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A New Dimensional in Teaching Non-verbal Students with Learning Disabilities

Ahmad Yazid Yahya, Noor Aini Ahmad, Yoong Soo May

Sekolah Kebangsaan Bagan Serai, Special Education Department, Faculty of Human
Development, Universiti Pendidikan Sultan Idris, Malaysia, Sekolah Jenis Kebangsaan (Cina) Uk
Dih

Abstract

The main aim of this quantitative study is to define the teaching problems among special education teachers in teaching non-verbal students with learning disabilities. Purposive sampling had been used to select 80 participants in this study in Kerian District, Perak. The research instrument used in this study was questionnaire. Descriptive and inferential statistics were used to analyze the data of the study. The findings show that participants faced problems in teaching the non-verbal students with learning disabilities ($M=0.848$, $SD=0.553$) and need a teaching module to teach them ($M=0.841$, $SD=0.672$). The results of t-test showed that no significant between teaching problem with gender of teacher ($P=0.385 > 0.05$, $SD=0.330$). While the results of one-way ANOVA also showed that no significant between teaching problem with teaching experience ($P=0.297 > 0.05$, $SD=1.553$). In conclusion, the problems among non-verbal students with learning disabilities can be solved through intensive training among teachers and development of teaching module based on augmentative and alternative communication with emphasis on functional words. The implication of the study will enable teachers to improve their teaching ability regardless student disabilities and increase the teaching aids and also will assist non-verbal students with learning disabilities to increase interaction with community members.

Keyword: Student with Non-Verbal Communication, Augmentative and Alternative Communication, Functional Words, Teaching Problem, Teaching Module.

Introduction

Government has the responsible to ensure all individual to get a suitable education and to ensure that it became the main policy for national development (The Salamanca Statement, 1994). All individuals including people with disabilities are entitled for a fair of education (World Declaration on Education for All (WDEHA, 1990). The paragraph 34 (1) (b) clearly provided minister the statement to create special education program at special school or any of primary or secondary schools which are thought to be suitable and bring benefits (Akta Pendidikan, 1996 (Akta 550; 2012). There were many ways or methods used in conducting the teaching and learning for students with special education needs either in their own way or based on the

existing curriculums (Ward, 2014). Special Education Act allows teachers to modify their teaching and learning method, time for activity, subjects and teaching aids in implementing of special education curriculum (Special Education Act, 2013). In process of modification, teachers must be focus on knowledge and skills based on students' ability to a clear and intensive learning (McBride & Goedecke, 2012; Darwish, Abdo, & AlShuwaiee, 2018). Hence, education for students with learning disabilities should be given priority and teachers should be able to implement the education policy in a flexible way to ensure every student with learning disabilities had the chance to learn according to their needs and abilities.

Problems Statement

Problems of students with learning difficulties existed in various types and forms, such as they might have difficulties to understand conversation through facial expressions, body language and tone of speech (McMaster Children's Hospital, 2004). The academicians defined that non-verbal students with learning disabilities has problem mainly in language function due to retardation of brain development (Hahn, 2004). There were around half of the students have problems in language function (McCarney, 2009). These students also face difficulties in understanding new knowledge or theoretical aspects in the curriculum (Feiler & Watson, 2010).

Augmentative and alternative communication (AAC) is recommended to solve communication problems among non-verbal students with learning disabilities (Yusoff & Mohamed, 2014). AAC is a set of tools and strategies in various forms such as speech, share of view, text, gestures, facial expressions, touches, sign, symbols, picture or words generating tools (International Society for Augmentative and Alternative, 2014). The AAC method based on signal communication is more appropriate to solve the communication problems among non-verbal students with learning disabilities (Anderson, 2001). The signal communication will stimulate the brain function of language building part, communication and social skills (Johnson, 2012). Signal communication should be taught and applied since pre-school to make sure strengthen of communication skills (Peterson, 2008).

Hence, in order to solve this problem, various aspects have to be taken into account, such as the aspect of teachers and students. Based on previous study, special education teachers faced the problems to handle the issues among the non-verbal students with learning disabilities, especially in the aspects of knowledge and teaching skills. AAC teaching methods based on signal communication are suitable for the students because they can be used without the aids of communication tools. The functional words should be a teaching content to help students in order to deliver their own basic needs. The communication abilities of the non-verbal students with learning disabilities will improve the social interaction between the students with other individuals and their environment.

Non-Verbal Students with Learning Disabilities

Previous studies found that the problem of non-verbal students with learning disabilities is related to genetic element from the aspect of brain retardation (Antshel & Khan, 2008). Implication from the inability, the students will face difficulty in reading and are tend to rely on

the information givers (Landwher, 2008). Besides that, students have difficulties in understanding the environment situations such as element of joke if they were separated from other students (Semrud & Glass, 2008). Non-verbal students with learning disabilities also do not have the ability to understand the analogy and interpret the behavior in their environment (Schiff, Bauminger & Telodo, 2009). The previous study found that the non-verbal students with learning disabilities have the ability to process the words in learning, but have a significant different in cognitive function if compared with normal students (Gates, 2009).

Model of Social Facilitation based on combination of social training and interaction structured is a believed to be able to solve the problems among non-verbal students with learning disabilities in social and interaction aspect (Simpson, 2008). Approaches of music, dance or singing are suggested to convey their intentions or feelings especially for autism students (Sterland, 2013). In addition, the approach of low-tech teaching aids such a flash card will also helping students to master in the communication skills (Ahmad, 2010). Phone-graphic method, which is the combination of sound and picture, is also able to communicate (Cowden, 2010). Element of picture in communication learning will improve their interaction and communication skills to peers or individuals in their environment (Malone, Fant & Tullis, 2010). Application of picture element can give a quick and deep impact (Ruppar, Dymond & Gaffney, 2011).

Other than picture, non-verbal students with learning disabilities can also learn communication skills through signals communication (Ahmad, Mahamod & Aziz, 2012). Signal communication is a bridge and good foundation to be taught to non-verbal students with learning disabilities (Toth, 2009). The teaching of signal communication has been used in West since more than 30 years ago (Anderson, 2001). Signal communication will provide students with a form of communication which is faster for the parents who have children with limited communication skills (Berke, 2009). Signal communication can stimulate the brain function, which play a role in language building, communication and social skills (Johnson, 2012).

Thus, the problem of non-verbal students with learning disabilities is due to the language system development problems caused by neurological development retardation. Inability of communication skills effects the social interaction development between students with individuals in their environment. Based on the previous study, many researchers had focus on the aspect of social interaction development. Hence, in order to solve the problems among non-verbal students with learning disabilities, various elements such as materials, method, learning content, types of communication, ability to master and student ability to apply the type of communication in their environment must be considered. The combination of audio and visual techniques should be applied and used together in order for the students to master and understand the learning.

Methodology

This study is a quantitative study using survey method that had been carried out on 80 special education teachers in Kerian District, Perak. The participants were selected based on random sampling. Table 1 shows the participants in terms of gender and experience of teaching.

Table 1
Demography Information of Participants

| No. | Gender | Total | | Teaching Experience (Year's) | | | | |
|-----|--------------|-----------|------------|------------------------------|-----------|-----------|----------|----------|
| | | (n) | % | < 1 | 1 > 5 | 5 > 10 | 10 > 15 | 15 > |
| 1. | Male | 21 | 26.2 | 1 | 11 | 9 | | |
| 2. | Female | 59 | 73.8 | 5 | 25 | 19 | 7 | 4 |
| | Total | 80 | 100 | 6 | 36 | 28 | 7 | 4 |

This survey used a questionnaire with validity value ($M=0.79$) and reliability value ($\alpha=0.772$). The questionnaire contains of a six part, (1) demography, (2) teaching and learning problems, (3) the need of module development, (4) method and module content, (5) module design, and (6) suggestion. All the data were analyzed based on descriptive analysis statistics such percentage and mean, and inferential statistics analysis such a *t*-test, one-way ANOVA and Pearson Correlation. There are four research questions and three null hypotheses (H_0) that represented the second to fourth research questions as follow:

1. What is the level of teaching problems and module needs for teaching and learning of non-verbal students with learning disabilities among special education teacher?
2. Is there any significant difference in teaching problems between genders of special education teacher?
3. Is there any significant difference between teaching problems and teaching experiences of special education teacher?

Results

The findings were analyzed based on percentage and mean for the first questions, *t*-test analysis for the second questions and H_{01} , one-way ANOVA analysis for the third research question and H_{02} , and Pearson Correlation for the fourth research questions and H_{03} . The findings of research questions and hypotheses showed in form of tables and figures.

First Question

Table 2 shows the means of analysis for teaching problems and module needs. The table shows the level of teaching problems among special education teacher ($M=0.848$, $SD=0.553$) and module needs ($M=0.841$, $SD=0.672$). This means the special education teacher faced problems in teaching and learning and teaching module for teaching non-verbal students with learning disabilities is needed.

Table 2

The Mean Average of Teaching Problems and Module Requirements

| No. | Construct | Score | Means | Sd |
|----------------------|--------------------------------------|----------------|--------------|--------------|
| 1. | The Teaching Problems Among Teachers | 4371 | 0.848 | 0.553 |
| 2. | Needs of Teaching Module | 3734 | 0.841 | 0.672 |
| Total Average | | 4052.50 | 0.845 | 0.613 |

Second Question

Table 3 shows the *t*-test results for Ho1, which have no significant difference for teaching problems between the genders of special education teacher. The test is said to be significant when the probability of *p* value is less than alpha value (α). The table shows for male ($M=55.048$, $SD=2.747$), while for female ($M=54.492$, $SD=2.417$). The difference between them ($M=0.556$, $SD=0.330$). The results showed the significant levels for alpha (α) is $0.385 > 0.05$. Hence, the results showed that Ho1 is accepted.

Table 3

T-test Analysis for Teaching Problem between Genders

| Variable | Gender | Mean | Standard Division | DK (n-2) | Value-t | Value-p |
|-------------------|--------|--------|-------------------|----------|---------|---------|
| Teaching Problems | Male | 55.048 | 2.747 | 78 | 0.873 | 0.385* |
| | Female | 54.492 | 2.417 | | | |

Significant of alpha (α) value = 0.05*

Third Question

Table 4 shows the results of one-way ANOVA for Ho2, that have no significant difference for teaching problems between teachings experiences of special education teacher. The test is said to be significant when the probability of *p* value is less than alpha value (α). The table shows that there has no significant difference for the value of $f(4.75) = 1.251$, $p(0.385 > 0.05)$. Hence, the results of the test showed that Ho2 is accepted.

Table 4

One-way ANOVA Analysis between Teaching Problems and Teaching Experiences

| Teaching Problem | Sum of Squares | DK | Mean Square | Value <i>f</i> | Value <i>p</i> |
|------------------|----------------|----|-------------|----------------|----------------|
| Between Groups | 30.938 | 4 | 7.734 | 1.251 | 0.297* |
| Within Groups | 463.550 | 75 | 6.181 | | |
| Total | 494.488 | 79 | | | |

* $p < 0.05$

Discussion

Problems of Handling and Conducting Teaching

The existence of non-verbal students with learning disabilities in special education programs is a minority situation, but this does not mean that their presence is negligible (Ahmad, 2010). The findings of the surveys are in line with the studies of Ahmad, Mahamod and Aziz (2012) which found that special education teachers faced problems in handling and conducting teaching for non-verbal students with learning disabilities ($M=0.848$, $SD=0.553$). The analysis of t-test showed that there is no significant difference of teaching problems between genders of special education teacher ($P=0.385$, $SD=0.330$). This means that special education teachers faced problems in handling and conducting teaching to non-verbal students with learning disabilities regardless of the genders. This result of this study is in line with the findings by Ong, Mahamod and Yamat (2013) which examined the relationship between gender and intelligence factors for individuals. The evaluation of gender should be taken into account, because the genders can influence individual in action or face an issue especially involving the election (Misran, Syed Sahuri, Arsad, Hussain, Abd Aziz & Zaki, 2012).

The results of one-way ANOVA analysis also found that there is no significant difference between teaching problems and teaching experiences ($P=0.297$, $SD=1.553$). This means the problem when addressing and conducting the teaching for the non-verbal students with learning disabilities faced by teachers regardless of whether more or less of teaching experiences. The research is done on the aspect of teaching experiences because it can provide satisfaction coverage for the targeted group (Ismail & Abu, 2016). Experience is also a socialization form that can play the important role in determining behavior (Ning Faidah, Harti & Subroto, 2018). The finding is consistent with the survey done by Syed Ali, Abdul Rauf and Salimin (2017) that found that there is no correlation between teaching experience and teaching planning which is the factor that contributes to the teaching problems. However, Abdullah (2018) found that there is a significant relationship between teaching experience and teaching competence of a teacher.

The results based on mean score showed that there are three main factors that contributed to the problem of handling and conducting teaching to the non-verbal students with learning disabilities. The findings showed that the exposure course is a most important element ($M=0.968$), the knowledge of teaching methods ($M=0.938$) and the teaching planning ($M=0.900$). These three main factors are interrelated because exposure courses can provide the knowledge of teaching methods and help teachers to plan the appropriate teaching. The lack of knowledge will cause teachers to have low self-esteem, static and can lost student's beliefs to teachers (Tamuri & Ajuhary, 2010). The teachers are not only responsible in delivering knowledge to students but also responsible in improving their knowledge and appreciation the learning (Tamuri, Ismail & Jasmi, 2012).

Based on study by Yahaya, Samsuddin, Mat Jizat and Krishnan (2017) they found that the courses or training had a positive relationship with the teacher's self-efficacy, which refers to the teachers' confidence in implementing actions to achieve the goal or efficiency. Sugumarie and

Abdul Razak (2014) also found that there is a relationship between the course and training with the improvement of teaching professionalism.

Recommendations and Conclusions

Based on the analysis, genders and teaching experiences do not influence the level of teaching problems. In order to address that issue, it is recommended that special education teachers should modify or construct and reproduce learning materials, especially low technology teaching aids as flash cards that are appropriate to the needs and capabilities of students such. Secondly, special education teachers should be given exposure through short or regular courses, to ensure that they are more willing to address the problems of non-verbal students with learning disabilities. Constructing the module within concepts of AAC method based on signal communication and teaching content based on functional words should be developed to help teachers to carry out appropriate teaching and learning for non-verbal students with learning disabilities. Through development of module, the problems among the teachers and students will be handled together. The implementation of signal communication to replace the oral communication is able to provide opportunities for non-verbal students with learning disabilities in enhancing the ability to communicate and interact between students and individuals in their social environment.

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