Image Grouping Technique 2CTS: Mastering Small Letters Among Learning Disabilities Children in Primary School

Ratiga Dadayan[a], Rosadah Abd Majid[b],

[ab]Universiti Kebangsaan Malaysia, Bangi Selangor
[a],Sekolah Kebangssan Gombak Setia, Selangor
E-mail: ratiga.bba7228@gmail.com. No. HP 0162860900

Abstract: Students with learning disabilities shown difficulties in mastering lowercase at primary school. This study aims to examine the ability of learning disabilities students in mastering 26 lowercase by using Image Grouping Technique 2CTS. This research was a qualitative research with a single action research design which based on Piaget's cognitive learning theory and Kemmis & Mc Taggard model was adapted in this study. Result was collected by researchers by creating and modifying Pre-Oral test and Post-Oral tests based on Malaysia Ministry Education (KPM) program oral paper (LINUS 2.0) Bahasa Malaysia construct 1. Total of twelves students with learning disabilities (LD) including dyslexia, slow leaner and Attention Deficit Hyper Disorder (ADHD) was used as the study sample. All children in the same culture lifestyle and seven years old. The study was conducted in one of primary school at Gombak district. The results showed that LD children capable in understanding to achieved 26 lowercase letters by using 2CTS technique within 6 weeks of teaching and learning sessions without any difficulties.

Keywords: Learning disabilities; Image Grouping Technique; Lowercase letters

INTRODUCTION

Alphabet proficiency is a fundamental skill that needs to be mastered in language-based education in Malaysia. The 26 used Roman letters were invented by the Phonenians 700 years ago based on early foundations. These letters are also known as the "Phonetic Alphabet" (Bruce, 1948) and have been widely used in the Mediterranean, including European countries, North Africa, the Iberian Peninsula and the Levant. In the field of knowledge, the Roman alphabet is a priority that should be mastered by all groups of people from childhood to their own capacity in most of the countries that uses it.

In 2012, the "Global Education First Initiative" (GEFI) was planned and Secretary-General of the United Nations, Ban Ki Moon, suggested one of his initiatives was to improve the quality of learning in education by ensuring that all children acquire basic skills in learning (Rusmin (2015) and the United Nations Secterary (2012). Besides that, Teach All CEO, Wendy Kopp, under an independent body, conducted a study on "The Global Campaingn for Education" with thousands of teachers in nearly 150 countries in 1999. As a result of this study, it was found that 106 million students worldwide failed to obtain this good educational foundation including basic skills (Rusmin, 2015).

Addressing the issue, the Government of Malaysia also established a Government Transformation Program in 2010. One of the focus areas was the special section of the National Key Result Area (NKRA) under the supervision of the Prime Minister's Department to monitor their success over time in Literacy and Numeracy with a goal that all children are able to master the literacy and numeracy skills within 3 years of primary school in level 1 (Level 1-Grade 3). It is intended to change the basis of society as required in Vision 2020, including the illiterate rate reduction element by 2020. (Prime Minister's Department, 2010).

In fact, it can be said that before mastering the reading itself, the individual needs to gain general knowledge and mastery of the alphabet first (Stanislas 2009, Jamian 2011, Jones, Clark & Reutzel 2012, (Paige, Rupley, Smith, Olinger, & Leslie, 2018 Therefore, teachers need to train students to reach a full proficiency level of alphabet mastery, before continuing their next teaching so that students do not miss out and can be avoided from the illiterate category.

In addition, the skill of introducing alphabet to an individual is not something as trivial as singing an ABC song, instead, the knowledge must be acquired by the individual before entering early kindergarten or preschool. (Beaty, 2009), expressed her opinion that it is important for a child to master the letters in order to be successful in early reading.

Researcher try to use obtained in line with the existence of the alphabet at that time, where letters are used to convey information by drawing in various forms such as "pictograms", "logograms" "ideograms" by drawing on stone or other writing materials of their time. Combination of that researchers also relating image or visual technique information in learning process by introducing each lower letter name which believe will strongly effect on LD children.

According Mahboobeh Tahani and Jahanbakhsh 2018, teachers should have a good teaching method. With this concept, researchers tried to introduce alphabet to students with learning disabilities by categorizing 26 letters into 6 groups named as 2CTS, that means 2 types of "C" forms of Curve Right, Curve left, 2 types of "T" Tail, Tall, and 2 types of "S" Short and Sharp. Briefly, 6 letters curved left (o, a, c, s, e, u), 3 curved right (m, r, n,), 7 letters that are like a tall pillar (b, k, l, d, f, t, h), 5 letters with tails such as animal tails (g, y, p, q, j), 4 sharp letters resembling durian thorns (v, w, x, z), and one short letter (i).

The group of letters does not have to be taught in the prescribed order but rather it is done with the flexibility and willingness of the students themselves to choose the group of letters they wish to study according to the researcher's weekly schedule.

RESEARCH METHODOLOGY

Qualitative methods have been selected for conducting action research ("practitioner action research") as they are believed to be appropriate for focusing on the change of student learning and inquiry-based. This study will use three types of data collection methods including observation, pre- and post- oral verbal tests and interviews with parents in obtaining background knowledge of students in basic skills. The data collected provide evidence and support in answering action research questions.

Student data were collected in a narrative manner by interviewing the student's background from the parent's information other than filling in the student's personal information. Interactions are used as teaching and learning activities and researchers practice dual communication to achieve the objectives and research questions. The researcher introduces each letter name by creating an image on children's cognitive and ensures that it is mastered by various activities. For Example; Researchers start with Q&A.

1. Which animals have a tail?

2. Where does the tail place on this animal's body part?

3. Let's find the letters which having the tail down.

4. Researchers will introduce this letter shape name is ….

(g / y / p / q / j)

The lesson will continue with various fun learning by creating the letter with doh, painting, stick with the object given and many more according to researcher creativity.

Figure 1: Sample of children activity for memories after learning process of saying the letter name

Next, data were collected from the result of pre-oral verbally by using the traditional way, which letters in sequential order (Figure 3) and randomly order (Figure 4). Both results will show comparison either the child really mastering each letter's name or just memories it as a letters song (Abcd..)

Teaching and coaching will be given to the selected sample of studies as a plan by researchers. Those chosen as sample are those do not master the lowercase letter 100 percent. The results of the pre-oral diagnosis will determine students with learning disabilities ability to recognize 26 lowercase letters. While the result of the post-diagnostic after the learning session rand new technique teaching, researchers can see the effectiveness of students with learning disabilities mastery through the 2TCS technique compared to the traditional teaching method (normal).

The action study focuses on a four-stage cycle. Each level requires researchers as investigators to have critical and creative thinking. The following are the four levels.
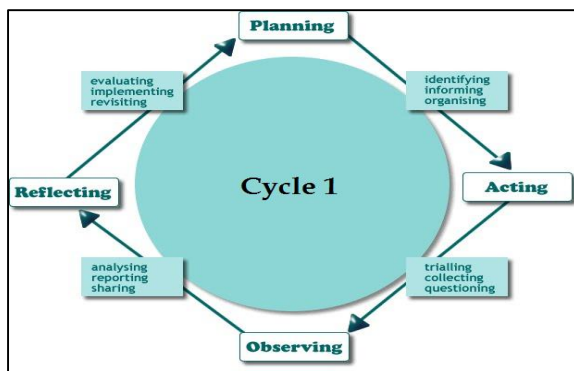

Figure 2: Kemmis & Mc Taggart Action Research Model. Resources of Planning and Research Division of MOE Education Policy 2008.

Copyright of Ministry of Education Malaysia 2006.

Stage 1: Reflections

In this phase, the researchers conduct reflections on the identified learning problems. In addition. the researcher also wants to ensure student mastery is achieved in the near future. Often the issues studied through these reflection notes will be considered as important issues to the researcher and can be addressed through classroom teaching plans.

Stage 2: Planning

At this stage, researchers are seeking inspiration or the best strategy for addressing the issue of literacy among students with reading disabilities. The methods and strategies that are being considered are in line with the time and physical capabilities. In addition, the planned methods and strategies should be in harmony with the progress and teaching and learning objectives in the classroom.

Stage 3: Planning implementation

The implementation will be carried out as planned by the researcher. However, in the process, there is a possibility of changes to the original planning. This is because researchers are constantly observing and responding to their observations. Therefore, this stage is also closely related to the next stage.

Stage 4: Observation

At the end of the first loop, the researcher ensures that the plan in addressing the issue is resolved. Even the results of this observation are also a reflection of this action study.

This study focused only on a group of Year 1 students entering the 2019 session at one of the schools in the Gombak district. The students were selected based on Year 1 data which 98 students have not mastered the introduction to alphabet names yet. List of student names. This group of students is placed in the same classes to help solve basic literacy skills. 12 students with learning disabilities were identified in those classes and were selected as study samples.

Research Materials Instrument

Two instruments have been produced. These include 2-part personal information, two-page pre-oral diagnostic test materials and a 1-page post- Diagnostic Exam excluding the cover page that was developed for early data collection. Both pages will focus on saying lowercase letters name in the traditional way of saying lowercase letters sequentially and the second page will say lowercase letters randomly.
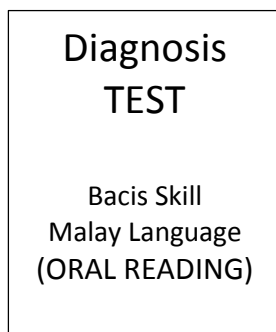

Figure 2: Front cover (Oral Reading)

Figure 3: Pre Oral Test Page 1

Figure 4: Pre Oral Test Page 2

Figure 5: Post Oral Test Page 1

Data collection procedure

Data collection began by providing a biodata form to view students' backgrounds to help them achieve the objectives of this study. This form consists of two parts, Part A: Student biography as part of the study and Part B: Information on child's existing knowledge.

In Section A, there are 7 general questions. Questions one to six are common questions that ask for students' background such as name, gender, race, nationality, date of birth and place of residence. The seventh question is a question about the background of early childhood education, whether it was pre-school or kindergarten. The questionnaire was conducted by interviewing 12 parents of selected students for study sample, face-to-face and by mobile phone telecommunications.

The observation method was used for the next step by testing the pronunciation of lowercase letters in the Pre-Oral Diagnostic Test paper. Student's achievement is collected through observation method.

The teaching plan was continued by recording each student's progress in a special schedule created by the researchers, weekly. Eight weeks of notes were conducted with a 2CTS teaching session.

Small letter	Earlier Recognize Letters	Small Letter	Earlier Recognize Letters
a	9	n	3
b	3	o	10
c	7	p	5
d	2	q	1
e	1	r	4
f	0	s	7
g	0	t	4
h	0	u	6
i	4	v	5
j	0	w	6
k	0	x	4
l	2	y	1
m	4	z	5

Table 1: Pre-Oral Diagnostic Test Results in saying 26 lowercase letters name.

FINDINGS

Researchers have found that students can master 26 letters well without difficulty. The students were able to said each letter name smoothly and fast that the researchers showed it randomly. The 2CTS technique convinced the researches to continued teaching for the next skills in LD children that is introducing syllables for the next reading process.

The data is collected on a weekly basis of the teaching session. The teaching session for the sample group was conducted for 3 days totaling 6 hours a week.

The researcher also aimed at just eight weeks in improving the mastery of lowercase letters name to students with disabilities. Two children found do not achieves due their frequently absents to the school.

Table 2: Analysis of Student's Achievements from Week 1 to Week 8 (Post-Test Oral Diagnostic) through the 2CTS technique.

NO	NAME	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8
		Teaching And Introducing Small Letter's Name							
		Curve Left (o,c,e,a,s)	Curve right	Revision Oral Spelling & Rewrite again	Tall (k,t,h,d)	Tall	Tail / Short (g,y,p,j,q,i)	Tail / Sharp (y,q,j v,w,z,x)	Revision
1	Aqasha	o,c,a,s	m.n.u.r	o,a,c,s,e,m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
2	Naqui	o,c,a,s	m.n.u.r	o,a,c,s,e,n, m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
3	Ikram	o	u,a	e,o,u,a,c,s	l,f,m,r	l,f,b,m,r,o, u,a,c,s,e	i,n	w,x,z,i,n	Ongoing
4	Putra	o,a	u	o,a,u,c	l,f,e,s,m	l,b,f,o,a,c, s,e,u	i	y,j,q,v,w,x,z	Ongoing
5	Khalish	o,c,a,s	m.n.u.r	o,a,c,s,e,n, m.u.r	l,b,f,t	i,b,f,t,h,d,k	g,p,i	y,j,q,v,w,x,z	Achieved
6	Rahim	o,c,a,s	m.n.u.r	o,a,c,s,e,n, m.u.r	l,b,f,t	o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
7	Izzan	o,c,a,s	m.n.u.r	o,a,c,s,e,n, m.u.r	l,b,f,t	i,b,f,t,h,d,k ,	g,p,i	y,j,q,v,w,x,z	Achieved
8	Haqeem	o,c,a,s	m.n.u.r	o,a,c,s,e,m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
9	Syafiq	o,c,a,s	m.n.u.r	o,a,c,s,e,m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
10	Laika	o,c,a,s	m.n.u.r	o,a,c,s,e,m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
11	Rabiatul	o,c,a,s	m.n.u.r	o,a,c,s,e,m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved
12	Nurul	o,c,a,s	m.n.u.r	o,a,c,s,e,m.u.r	l,b,f,t	i,b,f,t,h,d,k o,a,c,s,e, n,m,u,r	g,p,i	y,j,q,v,w,x,z	Achieved

DISCUSSION

Literacy is an important skill for children (Santi, (2018); Gerde, (2019) in acquiring their next reading skills. In fact, research on letters has also proven that it is a lifelong knowledge in helping the children perform (Huang, Tortorelli, & Invernizzi, 2014; Stahl, 2014; Jones, Clark, & Reutzel, 2012b).

The introduction of the basic alphabet is key for pre-school children (Wasik, (2001); GJ Duncan et al (2007); Single, 2012), to achieve in individual academics in primary school (Paige et al., 2018). Children will have reading difficulty if they do not have a clear guide in identifying, naming and writing letters (Ahmad, Schools & Schools (2015); Wasik, (2015); Paige et al (2018). The Nemours Foundation has established a program for reading in the yard and their knowledge letter is Pre-reading Skills (Nemours Foundation, 2019). It was supported, before efforts to put children into reading skills, letter recognition, naming, sound, uppercase and lowercase letters. The basics should be mastered first. Besides that, children need to identify 52 forms of letter writing that are challenging pre-literacy skills for young children (Sarah, 2015; Helal & amp; Weil-barais, 2016; Nemours Foundation, 2019; Cedar Mill Libraries Community Association, 2019).

Therefore, this Image Grouping 2CTS technique is recommended to assist in the acquisition of lowercase letters in LD children and typical children too.

PROPOSAL

The 2CTS technique, is able to assist various parties in dealing with early childhood literacy achievement too. Parents can also use these new teaching techniques to children as an alternative way besides the traditional teaching method. A variety of introduction method can help the cognitive development especially LD children.

REFERENCES

Beaty, J. J. (2009). 50 early childhood literacy strategies (2nd-Editio ed.). Pearson Merrill Prentice Hall.

Bujang, W. F. B. W. (2012). Jom Mengenali ABC. Penyelidikan Tindakan PISMP KG(BM).

Bruce, F. (1948). The Origin of the Alphabet. American Behavioral Scientist, 4(6), 3–7. https://doi.org/10.1177/000276426100400601

Bujang, W. F. B. W. (2012). Jom Mengenali ABC. Penyelidikan Tindakan PISMP KG(BM).

Gerde, H. K. (2019). Current Practices for Teaching Letter and Letter Sound Knowledge in Preschool Including Strategies for Improving Instruction in these Areas. Early Childhood Education Journal, 22.

Jabatan Perdana Menteri. (2010). Program Transformasi Kerajaan. Putrajaya, Malaysia: Unit Pengurusan Prestasi Dan Pelaksanaan (PEMANDU).

Jamian, A. R. (2011). Permasalahan kemahiran membaca dan menulis bahasa melayu murid-murid sekolah rendah di luar bandar. Jurnal Pendidikan Bahasa Melayu, 1(1), 1–12. Retrieved from http://journalarticle.ukm.my/2528/

Jones, C. D., Clark, S. K., & Reutzel, D. R. (2012). Enhancing alphabet knowledge instruction : Research implications and practical strategies for early childhood educators. Early Childhood Educ. https://doi.org/10.1007/s10643-012-0534-9

Paige, D. D., Rupley, W. H., Smith, G. S., Olinger, C., & Leslie, M. (2018). Acquisition of Letter Naming Knowledge , Phonological Awareness , and Spelling Knowledge of Kindergarten Children at Risk for Learning to Read. HINDAWI, 2018.

Rusmin, R. (2015). Jumlah keciciran semakin meningkat setiap tahun. Harian Metro. Retrieved from https://www.hmetro.com.my/node/66349

Santi, M. N. & S. (2018). Alphabet Knowledge through Cublak Suweng Games for Early Childhood Education. Advances in Social Science, Education and Humanities Research, 296(Icsie 2018), 250–254.

Stanislas, D. (2009). Reading in the Brain: The New Science of How We Read. Penguin Books. New York, NY. Retrieved from https://www.kirkusreviews.com/book-reviews/stanislas-dehaene/reading-in-the-brain/?utm_source=google&utm_medium=cpc&utm_term=&utm_campaign=DSA&gclid=CjwKCAjwmNzoBRBO EiwAr2V27UABwRYZOECtwsAHkzDurhdHQtzRfhwRylpVhF57GjwSyU5LDVQzoxoCeREQAvD_BwE

United Nations Secterary. (n.d.). The UN-Secretary-General's Global Initiative on Education. Retrieved from http://www.unesco.org/new/en/gefi/about/an-initiative-of-the-sg/

Wasik, B. A. (2001). Teaching the Alphabet to Young Children, (January 2001).