

THE INTEGRATION OF COOPERATIVE LEARNING MODEL ON ENGLISH LANGUAGE LEARNING IN FOSTERED ELEMENTARY SCHOOL OF SIMALUNGUN UNIVERSITY

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Abstract: This research is aimed at analyzing the integration of the cooperative learning model into English language learning, which was done at fostered elementary school of Simalungun University. The method of the study used was a quasi-experimental research method with a post-test-only control group design. The population of this study was all elementary school learners assisted by Simalungun University in Siantar City, with as many as 232 people. The research sample chosen was 70 learners, determined by using random sampling. The researcher used a lottery system to appoint the experimental and control classes. Based on the lottery system that was carried out, it was found that class IV of school X served as the experimental group and class IV Class Y as the control group. The instrument of the research was two sets of previously validated questionnaires. The data technique analysis used was statistical analysis. The result of the study is that the motivation and learning outcomes of learners following the NHT cooperative learning model were higher than learners following the conventional learning model. It is concluded that NHT cooperative learning model has a positive effect on increasing achievement motivation and English learning outcomes for learners of class IV at Y and X Schools both separately and simultaneously.

Keywords: *cooperative learning; learning english; number head together*

INTRODUCTION

Education that supports future development is the education that can develop the learners' potential to solve the future problems of life they face. The concept of education is fundamental. When in the world of work, "one must enter life in society and the world of work because the person concerned must be able to apply what is learned at school to deal with problems faced in daily life now and in the future" (O'Connor et al.; Kaplan & Haenlein, 2020). The rapid advancement of science and technology presents new challenges for human life. The world of education is also faced with complex challenges connected to increasing human resources that can compete and participate in the global community. In responding to these conditions, educational institutions and elementary

education must be brave and able to make improvements and breakthroughs toward improving the quality of both processes and products (Hallinger & Heck, 2010; Wiliam & Thompson, 2017).

The practice of education in the world of schooling to realize the goals of education is managed through the learning process. It certainly impacts changes in behavior as a result of education that emphasizes learning achievement as implemented in the school curriculum, which has been packaged as subjects that must be followed at every level. Application of learning in the classroom, the teacher should create situations and conditions that suit the needs of learners so that learners can follow the learning process properly and the materials presented by the teacher can be accepted and

understood by learners. Learning is “a communication process, namely, delivering messages from message sources through specific channels or media to message recipients” (Kamińska *et al.*, 2019; Odnokaya *et al.*, 2019). “Messages, message sources, channels or media, and message recipients are the components of the communication process, and the message to be communicated is the content of teachings or education contained in the curriculum” (Kruszewska *et al.*, 2022). The message's source is teachers, learners, other people, and book authors, the channel is learning media, and the message's recipient is the learner.

One of the subjects implemented in elementary schools is English lessons. English is one of the five subjects that learners in elementary schools must master. Considering the importance of English in schools, English should be one of the subjects that learners like in terms of its usefulness. Complaints and disappointment about the results achieved by learners are still being expressed. Generally, learners stated that English was a difficult and tedious subject, uninteresting, and even full of mystery. These subjects are problematic and arid and have nothing to do with everyday life (Rollins, 2020; Danckert & Eastwood, 2020). The average absorption capacity of elementary school learners for English subjects is only 42% (Isa & Azid, 2021; Burri & Baker, 2021). Of course, many factors are causing the low achievement in learning English, for example, the classic problem regarding the application of English learning methods, which are still teacher-oriented. At the same time, learners tend to be passive (Naibaho, 2022).

Another classic factor is the application of conventional learning models, namely “lectures, question and answer, and giving assignments or homework so that learners become bored, less active, and less motivated to participate in the learning process” (Mosquera *et al.*, 2021; Maimaiti *et al.*, 2021). In addition, in learners' eyes, English is still considered the most frightening subject compared to other subjects. “Various problems in teaching and learning activities in the classroom will undoubtedly affect student achievement” (Iglesias-Pradas *et al.*, 2021; Nadeak *et al.*, 2021).

The teacher's dominance in using conventional learning also affects student learning motivation. Motivation can be interpreted “as a series of efforts to provide certain conditions so that someone wants and

wants to do something. If he does not like it, he will try to negate or avoid the feeling of dislike” (Dörnyei & Muir, 2019; Cameron *et al.*, 2019).

Achievement motivation is a motive driving individuals to achieve success and aim to succeed in various advantages (Brunstein & Heckhausen, 2018). This measure of excellence can be related to the achievement task itself before it can also be in the form of other achievements. The main characteristics of achievement motivation are as follows: a) there is an effort to achieve success, b) success-oriented, c) innovative, d) responsible, and e) anticipating failure (Zuber *et al.*, 2016; Andreev *et al.*, 2020; Naibaho, 2022).

Various research results have consistently concluded that motivation influences learning outcomes. The level of motivation is always used as an indicator of a learner's good and bad learning outcomes. “Learning outcomes are learners' abilities after learning experiences” (Van *et al.*, 2020). Learning outcomes are changes that occur in learners concerning cognitive, affective, and psychomotor aspects as a result of learning activities (Rao, 2020). One of the steps that the teacher can take to increase motivation and student learning outcomes is to apply a cooperative learning model. “Cooperative learning models as learning activities in groups to help each other construct concepts, solve problems or inquire. In the cooperative learning model, learners work and study in small groups of 4-6 learners who help each other” (Yang *et al.*, 2022). These groups consist of learners with high, medium, and low learning outcomes, boys and girls, and learners with different ethnic backgrounds in the class, and these heterogeneous groups will work well together as a team.

“One of the cooperative learning models that can be applied in elementary schools is the Number Head Together (NHT) strategy type cooperative learning model, which is one of the cooperative learning strategies studied in this study” (Leasa & Corebima, 2017; Leasa *et al.*, 2016). In the NHT type of cooperative learning, learners in the class will be grouped randomly and heterogeneously. Each small group consisting of 4-5 learners will be given a number attached to their chest according to the number of group members (Ten *et al.*, 2009). Each group will be given worksheets, and learners are assigned to discuss worksheets with their group mates so that learning will be student-centered and student learning activity will increase

(Connell *et al.*, 2016; Li & Lam, 2013). After learners finish discussing with their group mates, the teacher will call one or more group members according to the number called to answer or report the results of their discussion. At the same time, other groups are allowed to respond and provide an assessment of the answers or reports presented by their friends. After learners have finished answering or reporting the results of their discussion, awards in the form of applause and reward points are always given to each group that can answer or report the results of the discussion correctly; likewise, with learners who answer questions or learners who ask questions nicely. Because the scores are group scores, peer-to-peer tutorial discussions and processes will always occur because the teacher will call student numbers randomly. The process of correcting wrong concepts and strengthening is carried out when cooperative learning takes place. For the “English learning process to be maximized, implementing the NHT type of cooperative learning is carried out using simple visual aids” (Jampel *et al.*, 2018; Ning & Hornby, 2014). “NHT is a type of cooperative learning designed to influence student interaction patterns and as an alternative to traditional class structures” (Baggini & Fosl, 2020). In the learning process, props can be used as media. Props are tools used to demonstrate specific facts, concepts, principles, or procedures to make them appear more concrete. Learners learn through something concrete. To understand abstract concepts, children need concrete objects as intermediaries or visualizations (Alper *et al.*, 2017; Henningsen & Pulvermüller, 2021). Such objects are called props.

As it is known that elementary school learners are formally in the age range of 7-12 years, when associated with Piaget's level of mental development, this age range is in the concrete operational stage. Children at this stage develop the ability to think systematically and know the world with the help of concrete objects. It means that learners' understanding of the material is much influenced by the results of their observations of the environment. Based on his explanation above, “it can be assumed that achievement motivation and student learning outcomes in English lessons with the application of the NHT-type cooperative learning model assisted by simple visual aids are different from achievement motivation and student learning outcomes in English lessons with the application of conventional learning models” (Joubish &

Khurram, 2011). The extent to which the cooperative learning model of the NHT type assisted by simple visual aids affects achievement motivation and student learning outcomes in English lessons, especially in class IV Class Y and Class X, cannot yet be disclosed. It is deemed necessary to research to prove scientifically supported by empirical data on these problems titled “The Effect of the NHT Type Cooperative Learning Model on English Language Learning in Primary Schools of Simalungun University.”

METHOD

This study uses an experimental method, while the type of research is quasi-experimental, bearing in mind that not all variables can be measured and strictly controlled. The researcher must keep the class the same in determining the subject or group for the two learning models, namely the NHT. The research design used was the post-test-only control group design. The population of this study was all elementary school learners assisted by Simalungun University in Siantar City, with as many as 232 people. The number of samples is 70 learners, determined by using random sampling. The researcher used a lottery system to appoint the experimental and control classes. Based on the lottery system that was carried out, it was found that class IV of school X served as the experimental group and class IV Class Y as the control group. The data in this study are data on achievement motivation and learners' English learning outcomes. Data regarding learners' achievement motivation in learning English was collected using a questionnaire whose assessment used a Likert scale. In preparing the learning outcomes instrument, a grid was first made, which was made based on the 2006 education unit-level curriculum foundation. Before being used, the instrument was validated first. The results of the validation of learners' achievement motivation instruments obtained 30 instruments declared valid and could be used in research. The results of validating the learners' English learning outcomes instruments obtained 25 instruments declared valid and could be used in research. ethical considerations related to the research, such as obtaining informed consent from participants or addressing potential conflicts of interest. Statistical analysis used to test the hypothesis is using ANOVA. In order to improve the quality of the research and maintain research ethics,

researchers ask all researchers to first fill out informed consent in writing before filling out the questionnaire and maintain confidentiality of the identity of the respondents by not mentioning their names in this publication.

RESULTS AND DISCUSSION

All requirements tests for hypothesis testing, including data distribution normality tests, variance homogeneity tests, and multicollinearity tests, are fulfilled so that hypothesis testing can be carried out. Test the first hypothesis, namely that there is a difference in achievement motivation between fourth-grade elementary school learners who follow the NHT learning model assisted by simple visual aids and groups of learners who follow conventional learning models. The test results yield an F value of $34,851 > F_{table} (4.00)$, significantly less than 0.05 . It means the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. It means "there are differences in the achievement motivation of class IV learners in Class Y and Class X who follow the two learning models. The results of this study supported the research finding that "learners' learning motivation using the NHT learning model is better than the conventional learning model" (Leasa & Corebima, 2017; Sinambela *et al.*, 2021).

Based on the results of data analysis and relevant research results, it is evident that there are differences in achievement motivation between learners who follow the NHT-type cooperative learning model assisted by simple visual aids and learners who follow conventional learning models. It is because "the NHT-type cooperative learning model is a group discussion variant with the characteristic that the teacher only appoints one student who represents the group" (Pohan & Agusti, 2022; Siahaan & Napitupulu, 2018). This method will ensure the total involvement of all learners in the learning process. When this learning model is applied, teachers and learners become active. The learning steps applied to the NHT learning model are more student-centered (Girsang, 2021). These steps include: a) dividing learners into several groups and giving them numbers. In this way, the teacher indirectly gives responsibility to each student. In groups, each student thinks together and practices the process of inquiry in their learning process skills to describe each student being able to find, implement, and answer the problems that exist in

student worksheets or problems given by the teacher. b) provide opportunities for learners to hold discussions with groups to solve a problem. In this activity, there will be a collaboration between bright and weak learners in the lesson. Intelligent learners will teach or guide weak learners. c) carry out the discussion by calling the learners' number. This activity aims to check how learners understand a subject matter. Learners who are called will convey the results of group discussions according to their abilities (Gultom *et al.*, 2020). The cooperative learning model can be combined with various learning innovations. One is the NHT-type cooperative learning model, combined with simple visual aids because learners learn through something concrete. To understand abstract concepts, learners need concrete objects used as visual aids as intermediaries or visualizations. Using the help of visual aids, learners can demonstrate a fundamental concept in learning activities. Thus the NHT-type cooperative learning assisted by simple visual aids can increase the achievement motivation of X and Y School learners.

In contrast to the conventional learning model, in conventional learning, the learning process that occurs refers more to or is centered on the educator himself, learners only receive information passively, learning and assessment are separate things, and the emphasis is on knowledge outside the context of its application. Learners are less able to apply what they have learned, the development of learners' mindsets is limited, and knowledge is only obtained himself. Conventional learning refers more to the teacher using a monotonous model method in each lesson that affects the lack of student ability and student activity in the learning process. Based on the results of the research above, it was found that the NHT-type cooperative learning model can increase the measured variables. These results indicate that the NHT cooperative learning model is suitable for application at the elementary school level. The second hypothesis test is that there are differences in the English learning outcomes of Class IV learners in Class Y and Class X who follow the NHT learning model assisted by simple visual aids with groups of learners who follow conventional learning models. The test results yield an F value of $114.659 > F_{table} (4.00)$ with a significantly less than 0.05 . It means the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. It means "there are differences in the English learning outcomes of Grade IV learners

in Class Y and Class X who follow the two learning models.

These findings are similar to the research that “there was an influence of the NHT-type cooperative learning model on science learning outcomes in terms of the critical thinking skills” (Tuaputty *et al.*, 2021). The study is relevant to the research conducted by researchers because the results positively impact student learning outcomes. “Learning outcomes are the ultimate goal of learning activities in schools. Learning outcomes can be improved through conscious effort that is carried out systematically, leading to positive changes, which are then called the learning process, and the end of the learning process is the acquisition of a student learning outcome. Student learning outcomes are collected in class learning outcomes” (Kennedy, 2006). “All of these learning outcomes result from an interaction between the act of learning and teaching. From the teacher's point of view, teaching ends with evaluating learning outcomes, while from the learners' point of view, learning outcomes are the end and peak of the learning process” (Biggs & Collis, 2014).

Learning outcomes are “changes that occur in learners concerning cognitive, affective, and psychomotor aspects as a result of learning activities” (Enneking *et al.*, 2019). Learning English is “a teaching and learning process built by the teacher to develop learners' creative thinking, which can improve learners' thinking skills and increase the ability to construct new knowledge to improve mastery of English material” (Liaw, 2007). In learning English, three essential domains must be balanced: the cognitive domain, the affective domain, and the psychomotor domain. These three essential things cannot be separated in the learning process at all levels of education in all subjects, especially learning English.

One way to determine “the level of success in a learning process is to look at the learning outcomes of English lessons” (Ancess, 2000). Obtaining good learning outcomes, of course, must be distinct from the learning process. The teacher is indispensable in selecting and implementing appropriate learning strategies and innovations to maximize learners' potential. The innovation is carried out by paying attention to the characteristics of learners, especially elementary school learners, and selecting a learning model that follows the subject matter being taught (Guan & Meng, 2007). Based on the study's results, it was found that the NHT-type

cooperative learning model combined with the use of simple teaching aids can improve the English learning outcomes of Class IV, Class Y, and Class X learners. It proves that the NHT-type cooperative learning model has advantages compared to conventional learning models in improving English learning outcomes. One of the characteristics of the NHT learning model is the assignment of numbers to learners, making learners ready to take part in learning because each student has the same opportunity to show their learning achievements.

The benefits of the NHT learning model include a) learners' self-esteem increases. It is caused by feeling valued by them in a group and playing a role in the group's success; b) improve attendance. Feeling that they will also play a role in the group, learners will be more active and not want to miss learning. Thus, a sense of responsibility will be nurtured early; c) acceptance of individuals becomes greater. Even though one friend is weak in learning in his group, another friend will teach his friend; d) fewer disruptive behaviors and less interpersonal conflict. By forming groups and giving them discussion assignments, naughty learners will refrain from disturbing other friends; dan e) besides gaining a deeper understanding and higher learning outcomes, “the NHT learning model can also increase kindness, sensitivity, and tolerance” (Yuliani *et al.*, 2021).

The third hypothesis test is that there are differences in achievement motivation and English learning outcomes for Class IV, Class Y, and Class X learners who follow the NHT learning model assisted by simple visual aids with groups of learners who follow conventional learning models. The test results show that the F value is $78.614 > F_{table} (4.00)$, and the sig value is less than 0.05. It means the null hypothesis (H_0) is rejected, and the alternative hypothesis (H_a) is accepted. It means "Simultaneously, there are differences in achievement motivation and English learning outcomes of Class IV, Class Y, and Class X learners who follow the two learning models. The strength of the results of this study is supported by the research conducted, which says that the cooperative learning model of the NHT type assisted by brain gymnastics could significantly increase the activity and achievement of learning English (Fenanlampir *et al.*, 2021). It is because the NHT learning model prioritizes optimal student involvement in the group. Learners must experiment, discuss, conclude, and make reports and presentations, all

of which must be experienced together by members of their group. It is because in determining group values and awards, the teacher randomly assigns one student number to represent the group.

This learning model can be maximized with the help of simple teaching aids because learners learn through something concrete. To understand abstract concepts, children need concrete objects as intermediaries or visualizations. This teaching aid is a tool that the eyes and ears can absorb to help teachers make teaching and learning more effective and efficient. Teaching aids are a tool that the eyes and ears can absorb to help teachers make learners' teaching and learning processes more effective and efficient (Wu & Tai, 2016). The intent and purpose of visual aids are to provide variety in how teachers teach and embody and to direct more to achieve practical learning goals. In learning abstract concepts, learners can understand and last longer if they learn through practice and experience, not just by remembering facts (Naibaho, 2022).

For this reason, the functions of teaching aids include the following: a) the learning process is motivated, both learners and teachers, and especially, student interest will arise. They will be happy, aroused, and interested so that they will have a positive attitude towards English learning; b) abstract concepts of English are presented in a concrete form so that they are more understandable and understandable and can be instilled at a lower level; c) the relationship between abstract English concepts and objects in the natural surroundings is more understandable; and d) abstract concepts presented in a concrete form, namely in the form of an English model that can be used as an object of research. The advantages of using concrete teaching aid in the learning process (Ashaver & Igyuve, 2013) are: a) growing learners' interest in learning because lessons become more attractive; b) clarifying the meaning of the lesson material so that learners understand it more easily; c) teaching methods will be more varied so that learners will not get bored quickly; and d) make more active in carrying out learning activities such as: observing, doing and demonstrating and so on. Therefore, based on the results of a combined study of cooperative learning models of the NHT type with the help of simple visual aids in learning English, it can increase student achievement motivation which will later affect the expected learning outcomes.

CONCLUSION

Based on the results of the research and discussion described above, it was found that the motivation and learning outcomes of learners following the NHT cooperative learning model assisted by simple visual aids were higher than learners following the conventional learning model. This learning model positively affects achievement motivation and English learning outcomes for learners of class IV at Y and X School separately and simultaneously. The suggestions that can be put forward in this research is that the cooperative learning model of the NHT type assisted by simple teaching aids needs to be introduced and further developed to teachers, learners, and other education practitioners as one of the exciting learning innovations after using conventional learning models for so long.

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