

ASSISTING ELEMENTARY STUDENTS DIAGNOSED WITH AUTISM SPECTRUM DISORDER TO LEARN ENGLISH VIA REMEDIAL TECHNIQUES

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ABSTRACT

This experimental study aims to investigate the effectiveness of remedial techniques on learning English for elementary students diagnosed with Autism Spectrum Disorder. All students were in grade 4 and were living in Phan Thiet City, Binh Thuan Province. The researcher has received consent and great encouragement from these students' teachers and parents before and during the research. The students were divided into the control group, which was taught with normal teaching methods, and the experimental group, which was further supported with remedial techniques in many activities such as one-to-one teaching, pair reading, and drill of worksheets. All students were pre-tested before the experimental teaching and then, after eleven weeks, did the post-test. The results show that remedial techniques have positive effects on helping students grow out of difficulties in learning English. The study recommends special support from educators and parents for these disadvantaged students during their English course at school.

Key words: Autism Spectrum Disorder; remedial techniques; difficulties in learning English

1. INTRODUCTION

I chose the elementary students diagnosed with autism to help with their English learning because of my own story. When teaching English for children at a Foreign Language Center, at the first class meetings, I met some troubles with a student in my class due to her behavior and her ability to learn, to remember what had been learnt, and to focus during the lesson. After asking for her personal information from that Foreign Language Center, I knew that she was an autistic girl. So, what is autism and how can I help

my autistic students with learning English? These questions were raised in my mind and I felt that I myself should find out the answers for my questions. This urged me to conduct this study to examine the effectiveness of remedial techniques on learning English of autistic students.

Although in Vietnam inclusive education programs based on the principle of integrating children with disabilities into mainstream schools were started in the early 1990s (Villa, Tac et al. 2003), and have encouraged more children to attend schools (Rydstrom 2010), the provision of education for children with disability meets many difficulties (Villa, Tac et al. 2003). For instance, resources such as classroom aides or adapted materials to assist teachers in teaching children with disabilities are limited, expenses and tuition fees in private special schools for children are often really high while public primary schools are tuition-free but often overcrowded (Rydstrom 2010). Besides, only one fixed national curriculum exists, individualised instruction is not encouraged in mainstreaming classrooms, the majority of teachers are neither trained in special education nor equipped with any specialised training to help children with learning difficulties (Villa, Tac et al. 2003).

2. LITERATURE REVIEW

2.1. What is Autism?

American Psychiatric Association (APA), 2013 identified autism as “Autism Spectrum Disorders” (ASD), a neurodevelopmental disorder which starts at the early years in one’s life. The impairments consist of restricted interests, repetitive behaviors, and the delay and deviance in social interaction, in communication and language (Faja & Dawson, 2006).

According to APA 1994, the clinical features of ASD include:

(i) Deficit in social interaction with problems in initiating and maintaining friendships, understanding others, expressing social interest, eye contacting, regulating social interactions, and sharing interests as well as enjoyment with others.

(ii) Impaired communication with delay in or lack of development of functional language such as initiating and sustaining conversations, stereotyped, repetitive or idiosyncratic use of language.

(iii) Narrow interests and behaviors with restricted patterns of concern, certain routines, stereotyped motor mannerisms, preoccupation with parts of

objects, and disapproval to change (APA 1994; Gabriels 2007; Frith 2008).

Besides, autistic people have difficulties in learning. Students meet difficulties in learning due to poor acquisition and use of words skills, problems in remembering auditory sequences, etc. Waterhouse, Wing, and Fein (1989) stated that only a small percentage (10% - 40%) of sampled diagnosed people could follow their study. Klinger & Dawson (1995) indicated that children with autism encounter troubles in prototype formation in learning.

In Vietnam, the number of children diagnosed with autism has been increasing dramatically. In 2003, the Children's Hospital 1 in Ho Chi Minh City admitted the first two cases of ASD, however, by 2009 this hospital diagnosed more than 800 cases (CLAN 2010). The National Hospital of Paediatrics in Hanoi also stated that there were about 6,000 children attending for diagnosis and treatment annually (Vu 2017). Besides, autistic people have a great number of difficulties in their daily life (CLAN 2010). Vu (2017) also said that most autistic individuals live dependently under the supervision and support of their parents or others. Only some of them are able to live independently.

2.2. Remedial Techniques

There have been many remedial techniques for students with learning difficulties. One of them is individualized reading instruction, a method of reading teaching in which content, instructional technology, and pace of learning are based upon the abilities and interest of each learner. Hardman, Drew & Egan (1996) stated that this technique is necessary for students with serious reading disabilities and proved the effectiveness in improving students' performance. This individualization may work well with a series of materials, which are normally chosen due to students' reading levels and their topics of high interest. Furthermore, the teachers are in charge mainly in the process of individualization.

According to Pani, 2004, over the past 20 years, researchers have paid attention to different aspects of instructional methods that enhance the reading skill in young children experiencing or are at risk for reading failure. This researcher supposed that reading disabilities are most commonly caused by weakness in processing the phonological features of language. The study obviously showed that phonological intervention had an impact on the reading competence among the reading disabled readers. The result of

children's performance from pre-treatment to post-treatment condition indicated some considerable improvement.

In fact, one-to-one instruction is largely regarded to be the effective way in rising student's achievement as specified by Elbaum et al (2000). Besides, these researchers added that electric technology can be regarded as effective means of instruction for students with learning disabilities.

Furthermore, Parkay and Stanford (1995) stated that teachers play a certain role in helping learning-disabled students. By recognizing some symptoms of students such as short attention span, poor reading, personal disorganization, impulsive and inappropriate behavior, inconsistent performance, speech problems, etc., teachers can quickly identify learning disabled ones so that they can receive the special education services they need. In addition, techniques showed their strengths in supporting students when involving the child's sense of hearing, vision, touch and movement (Hardman, Drew, & Egan, 1996).

Moreover, Kirk & Gallagher (1986) introduced some remedial techniques that were really useful to assist students with reading difficulties: (i) the kinesthetic method with 4 stages, (ii) the phonic-grapho-vocal method, a revised version of phonic remedial reading program, (iii) the visual-auditory-kinesthetic method, a phonic system, and (iv) the multi-sensory approach, a variation of visual-auditory-kinesthetic method.

Last but not least, the Picture Exchange Communication System (PECS) is known as an empirically validated approach to teach core communication skills. Its activities consisted of initial request, expanding vocabulary gradually and introducing commenting systematically (Frost & Bondy, 2002). The PECS protocol emphasizes on rapidly maximizing the gaining of communication, decreasing dependency on others to prompt communication. Therefore, it is suitable to teach some children, especially young ones with autism these foundational communication skills.

This study combined some remedial techniques to apply during the experimental teaching such as one-to-one teaching, individualized reading instruction, pair-reading, pictures, games and songs, drill methods, and phonetic techniques because this combination gave a range of benefits to students and tailored their learning interests.

3. RESEARCH METHODOLOGY

The aim of the study is to examine the effectiveness of the remedial techniques on English learning of the elementary students diagnosed with ASD. It was a piece of experimental research that involved in the data collection, analysis and interpretation which were suitable to the research purpose. The achievement tests were designed by the researcher to measure the studying level of students.

3.1. Participants

Six students living in Phan Thiet City, Binh Thuan Province took part in this study. They were 4 boys (68%) and 2 girls (32%), aged from 10 to 13 years with the average age of 11.83. All the students were diagnosed with autism and had different ASD symptoms and learning disabilities. They were taught English by the same teacher and studied the same kind of English textbook in grade 4 at a primary school. In fact, each class had only 1 autistic child or 2 autistic children, so 6 children joining the study were from many classes. They were being ASD intervened by their caregivers in different ways. As a result of being intervened well, to some extent, they could carry out their social integration and went to school with the active support from the teachers and caregivers.

3.2. Research Instruments

The pre-test and the post-test designed by the researcher were used as instruments in the study. The tests were constructed on the basis content of the English textbook that was taught to both control and experimental groups. The tests were of 10 marks whose results were used to find the students' achievement level after remedial techniques were applied. The students in both groups were given a time allowance of 30 minutes to complete the tests with 25 questions related to the course book English 4.

3.3. Procedure

The researcher has received consent and great encouragement from these students' teachers and parents before and during the research. The study was conducted with experimental teaching during a period of 11 weeks, nearly three months, from the beginning of March 2020 to the end of May 2020 at students' houses in Phan Thiet City, Binh Thuan Province.

The students were divided into experimental and control groups; each group had 3 members. In addition to English learning at class, 3 children in the control group, in a form of a private class, received two 45-minute lessons in a week with the common teaching method, while 3 children in the experimental group learned English in different lessons. Each student in this group had two 45-minute lessons weekly and was further supported with special remedial techniques.

In this study, the researcher as well as the teacher used the remedial techniques like one-to-one teaching, pair-reading, phonetic techniques, and the drill method to improve students' reading skill, enhance their learning motivation, and control their behavioral problems. Special kinds of worksheets were designed to use during the time of practice and drill.

During the time of teaching, besides helping students with English, the teacher always paid special attention to students' behavioral problems to assure that they did not lose control. The teacher tried to draw their concentration into work, develop their interest, keep the eye contact with them, assist them to use stationery such as pencil, rubber, scale, color pencils or crayons, etc. The learning activities were done by in-door and out-activities, also involving different games and songs.

All students did the pre-tests, and after completing eleven weeks, they did the post-tests whose results were recorded to find out the achievement level that they obtained. The results of pre and post tests were compared between groups.

3.4. Some Remedial Techniques Applied

Some remedial techniques were applied during the experimental teaching. They were one-to-one teaching, individualized reading instruction, pair-reading, pictures, games and songs, drill methods, and phonetic techniques.

Because the students' ability in catching knowledge was still limited, students needed a lot of help from the teacher to understand the lesson and do exercises. Furthermore, students' concentration was almost a matter of concern, and each student had different autistic characters, one-to-one teaching, individualized reading instruction, and pair-reading became truly essential in the process of guiding these students.

Furthermore, the PECS protocol tries to instruct users to be

spontaneous communicators (Frost & Bondy, 2002). This method showed its advantages in increasing teacher and students interaction throughout the learning process. The use of pictures helped students memorize and apply words to communicate with the teacher.

Moreover, easy and simple games including movement games always interested students. When being taught knowledge through games, students easily obeyed the teacher's organization, and they showed better cooperation and interaction. In addition, short songs, especially the ones that could be sung while using body movements often increased students' concentration, helped them relax and limit uncontrolled behavior during the lessons. These songs also facilitated students make good eye contact with the teacher. Besides, drill techniques were always repeated to help students remember the main lesson contents.

The study also applied some of the following remedial techniques recommended by Kirk & Gallagher (1986).

The kinesthetic method

Applying this method, reading is taught through four stages:

- (i) Students were asked to trace the form of a word that they had learnt and say it at the same time. Then they tried to memorize the word, wrote it down, and compared what had written with the original word.
- (ii) Looked at the word or phrase, students said it, and then wrote it from the memory, and compared each trial with the word or phrase in their learning material.
- (iii) Students said the word once when glancing at it, and then produced it by themselves based on their memory.
- (iv) Thanks to the experience with previously learned word, students started to generalize to read new words.

The phonic-grapho-vocal method

As a programmed phonic system, the phonic-grapho-vocal method focused on sound blending and incorporated kinesthetic experience. Following was the principles of effective programmed learning in the lessons:

- Minimal change (incorporating just one new sound in each lesson)
- Learning through repetition of each new sound in many settings and frequent drills
- Prompting and making confirmation

The visual-auditory-kinesthetic method

Being a phonic system for the remediation of reading disabilities, this method required students to learn both the names and the sounds of the letters. The names were used for spelling while the sounds were for reading.

This systematic procedure was conducted through the below steps:

- Students were first told the name of a letter and then its sound.
- Students said the sound and traced it or wrote it from what they could remember.
- After some consonants and vowels had been learnt, students were asked to sound each letter and blend the sounds into a word.
- Once students had learned to sound, write, and read three –letter words, the words were applied in stories that students read silently and aloud.

Multi-sensory approach

The program consisted of a teacher's guide and some auxiliary material. First, students heard the sound, letter or word, and then looked at it on a card, and traced it with large arm swings. These procedures were suitable to teach writing, spelling, and reading.

4. RESEARCH FINDINGS AND DISCUSSIONS

The research data was collected through questionnaire and the result of tests. A comparative analysis was expressed and significant difference was calculated.

4.1. Analysis of Questionnaire

In order to get children's information, children's caregivers were delivered the following list of questions including:

1. How old is your child?
2. Is your child a boy or a girl?
3. Who is in charge of intervening and taking care of him / her in your family?
4. According to you and your child's English teacher, what is his / her English level?
5. Please mark √ for his / her difficulties.

Child's difficulties	
In English reading	
In English writing	
In English speaking	
In communication	
In eating	
In attention	
In social interaction	
In playing with others	
Aggressiveness	
Passiveness	
Disturbed sleeping	
Repetitive behaviors	
Repetitive use of language	
Disapproval to change	
Other difficulties:	

In fact, autism is a behaviorally defined developmental disorder of early childhood with the delay and dysfunction in social and cognitive development, communication, and language (Volkmar, 1991). The condition of autism is considered as the most severe of the childhood neuropsychiatric disorders (Gillberg, 1999). The following information presented in table 1 was collected from caregivers of the autistic students.

Table 1. Students' information

Personal information	S1	S2	S3	S4	S5	S6
Age	10	13	12	12	11	13
Gender	Boy	Boy	Girl	Boy	Boy	Girl
Caregivers	Parents	Aunt	Father	Mother	Father	Parents
Difficulties						
In English reading			√		√	
In English writing		√		√		√
In English speaking	√	√	√	√	√	√
In communication	√	√	√	√	√	√
In eating			√		√	
In attention	√	√	√	√	√	√
In social interaction	√	√	√	√	√	√
In playing with others	√	√			√	√
Aggressiveness		√				
Passiveness					√	
Disturbed sleeping					√	
Repetitive behaviors		√			√	
Stereotyped motor mannerisms		√			√	
Repetitive use of language			√	√	√	
Preoccupation with objects					√	
Disapproval to change		√				
Students' English competence						
Average	√				√	
Below average		√	√	√		√

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Personal information		Number	Percentage (%)
Age	10	1	16.66
	11	1	16.66
	12	2	33.33
	13	2	33.33
Gender	Girl	2	33.33
	Boy	4	66.66
Caregivers	Parents	2	33.33
	Father	2	33.33
	Mother	1	16.66
	Aunt	1	16.66
Difficulties			
In English reading		2	33.33
In English writing		2	33.33
In English speaking		4	66.66
In communication		6	100.00
In eating		2	33.33
In attention		6	100.00
In social interaction		6	100.00
In playing with others		4	66.66
Aggressiveness		1	16.66
Passiveness		1	16.66
Disturbed sleeping		1	16.66
Repetitive behaviors		2	33.33
Stereotyped motor mannerisms		2	33.33
Repetitive use of language		3	50.00
Preoccupation with objects		1	16.66
Disapproval to change		1	16.66
Students' English competence			
Average		2	33.33
Below average		4	66.66

Table 1 revealed that almost students attended school at the wrong age (83.32%). Most of them were older than their classmates. In addition, not all students were taken care of by both parents. However, whether the aunt (16.66%), the father (33.33%) or the mother (16.66%) supported the students, these caregivers showed their efforts to be able to help the students move gradually toward social integration.

The number of students with difficulty in English reading and writing was equal, 33.33%. Two among 6 students had difficulty in eating, two with repetitive behaviors while 66.66% suffered from problems in playing with others, and the same number had difficulty in speaking (4 students). 16.66% of them were under aggressiveness and the same student was in passiveness. It was found that 1 student had sleeping disorders and 1 was in disapproval to change. All students had problems in communication, attention, and in social interaction while students having stereotyped motor mannerisms were 33.33%, repetitive use of language accounted for 50%, and preoccupation with objects had 1 student (16.66%). According to their caregivers who had always been with them on the road of learning, their English was still limited with 2 were at average level (33.33%) and 4 were at below average (66.66%).

It can be obviously seen that most of the students had different autistic features in eating difficulty, attention, social interaction, playing with others, aggressiveness, passiveness, disturbed sleeping, repetitive behaviors, or stereotyped motor mannerisms, and they faced difficulties with common skills such as reading, writing, speaking, and communication.

4.2. Analysis of Test Results

At the beginning of the experimental teaching, a pre-test designed by the researcher was given to all students. A summary of the results of the pre-test completed by both groups within 30 minutes was given in **Table 2**.

Table 2. Pre-test results

Groups	S1	S2	S3	Average
Experimental	3.5 (35%)	3.0 (30%)	4.5 (45%)	3.66/10.0
Control	4.0 (40%)	3.0 (30%)	4.5 (45%)	3.83/10.0

It is obviously seen that the average score of all students is low, 3.66/10.0 in the experimental group compared with 3.83/10.0 in the control group. The difference between students is not considerable. The highest score is 4.5 while the lowest is 3.0. There were two students who did the test quickly in their own ways, and handed in their papers before time was up.

The caregivers of these students said that they always did most of things in hurry and did not care much about the results.

Different methods were applied during the experimental teaching. The experimental group was taught with special remedial techniques while students in the control group were taught with usual teaching techniques. After eleven weeks, all students attended the post-test and the results were recorded as shown in **Table 3**.

Table 3. Post-test results

Groups	S1		S2	S3	Average
Experimental	7.0 (70%)		6.0 (60%)	6.5 (65%)	6.5/10.0
Control	5.0 (50%)		3.5 (35%)	5.0 (50%)	4.5/10.0

Table 3 clearly showed that average score of the experimental group was higher than that in the control group, 6.5/10.0 in the experimental group in comparison with 4.5/10.0 in the control group. The difference of the average score is 2.0 (6.5 and 4.5), much higher than that in the pre-test, 0.17 (3.66 and 3.83). Students in the experimental group reacted well with the remedial techniques. A student in the experimental group got 7.0/10.0, as twice as his result in the pre-test. This proved the effectiveness of the remedial techniques in English teaching to students with autism.

5. CONCLUSION

According to Waterhouse, Wing, and Fein (1989), autistic individuals revealed uniquely pathognomonic neural deficit with the differences in cognitive functional deficit, behavioral pattern. Hence, students diagnosed with autism need so much help from teachers and parents so that they could come over their own difficulties and then learn better. The research results showed that, to some extent, remedial techniques have positive effects on helping students grow out of problems in learning English. It was also recommended that there is a great necessity for research in the field of teaching English to autistic students.

The study indicates that certain progress was demonstrated by students in their learning although this occurred little by little. Furthermore,

teachers played a special role when teaching autistic students. They should always keep an eye on students for unexpected behaviors, need to show their love but apply discipline so that students obey them. Besides, they should be really patient and know as much as possible about each student's autism traits. Thus, in order to help students, it is necessary to have close coordination between teachers and caregivers, who can understand their children more deeply than anyone else. When helping an autistic student to understand a little more about English, teachers will have a very special feeling, i.e. a sense of success. Moreover, due to the distinctive characteristics of each student, the teachers should be flexible in teaching. For example, passive students needs a type of help different from aggressive ones. Additionally, lessons, instructions, games or songs should be carried out in the simplest and easiest way, and they need to be repeated to be thoroughly understood by students.

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