Increasing Eleventh Graders' Collaborative Skill in English Learning Through the Jigsaw Model at SMK Negeri 2 Gunungsitoli

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Abstract. This study aimed to increase the collaboration skill of 11th grade students in English learning through the application of the Jigsaw model at SMK Negeri 2 Gunungsitoli. The main problem identified was the low level of students' collaboration skills despite the use of group discussion methods, which were characterized by passive attitudes, lack of active contribution, ineffective communication, minimal mutual respect among group members, and suboptimal role distribution in group discussions. This study used the Classroom Action Research (CAR) method conducted in two cycles, each consisting of two meetings with planning, implementation, observation, and reflection stages. Data were collected through observation sheets, interviews, and documentation, then analysed qualitatively and quantitatively. The results showed a significant improvement in students' collaboration skills after the implementation of the Jigsaw model. In Cycle I, students' collaboration skills were rated as adequate with an average score of 64, while in Cycle II, they improved to outstanding with an average score of 86. This 22-point increase indicated the effectiveness of the Jigsaw model in facilitating active participation, communication, responsibility, and mutual respect within the group. In addition, the interview findings revealed several factors that hindered collaboration, such as lack of confidence, lack of time discipline, fear of rejection, and an unfavorable group atmosphere. This study implied that the Jigsaw model had proven effective in overcoming these barriers by clearly dividing tasks, forming expert groups for in-depth material exploration, and fostering individual and collective accountability. Thus, the implementation of the Jigsaw model could be an effective strategy to enhance students' collaboration skills in English language learning at vocational high schools, ultimately supporting the achievement of better learning outcomes.

Keywords: Classroom Action Research; Collaborative Skill; English Language Learning; Jigsaw Model; SMKN 2 Gunungsitoli.

1. BACKGROUND

The 21st century has made significant changes to all aspects of life, including in the world of education. Binkley (2012) in (Slam, 2020), in the 21st century, every student should receive a top-notch education that meets the four criteria of creativity, innovation, critical thinking and problem-solving, teamwork, and communication. According to Fitriyani et al., (2019), working together is a crucial ability for achieving successful outcomes. How crucial it is that students have the ability to work together and experience joy and kindness while interacting with others (Ministry of Education and Culture, 2020). According to Taryono (2019), six requirements must be met by learners' cooperation skills: accountability, teamwork, respect, making and keeping promises, managing tasks, and teamwork. This is consistent with the advancement of technology and the requirement that students be prepared to handle ever-more complicated global issues (Rahayu et al., 2022). It is expected that education in the 21st century will be student-centered, with a strong emphasis on collaborative and active learning. Therefore, "the government constantly

works to raise the standard of education, for instance by hiring qualified teachers, acquiring infrastructure and facilities for schools, and enhancing the curriculum " (Faozi, 2018).

Improving the quality of education in schools is highly dependent on the success of the learning process. Learning is the core of teaching and learning activities, which involve teachers and students, with the aim of developing students' intellect, emotions, spirituality, life skills, and morals. As stated by Lidia and Irwandi (2019), teachers, students, and learning models/methods are the key linked components that impact the learning process. These components play an important role in determining the success of the learning process in schools, as they are intertwined in its implementation. Through effective learning, students not only master the subject matter but are also able to think critically, solve problems, collaborate, communicate effectively, and have strong self-awareness and ethics.

Based on observation made by researcher in class XI-OTKP SMK Negeri 2 Gunungsitoli, students' collaborative skills were still not optimal even though group learning had been carried out. During the activity, only a small number of students showed active participation, while most students did not contribute optimally and tended to pay less attention to the common task, and some even showed a lack of focus that hindered teamwork. This condition showed a lack of activeness and mutual respect between group members, as well as a lack of cooperation and communication skills among students. Additionally, students struggled to respect differing opinions, accept input from peers for achieving common goals, demonstrate responsibility, and effectively divide roles within the group. These problems had a negative impact on students' initiative, active participation, and learning outcomes, especially in English learning. In addition, the jigsaw learning model, which had been proven effective in improving students' cooperation, communication, and responsibility skills, had never been applied in English learning. Therefore, the researcher intended to conduct a study on the application of a more interactive and collaborative learning model, such as Jigsaw, to improve students' initiative, active participation, and learning outcomes at SMK Negeri 2 Gunungsitoli. To overcome students' low collaboration skills, teachers need to implement effective learning strategies, one of which is through the Jigsaw model. This model emphasizes small group work, where students discuss in expert groups and home groups to share their understanding with each other. Jigsaw has been proven to improve cooperation, communication, responsibility, and the courage to express opinions (Asmara, 2020; Lidia & Irwandi, 2019; Purwanty, 2020). In addition to supporting material comprehension, this model also develops students' social and emotional skills. This study focuses on the application of the Jigsaw model to improve

the collaboration skills of grade XI students at SMK Negeri 2 Gunungsitoli in English learning.

2. THEORITICAL STUDY

Collaboration and Jigsaw Model

Collaboration is cooperation between individuals to achieve common goals through mutual support, sharing ideas, and collective problem solving (Respati, 2022). Collaboration skills emphasize effective communication, mutual respect, and responsibility within the team to achieve innovative results (Nurwahidah et al., 2021). This skill is characterized by group work, direct communication, individual responsibility, intrinsic motivation, and attention to students' needs and interests (Thobroni & Mustofa, 2013).

The Jigsaw model is a cooperative learning strategy that emphasizes positive interdependence and individual responsibility within the group. Students are divided into home groups and expert groups to study subtopics, then teach each other back in their home groups (Aronson, 2002; Slavin, 1986). This model fosters cooperation, responsibility, and a deep understanding of the material. Its main characteristics include positive interdependence, individual accountability, heterogeneity, shared responsibility, and an emphasis on group unity (Johnson & Johnson, 1984).
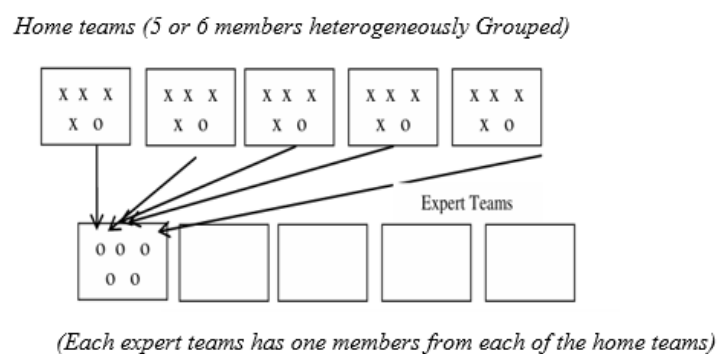
Figure 1 Jigsaw Collaborative Formation (Arens, 1997).

Improving Students' Collaboration Skills through the Jigsaw Model

Collaboration skills are important for vocational school students as part of 21st-century competencies. The Jigsaw Model trains students to take responsibility for the material they learn and share it with their group, so that they not only gain a deeper understanding of the material, but also learn to work together, appreciate responsibility, increase self-confidence, and develop critical thinking skills (Fitriyani et al., 2019; Educatio, 2021; Ngurah et al., 2020; Wahidah, 2021).

3. RESEARCH METHOD

This study uses Classroom Action Research (CAR) to address problems that arise in learning activities. Difficulties can arise from teachers, students, or interactions between learning components such as material, media, methods, strategies, classroom management, and evaluation. The purpose of CAR is to find the right solution according to classroom conditions. Hopkins (2010) in Azizah (2021) states that CAR is research that utilizes research techniques and real actions to understand the situation and improve the learning process. Thus, CAR is seen as a systematic process aimed at improving the quality of learning. This study focuses on improving the collaborative skills of grade XI students in English learning through the application of the Jigsaw model at SMK Negeri 2 Gunungsitoli. This study conducted in two cycles with stages of planning, action, observation, and reflection. The research subjects were 25 students in class XI OTKP at SMK Negeri 2 Gunungsitoli. The research variables consisted of independent variables (Jigsaw model) and dependent variables (student collaboration skills). The instruments used included observation sheets, interviews, and documentation. Data were collected qualitatively and quantitatively, then analyzed using descriptive techniques to describe the improvement in students' collaboration skills.

4. RESULT AND DISCUSSION

This study was conducted at SMK Negeri 2 Gunungsitoli in the 2024/2025 academic year with 25 students in grade XI OTKP as subjects, consisting of 18 males and 7 females. The study took place in two cycles, each consisting of two meetings, from May 9 to May 28, 2025. The research process was carried out through the stages of planning, implementation, observation, and reflection using the Jigsaw learning model. During the research, the researcher collaborated with the English teacher as a partner to assist in the learning process and conduct observations, so that the research was carried out according to plan and the results could be improved.

Description of Action Results for Each Cycle

The research comprised two cycles, each consisted of two meetings. Cycle I took place from May 09th 2025 to May 16th 2025, and Cycle II immediately followed, from May 23rd 2025 to May 28th 2025. Based on this research, the cycles were organized as follows:
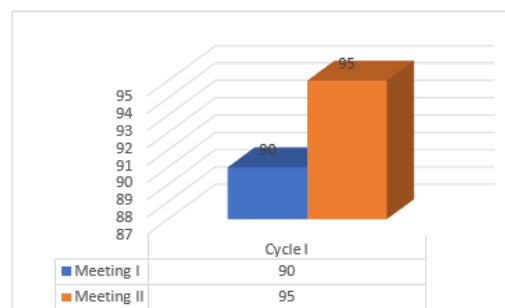
Cycle I

a. Implementation of Cycle I

Cycle I was implemented in two meetings, on May 9 and 16, 2025, with an allocation of 2×45 minutes. There were four stages in the implementation, namely planning, action, observation, and reflection.

In the planning stage, researchers develop learning modules in accordance with CP/ATP, prepare materials, schedules, and observation sheets for teachers and students regarding the application of the jigsaw model and collaborative skills.

The action stage was carried out through introductory, core, and closing activities. In the first meeting, the teacher delivered the material on "formal letters," including definitions, characteristics, steps, and examples. Students were divided into their original groups and expert groups according to the jigsaw procedure. After discussing, students returned to their original groups to present their learning outcomes.In the second meeting, the activities were carried out in the same manner. The difference was that the teacher motivated the students at the beginning of the lesson, resulting in better participation. However, the teacher still did not summarize the material at the end.

The observation stage showed an improvement in the teacher's skills in applying the jigsaw model. In the first meeting, the implementation reached 90% with a good rating, while in the second meeting it increased to 95% with a very good rating. This improvement was particularly evident in the teacher's ability to motivate students and manage group discussions.
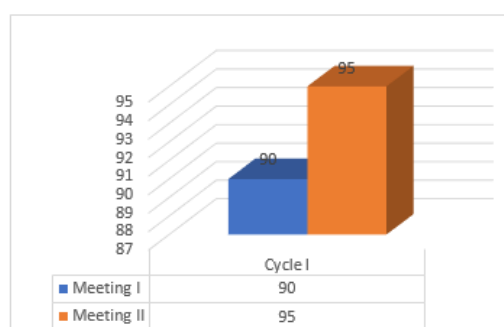

Graph 1. Diagram of recapitulation of researcher activity observation in cycle I.

b. Observation of Students' Activities in Cycle I

In cycle I, learning used the jigsaw model with the material "formal letters" to improve students' collaborative skills. In the first meeting, the observation results showed that some students did not respond well to the researcher's motivation and did not listen to the material summary as reinforcement. This was because the researcher

had not explained the importance of the material and had not summarized the lesson. Nevertheless, most student activities were in line with the learning objectives, with a percentage of 90 (good category). In the second meeting, student activities showed improvement. Students responded well to the researcher's motivation, even though the researcher had not fully delivered the material summary. Overall, student activities in applying the jigsaw model improved with a percentage of 95 (very good category).

Graph 2. Diagram of recapitulation of observation of student activities cycle I.

c. Observation of Students' Collaborative Skills in Cycle I

1) In the first meeting of Cycle I (May 9, 2025) with the topic of formal letters, students' collaborative skills received an average score of 15 (60%) in the "adequate" category. The observation results showed that the main weakness was in the indicator of respecting others' opinions, which only reached 48% (in the "poor" category). This occurred because students prioritized their personal opinions, resulting in less than optimal group cooperation.

2) In Cycle I, second meeting (May 16, 2025) with the same material, the average score increased to 17 (68%) with a rating of "fair." However, weaknesses were still evident in the indicator of time discipline in completing tasks, which was only 56% (category "poor"). Lack of punctuality had an impact on the smooth running of group work and the effectiveness of achieving common goals.

d. Reflection

Data collection was carried out up to the results of observations or research observations regarding the collaborative abilities of students in the learning process.

Table 1. Recapitulation of the Collaborative Skill of Students in Cycle I.

Aspect	Meeting I	Meeting II	Average cycle I	Classification
Students' collaborative skill	**60**	**68**	**64**	**Enough**

The results of observations in cycle I show that collaborative learning among 11th grade students at SMK Negeri 2 Gunungsitoli is still adequate, with an average score of 64. The implementation of the jigsaw model has not been optimal because some activities have not been carried out. The weaknesses found include a lack of motivation at the beginning of learning, no emphasis on the importance of the material for students' lives, students paying little attention to summaries of the material as reinforcement, and poor time management in completing tasks. To improve this, in cycle II the researcher sought to increase motivation before core learning, provide summaries at the end of activities, and guide students to be more disciplined in managing their time.


	Students Collaborative Skill
■ Meeting I	60
■ Meeting II	68
■ Average of Cycle I	64
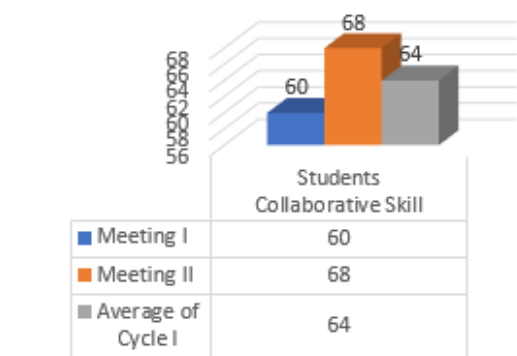
Graph 3. Diagram of recapitulation of collaborative skill of students in cycle I.

Cycle II

Cycle II was conducted in two sessions (May 23 and 28, 2025) with a duration of 2 x 45 minutes with 25 students. The material studied was informal letters using the jigsaw learning model. The activity began with prayer and motivation, followed by an explanation of the material, objectives, and steps for writing informal letters. Students were then divided into their original groups and expert groups for discussion, then returned to their original groups to teach each other the material. At the end of the meeting, students took a short test and closed with a summary and prayer.

The observation results showed that the application of the jigsaw model in cycle II went according to plan. The teacher was able to convey the objectives, relate the material to everyday life, and provide guidance to improve students' collaboration skills. Students actively worked together, unified their opinions, and completed tasks together. The percentage of teacher and student activity in both meetings reached 100% with a very good category.
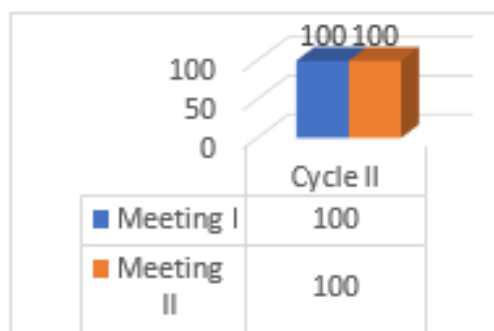
Graph 4. Diagram of recapitulation of researcher activity observation in cycle II.

a. Observation of Students' Activities in Cycle II

The observation in Cycle II meetings I and II was conducted based on the researcher's observation sheet. The application of the jigsaw model in English learning, particularly formal and informal letter writing, was carried out according to the established indicators. Students responded to the motivation given, listened to explanations, and actively participated in summarizing the material. The observation results showed that all activities were carried out optimally with 100% achievement and a very good category, proving that the jigsaw model improved students' collaborative learning abilities.
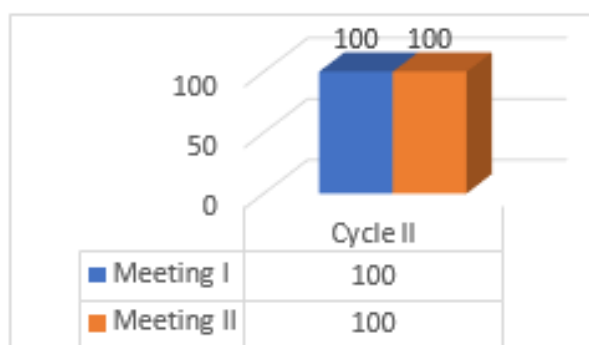
Graph 5. Diagram of recapitulation of observation of student activities in cycle II.

b. Observation of Students' Collaborative Skills in Cycle II

In cycle II, the first meeting was held on Friday, May 23, 2025, with the topic of informal letters. The observation results showed that students' collaborative skills scored an average of 20 (80%) in the excellent category. However, there were still weaknesses in the indicators of "tolerance for differences of opinion" and "compliance with instructions," which only reached 72% with a good rating. Low tolerance hinders communication and cooperation, while non-compliance with instructions causes roles to be out of sync and reduces the effectiveness of group work.The second meeting was held on Wednesday, May 28, 2025, with the same material. The observation results

showed an increase in students' collaborative skills with an average score of 23 (92%) and a very good category.

c. Reflection

Data collection was carried out up to the results of observations or research observations on the collaborative learning ability of students in the learning process.

Table 2. Recapitulation of the Collaborative Skill of Students in Cycle II.

Aspect	Meeting I	Meeting II	Average cycle II	Classification
Students' collaborative skill	**80**	**92**	**86**	**Very good**

Based on the results of observations in cycle II, student collaboration was categorized as excellent with an average score of 86. This shows that the collaborative skills of students in English learning in class XI at SMK Negeri 2 Gunungsitoli had been achieved in cycle II. The actions taken in cycle II were considered better than in the previous cycle. With two meetings, cycle II can be said to have been successful in improving students' learning abilities.

The following diagram shows a recapitulation of students' collaborative abilities in cycle II.
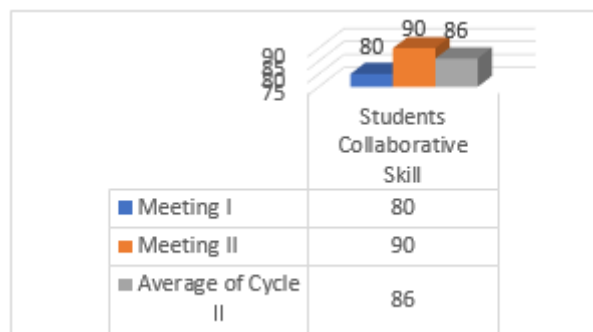
Graph 6. Diagram of recapitulation of collaborative Skill of students in cycle II.

Discussion

This classroom action research was conducted on 11th grade students at SMK Negeri 2 Gunungsitoli to improve their initially low collaboration skills. In cycle I, the average collaboration score was only 64 (fair category) due to a lack of appreciation for peers' opinions and poor time management. In cycle II, the average increased to 86 (very good category), demonstrating the effectiveness of the Jigsaw model in improving student participation, communication, and responsibility. These findings are in line with the research by Chen (2021) and Agustini & Irvani (2023), which emphasize the importance of collaborative skills in education and the workplace.

The following is a recapitulation of collaborative abilities of students in cycles I and II:

Table 3. Recapitulation of Collaborative Abilities of Students in Cycles I and II.

Aspect	Cycle I	Cycle II	Improvement
Students' collaborative skill	**64**	**86**	**16**
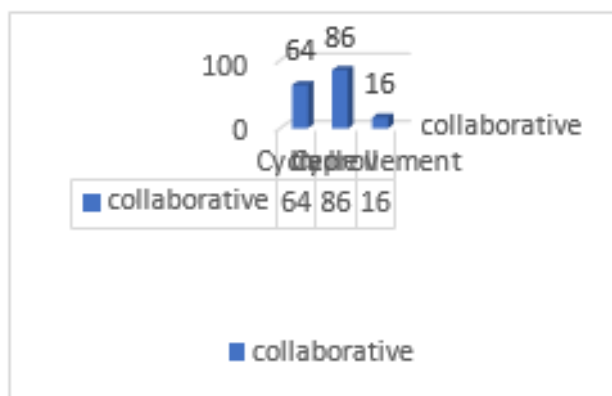
Graph 7. Diagram of Recapitulation of Collaborative Skill of Students in Cycles I and II.

Students' low collaboration skills are influenced by a lack of acceptance of criticism, low activity, discipline, and self-confidence, as well as weak motivation and time management. The application of the Jigsaw model has proven effective in improving collaboration, as demonstrated by an increase in scores from 64% in cycle I to 86% in cycle II. This confirms that the right learning strategies can strengthen student cooperation, communication, and engagement, although the results of this study are limited to one class with specific material and therefore cannot be fully generalized.

5. CONCLUSION

This study shows that the application of the Jigsaw model can improve the collaboration skills of grade XI students in English learning at SMK Negeri 2 Gunungsitoli. The observation results show a gradual increase from cycle I to cycle II. In cycle I, the first meeting scored 64% (fair), then increased to 68% (fair). In cycle II, the first meeting increased to 80% (very good) and the second meeting reached 92% (very good). The Jigsaw model proved to be effective in encouraging active participation, communication, individual responsibility, and mutual respect within the group. Interview analysis also revealed several factors causing low collaboration, such as lack of confidence, poor time management, unclear task distribution, and low motivation and appreciation for friends' opinions. The Jigsaw model successfully overcame these obstacles through clear task

distribution, the formation of expert groups, and the instilling of accountability and open communication. The improvement in collaboration skills had a positive impact on the understanding of English material and created a more active learning atmosphere. Therefore, teachers are advised to apply the Jigsaw model consistently by paying attention to time management, strengthening self-confidence, and creating a positive group environment.

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