JHEAA
ISSN : 3032-1123
https://doi.org/10.61796/ejheaa.v1i7.743

THE EFFECT OF COOPERATIVE LEARNING METHODS WITH CONCEPT MAPPING LEARNING IN SPEAKING SKILLS ASSESSMENT

Ida Nuraida[1], Halimah[2], Asep Saepuloh[3], Dinni Nurfajrin Ningsih[4]
[1]Universitas Banten Jaya, Banten, Indonesia
[2,3,4]Universitas Suryakancana, Cianjur, Indonesia
idanuraida@unbaja.ac.id[1], halimahhalimah639@gmail.com[2], asepsaepulah@unsur.ac.id[3], nurfajrindinni@unsur.ac.id[4]

Received: May 22, 2024; Accepted: Jun 29, 2024; Published: Jul 15, 2024;

Abstract: This paper describes how to applying the Cooperative Learning Method with concept mapping learning in English Language Education Department. The overall knowledge domain speaking in the field is shown. It is underlined that the concept mapping serves as a suitable tool to support instructors in promoting students' skill of speaking and in improving their understanding of new concepts. This study examines the effect of concept mapping methods and assessment on the English speaking skills of students in English Education Department at Banten Jaya University. The results of the research testing described in the previous can be drawn: 1). There is an effect of the Cooperative Learning method with the Concept mapping to the fourth semester students speaking skill in English Education Department 2) There is an effect of Assessment on the English speaking skills of fourth semester students of the English Education Department. 3) There is an interaction between the Cooperative Learning method and concept mapping with assessment in Concept Mapping method in Speaking skill of fourth Student in English Education Department. From the three findings above, it can be concluded that the application of the method of learning English speaking skills must consider students' Speaking skill assessments

Keywords: Cooperative Learning Method, Mapping Learning Concept, Speaking Skill Assessment

Introduction

In learning English, there are four main skills, namely listening, speaking, reading and writing. Among the four language skills, speaking seems to be the most important and difficult skill for ESL and EFL learners. It is a well-known fact that, if a student learns a language it means they must become a competent speaker of that language. In most cases, users of that language need to engage in various types of discussions or conversations, therefore they need to be proficient in speaking. The writer have stated that a large number of world language learners study English to develop proficiency in speaking. Therefore, speaking skills are considered the most important skill (Chand, 2021). Speaking skills are one of the four skills that must be mastered well because they are related to students' communication skills (Susanti et al., 2020).

The Students of the English Education Department need mastering of English speaking skills because with good English speaking skills, they will be able to interact with the other people confidently. This is in line with what has been researched by Abduh, A, Basri, &Arham, M. (2022) regarding the problems faced by students in improving their English speaking skills. He found that "Chinese students are often reluctant to say things in English, worrying about making mistakes,

feeling fearful of criticism and losing face or simply being shy of the attention that his speech attracts". This finding shows that the problem of using the mother tongue is dominant in everyday communication even though learning English is being presented in class, not to mention the problem of opportunities to use English orally in some situations. Abduh, A, Basri, & Arham, M. (2022) also assumes that the involvement of students in oral communication activities is still lacking and has not shown natural English communication.

Speaking English is not easy and takes a long time to master, it requires a lot of practice and strong effort to continue practicing, and requires mastery of some components such as pronunciation, intonation, grammar, vocabulary, fluency, and comprehension. Brown (2004 as cited in Normawati et al., 2023). Because speaking is a difficult skill, there are obstacles that lecturers and students face in almost all parts of the world while learning to speak English in the classroom. (Tambunsaribu et al., 2021) mentions two factors that become obstacles in learning to speak English faced by students, namely internal and external factors. Internal factors includes; a) students' attitudes towards learning, b) students' learning motivation, c) students' learning concentration, d) the way students process teaching materials, e) students' ability to store their learning results, f) students' process in exploring stored learning results, g) ability students to achieve and perform well, h) students' self-confidence, i) students' intelligence and success, j) students' study habits, and k) students' own aspirations. Meanwhile, external factors that influence students' learning difficulties include: a) lecturers as student coaches, b) learning facilities and infrastructure, c) assessment policies, d) students' social environment in higher education, and e) tertiary curriculum.

Based on the result of the observations and interviews with students, the learning method used not maximally involved students actively in the teaching and learning process and is still use lecturer center. The learning method in the teaching and learning process involves students actively so that students find their own knowledge under the guidance of the lecturer. In addition, the learning method used by lecturers can attract the students and motivate the students to learn and practice speaking in English. The cooperative learning method used concept mapping with the aim of encouraging students to think in various perspectives. The cooperative learning method that the writer applies to strengthen students' knowledge and understanding of the material is concept mapping. Concept Mapping is a central idea or concept that radiates out in related ideas.

Concept Mapping is also called mental maps, mind maps, clusters, mapping, word webbing, think-links, thought links or idea branches (Brüssow, 2003). Concept Mapping is described as a process that encourages active learning because students are involved in an active search for knowledge. Concept maps have proven to be versatile and effective tools across various academic disciplines (Veiga, Gil-Del-Val, Iriondo, & Eslava, 2024), increasing interest in learning, increasing memory, increasing understanding of the material, and increasing students' creativity (Brüssow, 2003). Meanwhile (Setiyawan, 2020) found that the use of Concept Mapping in learning to speak English helps students to find ideas when they want to speak and in general students who study languages do not have aspirations to speak because they are afraid of making speaking mistakes. Through Concept Mapping, students will be helped in finding ideas and combining ideas. These way students can speak fluently.

Concept mapping is a technique used to visually represent relationships between ideas or concepts. (Astiantih & Akfan, 2023). Meanwhile, Rubiya (2018) as cited in (Astiantih & Akfan, 2023) stated that a concept map is a visual tool that illustrates the connection between ideas, images, or words, similar to how a sentence diagram reveals the structure of a sentence, a road map depicts the layout of roads and towns, or a circuit diagram demonstrates the functioning of an electrical device. While Novak (2004 as cited in Ligita, Nurjannah, Wicking, Harvey, & Francis, 2022) defines a concept map as a visual aid to manage and symbolize knowledge, including concepts and their relationships. Although researchers have created their own definitions of concept maps, Wang and Dwyer (2004 as cited in Oni, 2021) synthesized that "a concept map is most often defined as a two-dimensional diagram consisting of concepts or nodes connected by labeled lines to show the relationships between and among concepts. That". For the purpose of this study, the previous

definition of a concept map by Wang and Dwyer used.

Novak (2008) describes the various characteristics of concept maps, explaining that vertices, which are circles, squares, or rectangles, represent concepts. He defined the concept as "perceived regularity (or pattern) in events or objects, or "records of events or objects, marked with labels". When nodes are joined together by appropriate one-way, two-way, or non-directional links or paths accompanied by conjunctions describing the relationships between nodes, the node-link network represents Novak's (2008) proposition. Propositions consist of two or more concepts that are connected by using conjunctions to form meaningful statements. Novak & Kanas, (2008). Another characteristic feature of concept maps is cross-links. Cross-links are lines that describe the relationship between concepts in different segments of the Novak & Canas concept map, (2008). Meanwhile, (Romero et al., 2017) reveals that the use of concept maps in teaching provides a series of advantages: they promote agility and skill in organizing concepts in a specific subject area, have a great visual impact by showing the relationships among the main ideas in a simple, visually attractive manner, graphically display the organization and connection among concepts and ideas, and Bermawi (2009) states that the learning strategy by using concept maps as a learning tool to help improve student memory in learning. In essence, crosslinking helps show how two concepts or sub concepts may be related to one another. Finally, an important feature of a concept map is its hierarchical structure, and in essence, a concept map is a pictorial representation of information that describes how concepts can be interrelated while also identifying specific differences among concepts.

Setiyawan (2020) in his research entitled "Improving Students' Speaking Skills in Generating Ideas Through New Concept of Mind Mapping Technique" stated that many students have problems in their speaking such as lack of vocabulary, lack of grammar knowledge, and lack of generating ideas. Then, teachers must look for teaching strategies to solve students' speaking problems. One strategy is to use mind mapping. The results of this research show that mind mapping helps students to improve their speaking in generating ideas.

Khalil, Al Aqtash & Musleh, (2020) conducted research on Arab Emirates students with the title "The Effect of Concept Mapping on Arabic Grammar Proficiency: Al Ain University Students in the United Arab Emirates". The research results show that Concept Mapping has a positive effect on improving students' grammar skills.

The research conducted by (Abduh, Basri and Arham, 2022) with the title "Self-Efficacy in Speaking Based Activities for Art and Design Students", namely this research aims to explore potential models for speaking through which consist of: a) strategies for using art as a media for learning English; b) challenges to using art as a medium for learning English. This qualitative case study uses semi-structured interviews and observations in three schools in South Sulawesi. Data were analyzed using a thematic analysis approach. The findings show that there are four strategies for using art as a medium for learning English, namely: a) using art to learn vocabulary; b) use art to learn grammar; c) using art as a medium for the simple writing learning process and; d) using art as a medium for speaking. In addition, the challenges they face include linguistic and practical challenges. The findings of this research expand the debate on learning English through art media. The implication of this study is that using art as a medium for learning English can be a model for EFL in similar contexts.

Hypothesis testing:

The F test is used to determine whether there is a significant influence between the cooperative learning variable using Concept mapping learning method (X) on English speaking skills (Y1) and the cooperative learning variable using the concept mapping method (X) on English speaking skills assessment(Y2). In addition to data analysis using SPSS 17.0 for Windows.

1. Hypothesis Testing

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	1,592a	2	,796	,678	,010

Intercept	67,016	1	67,016	57,095	,000
Cooperative	1,350	1	1,350	1,150	0,028
Concept Mapping	,842	1	,842	2,717	0,039
Cooperative* Concept Mapping	154,794	103	1,503	2,898	.003
Error	120,898	103	1,174		
Total	24678,000	106			
Corrected	345,58				

a. R Squared = ,013 (Adjusted R Squared = ,006)

Figure 1: Tests of Between-Subjects Effects

Methods

The research method used is the experimental method, in which the experimental class applies Concept Mapping learning methods and in the control class conventional learning methods are applied. This method is used to examine whether or not there is an effect by giving treatment to the experimental group and then the results compared with the results of the control group. The design used is a factorial of two times two. In a 2X2 factorial design, each independent variable has two values. The treatment was carried out based on the lecture schedule for the fourth semester at the English Education Department. The writer used the Extensive Speaking class for 10 meetings, for each meeting is 90 minutes long. Eight meetings were used to carry out classroom learning, both in the experimental class and in the control class, while the other two meetings were used to collect data in the form of Assessment scores and students' English speaking skills scores.

Result and Discussion

The analysis used in this study is a two-way analysis of variance (ANAVA). Analysis is permitted if the data on English speaking skills comes from a population that is normally distributed and homogeneous. Therefore, before testing the hypothesis, it is necessary to test the requirements for normality and homogeneity.

a. Hypothesis testing

The t-test was used to determine whether there was a significant effect between the cooperative learning variable using the point counter point method (X) on English speaking skills (Y1) and the cooperative variable using the concept mapping method (X) on English speaking skills (Y2). In addition to data analysis using SPSS 17.0 for windows, parametric hypothesis testing uses the t-test formula.

b. Normality test

Figure 2. The table of Normality test

One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		106
Normal Parameters[a,b]	Mean	,0000000
	Std. Deviation	1,44932313
Most Extreme Differences	Absolute	,186
	Positive	,122

	Negative	-,186
Test Statistic		,186
Asymp. Sig. (2-tailed)		,293[c]

a. Test distribution is Normal.
b. Calculated from data.
c. Lilliefors Significance Correction.

Based on the SPSS output table above, it can be seen that the significance value of Asiymp. Sig (2-tailed) of 0.293 is greater than 0.05, meaning that the data used in the study is normally distributed. Thus the requirements for normality in the test model have been met.

c. Homogeneity Test.

Figure 3. The Table of Homogeneity Test

Test of Homogeneity of Variances

		Levene Statistic	df1	df2	Sig.
Speaking Skills	Based on Mean	11,833	4	100	,067
	Based on Median	7,467	4	100	,130
	Based on Median and with adjusted df	7,467	4	63,811	,070
	Based on trimmed mean	11,429	4	100	,000

Based on the output table above, it is known that the significance value (Sig) based on the mean for the variable English speaking skills in students who have assessment and those who do not have assessment is 0.067. Because the Sig value is 0.067 > 0.05, it can be concluded that the data variance of English speaking skills of students who have assessment and those who do not have assessment is homogeneous.

Figure 4. the Table of Concept Mapping Validity Test

No	***Pearson Correlation value***	**r tabel**	**Information**
1	0,672	0,176	Valid
2	0,576	0,176	Valid
3	0,835	0,176	Valid

Based on the results of the table above, it is found that all items are valid for the value of r arithmetic > r table, so that the variable items of English speaking skills can be used as instruments for further research.

Figure 5. The Table Concept Mapping Questionnaire Reliability Test Results

Reliability Statistics

Cronbach's Alpha	N of Items
,684	3

Speaking Skill Validity Test

No	*Pearson Correlation Value*	r table	Information
1	0,417	0,176	Valid
2	0,942	0,176	Valid
3	0,923	0,176	Valid
4	0,924	0,176	Valid

Based on the results of the table above, it is found that all items are valid for the value of r arithmetic > r table, so that the variable items of English speaking skills can be used as instruments for further research.

Figure 6. The Table of Speaking Skills Questionnaire Reliability Test

Reliability Statistics

Cronbach's Alpha	N of Items
,826	4

DISCUSSIONS

In this study, two classes were used, namely A class as a control class used conventional method and B class as an experimental class. The study was conducted in English Education Department at Banten Jaya University with a total of 50 students in the control class and 50 students in the experimental class. This research was conducted in 5 meetings in the control class and 5 meetings in the experimental class with 2 hours each in each meeting. This study has a goal, namely to improve the English speaking skills of fourth student in English Education Department.

At the time of the pretest, it was found that students still had difficulty speaking in front of the class correctly because they did not have the confidence to express themselves. The students' anxiety about their appearance in speaking makes them not want to do it. This can be seen from the assessment of speaking skills using an assessment rubric with 5 aspects assessed, namely pronunciation, intonation, fluency, appearance, attitude, and understanding of the content/theme, with a score of 1-5. The average scores obtained are 2 and 3, namely the criteria are not good and enough. However, during the post-test, students were able to get a score of 4-5 on each of the indicators assessed, namely good and very good criteria. This shows an increase between the pretest and posttest scores. In the experimental class that applies the concept mapping learning method, students become more active and can speak English fluency.

Based on the data analysis that has been carried out, it can be concluded that the use of the cooperative learning model of concept mapping using assessment in speaking which is applied to English class, especially in the aspect of speaking skills, has an effect. This confirms that the use of this model can be applied in order to improve students' speaking skills in English class.

Based on the SPSS output table above, it can be seen that the significance value of Asiymp. Sig (2-tailed) of 0.293 is greater than 0.05, meaning that the data used in the study is normally distributed. Thus the normality requirements in the test model have been met, meaning that the data is normally distributed. In the output table for the homogeneity test, it is known that the significance value (Sig) based on the mean for the variable of assessment English speaking skills in students who have is 0.067. Because the Sig value is 0.067 > 0.05, it can be concluded that the data variance of English speaking skills of students who have assessment and those who do not have assessment is homogeneous.

Hypothesis testing is done by using a two-way ANOVA test. Hypothesis testing F1 = 1.150 > F0 table = 2.69, then H0 is accepted. So it can be concluded that there is no effect of the cooperative learning model with concept mapping learning techniques on the English speaking skills of fourth students. F2 = 2.717 > F0 table = 2.46, then H0 is rejected. So it can be concluded that there is an

effect of the Cooperative learning model with Concept Mapping learning techniques on the English speaking skills of fourth students. F3 = 2.898 > F0 table = 2.19, then H0 is rejected. So it can be concluded that there is an effect of the cooperative learning model with concept mapping t learning techniques on the English speaking skills of fourth students who have assessment. F4 = 3.192 > F0 table = 2.19, then H0 is rejected. So it can be concluded that there is an effect of the cooperative learning model with the concept mapping learning method on the English speaking skills of fourth students who have assessment.

Conclusion

This research examines the effect of cooperative learning methods use concept mapping to English speaking skills assessment of students in English Language Education Department, at Banten Jaya University. The learning methods provided are cooperative learning methods use the concept mapping and Students speaking skill assessment.

Based on the results of the hypothesis test described in the previous chapter, the following conclusions can be drawn:

1. There is the effect of the Cooperative Learning method use Concept mapping learning methods and English speaking skills assessment of students in the fourth semester of the English Language Education Department, at Banten jaya University.
2. There is the effect of concept mapping on the English speaking skills of students in the fourth semester of the English Language Education Study Program, .
3. There is an interaction between the Cooperative Learning method use concept mapping in the English speaking skills assessment of fourth semester students in English Language Education Department at Banten Jaya University. From the three findings above, it can be concluded that the application Cooperative Learning methods use the concept mapping learning take into account students' speaking skill assessment.

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