

The Development of Kindergarten Students' English Pronunciation Skill Using Phonics Method and Harrow's Instructional Model: A Case Study in a Thai Primary School

* Ratchadaporn Sukarapuntorn¹, Phibun Tanyabut²

Master of Education Program in Curriculum and Instruction
Suryadhep Teachers College Rangsit University, Prathumthani, Thailand

*Corresponding author, E-mail: phibun.t@rsu.ac.th

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Abstract

The purposes of this research were to investigate the effects of phonics instruction combined with Harrow's taxonomy of the psychomotor domain on English word pronunciation skills and satisfaction of first-grade students in schools under the jurisdiction of the Nakhon Nayok Primary Educational Service Area Office. The sample group consisted of 39 first-grade students in classroom 1/5, semester 1, academic year 2024, from a Kindergarten in Nakhon Nayok Province. The sample was obtained by cluster random sampling, using classrooms as the sampling unit. The research instruments included four lesson plans, a 10-item test measuring English word pronunciation skills, and a 7-item satisfaction questionnaire. Data were analyzed using mean, standard deviation, and t-test. The results of the research revealed that: 1) The English word pronunciation skills of first-grade students after receiving instruction using phonics combined with Harrow's taxonomy of psychomotor domain were significantly higher than before receiving instruction at the .05 level of significance. 2) First-grade students had a high level of satisfaction with the instruction using phonics combined with Harrow's taxonomy of psychomotor domain ($\bar{x} = 2.77$, S.D. = 0.06), especially in terms of increased ability to pronounce English words ($\bar{x} = 2.89$, S.D. = 0.30), enjoyment and participation in activities ($\bar{x} = 2.82$, S.D. = 0.38), and understanding of phonics ($\bar{x} = 2.76$, S.D. = 0.42).

Keywords :Phonics; Pronunciation Skills; Harrow's Taxonomy.

1. Introduction

In the rapidly evolving global landscape of the 21st century, education is undergoing a profound transformation to meet the demands of the modern world. Schools are tasked with equipping students for an ever-changing future, necessitating the teaching of new skills such as critical thinking, problem-solving, and teamwork (UNICEF Thailand, 2019). Flexibility in education is paramount, enabling students to learn anytime and anywhere, which is facilitated by the integration of technology and innovative learning methodologies

(Achari, 2023). Embracing technological advancements is crucial for schools to enhance the quality of learners' lives and empower them to thrive in a diverse global society (Townsville Catholic Education, 2023).

English, as the lingua franca of the 21st century, holds immense significance in international communication, business, education, and culture. Spoken by over 1.5 billion people worldwide, English is the most popular language for second language acquisition (Statista, 2022). Its prominence in academia is evident as it is the language of instruction in leading universities and colleges globally (Altbach, 2024). Furthermore, English is widely used in scholarly publications and research, making it indispensable for higher education (Onder, 2014).

Recognizing the importance of foreign language learning in daily life, Thailand mandates English as a compulsory subject from primary to secondary education. The Ministry of Education aims to equip students with foundational English language skills for communication, listening, speaking, reading, and writing (Wongkumsai, 2023). The Basic Education Core Curriculum B.E. 2551 outlines standards, learning content, and indicators to ensure students can understand and utilize English in their daily lives (Office of the Basic Education Commission, 2008).

However, the Ordinary National Educational Test (O-NET) results reveal that most students' English scores fall below the Ministry of Education's standards (Bangkok Post, 2020). This issue stems from several factors, including the lack of specialized English language teaching degrees among many English teachers and the scarcity of high-quality English language teaching materials in Thai schools (Suwanarak & Phothongsunun, 2009). Consequently, students who struggle with English may face challenges in university entrance exams, job searches, and cross-cultural communication (Puengpipattrakul et al., 2007).

One significant challenge in teaching English to Thai primary students is pronunciation, as Thai lacks certain English sounds, leading to substitutions with familiar Thai sounds. Despite theoretical understanding, students may struggle with accurate pronunciation, impacting communication effectiveness. This difficulty arises from a lack of understanding of the relationship between letters and unfamiliar sounds, leading to mispronunciation and misunderstanding of word meanings. Therefore, teaching pronunciation should encompass both accuracy and comprehension.

Phonics instruction, emphasizing letter-sound relationships, has proven effective in teaching English pronunciation, particularly at the primary level. Research by Orrasa Sae-Tiew (2013) and Suchada Inmee (2013) demonstrates the positive impact of phonics on reading skills in third-grade students. Similarly, Jirapa Suea-In (2016) found that phonics instruction improved reading abilities in second-grade students. Further studies by Natthapon Suriyamonthon (2018), confirm the effectiveness of phonics in enhancing

reading and writing skills in first-grade students. Research by Evans (1985) and Carr (1985) also highlights the superiority of phonics instruction over traditional methods in improving reading scores. Adams (1998) and Hill (1999) further support the efficacy of phonics in developing reading skills and spelling abilities.

Harrow's Taxonomy of Learning Domains, a learning theory developed by Reinold Harrow (1972), is widely used in education to design effective instruction. This theory categorizes learning into six domains: knowledge, comprehension, application, analysis, evaluation, and synthesis, each with distinct levels of complexity. Harrow's Model of Skill Acquisition emphasizes consistent and continuous practice to develop reading skills. Combining phonics instruction with Harrow's model has been found to significantly improve students' English pronunciation skills.

Given the significance of the aforementioned issues, this research aims to utilize phonics instruction combined with Harrow's instructional model to enhance the English pronunciation skills of first-grade students. By fostering a deeper understanding of letter sounds, word formation, and pronunciation rules, this approach seeks to empower students to read and pronounce English words accurately, ultimately improving their reading skills and fostering a positive attitude towards English language learning.

2. Literature Review

The literature review for this research encompasses both Thai and international studies, exploring the theoretical foundations and empirical evidence related to phonics instruction, Harrow's taxonomy of the psychomotor domain, and their combined impact on English word pronunciation skills and student satisfaction.

2.1 Research focusing on the Thai EFL context

Several Thai studies have investigated the effectiveness of phonics instruction in improving English language skills among primary school students. Suchada Inmee (2013) focused on developing phonics poster media for third-grade students and found a significant improvement in their pronunciation skills. Laksana Phan Bamrungrattanakul (2014) explored the impact of phonics instruction on spelling and pronunciation in second-grade students, revealing significant improvements in both areas. Jiraporn Suea-In and Tasanee Charthai (2016) examined the development of reading skills through phonics instruction in second-grade students, reporting significant gains in reading abilities and high levels of student satisfaction. Kulthida Kookeartkan (2016) investigated the effects of phonics instruction on word recognition and pronunciation in first-grade students, demonstrating significant improvements and high levels of student satisfaction. Tuangrat Saejong (2021) focused on developing reading, pronunciation, and spelling skills using phonics drills with third-grade students, finding significant improvements and high levels of satisfaction. Natthapon Suriyamonthon et al. (2018) studied the impact of phonics

instruction on pronunciation and vocabulary knowledge in first-grade students, revealing significant improvements in both areas. Chaweewan Wattananukit (2022) developed a set of phonics-based learning activities for first-grade students and found significant improvements in pronunciation and academic achievement, along with positive attitudes towards English learning. Jutarat Wilayrat (2022) also explored the effects of phonics instruction on pronunciation skills and satisfaction in first-grade students, reporting significant improvements and high satisfaction levels.

2.2 Research focusing on the non-Thai EFL context

International research also supports the efficacy of phonics instruction in improving reading skills. Smith (1998) compared the whole language method with the phonics method and found that students taught with phonics had significantly better reading outcomes. Wolf (2016) examined the development of letter-sound knowledge and decoding skills in preschool children, finding that phonics instruction led to faster and more significant improvements in letter-sound reading and CVC word decoding. Bowers and Bowers (2017) advocated for teaching the logic of English spelling alongside phonics, highlighting its potential to enhance reading skills beyond pronunciation. Salas (2018) investigated the development of pronunciation skills in pre-primary students using Jolly Phonics and found significant improvements and positive attitudes towards pronunciation. Mullins (2013) analyzed the effectiveness of the Phonics Dance in improving letter-sound knowledge and word recognition, demonstrating its superiority over traditional phonics instruction. Farokhbakht & Dariush (2015) studied the effects of synthetic phonics instruction with multisensory activities and found significant improvements in reading and spelling skills, particularly among boys. Coates, Gorham, and Nicholas (2017) examined the effectiveness of phonics instruction for English language learners in Italy and reported significant improvements in pronunciation skills.

Synthesis

The literature review demonstrates a convergence of evidence from both Thai and international research, highlighting the effectiveness of phonics instruction in improving English word pronunciation skills among primary school students. Moreover, studies consistently report high levels of student satisfaction with phonics instruction, suggesting its potential to foster positive attitudes towards English language learning. This research builds upon this existing body of knowledge by integrating Harrow's taxonomy of the psychomotor domain into phonics instruction, aiming to further enhance pronunciation skills and create a more engaging and effective learning experience for first-grade students.

3. Research Objectives

3.1 To compare the English word pronunciation skills of first-grade students before and after using phonics instruction combined with Harrow's taxonomy of the psychomotor domain.

3.2 To study the satisfaction of first-grade students towards using phonics instruction combined with Harrow's taxonomy of the psychomotor domain.

4. Research Questions

4.1 Do first-grade students have higher English word pronunciation skills after learning with phonics instruction combined with Harrow's taxonomy of the psychomotor domain than before learning?

4.2 What is the level of satisfaction of first-grade students towards phonics instruction combined with Harrow's taxonomy of the psychomotor domain?

5. Research Methodology

Research Design

This experimental research utilized a one-group pretest-posttest design to investigate the effects of phonics instruction combined with Harrow's taxonomy of the psychomotor domain on English word pronunciation skills and satisfaction of first-grade students.

Participants

The sample consisted of 39 first-grade students from a primary school in Nakhon Nayok province, Thailand, selected through cluster random sampling using the classroom as the sampling unit.

Research Instruments

The research instruments included:

Four lesson plans incorporating phonics instruction and Harrow's taxonomy across five stages: building motivation, initiating learning, engaging in practice, student participation, and encouragement.

A pretest and posttest consisting of 10 items measured students' English word pronunciation skills

A 7-item questionnaire assessed student satisfaction with the instructional approach, covering aspects such as content, activities, teaching materials, and perceived benefits.

Validity and Reliability

All research instruments underwent content validity checks using the Index of Item Objective Congruence (IOC) and demonstrated acceptable reliability. The lesson plans were further evaluated for effectiveness using the 80/80 criterion.

Data Analysis

Data analysis involved:

Descriptive statistics (mean and standard deviation) to summarize the data

Inferential statistics (t-test) to compare pretest and posttest scores and assess the significance of changes in pronunciation skills

Ethical Considerations

The study adhered to ethical considerations for research involving human subjects, obtaining approval from the Research Ethics Office at Rangsit University (COA. No. RSUERB2024-060).

6. Research Analysis

In this research, various statistical methods were employed to analyze the data obtained from the experiment and questionnaires:

Content Validity: The Index of Item Objective Congruence (IOC) was used to examine the content validity of the lesson plans, the English word pronunciation assessment, and the student satisfaction questionnaire, ensuring alignment between content, objectives, and learning activities.

Lesson Plan Effectiveness: The 80/80 criterion was applied to evaluate the effectiveness of the lesson plans in enhancing students' English word pronunciation skills.

Reliability: Cronbach's alpha (α -Coefficient) was used to assess the reliability of both the English word pronunciation assessment and the student satisfaction questionnaire, ensuring the internal consistency and reliability of the instruments.

Pronunciation Assessment: A 5-level rubric scoring system was utilized to evaluate students' English pronunciation skills, specifically focusing on their ability to pronounce letters A-Z and words.

Descriptive Analysis: Mean and standard deviation were calculated to describe the characteristics of pretest and posttest scores and students' opinions.

Inferential Analysis: A t-test was conducted to compare the mean scores of the pretest and posttest, determining the significance of any changes in students' pronunciation skills.

7. Research Hypotheses

7.1 The English word pronunciation skills of first-grade students who have received instruction using phonics combined with Harrow's taxonomy of psychomotor domain are significantly higher after learning than before learning, at the .05 level of significance.

7.2 The satisfaction of first-grade students towards using phonics instruction combined with Harrow's taxonomy of the psychomotor domain is at a high level or above.

8. Results and Discussion

The research findings regarding the development of English word pronunciation skills of first-grade students using phonics instruction combined with Harrow's taxonomy of the psychomotor domain are presented and discussed in two parts:

Part 1: Comparison of Pretest and Posttest Results

A t-test analysis revealed a statistically significant improvement in students' English word pronunciation skills after receiving the intervention ($p < .05$) as follows:

Table 1: Pretest and Posttest Scores on English Word Pronunciation

Group	Mean (N=39)	S.D. (N=39)	df	t	p-value
Pretest	15.38	1.76	22	6.54	0.001
Posttest	17.36	1.04			

The mean score of the posttest ($\bar{x} = 17.36$, S.D. = 1.04) was significantly higher than the mean score of the pretest ($\bar{x} = 15.38$, S.D. = 1.76). This result aligns with previous research findings that support the effectiveness of phonics instruction in enhancing pronunciation skills (Suchada Inmee, 2013; Laksana Phan Bamrungrattanakul, 2014; Jiraporn Suea-In and Tasanee Chartthai, 2016; Kulthida Kookeartkan, 2016; Tuangrat Saejong, 2021; Natthapon Suriyamonthon et al., 2018).

The five stages of the instructional approach employed in this research, namely building motivation, initiating learning, engaging in practice, student participation, and

encouraging, contributed to the observed improvement. Through various media and activities, the initial stage of building motivation effectively captured students' interest and created a fun learning environment, facilitating the subsequent imitation and learning of letter sounds. The structured and gradual learning process in the initiating learning stage, aligned with Harrow's manipulation stage, enabled students to accurately learn the English alphabet. The engaging practice stage, incorporating games and songs, provided ample opportunities for students to practice blending and segmenting sounds, leading to the discovery of new words through letter substitution and demonstrating their understanding of phonics principles. The student participation stage, where students actively engaged in speaking, pronouncing, and writing words, fostered the application of learned skills and improved spelling and reading comprehension. Finally, the encouragement stage, emphasizing positive reinforcement and confidence building, contributed to students' fluency and naturalization of pronunciation skills.

Part 2: Student Satisfaction

The results of the student satisfaction questionnaire revealed a high level of satisfaction ($\bar{x} = 2.77$, S.D. = 0.06) with the phonics instruction combined with Harrow's taxonomy of the psychomotor domain. Students particularly appreciated their increased ability to pronounce English words, their enjoyment and engagement in activities, and their understanding of phonics. This finding is consistent with previous research by Kulthida Kookeartkan (2016) and Jutarat Wilayrat (2022), which also reported high levels of student satisfaction with phonics instruction.

Data Collection Procedure

The student satisfaction questionnaire was administered to all 39 participants after the completion of the intervention. Students were given clear instructions on how to complete the questionnaire and were encouraged to answer honestly. The questionnaire was completed anonymously to ensure confidentiality.

The high level of satisfaction can be attributed to several factors. The fun and engaging learning activities, incorporating games, songs, and movement, stimulated students' interest and created a positive learning atmosphere. The successful pronunciation of English words, facilitated by phonics instruction, boosted students' confidence and motivation. The continuous encouragement and praise from the teacher, in line with Harrow's model, further enhanced their satisfaction. Additionally, the use of attractive and appropriate teaching materials, such as colourful illustrations and a suitable number of vocabulary words, contributed to a positive learning experience.

However, despite the overall high satisfaction, some questionnaire items received slightly lower ratings, suggesting areas for improvement in future instruction. These areas include ensuring adequate time for activities to prevent fatigue, addressing individual

differences in students' abilities and learning styles, and creating a classroom environment that encourages the use of English for communication and confidence building.

9. Conclusion

In conclusion, this research underscores the efficacy of phonics instruction combined with Harrow's taxonomy of the psychomotor domain in enhancing English word pronunciation skills among first-grade students. The significant improvement observed in pronunciation skills, coupled with the high level of student satisfaction, affirms the effectiveness of this integrated approach. The five stages of the instructional model, namely building motivation, initiating learning, engaging in practice, student participation, and encouragement, collectively contributed to the positive outcomes.

The findings of this research have practical implications for English language teaching in Thai primary schools. Integrating phonics instruction with Harrow's taxonomy can be a valuable tool for teachers to enhance students' pronunciation skills and foster a positive attitude towards English language learning. The study also highlights the importance of considering individual differences and creating a supportive classroom environment to maximize the effectiveness of this approach.

Furthermore, this research contributes to the growing body of evidence supporting the use of phonics instruction in second language acquisition. By incorporating Harrow's taxonomy, this study offers a novel perspective on integrating psychomotor skills development into language learning, potentially opening new avenues for research and pedagogical innovation. Future research could explore the long-term impact of this approach and its applicability to other grade levels and language skills.

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11. The Author

Miss Ratchadaporn Sukarapuntorn is a student in the Master of Education Program in Curriculum and Instruction. Suryadhep Teachers College Rangsit University, Prathumthani, Thailand.

12. References

- Achari, C. (2023). *Flexible learning: Enhancing education in the 21st century*. LinkedIn. Retrieved from <https://www.linkedin.com/pulse/flexible-learning-enhancing-education-21st-century-charankumar-achari-p0gnc>
- Adams, M. J. (1998). *Beginning to read: Thinking and learning about print*. MIT Press.
- Altbach, P. G. (2024). *The imperial tongue: English as the dominating academic language*. International Higher Education. Retrieved from <https://ejournals.bc.edu/index.php/ihe/article/download/7986/7137/13854>
- Bamrungrattanakul, L. (2014). The development of spelling and English pronunciation of grade 2 students at Satit Kasetsart University Laboratory School by using phonics instruction.
- Bangkok Post. (2020). Long-overdue end of O-Net exams. Retrieved from <https://www.bangkokpost.com/thailand/general/2044427/long-overdue-end-of-o-net-exams>
- Bowers, J. S., & Bowers, P. N. (2017). Beyond phonics: The case for teaching children the logic of the English spelling system. *Educational Psychologist*, 52(2), 124-141.
- Evans, M. A. (1985). Children's ability to identify and segment phonemes in words: A development study. *Journal of Educational Psychology*, 77(4), 452-461.
- Farokhbakht, L., & Dariush, M. (2015). The effect of Jolly Phonics on EFL learners' reading and spelling ability and motivation. *Theory and Practice in Language Studies*, 5(12), 2521-2528.
- Graddol, D. (2006). *English next*. British Council.
- Harrow, A. J. (1972). *A taxonomy of the psychomotor domain: A guide for developing behavioral objectives*. David McKay Company.
- Hill, S. (1999). Phonics and spelling knowledge of primary school children. *Educational Research*, 41(3), 269-280.
- Hornby, A. S. (2000). *Oxford Advanced Learner's Dictionary of Current English* (6th ed.). Oxford University Press.
- Inmee, S. (2013). The development of English pronunciation of grade 3 students using phonics posters media. *Veridian E-Journal, Silpakorn University (Humanities, Social Sciences and Arts)*, 6(3), 145-158.
- Jenkins, J. (2015). *Global Englishes: A resource book for students* (3rd ed.). Routledge.
- Jolly Phonics (2011). *Jolly Phonics Guide for Parents and Teachers*. Retrieved from <http://www.jollylearning.co.uk>

- Kookeartkan, K. (2016). The effects of phonics instruction on word recognition and pronunciation of English as a foreign language learners.
- McKay, S. L. (2002). *Teaching English as an international language: Rethinking goals and approaches*. Oxford University Press.
- Mullins, M. K. (2013). An analysis of the phonics dance in a semi-rural Midwestern elementary school.
- Office of the Basic Education Commission. (2008). *The Basic Education Core Curriculum B.E. 2551 (A.D. 2008)*. Retrieved from http://academic.obec.go.th/images/document/1525235513_d_1.pdf
- Onder, O. N. (2014). *The role of English as a lingua franca in academia: The case of Turkish postgraduate students in an Anglophone-centre context*. *Procedia - Social and Behavioral Sciences*, 186, 438-445.
<https://doi.org/10.1016/j.sbspro.2014.05.087>
- Puengpipattrakul, W., Chiramanee, N., & Sripetpun, W. (2007). The challenge facing Thai graduates and their potential for English-required workforce. *Thai Journal of Science*, 28, 288-297.
- Saejong, T. (2021). The development of English pronunciation and spelling skills using phonics drills of grade 3 students.
- Sae-Tiew, O. (2013). Using phonics to develop English skills of grade 3 students. *Journal of Education Naresuan University*, 15(3), 101-109.
- Salas, J. G. (2018). The development of English pronunciation skills of pre-primary students through Jolly Phonics instruction.
- Smith, J. W. A. (1998). The effects of phonics instruction on reading achievement.
- Statista. (2022). *70 statistics about the English language*. EC English. Retrieved from <https://www.ecenglish.com/en/school-locations/blog/ec/2024/04/24/70-statistics-about-the-english-language>
- Suea-In, J., & Charthai, T. (2016). The development of reading ability using phonics instruction of grade 2 students at B swoonkhumratsabamrung School. *The 12th National Conference on Humanities and Social Sciences*, 853-862.
- Suriyamonthon, N. (2018). Phonics instruction to promote pronunciation and vocabulary knowledge of first-grade students. *Journal of Education, Mahasarakham University*, 37(1), 117-128.
- Suwanarak, K., & Phothongsunun, S. (2009). English-teaching problems in Thailand and Thai teachers. ERIC. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1078705.pdf>
- Townsville Catholic Education. (2023). *The role of technology in modern education*. Retrieved from <https://www.tsv.catholic.edu.au/the-role-of-technology-in-modern-education/>
- UNICEF Thailand. (2019). *Education for the 21st century*. Retrieved from <https://www.unicef.org/thailand/stories/education-21st-century>
- Wattananukit, C. (2022). The development of learning activity packages using phonics instruction to enhance English pronunciation for Prathom Suksa 1 students.

- Weaver, C. (1994). Reading process and practice: From socio-psycholinguistics to whole language (2nd ed.). Heinemann.
- Weaver, C. (2002). Reading process and practice: From socio-psycholinguistics to whole language (3rd ed.). Heinemann.
- Wilayat, J. (2022). The development of English pronunciation ability by using phonics instruction of grade 1 students.
- Wolf, M. (2016). Proust and the squid: The story and science of the reading brain. HarperCollins.
- Wongkumsai, S. (2023). *The importance of English in Thai society and technology*. Northeastern University Academic and Research Journal. Retrieved from <https://so04.tci-thaijo.org/index.php/neuarj/article/download/264395/180017>