DEVELOPING READING BASED PEER TUTOR MODEL FOR CHILDREN WITH READING DIFFICULTIES

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Abstract

The purpose of this study is to test a developed peer tutoring model as a reading approach to improve the reading skills of children with reading difficulties and to test the procedures of peer tutoring implementation. The research is a part of the R & D (Research and Development) design focusing on the field try outs which were done using the action research procedures implemented in three schools. The result shows the percentage of the reading ability increase in almost every session of the peer tutors in the classroom, outside the classroom and in the resource room. The impact of social interaction did not appear during the first month of implementation, but some behavioural changes have been found: most of the tutee become more confident and are willing to initiate interactions; meanwhile, in carrying out their role the tutors seemed enthusiastic and happy. Revisions of the models and procedures are made based on teachers and students reflection.

Keywords: children, reading difficulty, peer tutoring, procedures

Introduction

One of problems the teachers faced in the classroom is students with reading difficulties. Pujaningsih (2011) reported that there are approximately 3-4 students having reading problem in 18 elementary schools in Yogyakarta Municipality and most of them are male. She also reported that due to the lack of problem assessment, efforts to deal with this problem have not been successful, moreover special service for students with reading difficulties cannot be done effectively due to the time limit. Therefore, peer involvement has been suggested.

Phenomena of children with reading difficulties (CwRD) have become a challenge for education worldwide. In general, the number of children with reading difficulties in developed countries is relatively high. According to Gorman (2003), 10% - 20 % children of elementary school experienced this. National Institute of Child and Health and Development (NICHD) in Bursuck and Damer (2011) described that approximately 30 percent of CwRD needs an intensive support. The urgency of handling these children is very clear; if this problem is ignored they will face a more complex learning problem in the future.

CwRD tend to fail in their learning especially in reading and writing activities that furthermore cause them tend to have poor selfconcepts, negative emotions and negative personalities (Lackaye and Margalit, 2006). Failure to handle the aforementioned problems can possibly lead to depressions (Maag and Reid, 2006). Moreover, the children are more vulnerable to "stay in their level" and drop out (Deshler *et al.* in Bear and Braziel, 2006). The problems will continue until they are in the transition of teenager to adulthood.

Reading ability is an important base for learning other subjects. Therefore, reading difficulties have to do with the low mastery of other subjects. Mathematics questions presented in a story, varied instructions in evaluation tests, additional reading materials for other subjects (Religion, Civic, Science, etc.) require reading skills. Regarding this, attempts to help children with reading difficulties need to be done by taking into account the situation on the field.

Some studies reported that children could learn easily from their peers. They learn through discussions and interactions and it is proven that both ways are more effective than working individually (Yuk Fai, 1996). As reported in some studies, handling learning difficulties by peer-based activities have

some positive sides. Children involvement in a learning process increases children's motivation (Ryan and Deci, in The Access Centre, 2004). Next, peer learning strategy is an economical and effective approach to handle children with special needs that will give positive impact for both parties socially and motivate them to learn (Miller & Miller in The Access Centre, 2004). Peer strategy is effective to be applied in: grades 1, 2 and 3;   suburb areas; a region with middle to lower social economy inhabitants; and minority/shunned children (Rohrbeck, et al., 2006).

This study has aimed to formulate a model and procedures of peer tutoring to improve reading skills of children with reading difficulty (CwRD) and to describe the academic impact on the tutors and tutees. The result of this study would enrich the studies of services for children with reading difficulties in low level classes especially if it is applied in a class with no special teacher supports.

Method

This research was a Research and Development (R&D) study modifying the procedures proposed by Gall, Gall and Borg (2003). The product is a model of peer-based service procedures for children with reading difficulties.

Table 1: Research Steps

NO	STAGE 1		OUTCOME	INDICATOR
1.	Preliminary			
	a. selection		Determining subjects diagnosed having initial reading difficulties	10 children were identified to have reading difficulties as nominated by the teachers
	b. Assessment of initial reading ability		3 children were identified having reading difficulties; initial reading and socio-metric measurement	- Initial reading ability of the 3 children were identified with Curriculum Based Assesment (CBA) -sociogram mapping with sociometric test
	c. Workshop on the model		3 teachers of the lower grade from 3 schools had got similar perception about peer-based	Teachers were ready to implement the procedure
2	Try Out using Classroom Action Research			
	Preparation		Supporting instruments are ready to use	3 individual lesson plans completed with reading materials based on children's levels and observation guidelines.
	Implementation of Peer-based strategy		Implemented by 3 tutors and 3 tutees	Reading progress tests were done minimum 10 times of tutorial sessions.
3	Model Revision			
	a. Evaluation and revision based on the try outs		FGD of the hypothetic models of the procedures	The hypothetic model was revised based on the FGD attended by 1 language expert and 3 teachers from 3 schools
	b. Model Revision		Interviewing the tutors, tutees, final sociometric measurement	Results of sociometric measurement and interviews

Setting

Study was done in 3 elementary schools (SD; *Indonesia: Sekolah Dasar*) namely SD Bangun Rejo II, SD Ngoto and SD Rejowinangun I involving 6 teachers and 10 students doing classroom action research (CAR). Below is the detail about the teachers:

Table 2: Demographic data of the research subjects

Number	6
Gender	Female
Education Background	Undergraduate : 1. Elementary School Teacher Education: 2 persons 2. Dance Teacher Education : 1 3. Humanity : 1 person

	4. Special Education : 1 person Diploma: 1. English Education: 1 person
Age (average)	41 years 6 months
Teaching experience (average)	12 years, 6 months

The data show that 59% of CwRD in 3 schools are male. In SD Rejowinangun and SD Ngoto, approximately 1-2 children in a class are CwRD; so, it was agreed to apply peer tutoring out of the teaching-learning hours. This is different from SD Bangun Rejo II that most of the students in grade 1 had reading difficulties; therefore peer tutoring was done during the teaching-learning hours by pairing one tutor with one tutee. In the same school, peer tutor was also done in remedial classes to help the special teacher handling the big number of students.   The details are as follows:

1. Peer tutor done out of the teaching-learning hours (1 tutor for 2 tutees and 1 tutor for 1 tutee in SD Ngoto dan SD Rejowinangun)
2. Peer tutor done during the teaching-learning hours (1 class in SD Bangun Rejo II)
3. Peer tutor done in a remedial class (SD Bangun Rejo II) for reading comprehension difficulties.

This study involved 10 students, 4 from Elementary School Teacher Education Department (ESTED) and 6 from Special Education Department (SED). Two ESTED students assisted the teacher in implementing the CAR in SD Ngoto and SD Rejowinangun I. SED students assessed students reading abilities together with the teachers in 3 schools and assisted them in implementing CAR in SD Bangun Rejo II.

According to the teachers, the problems they faced in the classroom are:

1. The teaching-learning process needed a longer time as they spent more time to help CwRD during the lesson because the children were not able to comprehend instructions or write the answers.
2. The children read wrongly.
3. The children could not complete the task on time because they cannot read well.
4. The children were shy and academically poor.

So far, the teachers of the three schools have attempted to handle the CwRD by doing varied activities such as giving some extra time for studying, mentoring, even doing peer tutoring although it was not systematic yet. The efforts had also given varied results. Some teachers said these are unsuccessful but the others said there was a little improvement. In general, the teachers involved in this study stated that they felt interested and were willing to implement peer tutoring in the classroom for 1 cycle because the thought that the methods they used to handle the CwRD were not successful. During the implementation, there were 3 more teachers expressing their willingness to participate after they attended the workshops on peer tutoring.

The CAR was done in 3 schools consisting of 1 cycle comprising 8-12 tutorial meetings. Beforehand, workshops on peer tutoring were done for the teachers and students. The target was to build similar perception and understanding amongst participants of the research (teachers, students and researchers) about strategies in selecting tutors, tutor training, tutorial application and evaluation. In general, selected tutors must have better reading skills that the tutees and in terms of personality they must be patient. However, in selecting tutor teachers took into acount the tutor-tutee realationship and willingness. Nevertheless, in the field some obstacles are identified that some tutors were not patient that the tutorial could not run successfully. It happened when teachers had not enough tutors in the class that met the criteria. Gender-based tutorial was not specifically identified. The data is as follows:

Table 3: Gender of Tutor and Tutee

	(tutor : Tutee)
SD Rejowinangun I	(M : F) (M:M), (M:F)
SD Ngoto	(M:M), (M:M) (F:F)
SD Bangun Rejo	(M:F), (M:M) (M:M)

Selection Tutors

Based on the Focused Group Discussion (FGD) result, the decision about tutor was based on the closeness of relationship between tutors and tutees and indirectly it refers to friends with similar gender. However, the decision about tutor that was based on personality (patience) turned to female tutors. Peer tutoring was implemented differently in each school. One school applied it during the teaching-learning process because the number of CwRD is quite a lot. In this class, the teacher paired almost all children having better reading skills with those who were less. Meanwhile the other school implemented the tutoring after school time. Obstacles found when they chose time and place. Based on the observation, peer tutoring was done in a library next to a place where a group of upper class students practicing the drum band causing noise that made tutors and tutees could not concentrate. When it is done in an infirmary some other friends came and intruded the tutoring. They asked "what are you doing?" and then they commented or mocked or spelled the words. After school tutoring did not get so good response from tutors and tutees. As they were observed tired and sluggish in the afternoon, the teacher asked them to have their lunch. Day selection was also influential. When the tutorial was done on the same day as extracurricular day, children's concentration decreased. It was recorded during tutorial session done after school before the drum band or scout extracurricular that children's concentration was distracted.

Implementation

Each teacher signed some consent to apply peer tutoring with a set of activities as follows:
a) Preparation

Tutor training was done by all teachers in 3 schools. In this step, based on FGD, it was revealed that there were tutors who never praised and felt confused in filling out the achievement column. These indicate that they were not ready. Materials had been prepared during the workshops. They were developed based on the assessment on tutee's reading skills. Tutorial kits were developed during the workshops and designed based on peer tutoring guidelines.
b)   Tutorial Implementation
 1) Greetings

Tutors are expected to start the tutorial session with greetings. However, this stage was often skipped because tutors and tutees arrived on the same time in the library or classes; so, what was done was asking the tutee to pray.
 2) Explaining tutorial procedures

Tutors are responsible to explain the tutorial procedure to the tutees. In the implementation, it was observed that they explained the procedure in a detail way in the beginning of the sessions; after that they did not do it again as the tutees had already known.
 3) Taking tutorial materials and kits

Tutors took the materials prepared by the teacher based on the assessment results. In some sessions, however, it was found that tutees' ability significantly improved. Unfortunately the materials for them had not been prepared beforehand. Majority of the observation data showed that tutors still needed teachers' inducement to give praise as they often forgot to do it. A significant increase of tutee's reading abilities was found in peer tutoring done during the teaching-learning process. When they were with tutors, based on the observation, tutees' completed the task faster.

The tutorial problems were found in some situations. First, when the tutorial was done for more than 45 minutes (as stated in the guide book) both tutors and tutees felt bored. Second, teachers and researchers do not anticipate the situation that the students improve their skills quickly, so that the next level materials had not been prepared. It happened when tutees were able to complete the tutorial tasks consisting of CVCV (i.e. Consonant Vowel Consonant Vowel) structure and should be followed by CVCVC (i.e. Consonant Vowel Consonant Vowel Consonant) structure. Third, tutors were busy doing their own activities when they worked with tutees that were able to read CVCV and targeted to read CVCVC who were very slow to respond. The feedback had not been given effectively as tutors did not give the key words and let the tutees have a difficult time. Finally, using one place for two tutorial activities were not beneficial as the tutor turned his focus to the other tutee.

 4) Closing

In this stage, tutor/tutee put a sign in the achievement column based on the number of cards that were successfully read. The schools used varied ways in this stage. Tutors who were unsure of how to

shade the achievement ladder did not to use this technique. So far, to record the reading accuracy in each meeting tutors took notes on the words pronounced wrongly by the tutees. Next, tutor said goodbye and encouraged tutees to attend the next tutorials.

The result shows that in general tutee's reading skills have improved. It can be seen in the table below:

Table 3. Reading improvement after peer tutoring

Schools and setting	Before	After
SD Ngoto (out of teaching-learning hours)	11 words/minutes	16 words/minutes
	18 words/minutes	24 words/minutes
	7 words/minutes	15 words/minutes
	Able to read by spelling words per words	Able to read words with C-V-C patterns
SD Rejowinangun I (out of teaching-learning hours)	spell per word	• Able to read per syllable • Able to read more fluently
	Tend to make mistakes in pronouncing the words as the result of guessing	The frequency of mistakes had decreased.
SD Bangun Rejo II (during the teaching-learning process in classrooms)	Able to spell and read simple CVCV and CVCVC words	Read two short sentences.
	Able to read CVCVC words	Able to read simple sentences (SPO)
SD Bangun Rejo II (remidial classes)	unable to answer questions related to the text in one sentence	Able to answer questions of who, where, what, based on the text in one sentence
	unable to answer questions based on the text in one sentence	Able to answer questions of who and when in one sentence

Table 3 shows the increase of reading skills in all settings. The improvement can be seen from the result of CBM assessment i.e. the speed of reading per minute, results of initial reading (decoding) ability and reading comprehension. Although, sociometric test had not detected any significant improvement on social interaction skills, behaviour changes were observed. Tutees were more confidence to talk and initiate conversations.

Table 4: Changes of social interaction after peer tutoring

	before	after
SD Rejowinangun I	0	0
SD Ngoto	0,05	0,09
	0,05	0,05
SD Bangun Rejo II	5,55	5,55
	0	0,02

Improvement of skills in early reading level and reading comprehension level appeared in all peer tutoring sessions. It was possibly because the materials used were based on the assessment result. Based on the interview and field notes, majority of tutors in all schools were happy doing their duty as they could help their friends. Their enthusiasm was observed as they motivated tutees to come along next days. Nevertheless, tutors facing tutees with reading and memory problems were observed less patient. Moreover, tutors handling 2 tutees got bored easily.

Reflection:

Getting the tutor ready influences the implementation of peer tutoring especially in assessment activities (filling in the achievement column) and feedback. Therefore, tutor preparation phase can be extended if during simulation they still feel hesitate or uneasy. Moreover, it is important to provide materials for all levels since the very beginning of the program and to choose the best time and place for peer tutoring.

Discussion

As identified by teachers, majority of CwRD are male (59%. This is in line with Lerner and Kline (2006) who stated that the number of male students facing reading difficulties at schools is four times larger than female. The study shows reading difficulties are categorised into some levels.

There are some reading problems that **cannot be solved** by peer tutoring. National Institute of Child and Health and Development (NICHD) in Bursuck and Damer (2011) stated that:

a. 5% children come to schools with reading abilities. They are able to read naturally without formal learning.
b. 20 % - 30% children read easily
c. 20% - 30% children read with efforts and with teacher's support. If parents teach them at home they can read well.
d. 30% children need extra lesson to learn how to read. If they do not get speacill attention before they step on to grade their reading performance will be poorer than their peers.
e. 5% children have serious reading problems and need speacial service.

Among many reading problems faced by the children, only a few that cannot be solved by peer tutoring. Chipman and Roy (2006) emphasized that peer tutoring is not suggested for children with decoding problems. However, children's reading ability levels in this study cannot be identified in the early assessment level. Learning from this, therefore, assessment on reading ability levels is needed in order to decide whether the reading problems require special mentoring or peer tutoring. Peer tutoring during the teaching-learning process can be applied in a class that a half of its members are having reading difficulties. The study revealed that majority of CwRD is from lower-medium economy families. Bursuck and Damer (2005) in Bursuck and Damer (2011) argued that in schools with poor family environment, there are more children that need extra support.

Peer Tutoring Improvement

In all peer tutoring classes, improvement on reading skills, both early reading and reading comprehension skills, was identified. This finding was in line with the result of meta analysis of peer tutorial, done by peers of similar level and peers of different level, proposed by Cohen, Kulik and Kulik in Yuk Fai (1996) which revealed that both strategies influence positively towards academic achievement. Positive results can also be seen in social interaction progress. Although it has not been reflected yet in sociometric result, interviews toward tutors revealed that they feel happy in doing peer tutoring. Yuk Fai (1996) stated tutors can also gain personal academic satisfaction. By becoming a tutor a child has an opportunity to take care of the others and be more responsible.

During the tutoring, it was fpound that tutors forgot to praise the tutees, forgot to give feedback and switched their focus to other things. This happens because they are not used to do these activities. Therefore, in the guideline these matters need to be included. This is in line with Wright's suggestion to ease teachers improving the peer tutoring process (2002). The guideline should at least consist of the following:

a. The use of praises. If the tutors praise the tutees less than 3 times during a session teacher can remind them to praise at least 5 times in a session.
b. Simulation of reading strategies. It is suggested to ask tutors to do simulation with the teachers to ensure that they do their duty without teacher's supervision.
c. The number of tutorial materials. If the number of letters or syllable and or words o read is less than 80% of the given target, tutors should be reminded to encourage the tutee to focus more on the tutorial.
d. Tutors' improper behaviours must be corrected. If they do not change, changing tutors might be applied
e. Tutees' bad behaviour during tutorial can be handled by: 1) equipping tutors with strategies to control the tutees; 2) postponing the peer tutorial (if the problems appear permanently).

The making of reading ability achievement graph is included in the guideline of peer tutoring in this research. Marr et al. (2010) argued that the graphs could motivate the students to reach their aims. Each child has each own graph that can be filled with the progress of reading ability at the end of every tutorial session. This encourages the children to continue their learning in the next peer tutoring. The graph can also be used by teachers to plan their lessons.

Conclusion

Effective peer tutoring model consist of 3 steps: preparation, implementation and evaluation. Reading skill improvement is identified from the result of academic achievement in almost all classes implementing peer tutoring. Moreover, the social impact is seen qualitatively. Further research on assessment instruments to identify difficulty levels is needed so a better peer tutoring method can be selected. Graded peer tutoring materials as one of the tutorial instruments need to be developed.

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