Scaffolded Think-Group-Share learning to enhance children's English learning performance

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Abstract: Cooperative learning is considered one of the most effective instructional methods. However, previous empirical studies on the effectiveness of cooperative learning did not always show positive results. Poorly constructed cooperative learning that lacks the appropriate components might cause critical problems, such as the free-rider effect and overwhelming cognitive load. The free-rider effect occurs when a group member does not perform or does less work than other group members. A challenging task without additional support from the teacher might discourage students to work as a group due to unmanageable cognitive load actively. As an initial effort to remove such problems, we developed "Scaffolded Think-Group-Share" learning based on the existing cooperative learning method called "Think-Pair-Share." In "Scaffolded Think-Group-Share" learning, students are required to work on the individual scaffolding worksheet before doing a group activity to help them actively participate and cognitively engage in a group activity. In particular, the scaffolding worksheet provides students with cues and exercises with gradual levels of difficulty that function to stimulate students' prior knowledge and manage their cognitive load gradually. Consequently, "Scaffolded Think-Group-Share" learning might have the potential to enhance children's English performance by minimizing the free-rider effect and helping children manage their cognitive load.

Keywords: Cooperative learning; scaffolding; English learning performance; free-rider effect

Introduction

Most Asian countries have lowered the age for compulsory English education (Nunan, 2003) by implementing the policy to introduce English into elementary school (Lee and Azman, 2004). In September 2011, China lowered the age from 11 to 9 years old, and Korea lowered the age from 13 to 9 years old in 1995. In Japan, English was not a compulsory subject in elementary school until April 2011 when the government of Japan launched the Course of Study for elementary schools that required English to be compulsory starting in the fifth grade (Hu and McKay, 2012). In 1993, Indonesian elementary schools started to introduce English to fourth graders as a local content subject (Rachmajanti, 2008).

The government of Indonesia has shown a severe attempt to improve teaching strategies in elementary school English classes (Rachmajanti, 2008). Previous studies showed that many English teachers in Indonesian elementary schools adopted a monotonous lecture method and rarely varied their teaching methods (e.g., Rachmajanti, 2008; Hawanti, 2011; Zein, 2012). On the contrary, most Indonesian elementary school students were discontented with the teacher-centered instructional method and preferred to work in small groups with interactive learning activities (Rachmajanti, 2008) as argued by some scholars that young language learners (third, fourth, and fifth graders) work well in groups and learn from each other (e.g., Scott and Ytreberg, 1990; Curtain and Dahlberg, 2016). Huda (1997) argued that the monotonous teaching method in the Indonesian English classes was one of the most critical obstacles to English language acquisition by Indonesian children.

Cooperative learning

Cooperative learning is considered one of the instructional methods that could accommodate student learning in Indonesian elementary school English classes. Previous empirical studies found that cooperative learning is useful for enhancing

learning achievement, developing higher-order thinking skills, encouraging pro-social behavior, improving inter-ethnic relationships, and increasing motivation to learn (e.g., Cook, 1984; Cohen, Lotan, and Catanzarite, 1990; Sharan and Shaulov, 1990; Slavin, 1995; Johnson, Johnson, and Stanne, 2000; McCafferty, Jacobs, and DaSilva Iddings, 2006; Jacobs and Goh, 2007). Additionally, previous research on cooperative learning in language classes proposed that the method support reading, comprehension, and vocabulary development (e.g., Slavin, Lake, Chambers, Cheung, and Davis, 2009).

However, other research studies find that cooperative learning does not always show positive results when compared to traditional instruction (e.g., Davidson, 1985; Shaaban, 2006; Thanh, Gillies, and Renshaw, 2008). Moreover, cooperative learning is also still considered as not widely applied and systematically studied in English as a foreign language (EFL) classrooms (Lan, Chang, and Sung, 2005; Lin, 2009; Ning, 2010). This infers that the effectiveness of cooperative learning in EFL classes needs to be more thoroughly investigated with learners of different ages, particularly students in elementary schools, by exploring in more detail the procedures of cooperative learning.

Such inconsistent results of studies on the effectiveness of cooperative learning might be the result of differences in the main components of each cooperative learning method. Slavin (1990) contended that poorly constructed cooperative learning methods lacking the appropriate components could result in a free-rider effect, which is a major pitfall of cooperative learning. Additionally, solving complex tasks often requires high cognitive load that when left unmanaged might lead to a state of cognitive overload in which learning is obstructed. This means that teachers should resolve the issue of free-riders and unmanageable cognitive load to make cooperative learning more effective.

Scaffolded Think-Group-Share

Previous empirical studies on the effectiveness of cooperative learning did not always show positive findings (e.g., Shaaban, 2006; Thanh, Gillies, and Renshaw, 2008). The problems, such as the free-rider effect and unmanageable cognitive load experienced by the students, might lead to the ineffectiveness of cooperative learning methods applied in the classrooms. Therefore, we developed a cooperative learning method that is termed "Scaffolded Think-Group-Share" learning to resolve the problems of passive participation and task difficulty. "Scaffolded Think-Group-Share" learning accentuates individual activity before group activity by having the students to work on a scaffolding worksheet individually to help them actively participate and cognitively engage during a group activity. The scaffolding worksheet also provides students with cues and exercises with gradual levels of difficulty to help them manage cognitive load.

Some scholars argue that scaffolding can be designed to minimize the free-rider effect, which occurs when some group members do not perform their best assuming that other group members will cover the work that they have to do (Janssen, Erkens, Kanselaar, and Jasper, 2006). Wood, Bruner, and Ross (1976) first coined the term scaffolding which refers to "process that enables a child or novice to solve a problem, carry out a task or achieve a goal which would be beyond his unassisted efforts" (Wood, Bruner, and Ross, 1976, p.90). As the task gets more complicated and students' ability gets lower then support of scaffolding is more needed (Donovan and Smolkin, 2002).

Furthermore, to discourage free-riders, teachers must ensure that the group assignments require input from each group member (Michaelsen, Fink, and Knight, 1997). Teachers should also design group assignments that motivate intensive group interaction because group assignments that require students to apply a rule or solve a problem can increase group cohesiveness, which in turn eliminate the free-rider effect (Michaelsen, Fink, and Knight, 1997). "Scaffolded Think-Group-Share" learning method consists of three steps: Scaffolded Think, Group, and Share.

Step 1: Scaffolded think

In the Scaffolded Think step, each group member works on the scaffolding worksheet individually. The scaffolding worksheet, which purposes to stimulate prior knowledge (i.e., bridging approach of scaffolding), is administered to assist students to actively participate in the group activity (Gagné and Driscoll, 1988). Consequently, this worksheet consists of clues that may activate students' prior knowledge.

Additionally, we structured the exercise questions so that students build upon their knowledge sequentially to gradually manage the cognitive load. When students work on complex tasks, it often requires high cognitive load that might lead to a state of cognitive overload in which learning is obstructed when left unmanaged. The worksheet used in this Scaffolded Think step is a form of hard scaffolds, which is a tool that affords the students with a structure to enable specific skills that are needed to complete the group task in the next step. A worksheet is also a form of strategic scaffolds since it guides students in analyzing and approaching the group task.

Step 2: Group

Following the first step where students work on the scaffolding worksheet individually, students continue to the second step by working in their groups to complete the group task. The group task's difficulty level is designed to be complicated enough to encourage interaction within the group. Also, to promote positive interdependence amongst group members, each group member is assigned a role. The roles are moderator and timekeeper, note taker and presenter, information synthesizer and researcher, and Q and A person. Students should not be able to sit idly without the knowledge of other group members as they take responsibility for their given roles. As a result, each group ensures that its members fulfill their responsibility and if necessary, students are encouraged to report to the teacher of any free-riders (Lin, 2006). In this step, the teacher actively monitors to ensure that groups consistently work on the task and give appropriate feedback when necessary.

Step 3: Share

Upon finishing the group task, students move to the final step where groups share their answers to the questions in the group task with the rest of the class. The teacher and other groups can ask questions or give their feedback after a group has presented its final product. Consequently, students are exposed to various ideas and feedback from the teacher and other groups. During this last step of "Scaffolded Think-Group-Share" learning, students do a comparison, analysis, and synthesis procedures. The students compare their answers with those of other groups. They also continue the process by analyzing and synthesizing multiple ideas and feedbacks that they are exposed to.

Conclusions and discussion

"Scaffolded Think-Group-Share" learning contains elaborate and structured hard scaffolds. Therefore, it might help students activate prerequisite knowledge and develop certain skills that are needed to complete the group task. The scaffolding worksheet provides students with cues and exercises with gradual levels of difficulty that function to stimulate students' prior knowledge and manage their cognitive load gradually. As a result, it might help them to participate actively and cognitively engage in the group activity thus promote individual accountability. In addition to that, each group member is assigned a role to promote positive interdependence amongst group members. The students are also exposed to various ideas and feedback from the teacher and other groups where they compare, analyze, and synthesize those ideas and feedbacks. In summary, "Scaffolded Think-Group-Share" learning might have the potential to enhance children's English performance by minimizing the free-rider effect and helping children manage their cognitive load.

References

Cohen, E. G., Lotan, R. A., and Catanzarite, L., 1990, Treating status problems in the cooperative classroom. In: Cooperative learning: Theory and research, edited by S. Sharan (New York: Praeger), pp. 173-202.

Cook, S., 1984, Cooperative interaction in multiethnic contexts. In: Groups in contact: The psychology of desegregation, edited by N. Miller and M. Brewer (New York: Academic), pp. 77-96.

Curtain, H., and Dahlberg, C. A., 2016, Languages and Learners: Making the Match (Boston: Pearson).

Davidson, N., 1985, Small group learning and teaching in mathematics: A selective review of the research. In: Learning to cooperate, cooperating to learn, edited by R. Slavin, S. Sharan, S. Kagan, R. Hertz-Lazarowitz, G. Webb, and R. Schmuck (New York: Plenum).

Donovan, C. A., and Smolkin, L. B., 2002, Children's genre knowledge: An examination of K-5 students' performance on multiple tasks providing differing levels of scaffolding. Reading Research Quarterly, 37, 428-465.

Gagné, R. M., and Driscoll, M. P., 1988, Essentials of Learning for Instruction (Englewood Cliffs, NJ: Prentice-Hall).

Hawanti, S., 2011, Teaching English in Indonesian primary schools: The missing link. Leksika, 5(1), 62-69.

Hu, G. W., and McKay, S. L., 2012, English language education in East Asia: Some recent developments. Journal of Multilingual and Multicultural Development, 33(4), 345-362.

Huda, N., 1997, A National Strategy in Achieving English Communicative Ability: Globalization Perspectives. The Journal of Education, 4.

Jacobs, G. M., and Goh, C. C., 2007, Cooperative Learning in the Language Classroom (Singapore: SEAMEO Regional Language Centre).

Janssen, J., Erkens, G., Kanselaar, G., and Jasper, J., 2006, Visualization of participation: does it contribute to successful computer-supported collaborative learning? Computers & Education, 49(4), 1037-1065.

Johnson, D. W., Johnson, R. T., and Stanne, M. E., 2000, Cooperative Learning Methods: A Meta-Analysis (Minneapolis, MN: University of Minnesota Press).

Lan, Y. J., Chang, K. E., and Sung, Y. T., 2005, Cooperative learning in small EFL early reading groups. Journal of Pan-Pacific Association of Applied Linguistics, 9(2), 319-341.

Lee, P., and Azman, H. (Eds.), 2004, Global English and Primary Schools: Challenges for Elementary Education (Melbourne: CAE Press).

Lin, E., 2006, Cooperative learning in the science classroom. The Science Teacher, 73(5), 34-39.

Lin, M., 2009, Effects of cooperative learning on the oral proficiency of Chinese students in the tertiary-level EFL classroom. Doctoral dissertation, University of Leicester. http://lra.le.ac.uk/bitstream/2381/8941/1/2009linmxedd.pdf

McCafferty, S. G., Jacobs, G. M., and DaSilva Iddings, A. C. (Eds.), 2006, Cooperative Learning and Second Language Teaching (Cambridge: Cambridge University Press).

Michaelsen, L. K., Fink, L. D., and Knight, A., 1997, Designing effective group activities: Lessons for classroom teaching and faculty development. In: To improve the academy, edited by D. DeZure (Stillwater, OK: New Forums Press and the Professional and Organizational Development Network in Higher Education), pp. 373-398.

Ning, H., 2010, An investigation of the use of cooperative learning in teaching English as a foreign language with tertiary education learners in China. Doctoral dissertation, University of Canterbury. http://ir.canterbury.ac.nz/bitstream/handle/10092/5188/thesis_fulltext.pdf?sequence=1&isAllowed=y

Nunan, D., 2003, The impact of English as a global language on educational policies and practices in the Asia-Pacific region. TESOL Quarterly, 37(4), 589-613.

Rachmajanti, S., 2008, Impact of English instruction at the elementary schools on the students' achievement of English at the lower secondary school. TEFLIN Journal, 19(2), 160-185.

Scott, W. A., and Ytreberg, L. H., 1990, Teaching English to Children (New York: Longman).

Shaaban, K., 2006, An initial study of the effects of cooperative learning on reading comprehension, vocabulary acquisition, and motivation to read. Reading Psychology, 27(5), 377-403. doi: 10.1080/02702710600846613

Sharan, S., and Shaulov, A., 1990, Cooperative learning, motivation to learn, and academic achievement. In: Cooperative learning: Theory and research, edited by S. Sharan (New York: Praeger), pp. 173-202.

Slavin, R. E., 1990, Cooperative Learning: Theory, Research and Practice (Englewood Cliffs, NJ: Prentice Hall).

Slavin, R. E., 1995, Cooperative Learning: Theory, Research, and Practice (Boston: Allyn and Bacon).

Slavin, R. E., Lake, C., Chambers, B., Cheung, A., and Davis, S., 2009, Effective reading programs for the elementary grades: A best-evidence synthesis. Review of Educational Research, 79, 1391-1466.

Thanh, P. T. H., Gillies, R., and Renshaw, P., 2008, Cooperative learning and academic achievement of Asian students: A true story. International Education Studies, 1, 83-88.

Wood, D., Bruner, J. S., and Ross, G., 1976, The role of tutoring in problem-solving. Journal of Child Psychology and Psychiatry and Allied Disciplines, 17, 89-100.

Zein, M. S., 2012, Language teacher education for primary school English teachers in Indonesia: Policy recommendations. Doctoral dissertation, Australian National University. https://openresearch-repository.anu.edu.au/bitstream/1885/9981/1/Zein_M.S._2012.pdf