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THE USE OF COOPERATIVE INTEGRATED READING AND COMPOSITION (CIRC) METHOD TO IMPROVE READING COMPREHENSION ABILITY OF VISUALLY IMPAIRED STUDENTS IN THE 3rd GRADE OF SD SLB A YKAB SURAKARTA, INDONESIA

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Abstract:
This study aims to determine effects of the use of Cooperative Integrated Reading And Composition (CIRC) methods to enhance reading comprehension ability of visually impaired students in the 3rd grade of SLB A YKAB Surakarta. This research used experiment method with one group posttest pretest design. The subject is given treatment in the form of the application CIRC method in reading comprehension learning for four sessions, with duration for 60 minutes for each session. The effectiveness of CIRC method will be proved by the differences of the test result between pretest and posttest of reading comprehension. The population in this research are 5 visually impaired students in the 3rd grade of SLB A YKAB Surakarta. The entire population was also sampled simultaneously. The data collection technique is test by using short answer question. The data was analyzed using a statistical analysis nonparametric Wilcoxon signed rank test through SPSS program version 20.

Based on statistical analysis, the mean score of the posttet is higher than the mean score of pretest, namely 81,316 for posttest and 68,656 for pretest. Non-parametrik statistical analysis also indicated that score of Z = -2,032 and P = 0,042. Thus, the hypothesis "*CIRC method was effective to improve reading comprehension ability of visually impaired students in the 3rd grade of SLB A YKAB Surakarta*" can be accepted. It can be concluded that CIRC method has positive effect on reading comprehension ability of visually impaired students in the 3rd grade of SD SLB A YKAB Surakarta.

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1. Introduction

Reading is one of the basic elements in education, but the process is quite complicated, not just merely spell the letters (Rachim, 2002). Reading is not easy because the process to obtain reading ability is quite complicated. According to Rachim (2008:12) this complicated process in reading is due to the "*act of reading that involves many things like visual activity, psycholinguistics thinking and metacognitive*". According to the National Research Council (1999) in order to achieve optimal reading skills, it needs various approaches and methods. The definition of reading by Tarigan (2008: 7) is an ability to see the symbols of writing and change the written symbols through phonic become read orally (oral reading).

Meanwhile the reading comprehension level of literacy is higher than the level of basic literacy skills. According to Anderson in Klingner, Vaughn, and Boardman (2007: 10) reading comprehension is the process of constructing meaning with a complex process that includes reading the words, general knowledge and fluency. Definition of reading comprehension is also expressed by Somadayo (2011: 10) as a process of acquisition meaning that actively involves the knowledge and experience that has been owned by the readers and be connected to the content of reading.

Meanwhile, there are several factors that can support the achievement of the ideal reading skills. One of them is the person's physical condition. Disturbance in a person's organs can affect the sensor reading skills. These disorders can occur in the visual apparatus, hearing aids and speech synthesizers that can make the progress of learning to read in children slow (Rachim: 2008). Children who experience physical disorders such as those mentioned above, require separate ways or methods to achieve the ideal reading skills. Therefore, they are included in the special needs students. In accordance with the Law of Republic of Indonesia number 20 of 2003 Article 5 Paragraph 1 which states "*citizens who have physical emotional, mental and social belong to special education*", then students with physical disability also need to get an educational opportunity or in this case, appropriate reading training to their needs. Therefore it is necessary to do research on the application of specific methods succeed students with special needs to achieve the ideal reading skills.

1.1 Subject

The focus subject of this research is the visual impaired children. Visually impaired children have been selected for their impaired visual function, so that the process of learning to read was inhibited. Geniofam (2010: 12) divides the definition of visual impairment from two aspects, first "*people can be said as totally blind if they cannot see two fingers in front of her or just see light that is tolerable for orientation mobility.*" The second definition in terms of education is "*they cannot use a letter other than braille*."

The remaining modalities in children with visual impairment are hearing, smell and touch. So in learning activities, these all three modalities must be optimized. In reading comprehension learning activities, tactile function is highly preferred. Therefore totally blind children are taught to read Braille, which is a letter that formed from a pattern of arise dots printed that require the ability to touch to read it. While blind children who still have some usable vision or low vision, utilize their remaining eyesight with print large letter sized type 18 points (Smith, 2009).

The use of different fonts in children with visual impairment would occur differences in the ability to read compared with sighted children. According to Sharon Z Sacks, Cheryl K Hannan & Jane N Erin (2011: 266) for the blind students who rely on the palpability in reading, or using braille, learn to read and write is something complex. The process of reading and writing Braille takes time and is considered as more difficult than reading and writing using sighted letters. Totally blind children are also risky to have difficulty in reading skills of understanding, due to its fluency, vocabulary and concept development (Kamei-H, Holbrook & Ricci: 2012, Mohammed, Zainora; Omar, Rokiah: 2011). Similar with totally blind children, children with low vision are also late although they have some vision. Their exclusion is related to the control of eye movements, and other visual process that more difficult by low vision children (Gompel, Bon & Schreuder 2004). According to Ferrel (in Taylor, Smiley & Richard, 2009: 294) the lag of reading in blind children also occur on understanding concepts, because their way to understand is definitely different with normal students.

Disability experienced by children with low vision can affect the speed in reading, and moreover will affect the ability of reading comprehension. Various theories about blind children can be proven in the field. Blind students of 3rd grade SDLB A YKAB Surakarta has the ability to read lower than normal students in general. In 3rd grade, they have not reached their ideal reading skills. Their exclusion is due to their low reading speed, influent reading skills, and not mastering the vocabulary and concepts in the passage. So the research about application of the CIRC methods

(Cooperative Integrated Reading and Composition) at the 3rd grade students with visual impairment in learning reading comprehension needs to be conducted.

1.2. Objective of the Study

This study aims to determine the positive effect of the CIRC methods application in reading comprehension. CIRC method is one type of cooperative methods, and all of its activities focused on cooperative learning activities (Sharan, 2012: 39). According to Slavin (2005) CIRC is a method of comprehensive program to teach reading, writing, and language arts at higher grade in elementary school. This method can accommodate different ability level of student (Huda, 2012). CIRC learning activities is predicted suitable with the needs and conditions of visually impaired students. CIRC method contains various elements that can support students' skills in speaking. One of them is the meaning of the word, namely identifying the difficult words in reading and understanding them in one group. This element can overcome the problem of blind children in the late understanding of the concept. Besides the cooperative model also greatly assist students.

In line with the statement of Hosnan (2014), CIRC learning model in terms of language can be interpreted as a cooperative learning model that integrates a thorough reading and compose it become important parts.

Based on the literature review and the background above, it can be formulated a hypothesis that Cooperative Integrated Reading and Composition (CIRC) methods can improve reading skills of children with visual impairment of 3rd in SDLB A YKAB Surakarta.

2. Methods

The Subjects in this study is five visually impaired students of 3rd grade of SDLB A YKAB Surakarta. This study is a population research due to the small number of the population, so that the entire population is used as the research sample. This research is placed in SLB A YKAB Surakarta located in jl. HOS Cokroaminoto No 43, Jagalan, Jebres. The design of this research is a quantitative research using experimental methods. Experimental design used is pre and post-test single group or one group pretest posttest design. The data collected will be analyzed using non-parametric statistical Wilcoxon signed rank test with SPSS version 20.

Data collection technique used in this study is test questions with short answers. The items of the question test between pretest and posttest are different, but it has the

same content. The pretest consists of ten questions from the two reading materials. The lenght of readings item was adapted from Competency Standards for blind students in 3rd grade namely, 100-150 words. Each reading items has five items. So from the two reading items, it will be obtained 10 short question items. The first step that must be done in this research was the pretest. Pretest is a given test performed before treatment. Pretest is given to a subject to determine the ability of the subject in.beginning. The next step after pretest was given is treatment namely, using CIRC methods in teaching reading comprehension. The treatment given during four meetings with the duration of each meeting is 60 minutes.

As a cooperative learning model, CIRC emphasizes on group learning activities. Then the subjects were divided into two groups with different ability. Group A is consisted of two students, and group B is consisted of three students. During reading comprehension activities with CIRC method, students work together to compete between group A and group B. Each group will get pieces of the paragraph that should be arranged. Then students work together to read a separate paragraph, communicate its contents, and discuss in the group. The quality of the group performance is not only seen from the successfully arranged paragraph, but each group also had to retell the passage to the class.

Once the treatment session is completed, posttest reading comprehension is conducted. Posttest is a test given after the treatment. Posttest results will be compared with the score of pretest results to conclude whether there is influence or not from the CIRC method.

3. Results

Data related to the implementation of the research is showed as follows. The data about research subjects will displayed in the following table.

Number	Name	Gender
1.	AF	Female
2.	YA	Male
3.	YIA	Female
4.	CHB	Male
5.	LR	Male

Table 1: List of the subject

To determine the beginning ability of students in reading comprehension, reading comprehension pretest was performed. Reading comprehension pretest results are as follows.

Number	Name	Score
1.	AF	33,3
2.	YA	86,66
3.	YIA	76,66
4.	CHB	73,33
5.	LR	73,33
	Average	**68,656**

Table 2: Pretest score

The next stage after the pretest done is to provide a treatment of CIRC method applied in teaching reading comprehension. Posttest was conducted to determine the final result after being given CIRC method. Here is the result of the reading comprehension posttest.

Number	Name	Score
1.	AF	46,66
2.	YA	93,33
3.	YIA	83,33
4.	CHB	96,66
5.	LR	86,6
	Average	**81,316**

Table 3: The Score of the Posttest

The next step is to compare the pretest and posttest score find out whether the CIRC method affects reading comprehension of visual impaired children in 3rd Grade. The comparison score between pretest and posttest results is shown in the following diagram.

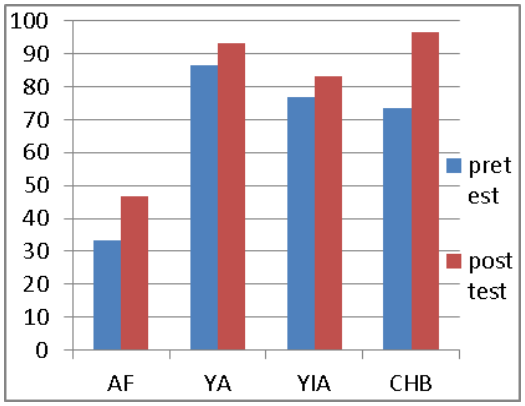

Chart 1: Comparation posttest and pretest score

Translation of the acquisition value of pretest and posttest reading comprehension is as follows.

Descriptive Statistics

	N	Min	Max	Mean
Pretest	5	33,30	86,66	68,6560
Posttest	5	46,66	96,66	81,3160
Valid	5			

Table 3: The Descriptive statistic of pretest and posttest score

The results of analysis of the application of methods CIRC to the reading ability of blind students of 3rd grade SDLB A YKAB Surakarta outlined in the following table.

Test Statistics[a]

	Nilai posttest - Nilai pretest
Z	-2,032[b]
Asymp. sig. (2-tailed)	,042

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Table 4: The statistic test result of reading comprehension score test

Requirements analysis test is done by comparing Asymp. Sig. (2-tailed)/P with a significance level (α) of 5%. The hypothesis is accepted as true if Asym. Sig. (2-tailed) <5%. According to the table above, the value of Z = -2.032, and the value of P = 0.042. Since the value of P, Z <0.05, then the hypothesis that said CIRC is effective methods to improve reading comprehension can be accepted as true.

3. Discussion

After analyze the data and test hypotheses, it can be concluded that the hypothesis "CIRC method is effective to improve reading comprehension ability of visual impaired students 3rd grade SLB A YKAB Surakarta" can be accepted. Based on the data analysis above, application of CIRC methods can improve the ability of reading comprehension of visually impaired students 3rd grade SLB A YKAB Surakarta. The results are consistent with research on the application of methods CIRC that has been done before.
Reading activities for visual impaired students need some special tools. For blind students, they require Braille to read, whereas for low vision they need a large size print letters at least 18 points. Blind students in general do not have intellectual disabilities.

As revealed by Gargiulo that "*there was no significant difference between students with visual impairments and sighted students about their learning ability*" (2012: 456). While in language development according to Taylor, Smiley and Richard (2009: 294) they state that compared with sighted children, blind people do not have a crucial problem in the development of language. However, it does not mean that blind people have no difficulty in development of early reading skills. The difficulty is about conceptual mastery, since they do not get the input of visual stimulation. Visual stimulation can be understood as every information obtained through the sense of sight. This information will form as a concept that will also enrich the vocabulary.

The success of CIRC method to improve reading comprehension in students with visual impairment can be realized because the activities in CIRC method can help students. As previous theory, there are some obstacles associated with the development of blind children reading skills. In terms of language skills, according to Ferrel (in Taylor, Smiley & Richard, 2009: 294), their language difficulty is on understanding concepts. According to Emerson, Holbrook & D'Andrea (in Kamei-Hannan, Holbrook & Ricci, 2012: 4) the main problems in reading of visually impaired children are related to fluency, vocabulary and concept development. So these obstacles can be overcome through learning activities in the CIRC method.

CIRC method contains various elements that can support students' skills in the language aspect. One of them is the meaning of the word elements, namely identifying the difficult words in reading and understanding them together in one group. This element overcomes the problem of blind children in the late understanding of concept. According to Huda (2012: 126), cooperative method is designed to accommodate a diverse student ability level, either through heterogeneous grouping or a homogeneous grouping. So in this case, the ability of different children can support each other in

learning activities. Students with higher ability can promote the progress of students who with lower ability.

In addition, the increasing of reading ability of students in this research also occurs due to CIRC method that is essentially an integrated learning activity between reading and writing. Thus, in the CIRC method, students conduct all components to improve the quality of language either in reading or writing. This is in line with the principle of visual impaired students learning proposed by Smith (2009: 244) that is concrete experience, unity of experience, and learning by doing. Unity of experience is gained through the cooperative model, which held discussions with friends, discuss the content of the story, and shared understanding. Learning by doing obtained through reading and writing activity.

However, this method has a weakness when applied to children with visual impairment. The weakness of CIRC method for student with visual impairment is that they get less concrete experience of learning principle. Concrete experience can be obtained through the learning tool, or direct experience gained by the students. Thus without teaching aid or other learning tools, the application of CIRC methods will not fulfill the learning principle of concrete experience to student with visual impairment. The fact indicate that all students have different abilities in the classroom. Only two students in this research subject possess good ability in reading comprehension skill. Moreover one of the students is in lower level than their classmates. In this learning activity that formed in two groups, group A is consisted of two students, and group B is consisted of three students. CIRC method was able to encourage peers to continue developing their reading skills.

Nevertheless, the CIRC is not directly solves the problems of reading experienced by students with visual impairment. According to Emerson, Holbrook & D'Andrea (in Kamei-Hannan, Holbrook & Ricci, 2012: 4) the main reading problems in visual impaired children are related to fluency, vocabulary and concept development. On the issue of reading fluency, this method did not have a significant impact. The effort to improve reading fluency with Braille take longer time and more intensive learning. Thus, the CIRC method overcomes the other problem of visual impaired children in reading such as the increasing of vocabulary mastery and the concept development.

5. Conclusions and Recommendations

The conclusion of this study is CIRC method is effective to improve reading comprehension of visually impaired students in 3r^{d} grade. The activity in the CIRC method can accommodate the problems of visual impaired student in learning and reading comprehension. CIRC method is not a method deliberately arranged for children with special needs. Therefore, it is necessary to develop a CIRC method that adaptive for students with visual impairment. In applying the method of the CIRC, thing should be considered is that blind people may be less fulfilled in concrete experience. The further research should modify the CIRC method so that the three principles of learning in visually impaired student (concrete experience, unity of experience, and learning by doing) can be met at once.

References

1. Geniofam. (2010). *Mengasuh & Mensukseskan Anak Berkebutuhan Khusus.* Jogjakarta: Garailmu.
2. Gompel, Marjolein; van Bon, Win H.J & Schreuder R (2004). Reading by Children with Low Vision. *Journal of Visual Impairment & Blindness.* 98(2), 77-89.
3. Hosnan, Muhammad. (2014). *Pendekatan Saintifik dan Kontekstual dalam Pembelajaran Abad 21: Kunci Sukses Implementasi Kurikulum 2013.* Jakarta: Ghalia Indonesia
4. Huda, Miftahul. (2013). *Cooperative Learning: Metode, Teknik, Struktur dan Model Penerapan.* Yogyakarta: Pustaka pelajar.
5. Kamei-Hannan, Cheryl; Holbrook, M Cay & Ricci, Leila A (2012). Applying a Response-to-Intervention Model to Literacy Instruction for Students Who Are Blind or Have Low Vision. *Journal of Visual Impairment & Blindness,* 106(2), 69-80.
6. Klinger, J.K., Vaughn, S., Boardman, A. (2007). *Teaching Reading Comprehension to Student with Learning Difficulties.* New York: Guilford Press.
7. Mohammed Z, Omar R, 2011. Comparison of reading performance between visually impaired and normally sighted students in Malaysia. The British Journal of Visual Impairment 29: 196-207. doi: 10.1177/0264619611415004
8. National Reasearch Council, (1999). *Starting Out Right: A Guide to Promoting Children's Reading Success.* Cetakan ke 6. Washington, DC: National Academy Press.

9. Rahim, Farida. (2008). *Pengajaran Membaca di Sekolah Dasar: Edisi Kedua.* Jakarta: Sinar Grafika.
10. Sacks, Sharon Z; Hannan, Cheryl K & Erin, Jane N (2011). Children's Perceptions of Learning Braille: Qualitative and Quantitative Findings of the ABC Braille Study. *Journal of Visual Impairment & Blindness.* 105(5), 266-275
11. Sharan, S. (2012). *The Handbook of Cooperative Learning.* Yogyakarta: Familia.
12. Slavin, Robert E. (2005). *Cooperative Learning: Teori, Riset dan Praktik.* Bandung: Penerbit Nusa Media.
13. Smith, J.D. (2009). *Inklusi, Sekolah Ramah untuk Semua* (penerjemah: Enrica & Denis). Bandung: Penerbit Nuansa
14. Somadayo, S. (2011). *Strategi dan Teknik Pembelajaran Membaca.* Yogyakarta: Graha Ilmu
15. Tarigan, Henry G. (2008). *Membaca: Sebagai Suatu Keterampilan Berbahasa.* Bandung: Penerbit Angkasa.
16. Taylor, R.L., Smiley L.R., Richards S. B. (2009). *Exceptional Students: Preparing Teachers for the 21st Century.* New York: McGraw-Hill.

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