. After these directions, the participants were given other examples of words that rhymed with *Joe*. Before the experimental trials, there were two practice trials with corrective feedback. Feedback was not given in the experimental trials. This technique is especially suitable for younger participants. It makes the invisible and abstract concept visible and fun.

Goswami (1986, 1993) extended the above auditory rhyme tasks into a clue

word analogy task to make a connection between rhyme and word recognition.

In the clue word analogy test, participants were first presented with a written clue word and were told, “We are going to learn a word that might help you read some of those words that we just tried” (Goswami, 1993). Then, the researcher read the clue word to the participants. The clue word remained visible when other words were presented to the participant to read. No feedback was given on how to use the clue word in reading other words. The words presented for reading included words that shared the same onsets, rimes, or some letters with the clue words (Goswami, 1986, 1993).

Multiple Intelligences

Overview

Multiple intelligences (MI) is a theory proposed by Howard Gardner (1983) that defines human potential as multidimensional, and thus not fully measurable by the traditional intelligence measurement—the I.Q. test. According to Gardner (1983, 1997), the term *intelligence* represents a biopsychological potential that deals with information. This potential can be triggered to solve problems in, or to create works that are valued by, certain cultural environments. According to the theory, everyone possesses all of the eight intelligences, only the distribution of them differs. In addition, the distribution of these intelligences is not fixed; it varies as one interacts with one’s surroundings (Gardner, 2000).

The Eight Intelligences

The multiple intelligences theory contains eight subtypes. The definitions and examples of the eight types are detailed below. Linguistic intelligence refers to the sensitivity to speaking and writing, the ability to master several languages and to use languages for specific purposes. Poets, journalists, and lawyers usually have a high

degree of this type of intelligence. Logical-mathematical intelligence refers to the ability to analyze questions and to discern patterns. Scientists and mathematicians have a high degree of this type of intelligence. Musical intelligence refers to the enjoyment of musical patterns and the sensitivity to rhythm, pitch, and timbre. Composers and violinists are endowed with this aspect. Visual-spatial intelligence refers to the ability to discern distances and directions, and the sensitivity to colors, lines, shapes and spaces. Sculptors and navigators are people gifted in this regard. Bodily-kinesthetic intelligence refers to the ability to solve problems or create works through the manipulation of body movements. Dancers, athletes, and craftspeople have a high degree of this type of intelligence. Interpersonal intelligence refers to the ability to discern others' intentions, motivations, and feelings and thereupon to interact appropriately with others. Therapists and salespersons have a high degree of this type of intelligence. Intrapersonal intelligence refers to the ability to discern and deal appropriately with one's own desires, fears, and abilities. Those who understand themselves well are endowed with this aspect. Naturalist intelligence refers to the ability to distinguish the patterns and differences among members of the same species and among different species. Biologists possess a high degree of this type of intelligence.

Multiple Intelligences and Teaching

Based upon this MI theory, Gardner argued that classroom instruction should attempt to involve as many dimensions of human potential as possible. Researchers such as Campbell (1996) and Armstrong (1994) also suggested incorporating MI into the classroom.

Multiple Intelligences and English Teaching

In Taiwan, studies on the effects of MI on English teaching have shown positive results (Chao, 1999; Chio, 2000; Ko, 2002; Lo, 2001). Chao's (1999) study found that MI-based whole language instruction improved Taiwanese EFL university

students' grammatical competence and also motivated them. Ko's (2002) study investigated the application of MI to high school English instruction. The study indicated that students were motivated and started to apply themselves to learning. Chio's (2000) study examined one English teacher's distribution of MI and its relationship with the teacher's teaching. Her study indicated that the teacher's intelligence profile was not closely related to the kinds of classroom activities used by the teacher. The reasons for her not being able to make good use of her strong intelligences were limited professional skills and class time. However, in spite of the teacher's weakness in certain intelligences, the teacher still tried hard to implement those kinds of intelligences into class by finding help from resource books. Lo's (2001) study investigated English elementary school teachers' musical intelligence and beliefs about using English songs and rhymes in teaching. Her study found that most teachers surveyed possess salient musical intelligence. In addition, they valued the use of English songs and rhymes in teaching, though they only used songs and rhymes in the development of students' listening and speaking skills.

Attitudes

Overview

According to Eagly and Chaiken (1993), attitudes are people's "psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p. 1). Their components, as determined by social scientists, are *affect*, *cognition*, and *behavior* (Katz & Stotland, 1959; Rosenberg & Hovland, 1960). According to Eagly and Chaiken (1993), the definitions of the three components are as follows. *Affect* includes one's emotions or feelings toward the attitude object. *Cognition* refers to one's thoughts about the attitude object. *Behavior* refers to one's actions related to the attitude object. An attitude object refers to an entity, toward which people show their favor or disfavor to some degree.

The Importance of Attitudes in Learning

People differ in their feelings and thoughts toward the same person or matter. Thus, in learning situations, students' feelings, thoughts, and behavior connected to certain factors may affect their learning to a greater or lesser degree. In other words, their performance may be influenced by their attitudes toward the subject, the teaching method or materials, and even the teacher.

Studies on Attitudes and Language Learning

Many studies have investigated the relationship between attitudes and language learning (Chihara & Oller, 1978; Gardner, Lalonde, & Moorcroft, 1985; Lukmani, 1972; Pierson, Fu, & Lee, 1980; Ramage, 1990; Spolsky, 1969). In these studies, the construct 'attitudes' was more or less related to 'motivation' in that language learners' attitudes influenced their motivation in language learning. Gardner and Lambert (1972) indicated that the construct 'motivation' is based on certain attitudes. As Crookes and Schmidt (1991) noted, in second language acquisition research, the two constructs are considered quite similar and interrelated. Influenced by Gardner and Lambert's (1959) integrative/instructional approach to motivation, several studies investigated learners' motivations to determine the influence of integrative and/or instrumental motivation on language learning. Hence, many studies on language learning and attitudes focused on learners' attitudes toward the target language, the speakers, and the cultures of the target language (Chihara & Oller, 1978; Gardner et al., 1985; Lukmani, 1972; Pierson, Fu, & Lee, 1980; Ramage, 1990; Spolsky, 1969). Some studies showed that attitudes relating to social factors were indicators of learners' language proficiency and persistence in language learning (Gardner, Lalonde, & Moorcroft, 1985; Spolsky, 1969). Thus, Spolsky (1969) investigated the influence of interpersonal attitudes on language learning. The result showed that foreign students newly arrived at American universities who had a high motivation to emulate native speakers of English had higher English proficiency than those who had a lower motivation. Gardner, Lalonde, and Moorcroft's (1985) study

of 170 university students' motivations indicated that students with high integrative motivation learned faster than those with low integrative motivation.

However, some research showed a different viewpoint (Lukmani, 1972; Pierson, Fu, & Lee, 1980; Ramage, 1990). Ramage (1990) mentioned the incomprehensibility of Gardner and Lambert's (1959) integrative-instrumental approach in attitudinal research. On the one hand, some studies showed that context-specific attitudinal factors were influential. On the other hand, integrative motivation and instrumental motivation were not independent of each other. Lukmani (1972) investigated Marathi-speaking high school students' motivation in learning English and their English proficiency. The finding indicated that learners' instrumental, instead of integrative, motivation significantly related to their English proficiency. This motivational orientation was related to the post-colonial society in which they lived. Chihara and Oller (1978) investigated the relationship between Japanese EFL students' English proficiency and their attitudes about themselves, other Japanese, English speakers, travel to an English speaking country, and English. The result indicated a weak correlation between those attitudinal factors and learners' English proficiency. No obvious pattern was found in the data to provide an explanation. The authors suggested that the results had to do with the indirect and illusive relationship between attitudes and English proficiency. In addition, the validity of attitude measures was questioned. Pierson, Fu, and Lee's (1980) study of Hong Kong secondary school students showed that direct measurements of attitudes about English were better predictors of English proficiency than indirect measurements. In other words, statements about language use and study better reflected learners' English proficiency than those about stereotypes of the target culture and speakers of the target language.

All the aforementioned studies shared two similarities. First, the integrative/instrumental approach proposed by Gardner and Lambert (1959) was the focus. Second, the subjects were young adults—teenagers or university students. Although these reflected the influential approach in this field and the idea that school

problems for subjects at this age are mainly motivation-oriented (Anderson & Maehr, 1994), they did not reflect a well-rounded picture of learners' attitudes and language learning. On the one hand, there was no further investigation of context factors such as attitudes toward the role of teachers, the presentation of messages, the materials, and the learning environment. On the other hand, the attitudes of younger subjects were not explored.

Shirley and Reynolds' (1988) study found that children's attitudes toward the teaching material had an influence on their learning of content subjects. Yet, as Crookes and Schmidt (1991) pointed out, in language learning, few studies focus on this attitudinal aspect. Moon (2000) mentioned that children focused on teaching methods, games, and communication in class. However, few studies attempted to find out whether teaching materials influenced children's attitudes toward language learning even though this concern was implied in the selection of textbooks (Richard-Amata, 1996).

The Significance of Learners' Attitudes toward English Nursery Rhymes and Chants

In addition to stories, nursery rhymes and chants have long been regarded as young children's favorites. This belief was the basis of a recommendation of this material as children's initiation to literacy (Cook, 2000). Research findings also indicated that children's early knowledge of nursery rhymes benefited their later literacy development (MacLean, Bryant, & Bradley, 1987; Bryant, Bradley, MacLean, & Crossland, 1989). Based upon the above ideas, this study attempted to discover children's attitudes toward this type of teaching material and the relationship between their attitudes and their learning.

Summary

As indicated in the above sections, phonological awareness is related to early

reading development. Studies have shown that children with this awareness made better connections between English words and their sounds than those without this awareness. The training of this awareness is important to both native English speakers and EFL learners. On the one hand, the awareness is not always spontaneously acquired. On the other hand, EFL learners, whose L1 is of a quite different language system from English, may encounter difficulties in acquiring English phonological awareness due to inappropriate L1 transfer. Training of this awareness incorporated into the classroom has shown positive results. Among those tasks often used in studies on phonological awareness, rhyme tasks are the easiest.

Nursery rhymes have been shown to aid native English speakers' rhyme awareness and decoding. The reason is that rhyme, as a salient feature in nursery rhymes, can help people tune in to similar sounds and build rhyme awareness, which later aids their reading development. However, as nursery rhymes are full of rhythm and often rhymed, individuals' innate musical and linguistic intelligences and even their attitudes toward the materials may affect their learning.

Based on these concerns, the goal of this study was to find out the effects of instructional methods using English nursery rhymes and chants on young Taiwanese EFL learners' development of rhyme awareness. Learners' musical and linguistic intelligences and attitudes toward the materials were also considered. Therefore, the research questions in this study are as follows:

1. Does explicit instruction on English nursery rhymes and chants have a significant effect on young Taiwanese EFL beginners' rhyme awareness?
2. Does young Taiwanese EFL beginners' musical intelligence have a significant effect on the relationship between instruction of English nursery rhymes and chants and their rhyme awareness?
3. Does young Taiwanese EFL beginners' linguistic intelligence have a significant effect on the relationship between instruction on English nursery rhymes and chants and their rhyme awareness?
4. Do young Taiwanese EFL beginners' attitudes toward English nursery rhymes

and chants have a significant effect on the relationship between instruction on English nursery rhymes and chants and their rime awareness?

Research Hypotheses. The null hypothesis for each research question was as follows:

H0 (1): There is no significant group mean difference in rime awareness between the young Taiwanese EFL beginners who receive explicit instruction on English nursery rhymes and chants and those who do not.

H0 (2): There is no significant effect of musical intelligence on the relationship between instruction on English nursery rhymes and chants and young Taiwanese EFL beginners' rime awareness.

H0 (3): There is no significant effect of linguistic intelligence on the relationship between instruction on English nursery rhymes and chants and young Taiwanese EFL beginners' rime awareness.

H0 (4): There is no significant effect of young Taiwanese EFL beginners' attitudes toward the English nursery rhymes and chants on the relationship between instruction on English nursery rhymes and chants and their rime awareness.

CHAPTER 3

METHOD

This chapter presents the research method used in this study. Fifty-nine second graders from two classes participated in this study. One class served as the control group and the other as the experimental group. Both groups completed four instruments that were created by the researcher. These four instruments were: (a) Rime Awareness Pretest, (b) Rime Awareness Posttest, (c) Survey of Attitudes toward English Nursery Rhymes and Chants, and (d) Survey of Musical and Linguistic Intelligences. The computer software SPSS 10.0 for Windows was used to analyze the data collected in this study.

Participants

Fifty-nine second graders from two classes of one elementary school in Taichung participated in this study. The two classes were selected through a screening test on rime awareness. The screening test was given to ensure that the two groups were of about the same entry level of rime awareness before the study began. The two classes were randomly assigned to either the experimental or the control group.

The 31 students (17 boys and 14 girls) in the experimental group took the Rime Awareness Pretest. During the study, one girl and one boy transferred to another school, leaving a total of 29 students (16 boys and 13 girls) in the group. All of them took the Rime Awareness Posttest. Thus, the final number of participants in this study was 29 (16 boys and 13 girls).

The 31 students (15 boys and 16 girls) in the control group took the Rime Awareness Pretest. During the study, one boy transferred to another school, leaving a total of 30 students (14 boys and 16 girls) in the group. All of them took the Rime Awareness Posttest. Thus, the final number of participants in this study was 30 (17

boys and 13 girls).

These participants studied English at school for one semester, and they attended a 40-minute English class once a week. During that semester, they were introduced to the 26 uppercase letters and some rhymes and dialogues. However, since the participants had different former English learning experiences outside the school, their English proficiency levels varied. Due to the lack of measurements on young Taiwanese beginning learners' English proficiency, it was hard to divide them into groups that accurately reflected their English proficiency levels. Nevertheless, the screening test on rime awareness in this study minimized the influence of English proficiency as an extraneous variable.

Measurements

This study was designed to measure the participants' rime awareness ability both before and after they received the instruction. In addition, participants' musical intelligence, linguistic intelligence, and attitudes toward English nursery rhymes and chants were measured in order to examine their influence on the relationship between the instructional methods and the participants' rime awareness ability.

Variables

In this experimental research study, the independent variable (i.e., the treatment) was the instructional methods, and the dependent variable was participants' rime awareness. In addition, there were three moderator variables: participants' musical intelligence, linguistic intelligence, and attitudes toward English nursery rhymes and chants. The control variable was the participants' entry level of rime awareness prior to the treatment. Figure 1 shows the relationships among the variables.

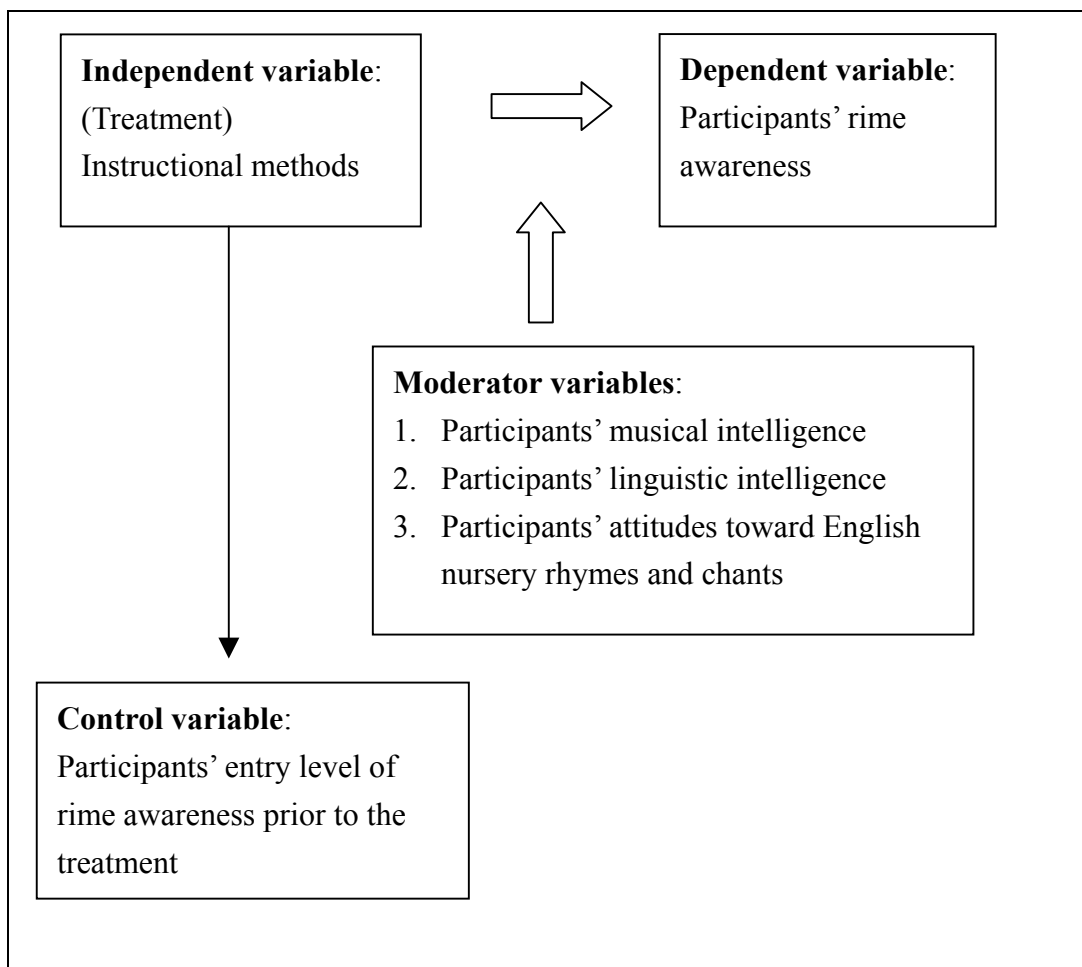


Figure 1. Relationships among the variables

Instruments

Rime Awareness Pretest. This instrument was designed to measure the participants' level of rime awareness at the beginning of this study by assessing their auditory identification of words that have the same rime (see Appendix A). The researcher conducted this test. To avoid cheating, answer sheets were in two different formats (see Appendix B). This test was modified from Bradley and Bryant's (1983) task. Unlike Bradley and Bryant's (1983) study, in which feedback was given in practice trials, the researcher modeled the practice trials in this study without mentioning the concept of rimes. This modification was made to observe participants' awareness without involving any possible induced awareness.

The selection of test items was based upon three criteria. First, the words

chosen for the test items were from Wylie and Durrell's (1970) list of the 37 most common word families in English (cited in Word families from Enchanted Learning, <http://www.enchantedlearning.com/rhymes/wordfamilies/>). Second, the rimes that appeared in the selected English nursery rhymes and chants were included. Third, the test items included three types (A, B, & C) in order to distinguish students who might have different degrees of rime awareness. Knafle's (1973) study of 189 kindergarteners' performance on a CVCC rhyming test showed that nonrhyming words sharing more end phonemes with rhyming words were easier for pupils to identify than nonrhyming words sharing only one end phoneme with the rhyming words. Furthermore, nonrhyming words that differed from rhyming words in the last phoneme were more difficult to identify than those that differed from rhyming words in the first end phoneme. Based on the findings of Knafle's (1973) study, two types of rime awareness test items (Types A & B) were developed for this study.

In a Type A item, the distracter rime has a different vowel and coda from the key rime. For example, among *lake cake take pin*, the distracter rime (/ɒn/) has a different vowel and coda from the key rime (/ek/). In a Type B item, the distracter rime has the same coda as the key rime but a different vowel from the key rime. For example, among *tight meet sight night*, the distracter rime (/it/) shares the same coda (/t/) with the key rime (/a0t/), but a different vowel from the key rime (/i/ vs. /a0/). In addition to the two types, the test included another type of item—Type C. In a Type C item, the distracter rime and the key rime have a different vowel and different coda, but their codas are both nasal consonants. For example, among *wine ring, king, bring*, the distracter rime ends with a nasal sound (/n/), but it is different from the nasal sound of the key rime (/H/). In addition, the vowel of the distracter rime (/a0/) is different from that of the key rime (/0/). The rimes of test items and types of items are shown in Appendix A.

Rime Awareness Posttest. This instrument was designed to measure the participants' level of rime awareness at the end of this study by assessing their ability to detect words that have the same rime (see Appendix C). The test design was the

same as with those in the pretest, except that different words were used as options for each of the test items. That is, the options provided in the two tests were different but with the same rime.

Survey of Attitudes toward English Nursery Rhymes and Chants. This instrument was designed to measure participants' attitudes toward learned English nursery rhymes and chants. It was written in Chinese and contained 13 statements (see Appendix D). Among the 13 statements, 11 of them followed a 4-point Likert scale format, except for Item Nos. 11 and 12, which allowed the participants to circle more than one response option. Although the meanings of the response options differed from statement to statement, they represented a certain point upon the continuum of attitudes in terms of one of the following aspects: *affect*, *behavior*, or *cognition*. For the eleven 4-point statements, participants were asked to choose 1 response option that best represented their own attitudes. The scores given to the response options, from left to right, in each question were 4, 3, 2, and 1. The responses to Item Nos. 11 and 12 were not included in scoring. The participants were later divided into 2 groups by SPSS 10.0 for Windows based upon their total scores. One group represented the *positive attitudes group* and the other represented the *negative attitudes group*. It took the participants about 15 –20 minutes to complete the test.

The survey statements were designed by the researcher based upon three attitudinal components, i.e., *affect*, *behavior*, and *cognition*. The focus and attitudinal components of each attitudes statement are listed in Table 2. As is shown in Table 2, four statements were affect-oriented (i.e., statement nos. 1, 2, 3, & 13), five statements were cognition-oriented (i.e., statement nos. 7, 8, 10, 11, & 12), and four statements were behavior-oriented (i.e., statement nos. 4, 5, 6, & 9).

Table 2

Attitudinal Component and Focus of Each Attitudes Statement

Statement No.	Attitudinal component and focus
1	Affect: like or dislike nursery rhymes and chants
2	Affect: like or don't like to chant
3	Affect: eagerness to share with others
4	Behavior: relevant behavior after class
5	Behavior: frequency of after-school practice
6	Behavior: familiarity with the teaching materials
7	Cognition: effects of nursery rhymes and chants on learning
8	Cognition: effects of nursery rhymes and chants on learning
9	Behavior: effects of reinforcement on memory
10	Cognition: opinions on the materials
11	Cognition: follow-up question of statement No. 10
12	Cognition: follow-up question of statement No. 10
13	Affect: want to learn more nursery rhymes and chants or not

Survey of Musical and Linguistic Intelligences. This instrument was designed to measure the participants' musical and linguistic intelligences by asking their opinions about statements that reflected their musical and linguistic intelligence tendencies (see Appendix E). This survey modified the musical and linguistic intelligence statements from Yeh and Hsieh's (2000) Multiple Intelligences Inventory (as cited in Jiang, 2001). In their 18-statement MI Inventory, Yeh and Hsieh's aim was to understand elementary school children's multiple intelligences. The reliability of Yeh and Hsieh's version reached .97 in Cronbach α . The section validity on each intelligence section was significant (.05) (Hsieh, 2000).

Yeh and Hsieh's version contained eight sections, with each section containing the characteristics of a specific intelligence (2000). It was a 6-point Likert scale

format, which contained scales ranging from 'quite unfit', 'unfit', 'somewhat unfit' to 'somewhat fit', 'fit' and 'quite fit'. Participants were asked to choose one among the six that most properly reflected their experience in regard to the statement. The relative score for each scale ranged from 1 to 6. The higher the score one got for each section, the stronger the inclination toward the intelligence s/he had. The inventory was written in Chinese. There was no time limit for filling out the inventory.

Five parts of Yeh and Hsieh's version were modified for use in this study. The first change was in the design of scales. Research has indicated that young children typically can discriminate among no more than five discrete bits of information simultaneously (Case & Khanna, 1981; Chi, 1978; Chi & Klahr, 1975; Nitko, 1983). Because the participants in this study were second graders, a 4-point Likert scale format was used. To avoid participants' tendency to choose a neutral response, the four scales did not include a neutral option. The second change was in the description of statements. Because participants were second graders, the contents of statements were modified in terms of tones and concreteness. That is, the meaning of the original statement was retained yet conveyed through an example that was related to the world of second graders. Because it was hard to think of an example of statement No. 50 in Yeh and Hsieh's (2000) MI Inventory (i.e., 'I am to the point when speaking or writing.') comprehensible to second graders, the question was omitted from this survey, thus leaving seven statements for linguistic intelligence. The third change was in the wordings of scales. They were changed from degrees of agreement into definitions that were more concrete for second graders to follow and reflect upon. The relative scores for the scales ranged from 4 points to 1 point. The fourth change was in the manner of conducting the test. In Yeh and Hsieh's study, participants read and filled out the inventory by themselves. In this study, to prevent those who finished first from disturbing other participants, the researcher read out the statements and participants circled the answers. The fifth change was in the order of statements. In the original version, statements that were related to the traits of a

certain type of intelligence were listed in the same section. These statements may have made those who answered the statements more aware of the intelligence they targeted and thus may have prompted unreliable answers. Thus, statements were rearranged randomly. It took the participants about 20 –25 minutes to complete the survey. The statement numbers of musical and linguistic intelligence are listed in Table 3.

Table 3
Statement Numbers of Linguistic and Musical Intelligence

Intelligence	Statement No.
Linguistic	2, 5, 6, 8, 11, 12, 15
Musical	1, 3, 4, 7, 9, 10, 13, 14

Participants' scores on linguistic intelligence were the combined score of the seven representative statements. Their scores on musical intelligence were the combined score of the eight representative statements. Participants were further divided into two groups by SPSS according to their scores for the two types of intelligences.

Treatment

Instructional Methods. Two classes of second graders received different instructional methods. The instruction in both groups lasted for 10 weeks. Each week, the researcher gave a 20-to-25 minute instruction session for both groups. Instruction for the experimental group contained explicit instruction on rimes and relevant activities. The instructional materials for both groups were rhymes from *Mother Goose Jazz Chants* (Graham, 1994), *Wee Sing and Play* (Beall & Nipp, 2000) and

the participants' textbook *Dear English I* (Ku, 2002) (see Appendix F for the contents of instructional materials). Each week, the rhymes or chants introduced to both groups were the same. However, instruction for the control group did not involve any instruction on rimes or any activities related to rime awareness. The only clue given about the concept was that, when the instructor wrote the lines on the board at the beginning of each session, the rhyming words at the end of each line were replaced by flashcards.

School curriculum for both groups. The textbook used by both groups was *Dear English I* (Ku, 2002). During this semester, students had to learn units 6 to 10 in the textbook and the 26 lowercase letters of the alphabet. However, with the permission of the two groups' elementary English teacher, the rhymes and songs in their textbook were replaced by the rhymes and chants selected for this study. Therefore, for the two groups, they were expected to learn the 26 lowercase letters of the alphabet and rhymes selected for this study during the semester.

Instructional materials. Rhymes and chants selected for teaching were from three sources: *Dear English I* (Ku, 2002), *Mother Goose Jazz Chants* (Graham, 1994) and *Wee Sing and Play* (Beall & Nipp, 2000). The selected rhymes and chants were based upon four criteria. First, there had to be at least two words with the same rime in the rhyme or chant. With this design, children could discover similar sounds among words. Second, the rhymed words had to belong to the 37 most common word families in English as listed in Wylie and Durrell (1970) (see Word families, from Enchanted Learning, <http://www.enchantedlearning.com/rhymes/wordfamilies/>). Third, all the rhymes and chants selected for use had to be available on published high fidelity audio recordings. Fourth, the rhymes and chants selected had to be related to the themes or the alphabet rhymes in participants' textbooks (See Appendix G for the features of selected rhymes and chants).

Data Collection Procedure

This 15-week study included 2 weeks of Rime Awareness Pretest, 1 week of participant selection, 10 weeks of instruction, 1 week of Rime Awareness Posttest and Survey on Attitudes toward English Nursery Rhymes and Chants, and 1 week of Survey on Musical and Linguistic Intelligences. The schedule for each week is shown in Table 4 (see Appendix H for details). The data collection flow chart for this study is shown in Figure 2.

Table 4
Weekly Schedule

Week	Schedule
1	Rime Awareness Pretest for 5 second-grade classes
2	
3	Select the target 2 classes for this study
4	Session 1: Little Willy was a flea
5	Session 2: One, two, three, four, five
6	Session 3: There was an old woman who lived in a sock
7	Session 4: Humpty Dumpty
8	Session 5: Baby Bear, Baby Bear, touch your knees
9	Session 6: Georgie Porgie, pudding and pie
10	Session 7: Diddle, diddle, dumpling, my son John
11	Session 8: Teddy Bear, Teddy Bear, turn around
12	Session 9: Star light, star bright
13	Session 10: Franky Panky, pepper and cheese
14	Rime Awareness Posttest and Survey on Attitudes toward English Nursery Rhymes and Chants
15	Survey on Musical and Linguistic Intelligences

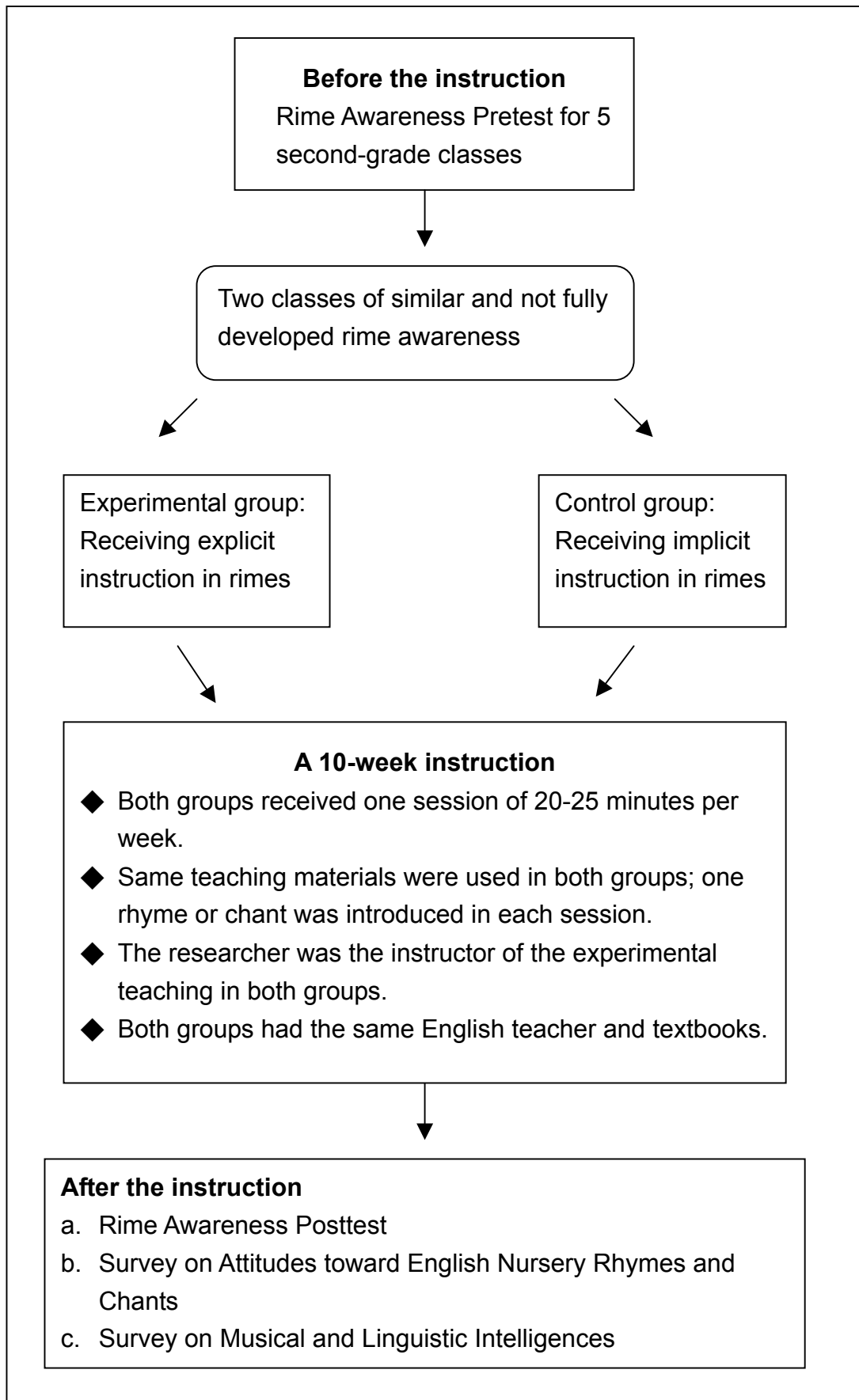


Figure 2. Data collection flow chart.

Before the study. An elementary school in Taichung granted the researcher permission to include their second graders in this study. Five classes of second graders took a rime awareness pretest. Then, two out of the five classes were chosen based upon their performances on the Rime Awareness Pretest. The test was administered to determine two groups with similar, yet not fully developed, rime awareness. Participants in each group took this test together in one class period.

Before conducting the Rime Awareness Pretest, the researcher informed the participants in Chinese of the test taking rules. Then, the researcher modeled two practice trial items. On this test, there were 20 items and each item included four words. The researcher read each item twice, with a one-second interval between words and a five-second interval between items. For each item, the participants were asked to identify one word that had a different rime from the other three words (see Appendix I for the procedure). One point was given for each correct response and the maximum score of the test was 20. It took the participants about 15 –20 minutes to complete the test. Their scores were compared in terms of mean and standard deviation. The pretest results of the five classes are summarized in Table 5.

Table 5
Results of Rime Awareness Pretest for the Five Classes

Class	No. of students	Min. score	Max. score	M	SD.	Class selected
A	31	5	19	11.77	3.90	
B	31	5	19	11.19	3.50	√
C	22	6	19	10.77	3.83	
D	31	3	20	10.84	3.63	√
E	30	2	17	9.17	4.07	

As Table 5 shows, there were fewer participants in Class C (N= 22) than in the

other classes. Therefore, Class C was left out first. Comparing the other four classes (A, B, D, & E), we found that Classes B and D were the most similar in terms of mean and standard deviation. Thus, these two classes (B and D) were selected and participants were randomly assigned to either the experimental or the control group.

During the study. There were 10 weekly sessions of instruction for both groups with each session lasting 20 to 25 minutes.

For the experimental group, the teacher introduced one nursery rhyme or chant per week. At the beginning of each session, the teacher wrote the lines of the target rhyme or chant on the board and the rhyming words were replaced by flashcards. Then, the teacher drew participants' attention to a poster related to the rhyme by asking some questions about the content of the rhyme. Next, the teacher played CD recordings and had participants listen to the rhyme once or twice. Afterwards, the teacher introduced the content of the rhyme by showing some flashcards and explaining in the participants' L1, Chinese. Then, the teacher asked the participants to act out the rhyme and to chant along a few times. The next step was to familiarize the participants with some key words. Following that step, the teacher drew their attention to words that end with the same rime and familiarized them with the concept of rimes in a follow-up activity (see Appendix J for a sample lesson plan).

For the control group, the teacher introduced one nursery rhyme or chant—the same as the one learned by the experimental group for that week. Sessions were conducted as outlined above, except that at the end of each session, the teacher engaged the participants in one or two activities that familiarized them with some key words, not the concept of rimes (see Appendix J for a sample lesson plan.).

After the study. Participants first took the Rime Awareness Posttest. Then, they filled out the Survey of Attitudes towards English Nursery Rhymes and Chants and the Survey of Musical and Linguistic Intelligences.

For the Rime Awareness Posttest, the test design and test-taking rules were the same as those in the pretest (see Appendix I for the procedure). It took the participants about 15 –20 minutes to complete the test.

For the Survey of Attitudes toward English Nursery Rhymes and Chants, the researcher first informed the participants of the purpose and test-taking rules. Then, the researcher modeled how to complete the survey by reading one sample statement, drawing the four response options on the board, and circling one option. After ensuring that the participants understood the rules, the researcher read each statement twice, and the participants listened and circled a response option for each statement. It took the participants about 20-25 minutes to complete the survey.

For the Survey of Musical and Linguistic Intelligences, the same procedures were used as with the Survey of Attitudes toward English Nursery Rhymes and Chants. It took the participants about 20-25 minutes to complete the survey.

Data Analysis Procedure

Quantitative data analyses were used to answer the four research questions in this study. The computer software SPSS 10.0 for Windows was used to analyze the data collected. One-way ANOVAs were conducted to answer the four research questions. The following sections detail the scoring system of the instruments, the reliability of instruments, and data analysis procedure.

Scoring system. Participants' responses to four instruments were coded and scored. The four instruments included the Rime Awareness Pretest, Rime Awareness Posttest, Survey of Attitudes toward English Nursery Rhymes and Chants, and Survey of Musical and Linguistic Intelligences.

The Rime Awareness Pretest contained 20 items (See Appendix A). Each item had one correct answer and 1 point was given for each correct answer. The maximum score of the test was 20.

The Rime Awareness Posttest contained 20 items (See Appendix C). Each item had one correct answer, and 1 point was given for each correct answer. The maximum score of the test was 20.

The Survey of Attitudes toward English Nursery Rhymes and Chants contained 13 statements (See Appendix D). All were in a 4-point Likert scale format, except

statement Nos. 11 and 12, which were multi-multiple statements related to participants' responses to statement No. 10. Therefore, only responses to the 11 Likert scale statements were totaled to determine their attitudes/inclinations (positive/negative). As the 4-point Likert scales in each statement showed degrees of favor/disfavor, their relative weightings were, from left to right, 4, 3, 2, and 1. Participants were categorized by SPSS as in either the *positive attitudes group* or the *negative attitudes groups*.

The Survey of Musical and Linguistic Intelligences contained 15 statements (See Appendix E). Among them, eight statements related to musical intelligence and seven statements related to linguistic intelligence. It was based on a 4-point Likert scale format. The relative weightings for each scale were, from left to right, 4, 3, 2, and 1. Participants' scores on this survey were sub-categorized as the total of musical intelligence and that of linguistic intelligence.

For musical intelligence, participants were divided by SPSS into two groups (salient /weak musical group) according to their total score on the eight statements. The maximum score was 32.

For linguistic intelligence, participants were divided by SPSS into two groups (salient /weak linguistic group) according to their total score on the seven statements. The maximum score was 28.

Reliability of instruments. Based upon participants' performance on each instrument, the reliability of each instrument is shown in Table 6.

Data analysis procedure. One-way ANOVAs were used to answer the four research questions. An alpha level of .05 was used for all statistical tests. For the second, third and fourth research questions, participants were first categorized into subgroups by SPSS according to their responses to relevant items. Afterward, one-way ANOVAs were conducted to answer the three research questions.

Table 6
Reliability of Instruments

Instrument		No. of participants	No. of items	Cronbach α
Rime Awareness Pretest	Experimental group	28	20	.750*
	Control group	29	20	.7076*
	Total of two groups	57	20	.6916
Rime Awareness Posttest	Experimental group	28	20	.7949*
	Control group	29	20	.7534*
	Total of two groups	57	20	.7698*
Rime Awareness Pretest vs. Rime Awareness Posttest	Experimental group	28	2	.7457*
	Control group	29	2	.8222*
	Total of two groups	57	2	.7830*
Survey of Musical Intelligence	Experimental group	28	8	.5943
	Control group	29	8	.7166*
	Total of two groups	57	8	.6727
Survey of Linguistic Intelligence	Experimental group	28	7	.6430
	Control group	28	7	.7279*
	Total of two groups	56	7	.6828
Survey of Attitudes toward English	Experimental group	27	11	.8406*
	Control group	29	11	.8953*
Nursery Rhymes and Chants	Total of two groups	56	11	.8720*

* $\alpha > 0.7$

CHAPTER 4

RESULTS AND DISCUSSION

This chapter presents the results of data analyses with summaries and discussion of the study. The data analyses were performed on the following aspects along with revision of the research design: participants' performance on rime awareness tests, results of the Paired-Samples T Tests on the rime awareness tests, participants' musical intelligence, linguistic intelligence, and attitudes toward English nursery rhymes and chants. A one-way ANOVA and Paired-Samples T Tests were used to analyze the collected data. An alpha level of .05 was used for all statistical tests.

Participants' Performance on Rime Awareness Tests

Overall scores. The experimental group's scores on both the rime awareness pretest and posttest are shown in Table 7. Among the 29 participants, 18 did better on the posttest than on the pretest, 7 did worse on the posttest, and 4 got the same score on both tests. Comparing each participant's scores on the pretest and posttest, we found that subject No.16's score decreased most (-12) on the posttest whereas subject No. 25's score increased most (12).

Table 8 shows the control group's scores on both the rime awareness pretest and posttest. Among the 30 subjects, 15 did better on the posttest than on the pretest, 12 did worse on the posttest, and 3 got the same score on both tests. Comparing each participant's scores on the pretest and posttest, we found that subject No. 13's score increased most on the posttest (9) whereas subject No. 24's score decreased most on the posttest (-6).

Table 7

Rime Awareness Pretest and Posttest Scores—Experimental Group

Subject No.	Pretest score	Posttest score	Progress
1	10	10	0
2	17	19	2
3	14	12	-2
4	13	17	4
5	7	8	1
6	11	11	0
7	8	10	2
8	10	15	5
9	6	7	1
10	15	16	1
11	11	7	-4
12	11	10	-1
13	11	10	-1
14	10	10	0
15	5	7	2
16	12	0	-12
17	19	20	1
18	10	11	1
19	13	9	-4
20	15	12	-3
21	14	15	1
22	13	15	2
23	11	20	9
24	15	18	3
25	7	19	12
26	16	16	0
27	9	12	3
28	10	11	1
29	5	10	5

Note. The shaded data indicates extreme score drop.

Table 8

Rime Awareness Pretest and Posttest Scores—Control Group

Subject No.	Pretest score	Posttest score	Progress
1	14	19	5
2	5	6	1
3	12	9	-3
4	3	7	4
5	13	10	-3
6	8	13	5
7	11	13	2
8	9	11	2
9	12	8	-4
10	8	7	-1
11	9	9	0
12	11	15	4
13	7	16	9
14	12	14	2
15	18	19	1
16	20	19	-1
17	9	10	1
18	11	10	-1
19	12	10	-2
20	13	14	1
21	16	15	-1
22	10	13	3
23	12	11	-1
24	11	5	-6
25	9	10	1
26	11	9	-2
27	14	11	-3
28	6	6	0
29	6	7	1
30	10	10	0

Note. The shaded data indicates extreme score drop.

As indicated in Tables 7 and 8, each group had one subject whose posttest score decreased more than 25% when compared with the pretest score. For the experimental group, subject No. 16's score decreased by 12 points (i.e., 60% of the full score) on the posttest. For the control group, subject No. 24's score decreased by 6 points (i.e., 30% of the full score) on the posttest. Due to their drastic score drop on the posttest, these two subjects were excluded from the rest of the data analyses in order to increase the reliability of the data. Hence, the final number of participants in the experimental and control groups were 28 and 29, respectively. Both groups' responses to test items are indicated in Appendix K.

Performance on different item types. Looking at participants' performance on different types of rime awareness test items, we found that the results somewhat reflected the different instructional methods they received. As the proportion of the number of items for each type was not equal to those of the other two types, the researcher first calculated two groups' means of correct responses to different item types. Table 9 presents the experimental group's mean of correct response for each item type, and Table 10 presents the control group's mean of correct response for each item type.

Table 9

Mean of Correct Response for Each Item Type—Experimental Group (N = 28)

Item type	Pretest mean of correct response (%)	Posttest mean of correct response (%)
A	71 ^a	71
B	44	66
C	49	46

Note. ^a The percentage has been rounded to the nearest whole number.

As Table 9 shows, on the pretest, the experimental group’s means of correct response on different types of items were: 71 (%) for Type A, 44 (%) for Type B and 49 (%) for Type C. In other words, Type A items appeared to be the easiest ones for them whereas Type B items were the most difficult ones. On the posttest, Type A remained the easiest ones for them, whereas Type C was the most difficult. Their different performance on the two tests revealed two interesting findings. First, means for Type A items remained the same on the two tests. Second, the posttest mean for Type B items increased by 22%.

Table 10

Mean of Correct Response for Each Item Type—Control Group (N = 29)

Item type	Pretest mean of correct response (%)	Posttest mean of correct response (%)
A	57 ^a	70
B	47	46
C	61	53

Note. ^a The percentage has been rounded to the nearest whole number.

On the other hand, as Table 10 shows, the control group’s pretest means of correct response for different types of items were: 57% for Type A, 47% for Type B and 61 % for Type C. In other words, Type C items appeared to be the easiest ones whereas Type B items were the most difficult ones. On the posttest, the control group’s means were: 70% for Type A, 46% for Type B and 53% for Type C. Type A appeared to be the easiest ones, and Type B the most difficult ones. Their different performance on the two tests revealed two interesting findings. First, they greatly

improved in Type A items. Second, Type B items remained the most difficult ones for them.

Comparing the two groups' performance, we found that both groups' performance on certain item types improved more than 10%. The experimental group improved by 22% on Type B items whereas the control group improved by 13% on Type A items. This difference might reflect the different instructions they received. The control group's instruction did not involve rimes. Therefore, much of the class time was spent on reciting the rhymes or chants in class. The recitation might have gradually helped participants discover the rhymes and rhythms of the teaching materials. Hence, they developed the concept of whole rimes—the focus of Type A items. On the other hand, the instruction for the experimental group involved rimes. Therefore, given the same amount of class time as the control group, they did not seem to have enough time to recite the rhymes or chants in class. Instead, much of the class time was allocated to focusing on rhyming sounds. This procedure may explain their improvement on subtler rhyming items, such as those of Type B. Yet, due to the small sample size, the 22% improvement on Type B items in the experimental group only included 6 participants, and the 13% improvement on Type A items in the control group only included 4 participants. Thus, the differences were not significant.

Frequency distribution of scores. Results of the experimental group's frequency distribution on rime awareness pretest and posttest are shown in Table 11. The full score of both tests was 20 points. The scores were further divided into the following: Range I: 16-20; Range II: 11-15; Range III: 6-10; and Range IV: 0-5. For the pretest, most subjects' scores fell in Range II (N=13) and Range III (N=10). There were only 3 subjects in Range I. In comparison, for the posttest, 5 more subjects scored in Range I whereas 4 fewer subjects scored in Range II. This shows that some subjects scored higher on the posttest.

The results of the control group's frequency distribution on the rime awareness pretest and posttest are shown in Table 12. Similar to the experimental group's

pretest scores, most subjects' scores fell in Range II (N= 13) and Range III (N= 11). Unlike the experimental group, however, most subjects' posttest scores fell in Range III (N= 15). As for the posttest, only 1 more subject scored in Range I (N= 4). In addition, there were more subjects in Range III (N= 15) than in Range II (N= 10). This shows that some subjects scored lower on the posttest.

Table 11
Frequency Distribution of the Total Raw Scores on Rime Awareness Pretest and Posttest—Experimental Group (N = 28)

Range	Score	Pretest		Posttest	
		No. of person	No. in each range	No. of person	No. in each range
I	20	0		2	
	19	1		2	
	18	0	3	1	8
	17	1		1	
	16	1		2	
II	15	3		3	
	14	2		0	
	13	3	13	0	9
	12	0		3	
	11	5		3	
III	10	5		6	
	9	1		1	
	8	1	10	1	11
	7	2		3	
	6	1		0	
IV	5	2		0	
	4	0		0	
	3	0	2	0	0
	2	0		0	
	1	0		0	
	0	0		0	

Table 12

Frequency Distribution of the Total Raw Scores on Rime Awareness Pretest and Posttest— Control Group (N = 29)

Range	Score	Pretest		Posttest	
		No. of person	No. in each range	No. of person	No. in each range
I	20	1		0	
	19	0		3	
	18	1	3	0	4
	17	0		0	
	16	1		1	
II	15	0		2	
	14	2		2	
	13	2	13	3	10
	12	5		0	
	11	4		3	
III	10	2		6	
	9	4		3	
	8	2	11	1	15
	7	1		3	
	6	2		2	
IV	5	1		0	
	4	0		0	
	3	1	2	0	0
	2	0		0	
	1	0		0	
	0	0		0	

Descriptive statistics of scores. Table 13 shows the descriptive statistics of the experimental group's rime awareness pretest and posttest scores. Comparing the experimental group's mean scores on the two tests, we found that the posttest mean score increased by 1.61 points, so the range slightly narrowed. The standard deviation increased by .55 points.

Table 13

Descriptive Statistics of Rime Awareness Pretest and Posttest Scores— Experimental Group (N=28)

Test	Range	Min.	Max.	M	SD
Pretest	14	5	19	11.14	3.57
Posttest	13	7	20	12.75	4.12

On the other hand, Table 14 shows the descriptive statistics of the control group's rime awareness pretest and posttest scores. Comparing the control group's mean scores on the two tests, we found that the posttest mean score slightly increased (by .65 points), the range decreased and the standard deviation slightly increased (by .14 points). It appeared that the control group improved slightly without explicit instruction on rimes. Although the improvement of the experimental group was higher than that of the control group, the significance of explicit instruction of rimes could not be proven simply by looking at the descriptive statistics.

Table 14

Descriptive Statistics of Rime Awareness Pretest and Posttest Scores— Control Group (N=29)

Test	Range	Min.	Max.	M	SD
Pretest	17	3	20	10.76	3.64
Posttest	13	6	19	11.41	3.78

Significance of instructional difference. To determine if there would be any significant difference due to instructional difference, a one-way ANOVA was conducted to compare the group means of the two groups' Rime Awareness Posttests. As Table 15 shows, the results did not indicate a significant difference between the

two groups' posttests ($F= 1.634, P= .207$). The lack of statistical significance might be partially due to small sample size (a total of 57 participants). Another possible factor was that the instructional methods per se did not significantly influence learners' acquisition of rime awareness since both groups used the same instructional materials, which might have aroused learners' rime awareness to some extent in both groups. To determine whether there would be any significant difference due to the combined effect of instructional methods and instructional materials, the research design of the study was revised with the two-group design being switched to two one-group designs. In other words, each group's pretest and posttest were further compared to see if there would be any significant difference.

Table 15

One-way Analysis of Variance for Finalized Group Difference on Rime Awareness Posttest (N = 57)

	SS	df	MS	F	Sig.
Between groups	25.435	1	25.435	1.634	.207
Within groups	856.284	55	15.569		
Total	881.719	56			

Revision of the Research Design

Revision of the research questions and null hypotheses. In view of the aforementioned intention, the research questions were revised as follows.

1. Does the combination of teacher's instruction of rimes and use of English nursery rhymes and chants as teaching materials have a significant effect on young Taiwanese EFL beginners' rime awareness?
2. Does young Taiwanese EFL beginners' musical intelligence have a significant effect on the relationship between their rime awareness and the combination of

teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials?

3. Does young Taiwanese EFL beginners' linguistic intelligence have a significant effect on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials?
4. Do young Taiwanese EFL beginners' attitudes toward English nursery rhymes and chants have a significant effect on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials?

And the revised null hypotheses were as follows:

H0 (1): There is no significant mean difference between each group's rime awareness pretest and posttest.

H0 (2): There is no significant effect of learners' musical intelligence on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials.

H0 (3): There is no significant effect of learners' linguistic intelligence on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials.

H0 (4): There is no significant effect of learners' attitudes toward English nursery rhymes and chants on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials.

Revision of variables. Hence, the original variables in this study were modified. In the revised research design, the independent variable (i.e., the treatment) was the teacher's instruction on rimes and use of English nursery rhymes and chants as

teaching materials. The dependent variable was participants' rime awareness. In addition, there were three moderator variables: participants' musical intelligence, linguistic intelligence, and attitudes toward English nursery rhymes and chants. The control variable was the participants' entry level of rime awareness prior to the treatment. The experimental group in the original design was termed Group One in the revised design. The control group in the original design was termed Group Two in the revised design. Figure 4 indicates the relationship among the variables.

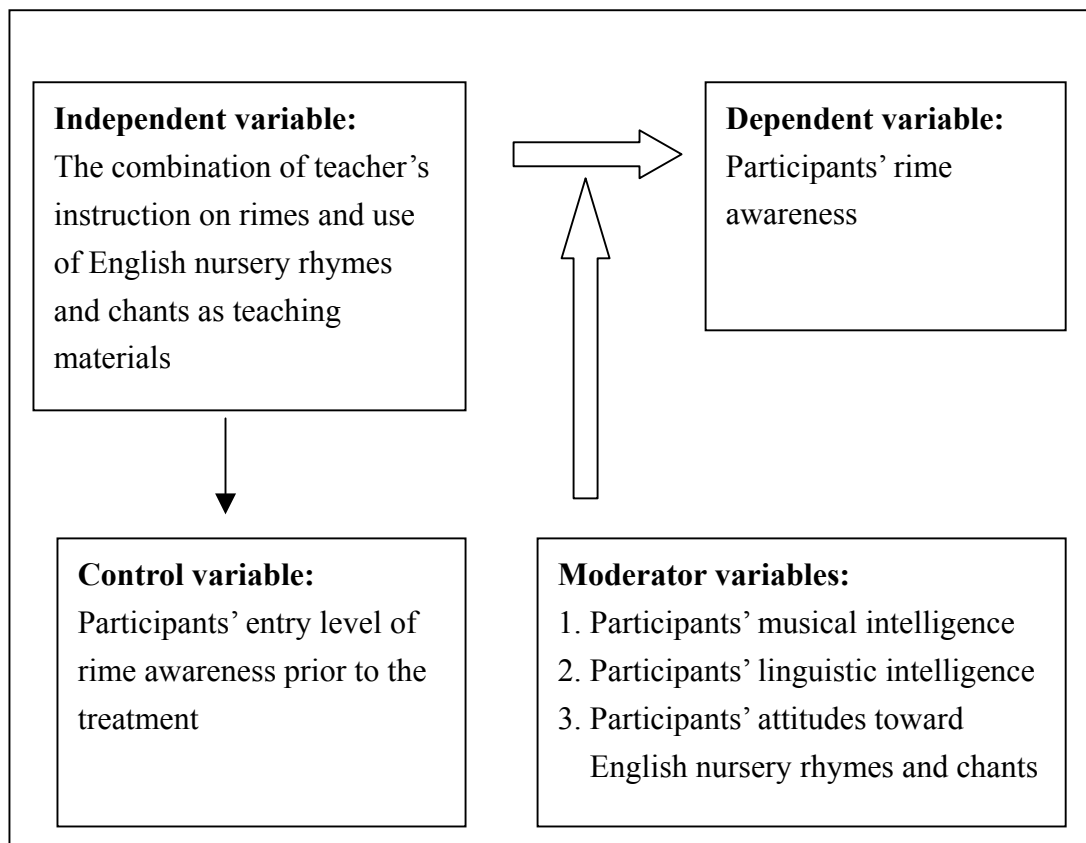


Figure 3. Revised relationships among the variables.

Results of the Paired-Samples T Tests in the Rime Awareness Tests

To answer the first revised research question, Paired-Samples T Tests were

applied to compare each group's (Group One and Group Two) pretest and posttest scores. The results of Group One are shown in Tables 16 and 17. The results of Group Two are shown in Tables 18 and 19.

Results in Group One. As Table 16 indicates, Group One's posttest mean score was 1.61 points higher than their pretest mean score. Table 17 indicates a statistically significant difference between Group One's pretest and posttest, $p = .021$ (with an alpha level of .05).

Table 16

Paired-Samples Statistics for Group One (N= 28)

Test	M	SD	SD Error Mean
RAPR	11.14	3.57	.67
RAPO	12.75	4.12	.78

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 17

Paired-Samples Test for Group One (N= 28)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.61	3.47	-2.452	27	.021*

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

* $p < .05$

Table 18

Paired-Samples Statistics for Group Two (N= 29)

Test	M	SD	SD Error Mean
RAPR	10.76	3.64	.68
RAPO	11.41	3.78	.70

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 19

Paired-Samples Tests for Group Two (N= 29)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-.66	2.88	-1.224	28	.231

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Results in Group Two. As Table 18 indicates, the posttest mean score for Group Two slightly increased (.65). However, Table 19 indicates that, given the alpha level of .05, the difference between Group Two's pretest and posttest was not statistically significant ($p = .231$).

Overall results of participants' rime awareness. Simply by looking at each group's means for different rime awareness item types, we found that each group made progress on one specific item type. Group One's mean progress on Type B items improved by 22% (about 6 more participants). Group Two's mean progress on Type A items improved by 13% (about 4 more participants). Results of a one-way

ANOVA did not show any statistically significant difference between the two groups. In the revised study, Paired-Samples T Tests were carried out to compare each group's pretest and posttest results. The summary of Paired-Samples T Test results is shown in Table 20. The comparison of each group's (Group One/Group Two) rime pretest and posttest indicated that only Group One's difference between pretest and posttest was statistically significant ($p = .021$). Compared with the previous insignificant one-way ANOVA result, it appeared that explicit instruction on rimes only was not sufficient enough to develop learners' rime awareness. That is, the incorporation of explicit instruction of rimes and use of English nursery rhymes and chants as teaching materials was more effective in developing learners' rime awareness.

Table 20
Summary of Paired-Samples T Tests on Participants' Pretest and Posttest of Rime Awareness

Participants	Mean Difference	Sig. (P value)
Group One	1.61	.021 *
Group Two	.65	.231

* $p < .05$

Answering the first research question. This study originally attempted to determine the influence of rime instructional methods on young Taiwanese EFL beginners' rime awareness. A one-way ANOVA indicated no significant difference between the two groups' rime awareness posttests ($F = 1.634$, $p = .207$). Therefore, the original first null hypothesis was accepted. It produced two possible interpretations. First, different rime instructional methods did not make a significant difference on learners' rime awareness. Second, the insignificant results may be due to the small sample size. To determine whether there would be any significant effect

due to the combined effect of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials, Paired-Samples T Tests were conducted. The comparison of each group's pretest and posttest indicated that only the participants who received the combination of teachers' explicit instruction on rimes and use of English nursery rhymes and chants as teaching materials made significant progress in their rime awareness ($p = .021$). There was no significant difference between rime awareness pretest and posttest for Group Two ($p = .231$). Therefore, the revised first null hypothesis was rejected. That is, explicit instruction on rimes along with the use of English nursery rhymes and chants as teaching materials fosters students' rime awareness. In other words, the results indicate that although the teaching materials feature rhyming words and rhythms, without explicit instruction on rimes, most students cannot learn the concept of rimes in a 10-week instruction period. This finding is similar to that of Gross and Garnett (1994) whose study on 5-year-old prereaders showed that explicit instruction on phonological awareness was necessary even though rhymes and word plays were used as the teaching materials.

Given the statistically significant effect of the combination of teacher's explicit instruction on rimes and use of English nursery rhymes and chants as teaching materials, the influences of three moderators were further investigated in relation to Group One's performance on the rime awareness pretest and posttest.

Participants' Musical Intelligence

Response to musical intelligence items. The two groups' responses to musical intelligence items are shown in Tables 21 and 22. The percentage of response to each option was rounded to the nearest whole number. All the participants were categorized by SPSS as being musically salient or weak according to their response to these items. An overall raw score of 26 or above was categorized as being in the salient musical group, and an overall raw score of 25 or below was categorized as being in the weak musical group. Table 23 shows the musical tendency of both

groups. Among the 28 participants in Group One, 11 belonged to the salient musical group whereas 17 belonged to the weak musical group. As for Group Two, 16 out of the 29 participants belonged to the salient musical group and the other 13 belonged to the weak musical group.

Table 21

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for the Musical Intelligence Items—Group One (N = 28)

No.	Item Description	1 ^a	2	3	4	M	SD
1	I often hum, sing, or whistle.	25 ^b	25	46	4	2.29	.90
3	I can play musical instruments, such as piano or flute.	18	36	18	28	2.50	1.20
4	When people sing or play the wrong note, I can find the mistake right away.	3	29	32	36	2.93	1.05
7	I can identify my classmates simply by hearing their voices.	0	11	36	53	3.43	.69
9	I often have feelings when I hear the melodies of songs. Some songs make me sad; some songs make me happy.	21	7	36	36	2.86	1.15
10	If the teacher wants us to clap by following certain rhythms, I seldom miss the rhythms/make mistakes.	0	4	21	75	3.71	.53
13	I learn new songs fast.	21	18	29	32	2.71	1.15
14	I like listening to the music.	7	7	22	64	3.43	.92

Note. ^a 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Table 22

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for the Musical Intelligence Items—Group Two (N = 29)

No.	Item Description	1 ^a	2	3	4	M	SD
1	I often hum, sing, or whistle.	14 ^b	28	24	34	2.79	1.08
3	I can play musical instruments, such as piano or flute.	24	24	24	28	2.55	1.15
4	When people sing or play the wrong note, I can find the mistake right away.	7	28	28	37	2.97	.98
7	I can identify my classmates simply by hearing their voices.	3	0	31	66	3.59	.68
9	I often have feelings when I hear the melodies of songs. Some songs make me sad; some songs make me happy.	10	7	17	66	3.38	1.01
10	If the teacher wants us to clap by following certain rhythms, I seldom miss the rhythms/make mistakes.	7	4	10	79	3.62	.86
13	I learn new songs fast.	7	17	28	48	3.17	.97
14	I like listening to the music.	0	7	17	76	3.69	.60

Note. ^a 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Table 23

Musical Tendency of Both Groups

Group	Salient musical	Weak musical	N
One	11	17	28
Two	16	13	29

Significance of musical intelligence. In order to determine the effect of participants' musical intelligence on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials, Paired-Samples T Tests were conducted to compare the pretest and posttest performances of each sub-musical group in Group One. Table 24 shows that the mean of the salient musical group in Group One increased by 1.73 points. Table 25 indicates a statistically significant difference between the group's pretest and posttest ($p = .031$). For the weak musical group in Group One, Table 26 indicates that the mean score increased by 1.53 points. Table 27 shows a statistically insignificant difference between the group's pretest and posttest ($p = .146$).

Table 24

Paired-Samples Statistics of Rime Awareness Tests for the Salient Musical Group in Group One (N= 11)

Test	M	SD	SD Error Mean
RAPR	11.82	4.07	1.23
RAPO	13.55	3.80	1.15

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 25

Paired-Samples Test of Rime Awareness Tests for the Salient Musical Group in Group One (N = 11)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.73	2.28	-2.508	10	.031*

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

* $p < .05$

Table 26

Paired-Samples Statistics of Rime Awareness Tests for the Weak Musical Group in Group One (N=17)

Tests	M	SD	SD Error Mean
RAPR	10.71	3.26	.79
RAPO	12.24	4.34	1.05

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 27

Paired-Samples Test of Rime Awareness Tests for the Weak Musical Group in Group One (N= 17)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.53	4.12	-1.529	16	.146

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Overall results of the influence of musical intelligence. As shown in Table 28, only the salient musical group in Group One showed a statistically significant difference between pretest and posttest. That is, participants with salient musical intelligence acquired rime awareness better than those with weak musical intelligence though they all had explicit instruction on rimes when learning English nursery rhymes and chants. Thus, it appeared that musical intelligence was a significant factor in the acquisition of rime awareness even though explicit instruction on rimes and the use of English nursery rhymes and chants as teaching materials were involved.

Table 28

Summary of Paired-Samples T Tests of Rime Awareness Tests for Sub-musical Musical Groups in Group One

Group	Mean difference	Sig. (P value)
Salient musical	1.73	.031*
Weak musical	1.53	.146

* $p < .05$

Answering the second research question. This study examined the influence of participants' musical intelligence on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials. On the one hand, a Paired-Samples T Test indicated that the difference between the rime awareness pretest and posttest of the salient musical group in Group One was statistically significant ($p = .031$). On the other hand, a Paired-Samples T Test indicated that the difference between the rime awareness pretest and posttest of the weak musical group in Group One was not statistically significant ($p = .146$). Based upon these findings, the second null hypothesis was rejected. In other words, musical intelligence was a significant factor in learners' rime awareness when they received explicit instruction on rimes and the use of English nursery rhymes and chants as teaching materials.

Lo (2001) found that teachers' musical intelligence is related to their beliefs about the teaching of English songs and rhymes. The findings in this study indicated that students' musical intelligence affected the development of their rime awareness when explicit instruction on rimes was combined with the teaching of English nursery rhymes and chants. These results support the notion of individual differences in MI.

Participants' Linguistic Intelligence

Response to linguistic intelligence items. The two groups' responses to linguistic intelligence items are shown in Tables 29 and 30. The percentage of response to each option was rounded to the nearest whole number. All the participants were categorized by SPSS as linguistically salient or weak. An overall raw score of 22 or above was categorized as being in the salient linguistic group. An overall raw score of 21 or below was categorized as being in the weak linguistic group. Table 31 shows the linguistic tendency of both groups. Among the 28 participants in Group One, 15 belonged to the salient linguistic group whereas 13 belonged to the weak linguistic group. As for Group Two, 15 out of the 29 participants belonged to the salient linguistic group whereas 14 belonged to the weak linguistic group.

Table 29

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for the Linguistic Intelligence Items—Group One (N= 28)

No.	Item Description	1 ^a	2	3	4	M	SD
2	I like to read.	4 ^b	0	39	57	3.50	.69
5	I am good at telling stories or jokes.	0	39	32	29	2.89	.83
6	In class, if the teacher asks questions, I will raise my hand to express my opinions.	11	18	39	32	2.93	.98
8	I still remember what my teacher said yesterday (e.g., a joke or notes).	14	7	32	47	3.11	1.07
11	I know many idioms or stories about idioms.	11	18	43	28	2.89	.96
12	I can vividly describe the plots of some cartoon programs to my friends.	18	25	28	29	2.68	1.09
15	I am good at memorizing new classmates' names.	4	14	21	61	3.29	1.08

Note. ^a 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Table 30

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for the Linguistic Intelligence Items—Group Two (N = 29)

No.	Item Description	1 ^a	2	3	4	M	SD
2	I like to read.	3 ^b	7	31	59	3.45	.78
5	I am good at telling stories or jokes.	14	10	35	41	3.04	1.07
6	In class, if the teacher asks questions, I will raise my hand to express my opinions.	17	28	34	21	2.59	1.02
8	I still remember what my teacher said yesterday (e.g., a joke or notes).	0	17	31	52	3.34	.77
11	I know many idioms or stories about idioms.	10	21	17	52	3.10	1.08
12	I can vividly describe the plots of some cartoon programs to my friends.	7	7	38	48	3.28	.88
15	I am good at memorizing new classmates' names.	0	14	14	72	3.59	.73

Note. ^a 1 = strongly disagree, 2 = disagree, 3 = agree, 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Table 31

Linguistic Tendency of Both Groups

Group	Salient linguistic	Weak linguistic	N
One	15	13	28
Two	15	14	29

Significance of linguistic intelligence. In order to determine the effect of participants' linguistic intelligence on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery

rhymes and chants as teaching materials, Paired-Samples T Tests were conducted to compare each sub-linguistic group's pretest and posttest performances. Table 32 shows that the mean score of the salient linguistic group in Group One increased by 1.73 points. Table 33 indicates a statistically significant difference between the group's rime awareness pretest and posttest ($p = .046$). As for the weak linguistic group in Group One, Table 34 shows that the group's mean score increased by 1.54 points. Table 35 indicates a statistically insignificant difference between the group's pretest and posttest ($p = .203$).

Table 32

Paired-Samples Statistics of Rime Awareness Tests for the Salient Linguistic Group in Group One (N = 15)

Test	M	SD	SD Error Mean
RAPR	11.93	3.13	.81
RAPO	13.60	3.68	.95

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 33

Paired-Samples Test of Rime Awareness Tests for the Salient Linguistic Group in Group One (N = 15)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.67	2.94	-2.193	14	.046*

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

* $p < .05$

Table 34

Paired-Samples Statistics of Rime Awareness Tests for the Weak Linguistic Group in Group One (N=13)

Tests	M	SD	SD Error Mean
RAPR	10.23	3.94	1.09
RAPO	11.77	4.51	1.25

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 35

Paired-Samples Test of Rime Awareness Tests for the Weak Linguistic Group in Group One (N= 13)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.54	4.12	-1.348	12	.203

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Overall results of the influence of linguistic intelligence. Table 36 indicates that only the salient linguistic group in Group One showed a statistically significant difference between pretest and posttest ($p = .046$). That is, the scores of those who received the same explicit instruction on rimes and the same teaching materials but did not possess salient linguistic intelligence did not show a significant difference between pretest and posttest. Hence, this suggested that linguistic intelligence was a significant factor that influenced learners' rime awareness when explicit instruction on rimes was combined with the use of English nursery rhymes and chants as teaching materials.

Table 36

Summary of Paired-Samples T Tests of Rime Awareness Tests for Sub-linguistic Groups in Group One

Group	Mean Difference	Sig. (P value)
Salient linguistic	1.73	.046*
Weak linguistic	1.54	.203

* $p < .05$

Answering the third research question. This study also examined the influence of participants' linguistic intelligence on the relationship between their rime awareness and the combination of teacher's instruction on rimes and the use of English nursery rhymes and chants as teaching materials. On the one hand, a Paired-Samples T Test indicated that the difference between the rime awareness pretest and posttest of the salient linguistic group in Group One was statistically significant ($p = .046$). On the other hand, a Paired-Samples T Test indicated that the difference between the rime awareness pretest and posttest of the weak linguistic group in Group One was not statistically significant ($p = .203$). Based upon these findings, the third null hypothesis was rejected. That is, participants' linguistic intelligence was a significant factor in learners' rime awareness when they received explicit instruction on rimes and the use of English nursery rhymes and chants as teaching materials.

Participants' Attitudes toward English Nursery Rhymes and Chants

Response to the attitudes survey. The two groups' responses to the 11 Likert-scale items of the attitudes survey are shown in Appendix M. The percentage of response to each option was rounded to the nearest whole number.

Reasons for level of interest in English nursery rhymes and chants. Statement No. 11 of the attitudes survey investigated participants' reasons for liking the

teaching materials. Group One's responses to the statement are shown in Table 37, and Group Two's responses to the statement are shown in Table 38.

Among the 28 participants in Group One, 22 thought the English nursery rhymes and chants learned in class were interesting. Their reasons are shown in Table 37. The most frequent reason was 'interesting classroom activities'. The second rank included 'interesting content', 'pleasant to read aloud', and 'appealing CD recordings'. The third rank included 'interesting to read aloud', 'easy to remember', and 'sounds cool'. In addition, three participants offered other reasons. One specifically pointed out the interesting games in class. Another said it could help him communicate with foreigners. A third mentioned 'fun' yet did not specifically point out which aspect was 'fun'.

Table 37
Group One's Responses to Statement No. 11

Option	Content	No. of response
A	Interesting contents (內容很有趣)	11
B	Pleasant to read aloud (唸起來很好聽)	11
C	Interesting to read aloud (唸起來很有趣)	9
D	Easy to remember (很容易記住)	9
E	Appealing sound effects/music of audio recordings (錄音帶、CD 配音及音效很吸引我)	11
F	Interesting classroom activities (課堂裡的活動很有趣)	15
G	Sounds cool (唸起來很酷)	9
H	Others (其他)	
	Games are fun. (玩的遊戲很好玩)	1
	I can communicate with foreigners. (可以跟外國人溝通)	1
	They are very interesting. (很有趣)	1

Table 38

Group Two's Responses to Statement No. 11

Option	Content	No. of response	
A	Interesting contents (內容很有趣)	18	
B	Pleasant to read aloud (唸起來很好聽)	18	
C	Interesting to read aloud (唸起來很有趣)	19	
D	Easy to remember (很容易記住)	8	
E	Appealing sound effects/music of audio recordings (錄音帶、CD 配音及音效很吸引我)	18	
F	Interesting classroom activities (課堂裡的活動很有趣)	19	
G	Sounds cool (唸起來很酷)	8	
H	Others	Music was loud enough. (音樂夠大聲)	1
	(其他)	Dancing was interesting. (跳舞很有趣)	1
		They are great and interesting. (很棒、很有趣)	1

Among the 29 participants in Group Two, 23 thought the English nursery rhymes and chants learned in class were interesting. Table 38 shows their reasons. The reasons ranked first included 'interesting to read aloud' and 'interesting classroom activities'. The second rank included 'interesting content', 'pleasant to read aloud', and 'appealing CD recordings'. The third rank included 'easy to remember' and 'sounds cool'. In addition, 3 participants mentioned other reasons. One mentioned that the music was loud enough. Another liked the dancing in class. A third mentioned 'fun' yet did not specifically point out which aspect was 'fun'.

Comparing the two groups' responses to reasons for interest in English nursery rhymes and chants, we found that the reasons were ranked similarly by both groups. Table 39 lists the rank of options in statement No. 11 for both groups. It shows that both groups included option F in the first rank, options A, B, and E in the

second rank, and options D and G in the third rank. They all considered 'interesting classroom activities' as the primary reason for their interest in the English nursery rhymes and chants. 'Interesting contents', 'pleasant to read aloud', and 'appealing sound effects/music of audio recordings' belonged to the second rank. And 'easy to remember' and 'sounds cool' belonged to both groups' third rank.

However, the two groups differed in the rank of one option. Group Two considered option C as the primary reason for their interest in the English nursery rhymes and chants, but Group One considered that option as the third reason. That is, only Group One considered 'interesting to read aloud' to be the primary reason for their interest in the English nursery rhymes and chants.

Table 39
Rank of Options in Statement No. 11 for Both Groups

Rank of options	Group One	Group Two
1st	F	C F
2nd	A B E	A B E
3rd	C D G	D G

Statement No. 12 of the attitudes surveyed participants' reasons for their lack of interest in the English rhymes and chants. Six participants in each group expressed their opinions. Table 40 shows Group One's reasons. The reason ranked first was 'sounds noisy'. The second rank included 'less interesting contents than those in stories', 'sounds like tedious memorization of lines', and 'boring classroom activities'. The third rank included 'unable to understand the content'. No other reasons were given.

Table 41 shows Group Two's reasons for their lack of interest in the English nursery rhymes and chants learned in class. The reason ranked first was 'unable to

understand'. The second rank was 'less interesting content than those in stories'. The third rank was 'boring classroom activities'. The fourth rank was 'sounds like tedious memorization of lines'. No other reasons were given.

Table 40
Group One's Responses to Statement No. 12

Option	Content	No. of response
A	Less interesting contents than those in stories (內容不如故事有趣)	2
B	Unable to understand the contents (聽不懂)	1
C	Sounds noisy (唸起來很吵)	4
D	Sounds like tedious memorization of lines (像在背書)	2
E	Boring classroom activities (課堂裡的活動很無聊)	2
F	Others (其他理由)	0

Table 41
Group Two's Responses to Statement No. 12

Option	Content	No. of response
A	Less interesting contents than those in stories (內容不如故事有趣)	3
B	Unable to understand the contents (聽不懂)	4
C	Sounds noisy (唸起來很吵)	0
D	Sounds like tedious memorization of lines (像在背書)	1
E	Boring classroom activities (課堂裡的活動很無聊)	2
F	Others (其他理由)	0

Comparing the two groups' responses, we found that the groups ranked reasons differently. Table 42 lists the rank of options in statement No. 12 for both groups. It indicates that option C, 'sounds noisy', was the first reason for Group One's lack of interest. Options A, D and E belonged to the reasons ranked second, including 'less interesting contents than those in stories', 'sounds like tedious memorization of lines', and 'boring classroom activities'. And Option B, 'unable to understand the contents', belonged to the reasons ranked third.

On the other hand, Option B, 'unable to understand the contents', was the first reason for Group Two's lack of interest. Option A, 'less interesting contents than those in stories' was the second reason, and Option E, 'boring classroom activities' was the third reason.

Table 42

Rank of Options in Statement No. 12 for Both Groups

Rank of options	Group One	Group Two
1st	C	B
2nd	A D E	A
3rd	B	E

Most of the participants in both groups indicated their interest in English nursery rhymes and chants (22 for Group One and 23 for Group Two). For both groups, their first reason for interest in the materials was the interesting classroom activities. Reasons related to the feature of rhymes were second. These findings reflect the concerns mentioned above. Learners' impression of the materials is influenced by the way the materials are presented. Another finding was that Group Two ranked another reason, 'interesting to read aloud', as the first priority in addition to 'interesting classroom activities'. However, Group One ranked this

reason third. This difference may have to do with Group Two's having more chances to recite rhymes in class. The two groups had the same schedule and amount of time for instruction. However, unlike Group Two, Group One had to learn the concept of rhymes. Therefore, the group spent less time reciting the rhymes and identifying key words in the rhymes. Besides, no participants were obligated to listen to the rhymes after class. Hence, Group One's attention to the teaching materials was less than Group Two's.

In addition, 6 participants among each group indicated their lack of interest in the materials. The reason ranked first was 'sounds noisy' for Group One and 'unable to understand the content' for Group Two. However, no apparent explanations were found for the difference. Another difference between the two groups' reasons for lack of interest in the teaching materials was on the option 'sounds noisy'. For Group One, 4 participants considered it as their reason whereas none in Group Two chose that option. Again, no apparent explanations were found for the difference, except that they reflect individual preferences.

Significance of attitudes toward English nursery rhymes and chants. All the participants were categorized by SPSS as having positive or negative attitudes. An overall raw score of 32 or above was categorized as a positive attitudes group. An overall raw score of 31 or below was categorized as a negative attitudes group. Table 43 indicates the attitudinal tendency of both groups. Among the 28 participants in Group One, 14 belonged to the positive attitudes group, whereas 14 belonged to the negative attitudes group. As for Group Two, 16 out of the 29 participants belonged to the positive attitudes group and the other 13 belonged to the negatives attitude group.

Table 43

Attitudinal Tendency of Both Groups

Group	Positive attitudes	Negative attitudes	N
One	14	14	28
Two	16	13	29

In order to determine the effect of participants' attitudes toward the teaching materials on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials, Paired-Samples T Tests were conducted to compare the rime awareness pretest and posttest performances of each sub-attitudes group in Group One. Table 44 shows that the mean score of the positive attitudes group in Group One increased by 1.64 points. Table 45 indicates a statistically insignificant difference between the group's pretest and posttest ($p = .137$). Concerning the negative attitudes group in Group One, Table 46 shows that the mean score increased by 1.57 points. Table 47 indicates a statistically insignificant difference between the group's pretest and posttest ($p = .085$).

Table 44

Paired-Samples Statistics of Rime Awareness Tests for the Positive Attitudes Group in Group One (N= 14)

Test	M	SD	SD Error Mean
RAPR	11.00	3.01	.81
RAPO	12.64	3.93	1.05

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 45

Paired-Samples Test of Rime Awareness Tests for the Positive Attitudes Group in Group One (N= 14)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.64	3.88	-1.586	13	.137

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 46

Paired-Samples Statistics of Rime Awareness Tests for the Negative Attitudes Group in Group One (N = 14)

Tests	M	SD	SD Error Mean
RAPR	11.29	4.16	1.11
RAPO	12.86	4.44	1.19

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Table 47

Paired-Samples Test of Rime Awareness Tests for the Negative Attitudes Group in Group One (N = 14)

Tests compared	Paired differences		t	df	Sig. (2-tailed)
	M	SD			
RAPR & RAPO	-1.57	3.16	-1.863	13	.085

Note. RAPR = rime awareness pretest ; RAPO = rime awareness posttest.

Overall results of the influence of attitudes toward English nursery rhymes and chants. Table 48 shows that there was no statistically significant difference in the

two groups between the pretest and posttest. Hence, it suggested that participants' attitudes toward English nursery rhymes and chants were not significant factors that influenced their acquisition of rime awareness when the combination of teacher's explicit instruction on rimes and the use of English nursery rhymes and chants as teaching materials was involved.

Table 48

Summary of Paired Samples T Tests of Rime Awareness Tests for Sub-attitudes Groups in Group One

Group	Mean difference	Sig. (P value)
Positive attitudes	1.64	.137
Negative attitudes	1.57	.085

* $p < .05$

Answering the fourth research question. This study also attempted to determine the influence of participants' attitudes toward English nursery rhymes and chants on the relationship between their rime awareness and the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials. Paired-Samples T Tests did not show any statistically significant differences between the rime awareness pretest and posttest of any sub-attitudes group in Group One. Therefore, the fourth null hypothesis was accepted. That is, participants' attitudes toward the teaching materials were not significant factors that influenced the relationship between their rime awareness and the combination of teacher's explicit instruction on rimes and use of English nursery rhymes and chants as teaching materials.

This result may seem somewhat surprising because it is believed that learners'

attitudes toward contextual factors, such as the teacher and the materials used, influence their learning. In line with this general belief, it seems possible that other unknown contextual factors may outweigh these factors as influential moderator variables. Actually, in some studies (Gardner, Smythe, & Brunet, 1977; Morgan, 1993; Ramage, 1990) on learners' attitudes and learning, the attitudinal aspects that were identified as being related to learners' learning were their attitudes toward the culture of the target language, its speakers, and the teacher. In the field of second language acquisition, the high proportion of content on teaching methods and techniques seems to imply their higher influence on learning than that of instructional materials (Morgan, 1993). It makes sense that learners' impression of the instruction is determined mostly by how the teacher presents the knowledge. In this sense, the warm-ups, the activities, and even the presentation of the materials determine students' impression of the materials. If skillfully presented, the materials will be meaningful to learners; if not, learners sense no purpose in learning the materials. The participants' degree of interest in the English nursery rhymes and chants reflects these concerns to some degree.

CHAPTER 5

CONCLUSION

This chapter concludes this research study by summarizing the main findings of the study, presenting pedagogical implications, discussing limitations of the study, and offering suggestions for future research.

Main Findings of This Study

The goal of this study was to determine the influence of rime instructional methods on young Taiwanese EFL learners' rime awareness. However, the analysis by a one-way ANOVA did not indicate statistically significant results. The lack of statistical significance might have been partially due to small sample size (a total of 57 participants). Another possible factor was that the instructional methods per se did not significantly influence learners' acquisition of rime awareness since both groups used the same instructional materials, which might arouse students' rime awareness to some extent in both groups.

To examine whether there would be any significant difference due to the combined effect of teacher's instruction on rimes and the use of English nursery rhymes and chants as teaching materials, the research design was revised with the original two-group design being switched to two one-group designs. In the revised design, Paired-Samples T Tests on the comparison of each group's rime awareness pretest and posttest showed that the combination of teacher's explicit instructional method on rimes and the use of English nursery rhymes and chants as teaching materials significantly affected learners' rime awareness. In addition, the revised design attempted to determine the influence of participants' musical intelligence, linguistic intelligence, and attitudes towards English nursery rhymes and chants on the relationship between learners' rime awareness and the combination of teacher's instruction on rimes and the use of English nursery rhymes and chants as teaching

materials. Paired-Samples T Tests indicated that the influence of participants' musical and linguistic intelligence on the relationship between learners' rime awareness and the combined effect of teacher's explicit instruction on rimes and use of English nursery rhymes and chants as teaching materials was statistically significant. However, the influence of participants' attitudes toward English nursery rhymes was not statistically significant.

Pedagogical Implications

Earlier studies (e.g., Blachman, 1991; Lundberg et al., 1988) noted that phonological awareness training for prereaders fostered their early reading and spelling proficiency. This study proved that young Taiwanese EFL beginners can be trained on rime awareness before they are able to read. It also showed that participants in Group Two may not have been able to discriminate auditorily among the similar rhyming words even though rhyming is a prominent feature in the teaching materials. This finding corresponds with Morgan et al.'s (1979) and Stedman and Kaestle's (1987) studies that demonstrated that phonological awareness is not always spontaneously acquired. Gross and Garnett's (1994) study of 5-year-old prereaders who did not yet have any awareness of rhyme and alliteration demonstrated that explicit instruction on phonological awareness was necessary even though rhymes and word plays were used as the teaching materials. For this reason, instructors should explicitly introduce the concept to learners, especially when they are learning a foreign language in an environment that offers limited language exposure. Another implication of this study is that learners' MI profiles may influence their learning and interaction with teaching materials. Therefore, teachers should introduce knowledge or lead students' to discover knowledge in different ways.

Limitations of the Study and Suggestions for Future Research

Though several variables were controlled in the design, this study still has

some limitations. These limitations are as follows: the scope of investigated phonological awareness, the design of instruments, the role of the researcher, small sample size, and time limitations.

The first limitation of this study is the scope of investigated phonological awareness. Due to participants' limited English proficiency, this study only focused on the development of learners' rime awareness (i.e., a subtype of phonological awareness) through their auditory discrimination of rhyming words. Future studies can incorporate visual recognition of rhyming words into the training program to compare its effect on the development of learners' rime awareness with the effect of mere auditory training. In addition, future studies can focus on the development of more advanced phonological awareness subtypes for learners with higher English proficiency.

The second limitation is the design of instruments. Some instruments in this study need to be modified to obtain a more reliable research result. First, the proportion of each type of item in the rime awareness pretest and posttest needs to be adjusted in order to get a balanced profile of learners' rime awareness. In this study, participants' performance on different rime awareness item types did not reflect the difficulty level of item types suggested in Knafle's (1973) study. Future studies can modify the design of rime awareness test items in this study and test a larger sample of participants to see if the results correspond with Knafle's (1973) findings. Second, the measurement of participants' musical and linguistic intelligence should use 'observation' as a means to get a more reliable record of learners' profiles of musical and linguistic intelligences. Due to time limitations and some practical reasons, a written measurement was used in this study instead of observation over a period of time. It is reasonable to question the validity of participants' responses to this kind of self-evaluation survey. Third, the content of the survey on learners' attitudes can be expanded to include other attitudinal factors, such as attitudes toward the language, the culture, the teaching methods, and the instructor. With such a design, we could better understand the relative influences of different attitudinal factors on young

learners' learning processes.

The third limitation of this study is the role of the researcher. In this study, the researcher was the experimental instructor for both groups. For this reason, the teaching may not have reflected the same authenticity as when the instructor was the participants' English school teacher. For example, because of limited teaching experience, the researcher encountered difficulty in classroom management, and thus some participants were not comfortable in the earlier instructional sessions. However, it was this role as an instructor that improved the researcher's teaching skills and made her more aware of aspects that may not have been noticed when simply observing the class. From learners' facial expressions and reactions, the researcher learned how to introduce rimes so that young learners could understand and remain focused. Furthermore, the researcher began to sense that the objectives for both groups in this study should be combined to ensure well-rounded instruction. In this study, Group One focused on the identification of rimes and thus sacrificed familiarity with new words and enjoyment of chanting the rhymes, whereas Group Two learned the new words and chanted the rhymes yet lost a good chance to develop rime awareness. In teaching, the two should be combined to provide better instruction on English nursery rhymes and chants.

The fourth limitation of this study is the small sample size. This factor may have influenced the results of two aspects. First, it may have resulted in the statistically insignificant effect of rime instruction on learners' rime awareness. Although the results of the revised design showed that the combination of teacher's instruction on rimes and use of English nursery rhymes and chants as teaching materials significantly influenced learners' rime awareness, this can be only viewed as findings of a case study and can not be generalized to a broader population. Future studies can apply the two designs of this study to larger samples. Second, because of the small sample size, each group's improvement on a certain item type was not persuasive. Future studies can specifically focus on learners' performance on different rime awareness item types in light of the different types of rime instruction

they receive.

The fifth limitation of this study is the time limitation. Because of the participants' class schedule, the time for participants to receive the rime instruction was limited—ten 20-to-25 minute weekly sessions. Moreover, participants were not required to recite or memorize rhymes after class. Therefore, they may not have been stimulated to appreciate the rhymes and rhythms of English nursery rhymes and chants. Future studies can make some adjustments to determine if the use of English nursery rhymes and chants as the only teaching materials can still stimulate learners' rime awareness.

Concluding Remarks

Although rhyming words are a common feature of many existing English nursery rhymes and chants, the findings of this study show that the combination of teacher's explicit instruction on rimes and use of English nursery rhymes and chants as teaching materials seems necessary if young Taiwanese EFL beginners are to develop rime awareness. The findings also suggest that through the teacher's explicit instruction on rimes and the use of English nursery rhymes and chants as teaching materials, learners with salient musical and linguistic intelligences may acquire greater rime awareness than those with weak musical and linguistic intelligences.

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Appendix A

Rime Awareness Pretest Items and Their Traits

Item No.	Content				Key rime	Distracter rime	Type ^a
1	lake	cake	take	<u>pin</u> ^b	/ek/	/ɪn/	A
2	tight	<u>meet</u>	sight	night	/aɪt/	/ɪt/	B
3	<u>wine</u>	ring	king	sting	/ɪŋ/	/aɪn/	C
4	fine	<u>king</u>	vine	pine	/aɪn/	/ɪŋ/	C
5	bump	jump	<u>coat</u>	pump	/ʌmp/	/ot/	A
6	down	brown	town	<u>song</u>	/aʊn/	/ɔŋ/	C
7	keep	weep	<u>luck</u>	deep	/ɪp/	/ʌk/	A
8	<u>beat</u>	mad	had	sad	/æd/	/ɪt/	A
9	bell	sell	tell	<u>doll</u>	/ɛl/	/ɔl/	B
10	cool	pool	<u>fan</u>	tool	/ul/	/æn/	A
11	fame	<u>come</u>	shame	tame	/æm/	/ʌm/	B
12	ring	swing	<u>pain</u>	bring	/ɪŋ/	/ɛn/	C
13	sent	bent	<u>hunt</u>	rent	/ɛnt/	/ʌnt/	B
14	luck	<u>bike</u>	muck	stuck	/ʌk/	/aɪk/	B
15	bill	still	will	<u>mile</u>	/ɪl/	/aɪl/	B
16	crow	bow	grow	<u>cow</u>	/o/	/aʊ/	A
17	<u>tank</u>	blink	wink	link	/ɪnk/	/ænk/	B
18	<u>soon</u>	crop	mop	pop	/ʌp/	/ʊn/	A
19	took	<u>kick</u>	hook	book	/ʊk/	/ɪk/	B
20	throat	goat	<u>luck</u>	boat	/ot/	/ʌk/	A

Note. ^a ‘Type’ refers to the type of each item. In a Type A item, the distracter rime has a different vowel and coda from the key rime. In a Type B item, the distracter rime has the same coda as the key rime but a different vowel from the key rime. In a Type C item, all of the words end with nasal sounds (i.e., /n/ vs. /ŋ/), but the nasal sound of the distracter rime is different from that of the key rime. The vowel of the distracter rime is also different from that of the key rime. ^b Underlined words are the correct answers.

Appendix B

Rime Awareness Pretest Answer Sheets (form A)



我的號碼：_____ 我的名字：_____

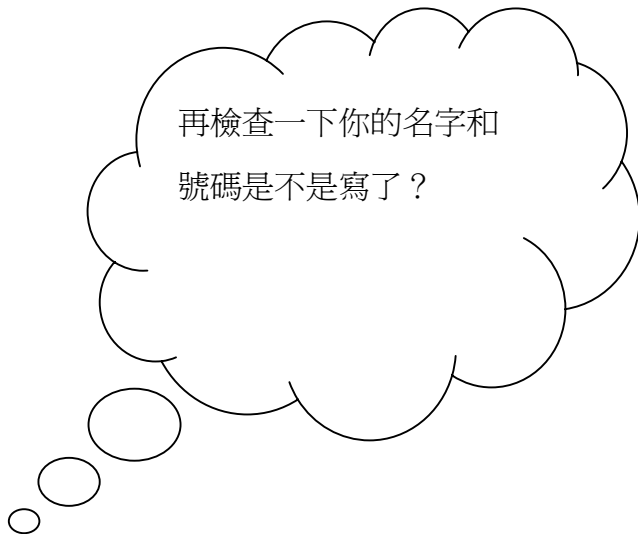
1.	A	B	C	D
2.	A	B	C	D
3.	A	B	C	D
4.	A	B	C	D
5.	A	B	C	D
6.	A	B	C	D
7.	A	B	C	D
8.	A	B	C	D
9.	A	B	C	D
10.	A	B	C	D
11.	A	B	C	D
12.	A	B	C	D



快結束了，只剩下面一頁！

Appendix B (continued)

13.	A	B	C	D
14.	A	B	C	D
15.	A	B	C	D
16.	A	B	C	D
17.	A	B	C	D
18.	A	B	C	D
19.	A	B	C	D
20.	A	B	C	D



再檢查一下你的名字和
號碼是不是寫了？

Appendix B (continued)

(form B)



我的號碼：_____ 我的名字：_____

1.	2.	3.	4.	5.	6.
A	A	A	A	A	A
B	B	B	B	B	B
C	C	C	C	C	C
D	D	D	D	D	D
7.	8.	9.	10.	11.	12.
A	A	A	A	A	A
B	B	B	B	B	B
C	C	C	C	C	C
D	D	D	D	D	D



快結束了，只剩下面一頁

Appendix B (continued)

13.	14.	15.	16.
A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D
17.	18.	19.	20.
A	A	A	A
B	B	B	B
C	C	C	C
D	D	D	D



再檢查一下你的名字和號碼是不是寫了？

Appendix C

Rime Awareness Posttest Items and Their Traits

Item No.	Content				Key rime	Distracter rime	Type ^a
1	make	sake	bake	<u>win</u> ^b	/ek/	/ɪn/	A
2	light	<u>neat</u>	kite	bright	/aɪt/	/ɪt/	B
3	<u>fine</u>	sing	wing	bring	/ɪŋ/	/aɪn/	C
4	dine	<u>ring</u>	line	decline	/aɪn/	/ɪŋ/	C
5	dump	hump	<u>boat</u>	lump	/ʌmp/	/ot/	A
6	clown	frown	gown	<u>long</u>	/aʊn/	/ɔŋ/	C
7	peep	leap	<u>buck</u>	jeep	/ɪp/	/ʌk/	A
8	<u>feet</u>	Dad	glad	pad	/æd/	/ɪt/	A
9	well	hell	yell	<u>roll</u>	/ɛl/	/ɔl/	B
10	fool	wool	<u>tan</u>	bull	/ul/	/æn/	A
11	came	<u>some</u>	same	lame	/æm/	/ʌm/	B
12	sing	wing	<u>gain</u>	string	/ɪŋ/	/ɛn/	C
13	cent	went	<u>front</u>	tent	/ɛnt/	/ʌnt/	B
14	buck	<u>hike</u>	suck	tuck	/ʌk/	/aɪk/	B
15	hill	Jill	pill	<u>file</u>	/ɪl/	/aɪl/	B
16	sow	low	go	<u>how</u>	/o/	/aʊ/	A
17	<u>bank</u>	pink	tink	sink	/ɪnk/	/ænk/	B
18	<u>moon</u>	top	hop	cop	/ʌp/	/un/	A
19	cook	<u>tick</u>	nook	look	/ʊk/	/ɪk/	B
20	coat	note	<u>duck</u>	rote	/ot/	/ʌk/	A

Note. ^a ‘Type’ refers to the type of each item. In a Type A item, the distracter rime has a different vowel and coda from the key rime. In a Type B item, the distracter rime has the same coda as the key rime but a different vowel from the key rime. In a Type C item, all of the words end with nasal sounds (i.e., /n/ vs. /ŋ/), but the nasal sound of the distracter rime is different from that of the key rime. The vowel of the distracter rime is also different from that of the key rime. ^b Underlined words are the correct answers.

Appendix D

Survey of Attitudes toward English Nursery Rhymes and Chants

各位可愛的同學：

這份測驗能幫助老師知道你們的意見。所以請你們仔細而且耐心地聽每一個句子，並且根據自己的實際情形來作答。如果不懂題目的意思，請舉手發問。

請放心，這不是考試，沒標準答案，你們的任何意見都不會對你們的成績有影響。很謝謝你們的幫忙！



Appendix D (continued)

作答說明：

在你們的答案卷上是不是有號碼 1-12？ 1 號表示第一題，總共有 12 題。每一題是不是有 4 個表情（示範：畫在黑板上）？等一下老師會唸題目，你們要選出一個最像你的意見的表情圈起來。每一個題目老師會唸 2 次。

如： 我喜歡上英語課。




1. 我喜歡英語課裡所教的英語韻文與唸謠。
非常喜歡 喜歡 不喜歡 非常不喜歡
2. 我喜歡唸英語韻文與唸謠。
非常喜歡 喜歡 不喜歡 非常不喜歡
3. 我喜歡將英語課裡所教的英語韻文與唸謠唸給家人、朋友聽。
非常喜歡 喜歡 不喜歡 非常不喜歡
4. 我常常唸英語課裡所教的英語韻文與唸謠給家人、朋友聽。
常常 有時候會 很少 不會
5. 下課後，我還會練習唸英語課裡所教的英語韻文與唸謠。
常常 有時候會 很少 不會
6. 我能熟背出大部份英語課裡所教的英語韻文與唸謠。
教過的 10 首都會 只有一、二首不會 會背三、四首
所有都不會背
7. 我覺得英語韻文與唸謠能夠讓我不害怕說英語。
非常同意 同意 不同意 非常不同意
8. 我覺得英語韻文與唸謠能夠讓我很容易地說出英語。
非常同意 同意 不同意 非常不同意

































Appendix D (continued)

9. 英語韻文與唸謠幫助我學習英文單字。
非常同意 同意 不同意 非常不同意
10. 我覺得英語課裡所教的英語韻文與唸謠很有趣。（如果選非常同意、同意，請繼續回答下一題；如果選不同意、非常不同意，請回答第 12 題）
非常同意 同意 不同意 非常不同意
11. 承第 10 題：
我覺得英語課裡所教的英語韻文與唸謠(很)有趣，因為：(可複選)
- A 內容很有趣
 - B 唸起來很好聽
 - C 唸起來很有趣
 - D 很容易記住
 - E 錄音帶裡的配音、音效很吸引我
 - F 課堂裡的學習韻文與唸謠的活動很有趣
 - G 唸起來覺得很酷
 - H 其他：_____
12. 承第 10 題：
我不覺得英語課裡所教的英語韻文與唸謠有趣，因為：(可複選)
- A 內容不如故事有趣
 - B 聽不懂
 - C 唸起來很吵
 - D 像是在背書
 - E 課堂裡的學習韻文與唸謠的活動很無聊
 - F 其他：_____
13. 我希望以後上英語課還能再學其他的英語韻文與唸謠。
非常希望 希望 不希望 非常不希望













Appendix D (continued)

答案卷

 我的名字: _____

1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

Appendix D (continued)

9.				
10.				
11.	<p style="text-align: center;">A B C</p> <p style="text-align: center;">D E F G</p> <p>H: _____</p>			
12.	<p style="text-align: center;">A B C</p> <p style="text-align: center;">D E</p> <p>F: _____</p>			
13.				

請再檢查一次，是不是每一題都回答了？



謝謝你耐心地回答！

Appendix E

Survey of Musical and Linguistic Intelligences

各位可愛的同學：

這份測驗能幫助老師認識你們。所以請你們仔細而且耐心地聽每個題目，並且根據自己的實際情形來作答。如果不懂題目的意思，請舉手發問。請放心，這不是考試，沒標準答案，你們的任何意見都不會對你們的成績有影響。很謝謝你們的幫忙！



Appendix E (continued)

音樂及語言智能評量

改編自：葉玉珠、謝佳蓁（2000）

作答說明：

看看你們的答案卷上是不是有號碼1-15？1號表示第一題，總共有15題。每一題是不是有4個號碼（示範：寫1、2、3、4在黑板上）？等一下老師會唸題目，你們要選出一個最像你意見的號碼圈起來。

如： 我的心算很厲害。

1	2	3	4
很厲害	厲害	不厲害	不會

- 我常常唱歌、吹口哨或哼曲子。
 - 1) 每天
 - 2) 1星期有4~5天
 - 3) 1星期有1~2天
 - 4) 除了上音樂課時老師說要唱，或升旗時要唱國歌，我不會自己唱歌、吹口哨或哼曲子
- 我喜歡讀國語日報或其他書（如：故事書）。
 - 1) 很喜歡
 - 2) 喜歡
 - 3) 不喜歡
 - 4) 非常不喜歡
- 我會彈奏某種樂器，例如彈鋼琴或吹笛子等。
 - 1) 很會
 - 2) 會，但不是很厲害
 - 3) 只會一點點
 - 4) 不會
- 聽別人唱歌或彈奏樂器的時候，如果他們唱錯了或彈錯了，我很快就能發現。
 - 1) 一聽到錯誤的地方馬上發現
 - 2) 很快就能發現那裡唱錯
 - 3) 覺得有地方怪怪的，但不知道是哪裡
 - 4) 不能發現
- 我很會講故事或是說笑話。
 - 1) 很會
 - 2) 會
 - 3) 不大會
 - 4) 不會

Appendix E (continued)

6. 上課時，如果老師問 5 次問題，我每次都會舉手，想說我的意見。
 - 1) 每次都會舉手
 - 2) 老師問 5 次問題，我會舉手 3~4 次
 - 3) 老師問 5 次問題，我會舉手 1~2 次
 - 4) 老師問 5 次問題，我有時候會舉手 1 次，但大部份都不會舉手。

7. 我只要聽到同學講話的聲音，不用看到他，就能猜出他是誰。
 - 1) 每次都能猜出
 - 2) 5 次有 3~4 次能猜出
 - 3) 5 次有 1~2 次能猜出
 - 4) 沒 1 次猜對

8. 老師昨天上課講的一些話，我現在還記得。(請舉例：如老師說了一個笑話，或要我們注意哪些事、)
 - 1) 記得很清楚老師說的笑話
 - 2) 記得老師說過笑話，但內容不是全部都記得
 - 3) 記得老師說過笑話，但不大記得笑話是什麼
 - 4) 不記得

9. 小朋友，有沒有那些歌曲你聽到會很快樂，(如：生日快樂歌，因為想到以前過生日的時候，收到很多禮物)？或那些歌曲你聽到會很難過(如：西風的話，因為想到以前是外婆教我唱這首歌，但她已經不在了)？
 - 1) 如果你常常聽到某些歌後，心情變的很快樂或很難過，選第 1 個表情
 - 2) 如果你有時候聽到某些歌後，心情變的很快樂或很難過，選第 2 個表情
 - 3) 如果你很少聽到某些歌後，心情變的很快樂或很難過，選第 3 個表情
 - 4) 如果你從來沒有因為聽到某些歌後，想到什麼事，所以心情變的很快樂或很難過，選第 4 個表情

10. 如果老師要我們跟著打拍子，我很容易就會跟著打拍子，很少打錯拍子或是跟不上。
 - 1) 每次都跟得上
 - 2) 5 次有 3~4 次跟得上
 - 3) 5 次有 1~2 次跟得上
 - 4) 每次都跟不上，很少跟得上

11. 我知道很多成語或成語故事(如：愚公移山、朝三暮四)。
 - 1) 10 個以上
 - 2) 5~6 個
 - 3) 3~1 個
 - 4) 都不知道

Appendix E (continued)

12. 我的同學要我告訴他，昨天的「小叮噹」卡通內容，如果我有看昨天那集，我能夠告訴他演了什麼。
- 1) 我能夠告訴他所有內容
 - 2) 我能夠告訴他大部份內容
 - 3) 我能夠告訴他一些我還記得的內容
 - 4) 我不能夠告訴他，因為忘了
13. 我很快就能學會老師剛教的新歌。
- 1) 上課時老師帶我們唱 1~2 遍我就會
 - 2) 今天上課時教的，我下課以前就會
 - 3) 今天上課時教的，我要等下次上課老師再帶我們唱，我才會
 - 4) 今天上課時教的，我要等好幾次上課時老師再帶我們復習，才能學會
14. 我喜歡聽音樂（如：兒歌，流行歌，或鋼琴演奏）。
- 1) 很喜歡
 - 2) 喜歡
 - 3) 不喜歡
 - 4) 非常不喜歡
15. 我很快就記住新同學的名字。
- 1) 今天認識，今天就記住
 - 2) 今天認識，要 1~2 天才記住
 - 3) 今天認識，要 4~5 天才記住
 - 4) 很難記住（1~2 個星期）才記住

請再檢查一次，是不是每一題都回答了？



謝謝你耐心地回答！

Appendix E (continued)

答案卷



我的號碼：_____

我的名字：_____

1.	1	2	3	4
2.	1	2	3	4
3.	1	2	3	4
4.	1	2	3	4
5.	1	2	3	4
6.	1	2	3	4
7.	1	2	3	4
8.	1	2	3	4

Appendix E (continued)

9.	1	2	3	4
10.	1	2	3	4
11.	1	2	3	4
12.	1	2	3	4
13.	1	2	3	4
14.	1	2	3	4
15.	1	2	3	4



請再檢查一次，是不是每一題都回答了？

謝謝你耐心地回答！

Appendix F

Selected Nursery Rhymes and Chants

Title of rhymes	Content	Source
Little Willy was a flea	Little Willy was a flea.	<i>Mother</i>
	Willy drank a pot of tea.	<i>Goose Jazz</i>
	Little Willy won't be very chilly, Will he?	<i>Chants</i>
One, two, three, four, five	One, two, three, four, five	<i>Wee Sing & Play</i>
	I caught a fish alive	
	Six, seven, eight, nine, ten	
	I let him go again,	
	Why did you let him go? Because he bit my finger so. Ouch!	
There was an old woman who lived in a sock	There was an old woman who lived in a sock	<i>Mother</i>
	With a clock that went 'tick'	<i>Goose Jazz</i>
	And a clock that went 'tock';	<i>Chants</i>
	One day she got angry and threw a big rock	
	At the clock that went 'tick' And the clock that went 'tock'.	
Humpty Dumpty	Humpty Dumpty sat on a wall	<i>Mother</i>
	Humpty Dumpty had a great fall	<i>Goose Jazz</i>
	All the kings' horses and all the kings' men	<i>Chants</i>
	Couldn't put Humpty together again.	
Baby Bear, Baby Bear, touch your knees	Baby Bear, Baby Bear, touch your knees.	<i>Mother</i>
	Baby Bear, Baby Bear, please say please.	<i>Goose Jazz</i>
	Baby Bear, Baby Bear, blow your nose.	<i>Chants</i>
	Baby Bear, Baby Bear, wash your clothes.	
	Baby Bear, Baby Bear, please don't cry. Baby Bear, Baby Bear, say good-bye.	
Georgie Porgie, pudding and pie	Georgie Porgie, pudding and pie,	<i>Mother</i>
	Kissed the girls and made them cry;	<i>Goose Jazz</i>
	When the boys came out to play,	<i>Chants</i>
	Georgie Porgie ran away.	

Appendix F (*continued*)

Title of rhymes	Content	Source
Diddle, diddle, dumpling, my son John	Diddle, diddle, dumpling, my son John, Went to bed with his trousers on; One shoe off, and one shoe on, Diddle, diddle, dumpling, my son John.	<i>Mother Goose</i> <i>Jazz Chants</i>
Teddy Bear, Teddy Bear, turn around	Teddy Bear, Teddy Bear, turn around. Teddy Bear, Teddy Bear, touch the ground. Teddy Bear, Teddy Bear, count to four. Teddy Bear, Teddy Bear, shut the door. Teddy Bear, Teddy Bear, turn out the light. Teddy Bear, Teddy Bear, say goodnight.	<i>Mother Goose</i> <i>Jazz Chants</i>
Star light, star bright	Star light, Star bright, First star I see tonight. I wish I may, I wish I might, Have the wish I wish tonight.	<i>Dear English I</i>
Franky Panky, pepper and cheese	Franky Panky, pepper and cheese, Kissed the girls and made them sneeze; When they said, "Achoo! Achoo!" Franky started sneezing, too.	<i>Mother Goose</i> <i>Jazz Chants</i>

Appendix G

Features of Selected Rhymes and Chants

	Selected Rhymes	Related unit in the textbook	Theme of the related unit	Original alphabet rhymes for the unit & rhyming words	Rimes and rhyming words of the selected rhyme	Audio recordings
1	Little Willy was a flea	6	Animals	Aa-Cc: me, pee, flea	/i/: flea, tea, chilly, he	√
2	One, two, three, four, five	6	Animals	Dd-Ff: clean, seen, green	/aɪv/: five, alive /ɛn/: ten, again /o/: go, so	√
3	There was an old woman who lived in a sock	7	Neighborhood	Gg-li: pretty, auntie, yummy	/ak/: sock, clock, tock, rock	√
4	Humpty Dumpty	7	Neighborhood	Jj-Ll: bread, bed, red	/ɔ/: wall, fall /ɛn/: men, again	√
5	Baby Bear, Baby Bear, touch your knees	8	Health	Mm-Oo: hug, mug, bug	/iz/: knees, please /oʊ/: nose, clothes /aɪ/: cry, goodbye	√

Appendix G (continued)

Selected Rhymes	Related unit in the textbook	Theme of the related unit	Original alphabet rhymes for the unit & rhyming words	Rimes and rhyming words of the selected rhyme	Audio recordings
6 Georgie Porgie, pudding and pie	8	Health	Pp-Rr: pie, try	/aɪ/: pie, cry /eɪ/: play, away	√
7 Diddle, diddle, dumpling, my son John	9	Daily routines	Ss-Uu: run, fun, one	/ɑn/: John, on	√
8 Teddy Bear, Teddy Bear, turn around	9	Daily Routines	Vv-Ww: bat, hat	/aʊnd/: around, ground /ɔr/: four, door /aɪt/: light, goodnight	√
9 <i>Star light, star bright</i>	10	Science & Technology	Xx-Zz: you, do, zoo	/aɪt/: light, bright, tonight, might	√
10 Franky Panky, pepper and cheese	10	Science & Technology		/i:z/: cheese, sneeze /u/: achoo, too	√

Appendix H

Schedule of the Study

Year	Week of the study	Schedule	Calendar								Month	Date	Tasks
			Sun.	M.	T.	W.	Th.	F.	Sat.				
2003	1	Participants selection	9	10	11	12	13	14	15	Feb.	14~20	Rime awareness pretest for 5 classes of 2 nd graders	
	2		16	17	18	19	20	21	22				
	3		23	24	25	26	27	28					
							1			March		24~27	Select the 2 target groups for this study
	4	Instruction	2	3	4	5	6	7	8	March	5, 7	Rhyme 1: Little Willy was a flea	
	5		9	10	11	12	13	14	15		12, 14	Rhyme 2: One, two, three, four, five	
	6		16	17	18	19	20	21	22		19, 21	Rhyme 3: There was an old woman who lived in a sock	
	7		23	24	25	26	27	28	29		26, 28	Rhyme 4: Humpty Dumpty	
	8		30	31							2, 4	April	Rhyme 5: Baby Bear, Baby Bear, touch your knees
					1	2	3	4	5				
9	6		7	8	9	10	11	12	9, 11		Rhyme 6: Georgie Porgie, pudding and pie		
10	13		14	15	16	17	18	19	16, 18		Rhyme 7: Diddle, diddle, dumpling, my son John		

Appendix H (continued)

	11		20	21	22	23	24	25	26	May	23, 25	Rhyme 8: Teddy Bear, Teddy Bear, turn around
	12		27	28	29	30	1	2	3		30, 2	Rhyme 9: Star light, star bright
	13		4	5	6	7	8	9	10		7, 9	Rhyme 10: Franky Panky, pepper and cheese
	14	Posttest and surveys	11	12	13	14	15	16	17		14, 16	Rime awareness posttest and survey on attitudes
	15		18	19	20	21	22	23	24		21, 24	Survey on musical and linguistic intelligence

Note. Dates shaded in dark gray refer to the exact dates of pretest and posttests.
Dates shaded in light gray refer to the exact dates for instructions.

Appendix I

Procedure for Conducting Rime Awareness Pretest and Posttest

Introductions

各位小朋友！在你們的答案卷上總共有號碼 1 到 20，1 號是第一題，2 號是第二題，總共有 20 題，每題都有英文字母 A、B、C、D（在黑板上示範）。等一下，每一題，你們會聽到四個英文字，其中一個聽起來和其他 3 個不像，請你們找出和其他 3 個不像的那一個字，而且要記住它是四個字中第幾個，如果是第 3 個，就把你的答案卷上那一題的 C 圈起來。每個題目老師會唸 2 次，現在老師先舉一個例子，仔細聽囉！

bat (1 秒) win (1 秒) mat (1 秒) fat (5 秒)

bat (1 秒) win (1 秒) mat (1 秒) fat (5 秒)

不一樣的那個字是 win，所以要把 B 圈起來！

老師再舉一個例子，仔細聽囉！

hide (1 秒) ride (1 秒) feed (1 秒) side (5 秒)

hide (1 秒) ride (1 秒) feed (1 秒) side (5 秒)

不一樣的那個字是 feed，所以要把 C 圈起來！

現在老師唸第一題，準備好了嗎？

第一題 lake (1 秒) cake (1 秒) take (1 秒) pin (5 秒)

第一題 lake (1 秒) cake (1 秒) take (1 秒) pin (5 秒)

第二題 tight (1 秒) meet (1 秒) sight (1 秒) night (5 秒)

(The researcher read each item in this manner through item No. 20.)

Note. Words within parentheses refer to gestures, the interval between words read by the researcher and additional explanations for conducting the test.

Appendix J

Table J1

Sample Lesson Plan—Experimental Group

Topic	Rhyme 3: There was an old woman who lived in a sock	
Goals	<ol style="list-style-type: none"> 1. To enjoy the rhyme. 2. To learn the concept of rimes by identifying words with the ‘ock’ rime. 	
Props	<ul style="list-style-type: none"> ◆ Cards for the big poster ◆ Flashcards: <i>old woman, sock, clock, tick, tock, angry, rock</i> ◆ CD, CD player ◆ 2 dice ◆ Cards for the dice: <i>old woman, sock, clock, rock, tick, tock</i> (×2) 	
Before the class	Set the scene; write the rhyme on the board (some words are replaced with the flashcards); stick cards on the dice (except for 1 ‘tick’ and 1 ‘tock’ card that are first substituted for the lines written on the board)	
Procedure		
Step	Content	Time
1	Introduction: T mentions the title of the rime, and asks questions about the poster to focus students’ attention on the rhyme and have them predict/guess what it is about.	(1-2 min)
2	T plays the CD and Ss listen to it twice.	(30 sec)
3	T asks Ss what the rhyme is about. T explains the content of the rhyme.	(30 sec)
4	T plays the CD and acts out the chant; Ss imitate. (3 times)	(3-5 min)
5	T chooses some students to act out the rhyme on the stage. (3 rounds)	(3 min)
6	T introduces the following words: <i>old woman, sock, clock, tick, tock, angry, rock</i> and has Ss practice identifying them.	(2 min)
7	T points out the similar sounds of some words: <i>rock, sock, clock.</i>	(1 min)

Appendix J (*continued*)

Table J1 (*continued*).

Step	Content	Time
8	<p>T says 3 words, Ss have to listen and decide whether they rhyme or not. T calls 1 student from each group to the front and has him/her pay attention to the sounds of words that T says.</p> <ol style="list-style-type: none"> a. If the words share the same end sound, s/he should make a ○ gesture (if not, s/he should make a X gesture). b. The fastest responder earns 1 point for the group. 	(3 min)
9	<p>Roll the dice</p> <ol style="list-style-type: none"> a. Divide Ss into 3 groups b. Explain the rules: (<i>rock, sock, tock, clock</i>) <ol style="list-style-type: none"> a) T asks Ss the English expression for a target picture. b) If S1 answers correctly, S1 goes to the front and rolls the 2 dice. c) If the pictures on the two dice share the same end-rhyme, S1 earns 5 points for the group. (i.e., rock + sock = 5 points; also tick + tick = 5 points because they are identical and therefore obviously share the same end sound!) 	(5-8 min)

Appendix J (*continued*)

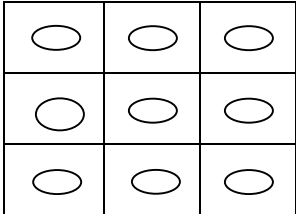
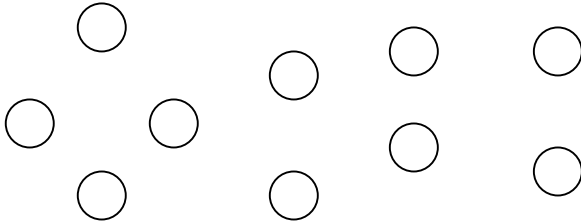
Table J2

Sample Lesson Plan—Control Group

Topic	Rhyme 3: There was an old woman who lived in a sock	
Goals	<ol style="list-style-type: none"> 1. To enjoy the rhyme 2. To learn the following words/phrases: <i>sock, clock, angry, rock, old woman, bird</i> 	
Props	<ul style="list-style-type: none"> ◆ Cards for the big poster ◆ Flashcards: <i>old woman, sock, clock, angry, rock, bird</i> ◆ CD, CD player ◆ 10 clocks 	
Before the class	<p>Set the scene; write the rhyme on the board (some words are replaced with the flashcards); stick cards on the dice (except for 1 ‘tick’ and 1 ‘tock’ card that are first substituted for the written lines on the board).</p>	
Procedure		
Step	Content	Time
1	Introduction: T mentions the title of the rime, and asks questions about the poster to focus students’ attention on the rhyme and have them predict/guess what it is about.	(1-2 min)
2	T plays the CD and Ss listen to it twice.	(30 sec)
3	T asks Ss what the rhyme is about. T explains the content of the rhyme.	(30 sec)
4	T plays the CD and acts out the chant; Ss imitate. (3 times) T picks some students to act out on the stage. (3 rounds)	(3-5 min) (3 min)
5	T introduces the following words: <i>old woman, sock, clock, angry, rock, bird</i> and has Ss practice identifying them.	(2 min)

Appendix J (continued)

Table J2 (continued)

Step	Content	Time
	<p>Bingo game</p> 	
6	<p>c. T puts the above diagram on the board (each circle stands for a clock).</p> <p>d. T explains the rule: S1 answers correctly and chooses a clock on the board for their group.</p> <p>e. The target place would be marked as the group's possession.</p> <p>f. The first group to get a line across, down, or diagonally on the bingo board is the winner.</p>	(5 min)
	<p>Help the old woman to destroy the clocks: (p.s. A stickball is good for this game!)</p> 	
7	<p>a. T sets up the above scene (each circle stands for a clock).</p> <p>b. T asks Ss to call out the name of a target picture.</p> <p>c. If S1 answers correctly, S1 can choose to destroy 1 clock and that clock goes to S1's group.</p> <p>c. The winner is the group that gets the most clocks.</p>	(5-8 min)

Appendix K

Table K1

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Rime Awareness Pretest Items—Group One (N = 28)

No.	Item Description	0 ^a	1	M	SD
1	lake cake take pin	25 ^b	75	.75	.44
2	tight meet sight night	68	32	.32	.48
3	wine ring king sting	86	14	.14	.36
4	fine king vine pine	46	54	.54	.51
5	bump jump coat pump	36	64	.64	.49
6	down brown town song	25	75	.75	.44
7	keep weep luck deep	32	68	.68	.48
8	beat mad had sad	50	50	.50	.51
9	bell sell tell doll	14	86	.86	.36
10	cool pool fan tool	18	82	.82	.39
11	fame come shame tame	46	54	.54	.51
12	ring swing pain bring	46	54	.54	.51
13	sent bent hunt rent	39	61	.61	.50
14	luck bike muck stuck	71	29	.29	.46
15	bill still will mile	75	25	.25	.44
16	crow bow grow cow	36	64	.64	.49
17	tank blink wink link	68	32	.32	.48
18	soon crop mop pop	21	79	.79	.42
19	took kick hook book	64	36	.36	.49
20	throat goat luck boat	18	82	.82	.39

Note. ^a 0 = wrong answer; 1 = correct answer

^b The percentage has been rounded to the nearest whole number.

Appendix K (*continued*)

Table K2

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Rime Awareness Posttest Items—Group One (N = 28)

No.	Item Description	0 ^a	1	M	SD
1	make sake bake win	14 ^b	86	.86	.36
2	light neat kite bright	29	71	.71	.46
3	fine sing wing bring	68	32	.32	.48
4	dine ring line decline	64	36	.36	.49
5	dump hump boat lump	43	57	.57	.50
6	clown frown gown long	39	61	.61	.50
7	peep leap buck jeep	25	75	.75	.44
8	feet Dad glad pad	64	36	.36	.49
9	well hell yell roll	11	89	.89	.31
10	fool wool tan bull	7	93	.93	.26
11	came some same lame	43	57	.57	.50
12	sing swing gain string	46	54	.54	.51
13	cent went front tent	54	46	.46	.51
14	buck hike suck luck	39	61	.61	.50
15	hill Jill pill file	11	89	.89	.31
16	sow low go how	29	71	.71	.46
17	bank pink tink sink	43	57	.57	.50
18	moon top hop cop	29	71	.71	.46
19	cook tick nook look	43	57	.57	.50
20	coat note duck rote	25	75	.75	.44

Note. ^a 0 = wrong answer; 1 = correct answer

^b The percentage has been rounded to the nearest whole number.

Appendix K (*continued*)

Table K3

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Rime Awareness Pretest Items—Group Two (N = 29)

No.	Item Description	0 ^a	1	M	SD
1	lake cake take pin	14 ^b	86	.86	.35
2	tight meet sight night	48	52	.52	.51
3	wine ring king sting	62	38	.38	.49
4	fine king vine pine	41	59	.59	.50
5	bump jump coat pump	59	41	.41	.50
6	down brown town song	21	79	.79	.41
7	keep weep luck deep	45	55	.55	.51
8	beat mad had sad	35	65	.66	.48
9	bell sell tell doll	24	76	.76	.44
10	cool pool fan tool	31	69	.69	.47
11	fame come shame tame	45	55	.55	.51
12	ring swing pain bring	31	69	.69	.47
13	sent bent hunt rent	41	59	.59	.50
14	luck bike muck stuck	90	10	.10	.31
15	bill still will mile	38	62	.62	.49
16	crow bow grow cow	72	28	.28	.45
17	tank blink wink link	79	21	.21	.41
18	soon crop mop pop	62	38	.38	.49
19	took kick hook book	59	41	.41	.50
20	throat goat luck boat	28	72	.72	.45

Note. ^a 0 = wrong answer; 1 = correct answer

^b The percentage has been rounded to the nearest whole number.

Appendix K (*continued*)

Table K4

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Rime Awareness Posttest Items—Group Two (N = 29)

No.	Item Description	0 ^a	1	M	SD
1	make sake bake win	10 ^b	90	.90	.31
2	light neat kite bright	72	28	.28	.45
3	fine sing wing bring	72	28	.28	.45
4	dine ring line decline	55	45	.45	.51
5	dump hump boat lump	14	86	.86	.35
6	clown frown gown long	21	79	.79	.41
7	peep leap buck jeep	62	38	.38	.49
8	feet Dad glad pad	55	45	.45	.51
9	well hell yell roll	10	90	.90	.31
10	fool wool tan bull	7	93	.93	.26
11	came some same lame	48	52	.52	.51
12	sing swing gain string	41	59	.59	.50
13	cent went front tent	72	28	.28	.45
14	buck hike suck luck	66	34	.34	.48
15	hill Jill pill file	48	52	.52	.51
16	sow low go how	28	72	.72	.45
17	bank pink tink sink	66	34	.34	.48
18	moon top hop cop	21	79	.79	.41
19	cook tick nook look	48	52	.52	.51
20	coat note duck rote	41	59	.59	.50

Note. ^a 0= wrong answer; 1 = correct answer

¹ The percentage has been rounded to the nearest whole number.

Appendix L

Table L1

*Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for
Survey of Musical and Linguistic Intelligences Items—Group One (N = 28)*

No.	Item Description	1 ^a	2	3	4	M	SD
1	I often hum, sing, or whistle.	25 ^b	25	46	4	2.29	.90
2	I like to read.	4	0	39	57	3.50	.69
3	I can play musical instruments, such as piano or flute.	18	36	18	28	2.50	1.20
4	When people sing or play the wrong note, I can find the mistake right away.	3	29	32	36	2.93	1.05
5	I am good at telling stories or jokes.	0	39	32	29	2.89	.83
6	In class, if the teacher asks questions, I will raise my hand to express my opinions.	11	18	39	32	2.93	.98
7	I can identify my classmates simply by hearing their voices.	0	11	36	53	3.43	.69
8	I still remember what my teacher said yesterday (e.g., a joke or notes).	14	7	32	47	3.11	1.07
9	I often have feelings when I hear the melodies of songs. Some songs make me happy; some songs make me sad.	21	1	36	36	2.86	1.15
10	If the teacher asks us to clap hands by following certain rhythms, I seldom miss the rhythms.	0	4	21	75	3.71	.53
11	I know many idioms or stories behind idioms.	11	18	43	28	2.89	.96
12	I can vividly describe the plot of some cartoon programs to my friends.	18	25	28	29	2.68	1.09
13	I learn new songs fast.	21	18	29	32	2.71	1.15
14	I like listening to music.	7	7	22	64	3.43	.92
15	I am good at memorizing new classmates' names.	4	14	21	61	3.29	1.08

Note. ^a 1 = strongly disagree; 2 = disagree; 3 = agree; 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Appendix L (*continued*)

Table L2

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Survey of Musical and Linguistic Intelligences Items—Group Two (N = 29)

No.	Item Description	1 ^a	2	3	4	M	SD
1	I often hum, sing, or whistle.	14 ^b	28	24	34	2.79	1.08
2	I like to read.	3	7	31	59	2.45	.78
3	I can play musical instruments, such as piano or flute.	24	24	24	28	2.55	1.15
4	When people sing or play the wrong note, I can find the mistake right away.	7	28	28	37	2.97	.98
5	I am good at telling stories or jokes.	14	10	35	41	3.04	1.07
6	In class, if the teacher asks questions, I will raise my hand to express my opinions.	17	28	34	21	2.59	1.02
7	I can identify my classmates simply by hearing their voices.	3	0	31	66	3.59	.68
8	I still remember what my teacher said yesterday (e.g., a joke or notes).	0	17	31	52	3.34	.77
9	I often have feelings when I hear the melodies of songs. Some songs make me happy; some songs make me sad.	10	7	17	66	3.38	1.01
10	If the teacher asks us to clap hands by following certain rhythms, I seldom miss the rhythms.	7	4	10	79	3.62	.86
11	I know many idioms or stories behind idioms.	10	21	17	52	3.10	1.08
12	I can vividly describe the plot of some cartoon programs to my friends.	7	7	38	48	3.28	.88
13	I learn new songs fast.	7	17	28	48	3.17	.97
14	I like listening to music.	0	7	17	76	3.69	.60
15	I am good at memorizing new classmates' names.	0	14	14	72	3.59	.73

Note. ^a 1 = strongly disagree; 2 = disagree; 3 = agree; 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Appendix M

Table M1

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Survey of Attitudes toward English Nursery Rhymes and Chants Items—Group One (N = 28)

No.	Item Description	1 ^a	2	3	4	M	SD
1	I like the English nursery rhymes and chants I learned in class.	7 ^b	4	46	43	3.25	.84
2	I like to read English nursery rhymes and chants.	14	7	40	39	3.04	1.04
3	I like to read the English nursery rhymes and chants I learned in class to my friends and family.	29	32	25	14	2.25	1.04
4	I often read the English nursery rhymes and chants I learned in class to my friends and family.	39	14	22	25	2.32	1.25
5	After class, I practice reading the English nursery rhymes and chants I learned.	36	39	14	11	2.00	.98
6	I can recite most of the English nursery rhymes and chants I learned.	32	32	14	22	2.25	1.14
7	I think that English nursery rhymes and chants dispel my fear of speaking English.	21	11	32	36	2.82	1.16
8	I think that English nursery rhymes and chants help me to speak better English.	18	14	32	36	2.86	1.11
9	English nursery rhymes and chants help me learn English vocabulary.	4	21	18	57	3.33	.92
10	I think that the English nursery rhymes and chants introduced in class are interesting.	7	18	29	46	3.19	.96
13	I hope I can learn more English nursery rhymes and chants in class.	21	7	18	54	3.04	1.23

Note. ^a 1 = strongly disagree; 2 = disagree; 3 = agree; 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.

Appendix M (*continued*)

Table M2

Frequencies of Responses (in %), Means (M), and Standard Deviations (SD) for Survey of Attitudes toward English Nursery Rhymes and Chants Items—Group Two (N = 29)

No.	Item Description	1 ^a	2	3	4	M	SD
1	I like the English nursery rhymes and chants I learned in class.	7 ^b	3	31	59	3.41	.87
2	I like to read English nursery rhymes and chants.	10	4	38	48	3.24	.95
3	I like to read the English nursery rhymes and chants I learned in class to my friends and family.	21	31	17	31	2.59	1.15
4	I often read the English nursery rhymes and chants I learned in class to my friends and family.	28	21	28	23	2.48	1.15
5	After class, I practice reading the English nursery rhymes and chants I learned.	21	24	17	38	2.72	1.19
6	I can recite most of the English nursery rhymes and chants I learned.	24	48	7	21	2.24	1.06
7	I think that English nursery rhymes and chants dispel my fear of speaking English.	7	24	14	55	3.17	1.04
8	I think that English nursery rhymes and chants help me to speak better English.	10	28	31	31	2.83	1.00
9	English nursery rhymes and chants help me learn English vocabulary.	3	14	35	48	3.28	.84
10	I think that the English nursery rhymes and chants introduced in class are interesting.	7	14	17	62	3.34	.97
13	I hope I can learn more English nursery rhymes and chants in class.	14	7	10	69	3.34	1.11

Note. ^a 1 = strongly disagree; 2 = disagree; 3 = agree; 4 = strongly agree

^b The percentage has been rounded to the nearest whole number.