

The correlation between English phonological awareness and reading ability

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Abstract

This article reviews multiple studies on the relationship between English phonological awareness and reading ability, exploring the intrinsic connection between the two. Numerous studies have shown that English phonological awareness is a significant factor influencing the development of reading ability, particularly in early childhood reading acquisition. By analyzing the research subjects, methods, and findings, this article also examines the limitations of existing research and offers insights for future studies. The study found a significant correlation between English phonological awareness and reading ability, with different components of phonological awareness playing distinct roles in reading development. Moreover, English phonological awareness serves as a predictive factor in reading acquisition. This research has important theoretical and practical implications for guiding reading instruction and improving the reading performance of children with reading difficulties. Future research should further explore the mechanisms of interaction between phonological awareness and reading ability, considering the combined effects of multiple causal systems in reading development.

Keywords

English Phonemic Awareness; Reading Ability; Related

1. Introduction

Reading is a vital means for humans to acquire knowledge and information, and the development of reading skills is influenced by various factors. Phonological awareness, a key cognitive factor in reading acquisition, has been a focus of extensive research. It refers to an individual's sensitivity and ability to understand the phonetic structure of language, including the recognition, manipulation, and combination of phonetic units such as phonemes, syllables, and rhymes. Numerous studies have shown that the development of phonological awareness significantly impacts children's mastery of the correspondence between character shapes and phonemes, text decoding, and reading fluency. In recent years, with the acceleration of globali-

zation, English has become a crucial tool for international communication, and the relationship between phonological awareness and reading ability has garnered significant attention from scholars both domestically and internationally. This study aims to review recent research on the relationship between English phonological awareness and reading ability, analyze the intrinsic connections between the two, and explore the mechanisms by which English phonological awareness influences reading acquisition. By reviewing relevant literature, this study seeks to provide a more comprehensive theoretical foundation for English reading instruction and offer insights for further research in this field. Additionally, this study will address the limitations of existing research and propose suggestions for future studies, with the goal of providing deeper insights into the relationship between English phonological awareness and reading the internal connection and development law between the abilities.

2. Research Object

2.1. Children

Children are the main subjects of the study on the relationship between English phonological awareness and reading ability. Wang Yan and Lin Chongde et al. (2002) found that children with poor English learning had defects in pseudo-word spelling ability, but showed normal performance in English phonological awareness, auditory verbal working memory and visual verbal working memory.[1] These children scored lower on reading comprehension tests and showed delayed development in syntactic awareness. Further analysis revealed a significant correlation between children's English phonemic awareness skills and their reading comprehension abilities. This suggests that English phonemic awareness plays a crucial role in the development of children's reading skills. Tao Sha, Feng Yanjiao, and others (2007) explored the relationship between different components of Chinese and English phonemic awareness and English reading learning. They found that among children who read normally, only the initial-rhyme awareness of English was significantly related to reading tasks; whereas among children who read poorly, all three components of English phonemic awareness—syllable awareness, rhyme awareness, and phoneme awareness—were significantly related to reading tasks. [2] This suggests that different components of English phonemic awareness may play a different role in children at different reading levels.

2.2. Those who do not learn English well

English learners who struggle are also a significant focus of research in this field. These individuals face challenges in reading comprehension, and their development of English phonological awareness is of particular concern. Wang Yan and Lin Chongde (2002) found that children who struggle with English have deficits in pseudo-word spelling but perform normally in other phonological skills. Addition-

ally, these children's syntactic awareness is also underdeveloped. When predicting children's reading comprehension using regression analysis, pseudo-word spelling, phonological awareness, syntactic awareness, and auditory working memory are all strong predictors.[1] This suggests that English phonemic awareness also plays an important role in the development of reading ability in children with poor English learning.

2.3. Adult learners

College students, who have a certain foundation in English learning, are of particular interest in the relationship between their English phonetic awareness and reading ability. Wang Feifeng (2009) conducted a survey on the English rhyme awareness, syllable awareness, and phoneme awareness of freshmen and tested their reading ability. The results showed that English phonetic awareness of freshmen is highly correlated with their reading ability, and phonetic awareness is a strong predictor of good reading ability. Moreover, there were significant differences in the three aspects of English phonetic awareness: rhyme awareness was better than syllable awareness, which in turn was better than phoneme awareness.[3] This suggests that even among college students, English phonemic awareness still has an important impact on reading ability.

3. Research methods

In the study of the relationship between English phonetic awareness and reading ability, researchers used a variety of methods and techniques to collect and analyze data. These methods mainly include experimental method, survey method and regression analysis method.

3.1. Experimental methods

The experimental method is a commonly used approach to study the relationship between English phonemic awareness and reading ability. By designing specific tasks, such as pseudo-word spelling, syllable counting, and rhyme comparison, the level of participants English phonemic awareness can be measured. Additionally, by integrating reading comprehension tests, the relationship between phonemic awareness and reading ability can be explored. For instance, Wang Feifeng (2009) surveyed first-year college students on their phonemic awareness, syllable awareness, and phonological awareness, and also tested their English reading ability. The data were then analyzed using SPSS for descriptive, correlation, and regression analyses.[3] The results show that there is a high correlation between college students English phonetic awareness and their reading ability.

3.2. Survey method

Through methods such as questionnaires and interviews, information about chil-

dren's phonological awareness and reading ability in their daily lives and studies is collected. This method helps understand children's perception and application of phonological structures and reading strategies, providing a solid empirical foundation for further research. For example, Pan Ying, Deng Xiaoping, et al. (2019) conducted a meta-analysis by collecting questionnaire data from related studies both domestically and internationally, to explore the relationship between Chinese students' English phonological awareness and their English reading performance.[4]

3.3. Regression analysis

Regression analysis is a statistical method used to study the relationship between a dependent variable and multiple independent variables. By establishing a regression equation, it can predict the value of the dependent variable and assess the impact of the independent variables on the dependent variable. This method is widely applied in studies examining the relationship between English phonological awareness and reading ability. For instance, Wang Yan and Lin Chongde et al. (2002) used regression analysis to explore the relationship between children's English phonological awareness, syntactic awareness, and reading comprehension, finding significant correlations and predictive effects among these variables.[1]

In addition, the researchers used statistical analysis, correlation analysis, meta-analysis and other techniques to process and interpret the data to reveal the quantitative relationship and trend between speech awareness and reading ability.

4. Research results

4.1. English phonetic awareness is significantly related to reading ability

A large number of studies have shown that there is a significant correlation between English phonological awareness and reading ability. This relationship has been verified in preschool children, primary school students and other age groups. Specifically, children with higher phonological awareness tend to perform better in reading accuracy, reading fluency, reading comprehension and other aspects.

For example, Wang Feifeng (2009) studied the English phonetic awareness and reading ability of freshmen in higher vocational colleges. The results showed that there was a strong correlation between English phonetic awareness and reading ability ($r=0.487$, $p<0.001$), and phonetic awareness was a better predictor of reading ability.[3] Similar findings have also been observed in children of other age groups and linguistic backgrounds. Wang Yan and Lin Chongde, among others (2002), conducted a study with junior high school and first-year high school students. The study examined the development of phonological awareness in children with poor English learning, exploring the relationship between phonological awareness, syntactic awareness, and reading comprehension skills in English learning.[1] It was found that there was a significant correlation between children's pho-

nemic awareness skills and their reading comprehension ability.

4.2. The role of different components of speech consciousness in reading acquisition

English phonological awareness comprises several components, including phonemic awareness, syllable awareness, and rhyme awareness. These components may play different roles in the acquisition of reading skills. Research indicates that phonemic awareness plays a crucial role in decoding and word recognition, whereas syllable awareness and rhyme awareness are more closely linked to reading fluency and comprehension.

For example, Pan Ying (2012) found that phoneme awareness had a significant impact on the English reading decoding ability of bilingual Chinese and English children, while syllable awareness and rhyme awareness predicted reading fluency and reading comprehension.[5] Moreover, the role of phonological awareness in different components may vary among children of different ages and language backgrounds. Tao Sha, Feng Yanjiao, and others (2007) found that when Chinese children learn English, their phonological awareness, particularly syllable and rhyme awareness, can transfer to the development of English phonological awareness, positively impacting their English reading ability; however, the impact of phoneme awareness is relatively minor.[2] This suggests that different components of phonological awareness may exhibit variations in cross-linguistic transfer and have varying impacts on reading ability. Gong Shaoying, Xu Xiancai, and others (2009) found that among the three factors—English syntactic awareness, phonological awareness, and working memory—English syntactic awareness is the strongest predictor for all English reading tasks, while English phonological awareness has a significant predictive effect only on short passage reading comprehension.[6] This may be related to the different levels of reading tasks. Short passage comprehension requires a higher level of language integration, which might limit the role of phonemic awareness in reading. Wang Feifeng (2009) found that there is a strong correlation between rhyme awareness and reading ability among freshmen, and that rhyme awareness is one of the better predictors of reading ability.[3] This may be because rhyme awareness helps children discover phonetic similarities between words, which in turn promotes vocabulary learning and reading comprehension.

4.3. The predictive effect of English phonetic awareness on reading ability

Numerous studies have shown that English phonological awareness significantly predicts reading ability. In the early stages of children's reading development, English phonological awareness is a key indicator for predicting reading ability. For those who struggle with English learning, English phonological awareness is also a crucial predictor of their reading ability. Wang Feifeng (2009) found through re-

gression analysis that phonological awareness is a significant predictor in reading comprehension, accounting for 23.7% of the variance.[3] Wang Yan and Lin Chongde et al. (2002) found that in the regression prediction of reading comprehension ability of children with poor English learning, pseudo-word spelling, phonological awareness, syntactic awareness and auditory working memory were all good predictors.[1] This suggests that enhancing these children's English phonemic awareness can improve their reading comprehension skills. Even among college students, English phonemic awareness continues to predict reading ability. Tao Sha, Feng Yanjiao, and others (2007) found that different components of English phonemic awareness play a significant role in the English reading learning of Chinese children, with initial rhyme awareness being able to predict variations in English word recognition and pseudo-word spelling independently.[2]

5. Limitations and implications

5.1. Limitations and implications

Despite significant progress in the study of the relationship between English phonemic awareness and reading ability, several limitations remain. Firstly, the selection of research subjects is limited. Current studies primarily focus on preschool children and primary school students, with fewer studies examining middle school and college students. Additionally, there are relatively few studies on bilingual Chinese-English children, and most of these studies are focused on children from specific regions or cultural backgrounds. This limitation may restrict the generalizability and applicability of the research findings.

Second, current research has not sufficiently explored the relationship between phonological awareness and reading ability. While numerous studies have shown a strong correlation between these two factors, there is still a lack of in-depth understanding of the underlying mechanisms and influencing factors. For instance, the specific processes by which phonological awareness affects reading decoding, word recognition, reading fluency, and reading comprehension remain unclear. Furthermore, the interaction mechanisms among different components of phonological awareness in the development of reading skills also require further investigation.

5.2. Implications for future research

In view of the limitations of existing research, future research can be improved and expanded from the following aspects:

First, expand the scope of research subjects. The research subjects are extended to children of different age levels and language backgrounds, including middle school students, college students and other children of different ages, as well as bilingual Chinese-English children from different regions and cultural backgrounds. In this way, the universality and applicability of the research results can be improved.

Second, delve into the factors influencing these aspects. Further explore the factors that influence the relationship between phonological awareness and reading ability, such as family environment, educational background, and frequency of language exposure. These factors can significantly impact children's phonological development and reading skills. By thoroughly understanding how these factors work, we can provide a theoretical foundation for developing more effective reading instruction strategies.

Finally, strengthen cross-cultural comparative research. Compare the performance and development characteristics of children's English phonological awareness and reading ability in different cultural backgrounds. This will help reveal the influence of cultural factors on children's language development and reading acquisition, and provide useful enlightenment for cross-cultural education.

Conclusion

In summary, there is a significant positive correlation between English phonological awareness and reading ability. Different components of phonological awareness play distinct roles in the development of reading skills, and English phonological awareness can predict reading ability. Moreover, native language experience has a certain impact on the development of English phonological awareness. Although existing research has made some progress, there are still limitations. Future research needs to improve and expand from multiple perspectives to more deeply uncover the intrinsic connections and development patterns between English phonological awareness and reading ability. By enhancing research in related fields and conducting cross-cultural comparative studies, we can provide a more comprehensive theoretical foundation and practical guidance for English reading instruction.

In English teaching, teachers should focus on developing students' phonemic awareness to enhance their reading skills. First, teachers should pay attention to the development of students' phonemic awareness by designing appropriate phonemic training tasks. These tasks help students master phonemes, rhymes, and syllables, thereby improving their phonemic processing skills. Second, teachers should tailor their teaching plans to the reading levels and individual differences of students. For students with lower reading levels, the focus should be on developing syllable awareness; for those with higher reading levels, the emphasis should be on developing rhyme and phoneme awareness. Finally, teachers should integrate phonemic training with reading instruction by guiding students through activities such as reading aloud, recitation, and dictation. These activities help students establish the correspondence between form and sound, thereby improving their reading speed and accuracy.

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