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The Learning Achievement in Thai Language for Hearing Impaired Students in Thailand

Iam-Khong Nuttaya
Valaya Alongkorn Rajabhat University under Royal Patronage, Pathumtani, Thailand

Suksakulchai Surachai, Kaewprapan Wacheerapan
King Mongkut's University of Techonology Thonburi, Bangkok, Thailand

The development of language skills, reading and writing, is very important for hearing impaired students. However, there is no evident about the current language proficiency of Thai hearing impaired students. Therefore, the purposes of this research were to compare the language achievement of Thai hearing impaired students with the national average scores of Thai language and to predict differences in Thai language skills when they graduate from collages. The sample groups in this study were 218 students who are hearing impaired and enrolled in schools for the deaf in Bangkok's area. The testing score of the hearing impaired students was compared with the average score of the NIETS (National Institute of Education Testing Service). The results showed that the hearing impaired students have lower scores than national average scores about 52 to 54 percentages, which is indicated that the hearing impaired students have a very serious problem. This finding is opposite from the most Thai people thinking about the reading ability of the hearing impaired students that they can read Thai as normal students, which is incorrect. Therefore, it should be urgent to the Thai community and, perhaps, other country that it is necessary to improve learning processes and develop proper technologies for hearing impaired students to increase their language skills.

Keywords: hearing impaired student, learning achievement, national language

Introduction

Thai language is regarded as the national language of Thailand which expresses the identity of nation, art, culture, personality, the way of life and use of people in the nation. Thai language indicates the wisdom of ancestors in terms of culture, tradition and aesthetics which all are precious and valuable for learning and inherit to be remained. In addition, Thai language is also the instrument of communication to make understanding and create good relationship to one another as well as supporting and improving knowledge and thought process for thinking and analyzing in every science. Hence, Thai language is selected to be the first group of learning content group which has to contain in the curriculum of Office of the Basic Education Commission, Ministry of Education (Bureau of Academic Affairs and Eduction Standards, 2008).

For learning of Thai language, it is necessary to practice until getting skills for communicating in the

Iam-Khong Nuttaya, Ph.D. candidate, Department of Learning Innovation Technology, Valaya Alongkorn Rajabhat University under Royal Patronage.
Suksakulchai Surachai, Department of Electrical Technology Education, King Mongkut's University of Technology Thonburi.
Kaewprapan Wacheerapan, Department of Electrical Technology Education, King Mongkut's University of Technology Thonburi.

effective way, so that the learners can apply to their daily life. The content and learning standard in this Thai language group consists of five learning contents, which are reading, writing, listening, watching-speaking and Thai language principle and literature. According to the hearing impaired students, they also have to learn like any other normal students (Bureau of Academic Affairs and Eduction Standards, 2008).

For hearing impaired students, learning the language is a very difficult thing for them. This is because the first language they learn is finger or sign language, thus, this causes the learning barrier which makes the language become the barrier of learning, way of life and communication for them (Mole & Peacock, 2010). The learning of the hearing impaired students had to use very much both attempt and patience (Education and Careers Resource for Deaf students). Moreover, they also need love and care as well as help and suggestions from both teachers and parents (Gray & Hosie, 2009) in order to encourage and support the language development for them. For the unit managing for education to the hearing impaired students has to consist of readiness on learning materials and educational facilities, this is considered as a very critical part of the hearing impaired, because the materials and facilities can help the hearing impaired students understand more in learning and remembering. One of the problems frequently found is that the hearing impaired students can remember things which have been learned but only in a short time (Schleper, 2009). This is because they neither hear nor repeat after the voices. The language leaning, therefore, is a kind of skill which is the most difficult to the learning for the hearing impaired students.

According to the importance, problems and barriers of learning of Thai language for the hearing impaired students, the researcher would like to compare the learning achievement of student in three different class levels between hearing impaired students and normal students in the Thai language study group of students in two school for the deaf in Bangkok with the students in normal from the average scores of O-NET (ordinary national educational test) of the NIETS (National Institute of Educational Testing Service) (NIETS (National Institute of Education Test (Public Organization)), 2010) by comparing with three class levels, namely class levels 2 (grade six), class level 3 (grade nine) and class level 4 (grade 12). This research was carried out in order to bring the comparison results to develop and improve the new techniques and learning process for increasing the learning achievement to hearing impaired students further.

Purpose of Study

The purpose of the study is to compare the educational achievement of the students in three different class levels between hearing impaired students and normal students in the learning of Thai language.

Scope of Research

This research used the test result of O-NET by NIETS in 2008 and 2009 academic year to find out the educational achievement of hearing impaired students in learning contents group on Thai language of Setsatian School for the Deaf under the Royal Patronage and Thungmahamek School for the Deaf.

Population in Research

The students in three class levels of the Office of the Basic Education Commission, Ministry of Education are students in the class levels 2, 3 and 4.

The students in three class levels of Setsatian School for the Deaf under the Royal Patronage and Thungmahamek School for the Deaf, under the Bureau of Special Education, Office of the Basic Education Commission Ministry of Education are students in the class level 2, 3 and 4 (Iam-Khong, Suksakulchai, Poolek,

& Pubsawat, 2011).

Sample Group in Research

Samples are students study Thai language in class levels 2 to 4 from the Office of the Basic Education Commission, Ministry of Education using average scores from normal students nationwide in academic year of 2008 and 2009.

Samples are students in class levels 2 to 4 from Setsatian School for the Deaf under the Royal Patronage and Thungmahamek School for the Deaf (Iam-Khong et al., 2011), Bureau of Special Education, Office of the Basic Education Commission and Ministry of Education. For the year 2008, scores were taken from 31 students from class level 2, 48 students from class level 3 and 29 students from class level 4. For the year of 2009, scores were taken from 37 students from class level 2, 18 students from class level 3 and 50 students from class level 4.

Expected Benefits

The expected benefits are as follows:

(1) To realize about the learning achievement, learning of Thai language, according to the learning contents and standard of hearing impaired students;

(2) To be able to predict the score level in the future.

Data Collections

Setsatian School for the Deaf under the Royal Patronage and Thungmahamek School for the Deaf arranged for its students to take O-NET in order to obtain raw scores of students in the class levels 2 to 4 for analysis.

Data Analysis

The researchers used raw and average score from hearing impaired students and normal students of all three class levels to compare using learning achievement descriptive statistics, mean, *SD* (standard deviation) and percentage, then testing to find a significance by using *t*-distribution (students' *t*-distribution of heterogeneity of variances and analyzing to predict with linear regression).

Research Results

This research used the test result of O-NET by NIETS in 2008 and 2009 academic year to find out the educational achievement of hearing impaired students in learning contents group on Thai language of Setsatian School for the Deaf under the Royal Patronage and Thungmahamek School for the Deaf.

Comparison of Mean of O-NET Point Result in 2008 and 2009

According to the data collection and data analysis from NIETS and School for the Deaf, it was found that the mean and standard deviation in 2008 (see Table 1) (NIETS (National Institute of Education Test (Public Organization)), 2010) had the level of grade point average of the students in three class levels as follows: in the class level 2, normal students have an average of 42.09, while hearing impaired students have an average of 21.85, in the class level 3, normal students have an average of 41.04, while hearing impaired students have an average of 21.96, and in the class level 4, normal students have an average of 46.42 while hearing impaired students have an average of 25.14.

In 2009 (NIETS (National Institute of Education Test (Public Organization)), 2008-2009), the average scores of students in the three class levels are as followed: in the class level 2, normal students have an average of 38.58 while

hearing impaired students have an average score of 28.56, in the class level 3, normal students have an average of 35.35 while hearing impaired students have an average of 17.30 and in the class level 4, normal students have an average of 46.47 and hearing impaired students have an average of 24.00 as shown in Table 2.

Table 1

O-NET Scores of Schools of the Deaf in Bangkok's Area in 2008

	2008					
	Level 2		Level 3		Level 4	
	Hearing impaired students	Normal students	Hearing impaired students	Normal students	Hearing impaired students	Normal students
Mean	21.85	42.09	21.96	41.04	25.14	46.42
SD	6.68	12.90	6.42	11.03	4.21	14.00

Note. Displays average scores from hearing impaired students and normal students for the academic year of 2008.

Table 2

O-NET Scores of Schools of the Deaf in Bangkok's Area in 2009

	2009					
	Level 2		Level 3		Level 4	
	Hearing impaired students	Normal students	Hearing impaired students	Normal students	Hearing impaired students	Normal students
Mean	28.56	38.58	17.30	35.35	24.00	46.47
SD	6.01	10.24	4.42	11.49	3.72	13.35

Note. Displays average scores from hearing impaired students and normal students for the academic year of 2009.

According to Tables 1 and 2, it could be noticed that the grade point average of hearing impaired students was less than normal students at 52%-54%, approximately, as shown in Table 3.

Table 3

Difference Ratio of the Average Scores of the Hearing Impaired Students and Normal Students in the Thai Language Study Group

Year of 2008-2009	
Class level of students	Difference ratio
2	52%
3	54%
4	54%

From the result of finding significance levels by using "*t*" (students' *t*-distribution) of heterogeneity of variances, the result revealed that the level of grade point average of students in three class levels of hearing impaired students and normal students (*t'*) had significant difference at level of 0.05 by comparing the *t*-value using:

$$t' = \frac{(\bar{x}_1 - \bar{x}_2)}{\sqrt{\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}}}$$

$$df' = \frac{\left(\frac{s_1^2}{N_1} + \frac{s_2^2}{N_2}\right)^2}{\frac{\left(\frac{s_1^2}{N_1}\right)^2}{N_1 - 1} + \frac{\left(\frac{s_2^2}{N_2}\right)^2}{N_2 - 1}}$$

By t'= Simply the *t*-distribution

df'= The degrees of freedom

$\bar{x}_1$ = Mean of normal students

$\bar{X}_2$ = Mean of hearing impaired students

S_1 = Standard deviation value of normal students

S_2 = Standard deviation value of hearing impaired students

N_1 = Number of testes of normal students

N_2 = Number of testes of hearing impaired students

According to the calculation result shown in Tables 4 and 5, it was found that the *t'*-value got was higher that the *t*-value from table of students in three class levels for both academic year of 2008 and academic year of 2009. When comparing from the mean in 7.1, it was found the research result was concordant.

Table 4

T'-Value of the Students in Three Class Levels Between Hearing Impaired Students and normal students of the Academic Year of 2008

Academic year of 2008			
Level	*t'*	Value *t* from the table	*df'*
2	2.520	1.310	30.000
3	6.018	1.2998	24.594
4	27.227	1.3125	28.052

Table 5

T'-Value of the Students in Three Class Levels Between Hearing Impaired Students and normal students of the Academic Year of 2009

Academic year of 2009			
Level	*t'*	Value t from the table	*df'*
2	5.952	1.3055	34.355
3	22.340	1.3314	29.015
4	42.703	1.2991	49.180

Trend of Difference Level of Score in the Learning of Thai Language

According to the use of linier regression for calculation of prediction, the result got was as follows:

(1) *R*-Square value (0.9479) was reliability;

(2) *Y*-Intercept value (0.4998) was constant value;

(3) *X*-Variable 1 value (0.0036 msec./degree).

Then, the value got was predicted the difference class levels of Thai language subject score in the next six years and will increase in every three years which the equation of regression to predict will be as follows:

$Y = 0.0036x + 0.4998$

where

Y = difference ratio prediction, x = years of prediction and this prediction has the reliability of $R^2 = 0.9497$.

From this equation, it can predict that in the next six years (2015), the level of grade point average score of hearing impaired students would be different from normal students at 52.14%, approximately. The difference level of grade point average score in every three years would increasingly be higher. Hence, in 2030, hearing impaired students will have the difference class level from normal students up to 57.57% (see Figure 1). Thus, it is urgent to have the improvement, development and support from the government for the creation of learning process to encourage learning skills of Thai language to hearing impaired students.

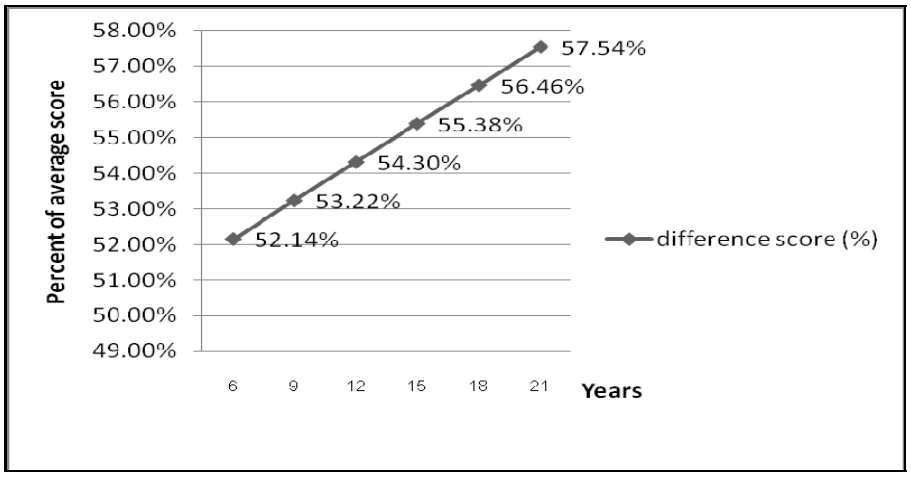

Figure 1. The difference level prediction of grade point average of hearing impaired students and normal students.

Discussion

Potentials of Students and Emphasizing Hearing Impaired Students

According to the different score level of hearing impaired students and normal students shown in Tables 1, 2 and 3, it could be suggested that the potential of the students extremely affected in learning process, because the hearing impaired children had the learning limits differently in each individual. Therefore, the support needed is to help them maintain their potentials of learning at its best as much as possible, together with the development in the appropriate way. There are many influent factors related to their learning achievement such as the level of their hearing loss, their intelligence and learning attention. However, the most influent factors are the supports from their teacher and parents (Tonparn, 1999) which could be described as follows:

(1) Teacher was one of the elements which were crucial, because the achievement of the students, according to the purpose of curricular, depended on teacher as well as administrator of the school in terms of support and improved the learning and teaching curriculum as well as supervising of learning and teaching the part which made learning and teaching be conducted systematically (Tonparn, 1999). Teaching hearing impaired students was different from teaching normal students, thus teachers had to be patient with answering the questions repeatedly and several times and caring closely. Moreover, the contents used in teaching process, the teacher had to select and consider the lessons in accordance with the learners' potentials so that the students could apply those know ledges to their daily life happily (Gray & Hosie, 2009; Schleper, 2009; Tonparn, 1999);

(2) Parents also were the motivation and support hearing impaired students very well. Parents should help and solve their distress occurred in an appropriate way with understanding and moral support in order that they would feel confident to encounter with problems and solve by themselves without any force and take an action with them like any other normal students. In addition, parents should learn and try to make understanding with finger or sign language very much for communicating and giving suggestions to their children. These would make hearing impaired students could live happily and have qualitative life (Hosie, 1996; Schleper, 1996; Tonparn, 1999).

Technology of Learning Support

According to much different score level, teachers suggested that it is beneficial to bring technology to be a part of learning process and be the tool of learning and teaching for hearing impaired students. It was regarded as the crucial thing in the communicational technology without border like the current time. Hearing impaired

students in nowadays were interested in and dedicate their time to the computer and internet very much. If the students had an opportunity to access the information and study or research by themselves all the time, their score could be increased (Iam-Khong et al., 2011; Chinachoti & Somchai, 2010).

However, at the present time, the learning materials for hearing impaired students in particular was not sufficient or had almost a little, thus the students had to make understanding from reading texts and seeing pictures (Chinachoti & Somchai, 2010) only. According to the technology used in learning (Tonparn, 1999), it indicated that technology could motivate and stimulate the interests of learners very well by using pictures, videos, and movement pictures as the main elements. All of these could help students concentrate with their activities and also give an opportunity for them to practice by themselves and encourage self-confidence (Gennari, 2009; Fellbaum & Freitas, 2009; Verlic, Povalej, & Debevc, 2007).

Conclusions

From the research result, it can be concluded that hearing impaired students had the level of grade point average of learning of Thai language lower than normal students at 52%-54%, approximately. In addition, when finding the level of statistical significance, it was found that the score level of both groups of students was different by at the statistic significance level of 0.05. If it was left, so the next six years from this day, the level of the interval of the average score of Thai language of hearing impaired students would be increased continuously. This research reflected that the society should give the opportunity and support hearing impaired students by using the equality in education and access to information. The interview with the director of NIETS emphasized that the government is only interested in providing to normal students and ignores the physical impaired students (Jamornmann, 2010). Hence, NIETS at least should realize that these physical impaired students also are the part population of Thailand. Moreover, with the effective learning support, they would mature and contribute to the future of the country.

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