Turkish Online Journal of Qualitative Inquiry (TOJQI)
Volume 12, Issue 5, June 2021: 1299– 1312

Research Article

Favourable Approach that Influence AutismStudents Learning Language Process

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Abstract

Education is important for all, including those students with special needs.In this context, learning process for students with special needsis certainly different from normal students, with special developed curriculum, as well as special skills for teachers are devotedfor teaching specific courses.This study investigatesthe special education teachers'approach in teaching phonics of the language (i.e. Bahasa Melayu)for autism students, focusing on three elements; namely learning module, oral language and multimedia application. A survey study was designed using questionnaire involving 42 special education teachers from primary schools in the Southern Peninsular of Malaysia.Descriptive analysis were used to obtain percentage, mean, and standard deviation. The results;a moderate level application of the module (M = 3.43, SD = 0.654) and the oral language (M = 3.64, SD = 0.570), but a high level of the multimedia application(M = 4.14, SD = 0.612). The multimedia elements wasthe most favorable approach in the teaching and learning process of autism students.The implication;more special design of a multimedia materials are needed for teaching phonics for language learning to help autism students to speaking correctly.

Keywords Bahasa Melayu Phonics; autism students; module; oral language; multimedia elements.

1. Introduction

Education is the fundamental thing that should be given to all children regardless of their social background and intellectual development.

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One of an effort to dominant the tutelage of these children is to improve their language skills in which the teacher plays a major role in this task. Language skills are fundamental skills that are essential and should be emphasized in the teaching and learning process in the classroom [1]. Therefore, teachers should understand the concept of classroom convalescence to overcome the problem of understanding reading skills amongst students. This convalescence program is also one of the methods to address disadvantaged students.

Samsiah [2] and Yahya [3] stated that reading methods that are not compatible with the students' needs will cause them to feel tired, less interested and then drowsy during the reading process. Pre-school children will also demonstrate good academic achievement in primary and secondary school if they master reading skills [4]. In contrast, the difference between students with virtuous and weak reading skills can be seen through their achievements at school [5]. Therefore, according to Moast and Foorman [6], they assume that students with weak achievement will continue to lag behind during their study.

However, there are a group of students labeled as special need students. These students also have the privilege of being like other students but they are considered to be weak, backward and inferior. This student should be given more attention and encouragement in order to contribute to the country as a normal student. The learning process of these special need students is certainly different than normal students. They were provided with a special curriculum as well as teachers devoted to the skills and teaching courses for special needs students [7]. This includes every aspect of the process in teaching and learning.

Besides, they should get the best teaching inputs in the process of teaching and learning that satisfies the diversity of student disabilities. It also includes teaching aids which is suitable as an important medium in teaching and learning that needs to be provided by teachers in teaching special needs students. Among these special need students were those who have problems in learning where it include down syndrome students, cerebral cavity, hyperactivity, short attention span (ADD/ADHD), mental retardation, emotional and behavioral problems, epilepsy dyslexia and students with low-mental problems [8].

A research on how children with autism spectrum disorders (ASD) and language disorder (LD) can understand conventional gestures suggest a severance between oral language comprehension and language gesture comprehension in children with language disorder and there were also a deficit in both oral language and language gesture comprehension in children with autism spectrum disorders [9].There were also a considerable number of studies investigating the brain and language associations in ASD have used the verbal intelligence quotient as their primary measure of language form and content [10].

Furthermore, a study was conducted on autism patients in Malaysia where researchers found that patients were generally male and from different races. The study found that 80% of patients had moderate autism while another 20% had serious autism problems. The findings show that 30% of these autism children were not involved in any type of therapy by taking into account the different racial belief systems in Malaysia as well as considering the implications of different disease treatments in developing countries [11].

Reading abilities are deficit in a disproportionate number of students with ASD, with the

majority failing to meet peer-level expectations in word recognition or comprehension [12]. There were also research suggests that many school-aged children with ASD will learn the decoding skills necessary to effectively read text, but will struggle with comprehension [13].

Students withASD show basic reading skills that are suitable with their age but their level or score of understanding were below the standard of the normal population [14]. While most of them have high levels of ability, students with ASD problem levels will also have difficulty primarily related to reading skills. Besides, if they master basic reading skills (the ability to sound the letters) easily, they still have problems in reading comprehension. Therefore, they feel it is difficult to understand the whole meaning of the texts being read. In addition, autism children usually experience difficulties in understanding and receiving information verbally and effectively. Their understanding is more focused on pictures and body language or verbally[15].

Additionally, autism children are children with learning disabilities where they often fail to focus on the mind and live in their own world. Therefore, these children should be given a special, interesting and suitable approach to their thinking during the teaching and learning process. Autism children do not fit accordingly to learn in the mainstream class because the content of their studies does not meet their needs as well as the use of oral language as the dominant in command [16].

Autistic learners master visual and spatial abilities; they use visual language to organise, understand and give meaning to the world. Although they might struggle with verbal skills, they have an associative way of thinking [17].For example, autistic children will not show interest in reading material but may be interested in being given short or visual reading material.

The use of the reading module is one of the reading strategies that been used by autism students in improving their reading skills [18]. In addition, repeated reading strategies were also applied in the use of reading modules. According to Therrien [19], repeated reading has proven to be effective in improving reading skills among students with learning disabilities. This strategy is a helping system and a model in promoting the development of autistic children's language in which the teacher needs to interpret and respond based on the student achievement level [20].

Clements & Zarkowsa [21] stated that story creation were dependent on some aspects of visual, auditing and movement that included the process of continuous knowledge enhancement. In other words, specific attention may be given to autism children in order for them to understand the whole concept of a story. Winter & Lawrence [22] also emphasizes on the use of time when doing oral language storytelling techniques while conducting the learning process among autism children. We should not expect the child to complete a task within the time allocated, instead we need to encourage them to complete the task.

Meantime, Prabowo, Utami & Al Fatta[23] in their study state that the application of oral language is an effort to enhance the autistic children's learning process. For example, according to Martinovich [24], learning techniques require playing elements through activities directly or indirectly inserted during storytelling were performed. Gray & Garand [25] also noted that the technique of an oral language use was a treatment for autism children learning in their reading

process.

Through the use of multimedia, autism students can be exposed to various media while interacting through technology in various forms such as text, animation, sound and motion picture. According to Hamid [26], children can interact more effectively when they learn to read using a computer. When referred to as a computer; it will certainly involve multimedia elements such as audio, graphics, animation other than text.

The use of attractive graphic symbols not only helps these autism students but also support their understanding [27]. By doing so, they can repeat the voice recordings they have heard while repeating words, phrases or sentences repeatedly so that they gain understanding. Teachers can also provide training such as pressing the button for each correct answer as a reinforcement of what has been learned. Therefore, teaching and learning strategies through multimedia can be applied to these children [28].

Hence, suitable training and approaches were needed in autism students teaching and learning process. Gopal [29] state that the factors enable autism children to master social skills were through the role of teachers, visual-assisted teaching, peers, environment and collaboration as well as parent's role.Special education teachers play an important role in helping these students address their abilities. They need to develop strategies and effective approaches so that the teaching and learning process of autism students works well.

Seidenberg & McClelland [30] have introduced he Four Part Processing Model of word recognition in Figure 1 that provides guidance regarding the underlying processes involved in decoding unfamiliar words, namely, the Phonological Processor, the Orthographic Processor, the Meaning Processor, and the Context Processor. Based on this model, the phonological and orthographic processors must work together to decode a wordthrough phonics technics as the process moves to the meaning processor where a deep knowledge of vocabulary is helpful.

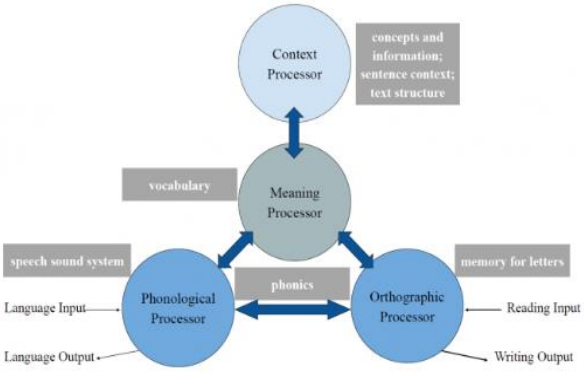

Figure 1.**Four Part Processing Model of Word Recognition**

Students with dyslexia have a strong oral vocabulary while their ability to decode is weak [30]and phonics technics works best for students and children with disabilities, including dyslexia and autism. The phonics method is applied in reading modules, where phonetic reading

will help them to improve theirreading performance [31], while oral language is animportant determinants of reading comprehension success in ASD [32],andthe multimedia materials are beneficial to improve their reading comprehension usinggraphics and texts together [33]. These method aimed to reduce mistakes made by studentswith autism, the use of thesemethodscan improve their reading skills.However, in this context, parents and teacher's role arestill important in enablingthemto take careof their basic living skills. Therefore, this study was conducted to:

i. Identify the level of module usage as an approach in teaching and learning Bahasa Melayu Phonic for autism students.
ii. Identify the level of oral language usage as an approach in teaching and learning Bahasa Melayu Phonic for autism students.
iii. Identify the level of multimedia elements usage as an approach in teaching and learning Bahasa Melayu Phonic for autism students.
iv. Identify the most dominant approach in teaching and learning Bahasa Melayu Phonic for autism students.

Phonics is a method of teaching reading that associates sounds with certain symbols. The method of phonics is a child's learning method of basic sound in speech, relational sound with symbols, and how to combine the sound by producing syllables and words [34].

2. Methodology

A survey study was conducted using questionnaires. These questionnaires will be distributed to respondents that been selected based on certain criteria. The use of questionnaires seems to be suitable for this research as it is cost saving and researcher can also facilitate respondents to answer the questions [35].

2.1.Population and sampling

The targeted population was thespecial education teachers in the primary schools with special education stream classes in the Southern Peninsular of Malaysia. A random sampling technique was utilized to find 40 samples amongst the special education teachers who teaches Bahasa Melayu Phonic, in four selected schools. The details are presented as in Table 1.

Table 1. Table of Sample Selection

School	Total	Sample
A	12	Teachers who teach and have attended teaching courses for autism students.
B	9	
C	10	
D	11	

2.2.Instruments

The questionnaire used in this study consisted of two main parts: Part A (Demographic Section) and Part B (Approach used by special education teacher in teaching and learning Bahasa Melayu Phonic for autism students). The Alpha Cronbach (α) test was used to determine the reliability index of the items. An α value of 0.60 and above is considered acceptable for a research purpose [36].Reliability of the Alpha Cronbach item of this questionnaire is at the value of 0.873. The three main construct of the items were about the usage of module, oral language and multimedia elements as in Table 2.

Table 2. Item Specification Questionnaire

Part	Construct	No of Item	Item Number
Part A	Demographic information	3	A1-4
Part B	Teachers' teaching and learning practices in classes		
	1) Module	8	B1-B8
	2) Oral language	8	B9-B16
	3) Multimedia elements	8	B17-B24

2.3.Data analysis

Data were analysed using quantitative descriptive analysis using mean score, percentage, and frequency. Specifically, the result of Part A was presented in frequency and percentage, while Part B were using mean scores (*M*) and standard deviation (*SD*).

3. Result and Discussion

3.1. Demographic information

This study was conducted by involving 40 special education teachers. Demographic information of this study was presented in Table 3 as follows:

Table 3. Demographic information of respondents

Demographic	Frequency	Percentage
Gender		
Male	12	30%
Female	28	70%
Age		
20-25	1	2.5%
26-30	5	12.5%
31-35	9	22.5%
>36	25	62.5%
Teaching Experience	5	12.5%
1-5 years	15	37.5%
6-10 years	6	15%
11-15 years	14	35%
>16 years		
	7	
Experience Teaching Special Education Students	14	
	13	
	6	17.5%
		35%
1-5 years		32.5%
6-10 years		15%
11-15 years	40	
>16 years	-	
	-	
Number of Autism Students taught in a class	-	100%
1-10		

11-20	
21-30	
>31	

Table 3 shows the respondents' demographics profile based on gender, age, duration of teaching experience, duration of teaching experience of special education students, and number of autism pupils taught. A total of 12 (30%) were male teachers and 28 (70%) were female teachers. Furthermore, based on the experience of teaching 5 teachers (12.5%) with 1-5 years' experience, 15 teachers (37.5%) had 6-10 teaching experience, 6 teachers (15%) had 11-15 years' experience and a total of 14 teachers (35%) experienced teaching for more than 6 years.

Based on the experience of teaching special education, 7 teachers (17.5%) are experienced in the field of special education, 14 teachers (35%) have 6-10 years in special education, 13 teachers with 32.5% -15 years, and 6 teachers (15%) experienced over 6 years in specialized education. Based on the number of autism students taught in a class, all 40 respondents (100%), had only 1-10 students per class.

3.2.The application of the learning module

The result shows that each item from module usage construct were at moderate level. The highest mean is from item B8 (M = 3.63, SD = 0.628). Meanwhile, the item with the lowest mean is B3 (M = 3.33, SD = 0.656). In general, the overall mean for module usage construct is at a moderate level (M = 3.43, SD = 0.654). This means that the module provided has help teachers in teaching and learning Bahasa Melayu Phonic for autism students, (see Table 4):

Table 4. Level of module usage

Item of Module Usage	**Mean**	**Standard deviation**
Item B1	3.43	0.712
Item B2	3.38	0.667
Item B3	3.33	0.656
Item B4	3.40	0.672
Item B5	3.45	0.597
Item B6	3.45	0.639
Item B7	3.35	0.662
Item B8	3.63	0.628
Total	**3.43**	**0.654**

In this context, the use of phonics reading module in teaching and learning rapidly improves the students' reading performance [15]. This method is a process of teaching errorless learning aimed at reducing mistakes made by students. For children with autism, the use of this errorless learning method is one of the factors that can improve their reading skills. Weiss, Fiske &

Suzannah [37] have state that errorless learning is an important element in the learning process of autism children.

Application ofthe module is a decent strategy for autism students in improving their reading skills [18]. This result is in line with a study on the application of reading module for children with disability among students with Autism that helps to improve the reading skills of students with non-verbal Autism [38].The result also supported by a study to scrutinize the psychological needs of children with ASD in Malaysia with the feasibility result that the designed module is practical, useful, and understandable for the participants [39].

3.3.The application of oral language

The result shows that each item from oral language usage construct were at moderate level. The highest mean is from item B12 (M = 3.93, SD = 0.417). Meanwhile, the item with the lowest mean is B9 (M = 3.23, SD = 0.80). In general, the oral language usage construct is at a modest level (M = 3.64, SD = 0.57). The result is similar with a study on verbal intelligence quotient as a method for oral language technics that accounted a small proportion of variance in receptive and expressive language scores in individuals with ASD [10].Observably, these autism students have interested in singing as an oral language techniques in their teaching and learning of Bahasa Melayu Phonic process. Details are presented in table 5:

Table 5. Level of oral language usage

Item of Oral language Usage	**Mean**	**Standard deviation**
Item B9	3.23	0.800
Item B10	3.80	0.516
Item B11	3.85	0.427
Item B12	3.93	0.417
Item B13	3.68	0.572
Item B14	3.58	0.636
Item B15	3.48	0.599
Item B16	3.58	0.594
Total	**3.64**	**0.570**

Prabowo, Utami & Al Fatta [23] in their study found that the application of oral language methods is an effort that enhances autism students learning process. This statement is also supported by Gray & Garand [25], which states that the technique of oral language use is a one of the best treatment for autism students to learn and improve their reading process. In conclusion, teachers need to use oral language techniques in order to attract autism students in their teaching and learning especially in Bahasa Melayu Phonic subject.

3.4. The applicationof the multimedia elements

The result shows that each item from multimedia element usage construct were athigh level. The highest mean is from item B18 (M = 4.40, SD = 0.496). Meanwhile, the item with the lowest mean is B20 (M = 3.90, SD = 0.744). In general, the multimedia element usage construct is at a high level (M = 4.14, SD = 0.648). This means that the multimedia element provided has help teachers in teaching and learning Bahasa Melayu Phonic for autism students. However, there is a wide range of developed technologies, and each participant in the process of education of children with autism assesses such technologies subjectively [40]. (see table 6)

Table 6. Level of multimedia elements usage

Item of Multimedia element Usage	Mean	Standard deviation
Item B17	4.25	0.800
Item B18	4.40	0.516
Item B19	4.33	0.474
Item B20	3.90	0.744
Item B21	4.08	0.616
Item B22	4.00	0.816
Item B23	4.05	0.597
Item B24	4.13	0.563
Total	**4.14**	**0.648**

This finding in linetothe research on social narrative and positive reinforcement components through novel computational multimedia tools practice session from Uzuegbunamet al [41], regarding the potentially effective in teaching greeting behaviors to children with ASD. Most autism students tend to need multimedia learning tools to help their learning process although their strength may include strong visual-spatial skills, non-verbal problem-solving skills, visual and auditory memory [42]. Besides, more activities should be blended into their learning process and aiming for a positive effect on their ability in reading [43].

The teaching and learning process through multimedia element are more attractive and effective and promising a better understanding for autism students. It is also supported by cognitive theory that expresses learning more easily through the observation and recognition of objects (visuals, sounds and others) that refer to multimedia elements, rather than learning with usual technics by relying on the reading of written material as books [44]. According to Omar & Hamid[45], students can interact more effectively when they learn to read using a computer. Thus, it can be concluded that the use of multimedia elements can be effective in helping the process of teaching and learning for autism student.

4. Conclusion

This study investigatesthe special education teachers'approach in teaching phonics of the language (i.e. Bahasa Melayu)for autism students, focusing on three elements; namely learning module, oral language and multimedia application. The application of learning module in teaching session was moderately accepted by students, and similarly for the application of the oral language approach.Interestingly, the application of the multimedia element was rated at high level, indicating that autism students were favorable at this approach.

The implication;more special design of a multimedia materials are needed for teaching phonics for language learning to help autism students to speaking correctly. Choosing the most useful and effective multimedia requires the existence of a range of characteristics that might be assessed for each elements. The difficulty is that such set of characteristics should take into account needs of all the students with autism. Therefore, a suitable treatment and special education tools were needed to ensure that autism children can learn and function normally through the develop system. Educational technology through useful and convenient learning tool is significant for student with autism especially in an inclusive classroom.

From the result of the findings, the researcher would like to suggest a few ideas that can be used as a guide or follow-up act to enhance the autism student's solidarities in Malaysia. This include a teachers training session in college whether during formal studies or during the course of service. This method should be further enhanced to produce a special education teacher who is competent and proficient in educating and managing autism students. Practical exercises need to be enhanced in order to provide opportunities for teacher trainees to get hands-on experience on autism students. In addition, training in this service should also be further enhanced by consultation and not only depend on workshops or lectures.

Slow language proficiency causes the attentiveness of these autism students to be lesser than normal students. This causes by their memory that seems to be short and they require repeat methods throughout the teaching and learning process. Teachers should also focus only on single thing during lesson and should give them time, opportunity and exercise before moving on to new knowledge. The task given should be step by step to make it easier for them to understand. The use of effective teaching methods on these autism students can have a significant effect on stress level within the teacher, family and the community.

5. Acknowledgements

This study has been funded under PPG Grant Vot. K021 from the Research Management Center (RMC), Universiti Tun Hussein Onn Malaysia (UTHM).

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