

## Is Phonemic Awareness Training Necessary in Second Language Literacy Development? Is it Even Useful?

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Phonemic awareness (PA) is the ability to divide a word into its component sounds. It is considered by many to be necessary for reading development. PA, it is argued, is the foundation skill for phonics, which in turn is the foundation for reading.

There are, however, compelling arguments against the necessity and even the usefulness of teaching PA in the first language, and the evidence thus far suggests that there is no case for teaching PA in second languages.

### **PA develops without PA instruction in L1**

The results of two kinds of studies show PA develops on its own in first language development, without instruction: (1) children in comparison groups in PA training studies, who get no PA training, typically improve in PA (Ehri, Nunes, Willows, Schuster, Yaghouh-Zadehm and Shanahan, 2001, p. 276); (2) longitudinal studies show that nearly all children score very well on tests of PA by about grade 3 (see e.g. Fox and Routh, 1975). Very few have had PA training.

### **PA and reading ability: No effect in L1**

The studies reviewed above show that PA need not be trained. It can be claimed, however, that PA training will help, or accelerate PA development and thereby accelerate the development of reading proficiency.

But there is no strong evidence showing that PA training helps reading comprehension. PA training studies show little or no effect of PA training on reading comprehension (Krashen, 2001) (1). So far, PA training has been shown to have an impact on tests of PA and pronouncing words in isolation, but not on tests in which students have to understand what they read.

### **PA and second language development**

It has also been claimed that PA will work for learning to read in a second language. But the arguments against PA training in first language development hold for second language literacy as well.

## **PA develops without PA instruction in L2**

The results of several studies suggest that PA in English as a second language develops without instruction:

Chu, Chang, Yu, Yu, Ting and Hu (2007) reported similar increases in PA competence in three groups of third grade children in Taiwan studying EFL: phonics alone, phonics with phonemic awareness training, and no instruction in phonics or phonemic awareness.

Huang's comparison groups, one averaging 12.5 years old the other 16 years old (Huang, 1999), improved in PA without instruction over a two month time span. The effect sizes for the gains, according to our calculations, were substantial: .66 (younger group) and .68 (older group).

Zapparoli and Su (2007) compared two groups of first graders studying English as a foreign language in Taiwan: One group received PA training only, and the other received instruction on the alphabet (basic phonics) without PA training over one semester. Both groups made modest gains on a test of PA, and there was no significant difference between the two groups.

DelliCarpini (2002) reported that over the course of a year, 26 adult speakers of Spanish with little formal education studying ESL improved in PA without explicit PA instruction.

## **PA and reading ability: No effect in L2**

In Nag-Arulmani, Reddy and Buckely (2003), Kannada-speaking seven to nine year olds in South India studying English as a foreign language had ten PA sessions over ten weeks in English. The PA-trained children improved in PA and word reading, but there was no difference between the PA-trained children and comparisons in reading comprehension.

Other studies provide no evidence, one way or the other, on the impact of PA training on reading ability in a second language. If reading is tested, it is only in the form of tests that present single words in isolation, not reading comprehension, and the tests typically require the student only to pronounce the word out loud (e.g. Huang, 1999; Ashmore, Farrier, Paulson, and Chu, 2003) This also appears to be the case in Bae and Fox (2011), which reviews unpublished MA theses from Korea. In Zapporilli and Su (2007), only PA and alphabetic knowledge were tested. (2)

Szabo (2010) reported an improvement on tests of "graphophonemic competence" for ESL students after PA activities taught in grade one were re-introduced to the curriculum in the second semester of grade two. The test included spelling, fluency and comprehension components, but there was no separate analysis of the students' performance on each component: Crucial to this discussion is whether they improved in reading comprehension. In addition, this study did not include a comparison group: Even if gains in reading comprehension had taken place, comparisons might have done just as well without instruction (3).

## Conclusion

A major question is how PA is developed. There are two likely candidates: (1) through training in phonics, a hypothesis supported by Zapparoли and Su (2007)'s results, described above; (2) through reading, a hypothesis supported by studies showing that illiterates improved in PA after they learned to read, as well as studies showing improvement in PA after storybook reading (Krashen, 2003) and studies showing better PA in those who learned to read Chinese with the aid of alphabetic symbols, as compared to the traditional logographic approach (research reviewed in Huang, 1999).

What is clear, however, is that PA training has not been shown to be a prerequisite to learning to read in first language or in second language development or even to be helpful. This conclusion is not only consistent with the evidence presented here, but is also supported by this obvious fact: Millions of people learned to read before the concept of PA was discovered by researchers.

## Notes

1. For a debate on this issue, see Krashen (2002) and a response from Ehri, Shanahan and Nunes (2002), the latter representing the conclusions of the National Reading Panel. A careful reading of Ehri et. al. shows no disagreement with the claim that the evidence for the impact of PA training on reading comprehension is weak. They note that for studies involving English-speaking subjects, the effect size for PA training on reading comprehension falls short of statistical significance, but add that "more comparisons would yield a firmer conclusion" (p. 129). Maybe. Maybe not. Since this exchange was published, no data showing an impact of PA training on reading comprehension has been published, to our knowledge.
2. Chu et. al. (2007) tested subjects on both "word meaning" (real words) and "pseudo-word reading" (nonsense words). PA-trained students did much better on the nonsense words than untrained controls did, but the difference was much smaller on the real words, where meaning is involved. The effect size for the pseudoword test was a robust .88: But for word meaning the effect size was only .33, even though the word meaning test only required the child to read the word aloud.
3. It should also be pointed out that Szabo used a crude scoring system: Results were presented only in terms of percentage of children reaching a threshold on the measure used ("still developing"). This leaves out a great deal of information. No credit is given for large gains resulting in below-threshold performance, masking possibly substantial growth. Finally, Szabo did not run any statistical tests on the data.

In an additional study of PA in second language acquisition, PA is given the credit for increasing competence, but it is not at all clear that this credit is deserved. Rather, the results can be interpreted as consistent with the conclusions presented here, that PA develops without instruction and is the result of reading.

Chien, Kao and Wei (2008) examined 10 and 11 year old children studying English as a foreign language in Taiwan. Chien et. al. reported that those who had studied English longer (in after-school private schools) not only did better on tests of English but also had more PA in English. (There was no difference among the groups in Mandarin PA.) Also, English PA was a significant predictor of English ability. From previous studies, we would predict PA would correlate with tests of decoding and word reading, but not actual reading. Chien et. al. did not examine the effect of PA on individual aspects of English competence, however.

In their brief discussion of pedagogical implications, Chien et. al. stated that "the awareness of syllables, sub-syllabic units and phonemic units does not develop naturally in the course of general cognitive growth; it demands specific training" (p. 285). Their data, however, does not support this statement: Those with more English exposure had more PA, and none of the subjects in this study had had PA training. They did, however, have more exposure to printed English, which was not mentioned by the authors. (Presumably all had phonics training, but this typically does not continue beyond the early stages. It is possible that spelling instruction might have contributed to PA growth as well.) Nowhere do Chien et. al. provide any evidence that explicit PA training contributes significantly to reading comprehension.

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