

[Summary of Doctoral Dissertation]

## **Reading Characteristics of Hearing Impaired Children in Special Primary Schools in Vietnam**

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### **Study context**

Reading is a very important skill for all children. It is essential for acquiring knowledge in school, becoming informed citizens, succeeding in the future career and experiencing personal fulfillment.

In Vietnam, a developing country with its own characteristics of the education system for hearing impaired children (HIC), and still lacks a lot of favorable conditions in providing the education for HIC, not much is known of the reading of HIC. The only study on the “Reading comprehension ability of HIC of fourth and fifth grades of inclusive schools in Vietnam” (Bui, 2002) revealed that the reading comprehension of HIC in inclusive primary schools was much lower than that of hearing children (HC). However, at special primary schools, where HIC often have more profound hearing impairment than HIC at inclusive schools, the facilities and equipment are supposedly better, and the teachers have more expertise in teaching HIC, no information is available on the reading of HIC. In order to contribute to improve the quality of reading education for HIC in special primary schools in Vietnam, it is necessary to have fundamental data on the reading of HIC, as well as further data concerning the variables that have close relationships with the reading of HIC.

### **Study purpose**

This study was carried out to investigate the reading characteristics of HIC in special primary schools in Vietnam. Specifically, it aimed to investigate: (1) Reading comprehension of HIC, (2) Reading vocabulary of HIC, (3) Syntax comprehension of HIC, (4) Figurative language comprehension of HIC, (5) Reading strategy of HIC, (6) Reading instruction to HIC, (7) Influence of family environment to reading achievement of HIC.

### **Methods**

Study 1: Multiple-choice reading comprehension tests of HC were used to investigate the reading comprehension of HIC in comparison with HC. Subjects were 218 HIC in grades 2, 3, 4, 5 of six special primary schools, and 540 HC of two regular primary schools.

Study 2: Multiple-choice reading vocabulary tests were developed to investigate the reading vocabulary of HIC in comparison with HC. The tests used nouns, verbs and adjectives in the textbooks of the Vietnamese language subject of primary school. Subjects were 218 HIC and 554 HC of grades 2, 3, 4, 5.

Study 3: Multiple-choice syntax tests were developed to investigate the syntax comprehension of HIC in comparison with HC. The tests used the syntax structures in the curriculum and textbooks for the Vietnamese language subject of primary school. Subjects were 214 HIC and 539 HC of grades 2, 3, 4, 5.

Study 4: Multiple-choice figurative language tests were developed to investigate the figurative language comprehension of HIC in comparison with HC. The tests used idioms and proverbs in the curriculum and textbooks for the Vietnamese language subject of primary school. Subjects were 215 HIC and 557 HC of grades 2, 3, 4, 5.

Study 5: Two short narrative stories were used to investigate the reading strategy of story structure of HIC in comparison with HC. Subjects were 19 good readers of HIC, 20 poor readers of HIC, and 20 average readers of HC in grades 3, 5.

Study 6: A questionnaire with 22 multiple-choice questions was developed to investigate the reading instruction for HIC in special primary schools. Subjects were 54 teachers teaching the Vietnamese language subject of grades 2, 3, 4, 5 at 11 special primary schools.

Study 7: A questionnaire with 26 multiple-choice questions was developed to investigate the influence of family environment (socio-economic condition, knowledge, skills relating to reading activities, education for HIC) on the reading achievement of HIC. Subjects were 27 parents of good readers of HIC, and 28 parents of poor readers of HIC in grades 3, 4 and 5.

## **Results and discussion**

Study 1 revealed the unique characteristics of HIC in special primary schools in Vietnam that their ages were remarkably high, and the ages of HIC who studied in the same grade varied greatly. The ages and hearing levels of HIC generally did not relate to their reading comprehension. The characteristics of reading comprehension of HIC were that they read at a much poorer level than both grade-matched and lower grade HC. Most of HIC (83%) had scores equivalent to the lowest score group of HC, few HIC (17%) had scores equivalent to the average and high score groups of HC. HIC showed a development for the easy reading text only, here in terms of reading text for grade 2, when the difficulty level of reading text rose to more than grade 2, HIC showed no development. Compared to previous studies in other countries (Furth, 1966; Conrad, 1979; King & Quigley, 1985; Allen, 1986) which reported that the average 16 year old HIC having reading comprehension levels equivalent to 9, 10 year old HC, the reading comprehension results of HIC in special primary schools in Vietnam were even poorer.

Studies 2, 3, 4 investigated the reading vocabulary, syntax comprehension, and figurative language comprehension, which were supposed to have close relationships with the reading comprehension of HIC.

Study 2 revealed some characteristics of reading vocabulary of HIC. The reading vocabulary of HIC was not only poorer than grade-matched HC but also HC of lower grades. 99% of HIC had scores equivalent to the lowest score group of HC, only 1% of HIC achieved scores equivalent to the average and high score group of HC. Similarly to reading comprehension, HIC

showed development on vocabulary of grade 2 only, while HC showed development on both the vocabulary of grade 2 and grade 3. Further analysis on word types showed that HIC were likely to understand adjectives less well than nouns and verbs, while HC did not show this trend clearly. These results reveal that vocabulary is one of the weakest areas in reading of HIC. This result supports the view that poor vocabulary was a central cause of the low reading comprehension of HIC (Quigley & Paul, 1984).

Study 3 revealed some characteristics of syntax comprehension of HIC. The syntax comprehension of HIC was much poorer than both grade-matched and lower grade HC. 77% of HIC had scores equivalent to the lowest score group of HC, only 23% of HIC achieved scores equivalent to the average and high score groups of HC. HIC and HC showed development for some specific syntax structures and for the total syntax score of grade 4. Further analysis revealed that there were some similar syntax structures that both HIC and HC comprehended or did not comprehend well. HIC generally understood some punctuation marks better than other syntax structures.

Study 4 revealed some characteristics of figurative language comprehension of HIC. HIC not only comprehended figurative language poorer than grade-matched HC, but also HC in lower grades. Most of HIC (98%) had scores equivalent to the lowest-score group of HC, only few HIC (2%) had scores equivalent to the average and high score groups of HC. HIC showed a development on figurative language of both grades 2 and 3 similarly to HC.

All the variables of vocabulary, syntax, figurative language had correlations with the reading comprehension of HIC, however the syntax-comprehension correlation of HIC was stronger than the others, and was also stronger than that of HC. This characteristic of HIC suggests that syntax knowledge is an important predictor of reading comprehension ability of HIC. Compared to previous studies in other countries (Conley, 1976; Coppens et al, 2013b; Giorcelli, 1982; Herreweghe, 2004; Jones & Quigley, 1979; Walter, 1978) the results of reading vocabulary, syntax comprehension, figurative language comprehension of HIC in special primary schools in Vietnam were even poorer. Generally, the above results supported the view that insufficiently developed vocabulary, syntax and figurative language were the main reasons for problems in reading comprehension of HIC (Paul & Gustafson, 1991; Kelly, 1993; Fruch, Wilbur & Fraser, 1984).

The low reading comprehension results of HIC in study 1 was supposed to have a close relationship with the ways they use reading strategies. Study 5 revealed some characteristics of HIC in using the strategy of story structure. Poor readers of HIC were the group using the story structure least well among three groups of children. They often used story structure less well than average readers of HC in both grades 3, 5, and good readers of HIC in grade 5. They had development of story structure but it was slower than the development of good readers of HIC. Good readers of HIC generally did not differ with poor readers of HIC in grade 3 in using story structure. They also used story structure less well than average readers of HC in this grade level. However in grade 5, the use of story structure of good readers of HIC improved significantly,

they almost caught up with HC, and often used story structure better than poor readers of HIC. Both groups of HIC had similar characteristics with HC in using “Setting” best, and “Plot” least. However, HIC and HC differed in using “Resolution”, this story part was one of the least used parts in HIC but was one of the most used parts in HC. Both groups of HIC showed development of story structure while HC did not.

The reading comprehension result of HIC in study 1 was supposedly the direct results of the reading instruction practices to HIC. Study 6 revealed that, in comparison to special school system for HIC in developed countries, where teachers are often well trained and the schools often have favorable and optimal conditions to instruct literacy for HIC (Marshman, 1974), there are many challenges and shortcomings in the reading instruction for HIC at special primary schools in Vietnam. Most of the teachers in special schools did not have official certificates on special education for HIC. There was a lack of teaching aids and teaching materials for HIC in special schools. This situation caused the teachers many difficulties in reading instruction for HIC, especially in teaching abstract words, onomatopoeia, homonym etc. The teachers however, made great efforts and used various methods to instruct and improve the reading for HIC. In sum, the issue of unqualified teachers, and the lack of appropriate facilities and equipment are supposed to be the main reasons causing the low reading ability of HIC.

Most of HIC in study 1 had reading comprehension scores equivalent to the lowest score group of HC. However, there was also a small number of HIC performing significantly better than the majority of HIC, and achieving scores equivalent to the average and even high score groups of HC. The question here is that whether there is any difference in the family environment between the good readers of HIC and the majority of poor readers of HIC? Study 7 on the influence of family environment on reading achievement of HIC revealed that good readers of HIC often had parents actively trying to exchange information with other parents, teachers, to help them. Parents of good readers of HIC also knew more about the HIC’s progress and problems at school. The mothers and HIC in these families also had a better mutual understanding when communicated. The families of poor readers of HIC, however, were characterized with the parents who often talked to the HIC about the importance of study to their future. Broadly speaking, parents of good readers of HIC are more willing to accept and adapt to children’s deafness, actively involve in the education process, and effectively communicate with HIC.

In sum, the current study revealed that the reading results of HIC in special primary schools in Vietnam were very poor. However, HIC showed certain development for reading. The reading results of HIC in Vietnam were even lower than of previously reported studies on reading of HIC in other countries. There were various variables causing the poor reading results of HIC, from the insufficiently developed vocabulary, syntax, figurative language, reading strategies of HIC to the low quality of reading instruction at schools, and the lack of parents’ care and help on the studies of HIC both at home and at schools. Comprehensive measures tackling all the above influential variables should be taken in order to change the current unfavorable situation, and to improve the reading abilities of HIC in special schools in Vietnam.