

UDL-BASED COLLABORATIVE LEARNING IN CAMBRIDGE PRIMARY EFL CLASSROOM

Novta Ittaqy Tafuzi¹, Sabariah², Luqmanul Hakim³

^{1,2,3}PGRI University of Adi Buana, Indonesia

(tnovta@gmail.com¹, sabariah@unipasby.ac.id²,

luqmanulhakim@unipasby.ac.id³)

Abstract

This study addresses the problem of adapting for learner diversity in primary English as a Foreign Language (EFL) classrooms, especially in standardised curricula such as Cambridge English. This study aims to investigate the effectiveness of the combination of UDL principles and collaborative strategies in enhancing students' English language skills based on the theory of Universal Design for Learning (UDL) and collaborative learning. Method: Quasi-experimental one-group pretest-posttest design was used with 36 fifth grade students in a private primary school in Surabaya, Indonesia. The data were collected through English diagnostic tests on listening, reading, writing and speaking, a Likert scale questionnaire of students' perceptions and classroom observations. The results reveal improvements in all language skills with the biggest gains in listening and speaking, and very positive student perceptions of engagement, accessibility, and expression. The findings suggest that the combination of UDL and collaborative learning creates a more inclusive and interactive learning environment that accommodates diverse learner needs. This study offers empirical support for the application of UDL in primary EFL contexts based in Cambridge and practical implications for the design of inclusive language instruction.

Keywords: *Cambridge curriculum; collaborative learning; English as a Foreign Language; primary education; Universal Design for Learning*

A. Introduction

English language instruction at the primary school level is of crucial significance for building students' basic competencies for global communication and enabling them to communicate effectively in various social and academic environments. English is not only an international language but also a key to knowledge, technology and cultural awareness thus early proficiency in English is a must for 21st century learners.

In the Indonesian context, many private schools adopt internationally standardised curricula such as the Cambridge English curriculum to enable the systematic development of language skills, namely listening, speaking, reading, and writing (Cambridge University Press, 2020). However, the systematic and communicative nature of the framework does not automatically lead to classroom practice that is teacher-centered and homogeneous, with little room for active



student participation and not meeting the needs of diverse learners (Hutabarat, 2020; Kusyairi et al., 2024). As a consequence, the potential of such curricula in addressing classroom heterogeneity is not fully exploited.

The diversity of learners is a fundamental problem in primary EFL classrooms, especially in a multicultural and heterogeneous context like Indonesian private schools. Students differ in terms of their cognitive ability, prior knowledge, motivation, learning styles, and socio-cultural background which affect the ways they process information and participate in learning activities (Telaumbanua & Harefa, 2024). These differences may become obstacles to participation and achievement, and therefore, to unequal learning outcomes in the absence of adaptive instructional strategies (Harahap et al., 2024). Studies have also found that unresponsive teaching methods in diverse classrooms can lead to decreased student engagement and hinder collaborative interaction (Fatmawati & Darmawan, 2023). Therefore, the need exists for instructional frameworks that are intentionally designed to address learner variability and foster inclusive learning environments from the outset.

Universal Design for Learning (UDL) has emerged as a promising framework to address these challenges by focusing on providing flexibility in instructional design through multiple means of representation, engagement, and action and expression (CAST, 2018). Research shows that UDL promotes accessibility, learner engagement, and

learning outcomes by enabling learners to access and express knowledge in ways that match their unique needs and preferences (Rusconi & Squillaci, 2023; Zeng et al., 2025). Moreover, collaborative learning has been widely recognised as an effective pedagogical approach that promotes meaningful interaction, peer support, and communicative competence in language classrooms (Aprianti & Ayu, 2020; Salamah, 2022). Students are encouraged to be active participants in the learning process, negotiating meaning and developing their language skills through structured collaborative activities in authentic contexts.

Both UDL and collaborative learning have been shown to have benefits, but previous research has focused on these approaches separately or in narrow contexts. Research on UDL tends to be focused on teacher training, inclusive education, or digital learning environments. Likewise, research on collaborative learning often emphasises interaction and communication, but does not include inclusive instructional design principles (Bray et al., 2024). Furthermore, there is a lack of empirical evidence exploring the integration of UDL and collaborative learning in primary EFL classrooms, especially within the context of structured international curricula such as Cambridge English. The importance of this gap is that the integration of these approaches has the potential to address learner diversity and enhance communicative language learning in a more comprehensive instructional model.

To address this gap, the study offers a new contribution that combines



Universal Design for Learning (UDL) principles with collaborative learning strategies in a primary EFL classroom in Cambridge. This study builds on prior studies that have examined these approaches independently, by conceptualising and operationalising them as an integrated instructional framework to support differentiated instruction and active engagement. This study extends the application of UDL beyond general or technology-based contexts by embedding UDL principles into collaborative learning activities, thus demonstrating the practical relevance of UDL in structured curriculum settings. Moreover, this integration offers a more holistic approach to addressing the cognitive and social dimensions of language learning in diverse classrooms.

Therefore, the present study aims to investigate the effectiveness of UDL-based collaborative learning in improving primary students' English language skills in listening, speaking, reading and writing. The research also examines students' perceptions of the learning experience to gain further insight into how the integrated approach supports engagement, accessibility, and expression in the classroom. This study is anticipated to contribute to the development of inclusive EFL pedagogy and provide practical implications for teachers in the implementation of flexible and student-centered instruction in primary education.

B. Research Method

This study employed a one-group pretest-posttest quasi-experimental design to examine the effectiveness of

Universal Design for Learning (UDL) combined with collaborative learning strategies in Cambridge-based English instruction. This design allowed the researcher to compare students' English learning outcomes before and after the intervention and identify improvements associated with the instructional treatment. The design was considered appropriate because it enabled the implementation of pedagogical innovation in a natural classroom setting without disrupting the existing academic structure.

The study was conducted at SD Bright Kiddie Surabaya and involved 36 fifth-grade students aged between 10 and 11 years. The participants were selected through purposive sampling from a class actively involved in Cambridge-based English instruction covering the four main language skills: listening, speaking, reading, and writing. The class was selected because its learning characteristics were relevant to the research objectives, particularly the implementation of UDL principles through collaborative learning activities.

The study used structured English assessments, a student perception questionnaire, written responses, and classroom observations to collect quantitative and supporting data. The primary instruments were the pretest and post-test, which measured students' English abilities before and after the intervention. Each assessment consisted of five listening items, five reading items, five writing tasks, and one speaking performance task. In the speaking task, students orally explained a prepared



topic. The pretest and post-test used similar structures, levels of difficulty, and assessment criteria to ensure that the results could be compared accurately.

A structured questionnaire consisting of 25 items was administered after the post-test to examine students' perceptions of the learning experience. The questionnaire measured classroom atmosphere, collaborative learning, and the three main UDL principles: multiple means of representation, multiple means of engagement, and multiple means of action and expression. Students responded to each item using a five-point Likert scale ranging from 1, representing strongly disagree, to 5, representing strongly agree. The questionnaire also included written-response items that allowed students to describe their learning experiences and perceptions in greater detail. Instrument validity was analysed using SPSS to determine whether each item adequately measured the intended construct. Instrument reliability was assessed using Cronbach's Alpha, with a coefficient of 0.70 or higher considered acceptable.

The research was conducted over eight weeks. During the first week, students completed the pretest to measure their initial English proficiency. From the second to the seventh week, students participated in English lessons that integrated UDL principles with collaborative learning strategies. The lessons provided multiple forms of representation, such as verbal explanations, written texts, visual materials, audio recordings, and demonstrations. Students also

participated in pair work, group discussions, collaborative tasks, and presentations to support engagement and active participation. Multiple forms of action and expression allowed students to demonstrate their understanding through oral, written, visual, and collaborative activities. Classroom observations were conducted throughout the intervention to monitor the implementation of UDL principles, collaborative learning activities, student participation, and classroom engagement. During the eighth week, students completed the post-test. The questionnaire was then distributed to collect students' perceptions of the learning process.

The collected data were analysed using descriptive and inferential statistical techniques. Descriptive statistics, including mean scores and standard deviations, were used to summarise the pretest, post-test, and questionnaire results. A paired-sample t-test was conducted to determine whether a statistically significant difference existed between the pretest and post-test scores. The hypothesis was tested at a significance level of 0.05. A p-value lower than 0.05 indicated a statistically significant difference between students' scores before and after the intervention.

A normalised gain score, or N-gain, was also calculated to measure the extent of improvement in students' learning outcomes. The N-gain score was interpreted as low when the score was below 0.30, medium when the score ranged from 0.30 to 0.70, and high when the score was above 0.70 as shown in a table below.



Table 1. *N-Gain Score Interpretation*

N-Gain Score (g)	Category
$g < 0,3$	Low
$0,3 \leq g \leq 0,7$	Medium
$g > 0,7$	High

In addition, Cohen's d was calculated to determine the magnitude of the intervention effect and evaluate its practical significance. These analyses provided evidence regarding both the statistical significance and the educational impact of UDL-based collaborative learning on students' English learning outcomes.

C. Result and Discussion

1. Result

In general, the results shows that the implementation of UDL contributed positively to students' engagement, participation, and learning outcomes. The findings are gathered systematically based on quantitative and qualitative data obtained from tests, questionnaires, and teacher interviews.

a. Baseline English Diagnostic Test

An English diagnostic test was administered to identify students' initial proficiency levels prior to implementing a learning model based on Universal Design for Learning (UDL) combined with collaborative learning. This test covered the four main language skills: listening, reading, writing, and speaking. These four skills were selected because they are the

primary components of English proficiency that are interrelated in the communication process. Through this diagnostic test, the researcher can obtain an initial overview of students' English proficiency levels as well as the variations in ability among individual students before the new learning approach is implemented in the classroom.

The data in this section were obtained from the pretest administered to 36 students in the class participating in the study. The diagnostic test was designed based on the material found in the Cambridge English textbook used in classroom instruction. The test was administered at the early stage of the study before UDL-based learning activities began. The purpose of this pretest was to objectively measure students' initial proficiency so that the researcher could compare the results with post-test scores after implementing the UDL-based collaborative learning model.

In addition, the results of these diagnostic tests also serve as a basis for analyzing students' progress after the learning process has taken place. By understanding students' initial proficiency levels, researchers can assess the extent of improvement in each language skill following the implementation of the learning intervention. This information is crucial for evaluating the effectiveness of the UDL-based collaborative learning model in improving students' English language skills, as well as for understanding how this approach can accommodate differences in students' abilities and learning styles within the classroom



b. Pretest Results

A pretest was administered to identify students' initial proficiency levels, and the learning process was then implemented using a collaborative learning model based on Universal Design for Learning (UDL). Over the course of several sessions, students participated in various learning activities designed to encourage active engagement, offer multiple pathways to understanding the material, and provide opportunities for students to express their understanding through a variety of activities. The learning activities included group discussions, collaborative task completion, the use of various learning media such as images and videos, and communication practice through presentations and student interactions.

Table 2. Pretest Results of Students' English Skills

Language Skill	Minimum Score	Maximum Score	Mean Score
Listening	72	95	85,7
Reading	75	96	88,4
Writing	70	94	86,9
Speaking	68	92	83,5

Based on Table 2, the pretest results provide an overview of the students' initial proficiency in the four English language skills: listening, reading, writing, and speaking. The average scores obtained by the students in each skill indicate that their initial proficiency ranges from adequate to good. The

reading skill had the highest average score at 88.4, followed by writing with an average of 86.9, and then listening at 85.7. Meanwhile, the speaking skill had the lowest average score at 83.5 compared to the other skills.

When viewed from the range of minimum and maximum scores, there is a fairly clear variation in proficiency among students in each language skill. In listening skills, student scores ranged from 72 to 95. In reading skills, the minimum score obtained by students was 75, and the maximum reached 96. Meanwhile, in writing skills, student scores ranged from 70 to 94, and in speaking skills, they ranged from 68 to 92. These score ranges indicate differences in the level of English proficiency among students prior to the implementation of the learning model.

In general, the pretest results indicate that reading and listening skills tend to score higher than writing and speaking. This may suggest that students are more accustomed to receptive learning activities, such as reading and listening, than to productive activities, such as writing and speaking. These variations in ability are a key consideration in the implementation of the Universal Design for Learning (UDL) approach, as this approach is designed to accommodate differences in ability, learning styles, and students' learning needs through a variety of more flexible and inclusive learning strategies.

c. Post-test Results after UDL-Based Collaborative Implementation

After implementing the UDL-based learning model integrated with



collaborative learning, the students took a post-test to measure the progress of their English skills. The post-test was administered to the students after the entire series of learning activities had been completed. The test instrument used had the same format and level of difficulty as the pretest, so that the results could be objectively compared to assess the students' improvement.

Table 3. Post-test Results of Students' English Skills

Language Skill	Minimum Score	Maximum Score	Mean Score
Listening	88	100	95,3
Reading	90	100	97,1
Writing	86	98	94,2
Speaking	85	97	92,8

Based on Table 3, the post-test results indicate an improvement in students' proficiency across all four English language skills: listening, reading, writing, and speaking. The average scores of students following the implementation of collaborative learning based on Universal Design for Learning (UDL) showed an increase compared to the pretest results. The reading skill achieved the highest average score of 97.1, followed by listening with an average of 95.3, then writing with an average of 94.2, and speaking with an average of 92.8. These results indicate that students were able to improve their English language skills after

participating in a learning process designed using the UDL approach.

When viewed in terms of the minimum and maximum score ranges, improvements were also clearly evident in each language skill. In listening skills, student scores ranged from 88 to 100. In reading skills, student scores ranged from 90 to 100. Meanwhile, in writing skills, student scores ranged from 86 to 98, and in speaking skills, they ranged from 85 to 97. These score ranges indicate that the majority of students were able to achieve higher scores after participating in the learning activities implemented in this study.

In addition to the increase in the average score, an improvement was also observed in the minimum scores of students, which rose across all language skills compared to the pretest results. This indicates that the learning approach used not only benefited high-achieving students but also helped students with previously lower proficiency levels to improve their English language skills. Thus, these post-test results indicate that the implementation of Universal Design for Learning (UDL)-based collaborative learning contributes positively to the development of students' English language skills.

d. Students' Perceptions of UDL-Based Collaborative Learning

To understand students' views on the implementation of the Universal Design for Learning (UDL)-based collaborative learning model, the researcher administered a questionnaire after the learning process was completed.



This questionnaire measured several aspects of students' learning experiences aligned with the three main principles of UDL engagement, representation, and action & expression as well as the classroom atmosphere and collaborative activities. The questionnaire was administered to all 36 students participating in the course and consisted of 25 statements divided into five main categories: classroom atmosphere, collaborative activities, engagement, representation, and action and expression. Each statement used a 1–5 Likert scale, ranging from “strongly disagree” to

“strongly agree.” The percentage scores were calculated using the following formula:

$$\text{Percentage Score} = \frac{\text{Total Obtained Score}}{\text{Maximum Possible Score}} \times 100\%$$

The total score is calculated by summing all of the students' responses for each aspect and then comparing that total to the maximum possible score. The resulting percentage is then categorized to illustrate the students' level of perception regarding the implemented learning methods. The results of the questionnaire analysis are shown in the following table.

Table 4. Students' Perceptions of UDL-Based Collaborative Learning

Aspect	Percentage Score	Category
Classroom atmosphere	95,00%	Very Positive
Collaborative activities	94,56%	Very Positive
Feelings During Learning (UDL – Engagement)	94,11%	Very Positive
Multiple Ways of Understanding (UDL – Representation)	95,78%	Very Positive
Multiple Ways of Expression (UDL – Action & Expression)	94,22%	Very Positive

Based on Table 4, the results of the questionnaire analysis indicate that students' perceptions of the implementation of collaborative learning based on Universal Design for Learning (UDL) fall into the “very positive” category across all measured aspects. The “classroom atmosphere” aspect received a score of 95.00%, indicating that students experienced a pleasant classroom environment that supported the learning

process. The collaborative activities aspect received a score of 94.56%, indicating that students enjoyed learning activities involving cooperation and discussion with peers. Additionally, the feelings during learning aspect, related to the engagement principle in UDL, received a score of 94.11%, indicating that students felt more motivated and comfortable during the learning process.



Meanwhile, the “multiple ways of understanding” aspect, related to the representation principle, received the highest score of 95.78%. This indicates that students highly value the use of various methods in presenting learning materials, such as images, videos, discussions, and interactive activities. The “multiple ways of expression” aspect, which relates to the “action and expression” principle, also received a high score of 94.22%, indicating that students felt supported by having various options for expressing their understanding of the material. Overall, the results indicate that students responded very positively to the implementation of the UDL-based collaborative learning model, and show that the instructional design used effectively supported student participation, engagement, and accessibility in the learning process.

1). Engagement

The engagement dimension relates to the level of students’ emotional involvement, motivation, and participation during the learning process. The questionnaire results indicate that this aspect received a score of 94.11%, which falls into the “very positive” category. The integration of collaborative activities such as group discussions, teamwork, and student interactions helps create a more enjoyable and motivating learning environment. Several students also shared their opinions regarding their learning experiences during the activities:

Table 5. Students’ opinion for UDL-Engagement

Students	Opinion
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Student 12	I feel happy learning English because the activities are different and interesting.
Student 18	The activities are creative and I feel more confident sharing my ideas.
Student 25	I feel more confident to speak English when working in a group.

Several students also shared positive feedback about their experiences during collaborative learning based on Universal Design for Learning (UDL). Student 12 stated, “I feel happy learning English because the activities are different and interesting.” This statement indicates that the variety of learning activities implemented was able to create a more enjoyable learning experience for students. Additionally, another student noted that “The activities are creative and I feel more confident sharing my ideas.” This indicates that a more interactive classroom atmosphere provides students with opportunities to participate more actively and express their opinions during the learning process.

Another comment shared by student 25 was, “I feel more confident to speak English when working in a group.” This statement suggests that collaborative learning activities can help students feel more comfortable and confident when using English. Through group collaboration, students can help one another, discuss, and share ideas so that they do not feel afraid of making mistakes while learning. Overall, these student responses indicate that collaborative



activities in learning can enhance students' motivation, self-confidence, and comfort in using English during the learning process.

2). Representation

The dimension of representation relates to the use of various methods in presenting learning materials so that students with different learning styles can understand the material more effectively. The questionnaire results indicate that this aspect received the highest percentage score, 95.78%, indicating that students highly value the variety of methods used to present material during the learning process. In implementing UDL-based learning, teachers present material through various media such as images, videos, class discussions, and interactive activities. Several students provided opinion on how teachers explain the material:

Table 6. Students' opinion for UDL-Representation

Students	Opinion
Student 10	Different explanations help me understand the lesson better.
Student 16	Examples given by the teacher make the lesson clearer.
Student 29	I can choose the way that helps me understand the lesson.
Student 34	The pictures and activities make the topic easier to learn.

Some students also provided feedback on the methods used to present the material during the Universal Design for Learning (UDL)-based learning

process. Student 10 stated, "Different explanations help me understand the lesson better." This statement indicates that using various methods to explain the material gives students the opportunity to understand the learning topic more clearly. Additionally, another student noted that "Examples given by the teacher make the lesson clearer." This indicates that the examples provided by the teacher can help students connect the concepts being studied with a more concrete understanding.

Other student comments also indicate that the variety of learning methods provides flexibility in the process of understanding the material. Student 29 stated, "I can choose the way that helps me understand the lesson." This statement indicates that students have the opportunity to choose the learning method that best suits their needs. Additionally, another student noted that "The pictures and activities make the topic easier to learn." This finding suggests that presenting material through various forms of representation—such as images, activities, and varied explanations can help students access information more effectively and support diverse learning needs.

3). Action & Expression

The "action and expression" dimension relates to how students demonstrate their understanding of the learning material. In UDL-based learning, students are given the opportunity to express their understanding through various types of activities. The questionnaire results show that this aspect



received a score of 94.22%, which also falls into the “very positive” category. In the learning process, students are given flexibility in completing tasks, such as through oral presentations, group discussions, written assignments, and collaborative projects. This flexibility provides students with the opportunity to express their understanding in accordance with their individual abilities and learning styles. Several students stated that:

Table 7. Students’ opinion for UDL-Action&Expression

Students	Opinion
Student 7	The lesson is interesting and I like how we can express our ideas in different ways.
Student 15	The activities can match my ability and make me more motivated.
Student 22	I feel more confident when presenting with my group.
Student 30	I enjoyed this lesson because can make me more active in class.

Some students also shared their thoughts on the opportunities they were given to express their understanding through various activities in Universal Design for Learning (UDL)-based instruction. Student 7 stated, “The lesson is interesting and I like how we can express our ideas in different ways.” This statement indicates that students feel more comfortable when given flexibility in conveying their ideas or understanding of

the learning material. Additionally, another student noted that “The activities can match my ability and make me more motivated.” This indicates that tasks tailored to students’ abilities can enhance their motivation to actively engage in the learning process.

Other comments from students also indicate an increase in self-confidence during the learning activities. Student 22 stated, “I feel more confident when presenting with my group.” This statement shows that group collaboration can help students feel more confident when sharing discussion outcomes or giving presentations. Additionally, another student stated that “I enjoyed this lesson because can make me more active in class.” This indicates that a learning approach that offers various ways to express understanding encourages students to participate more actively in learning activities. Thus, varying forms of expression in the learning process can help boost students’ confidence and participation in the learning process.

e. Improvement Across the Four English Skills

To evaluate the effectiveness of implementing the UDL-based collaborative learning model, students’ English proficiency was measured through pretests and post-tests covering the four language skills: listening, reading, writing, and speaking. A comparison of the average pretest and post-test scores is presented in Table 8.



Table 8. Improvement across the four English skills

Language Skills	Pretest Average	Pos-test Average	Improvement t	N-Gain	N-Gain Category
Listening	85,7	95,3	9,6	0,67	Medium
Reading	88,4	97,1	8,7	0,75	High
Writing	86,9	94,2	7,3	0,56	Medium
Speaking	83,5	92,8	9,3	0,56	Medium

A comparison of pretest and post-test scores revealed an improvement in all of the students' English language skills following the implementation of a collaborative learning model based on Universal Design for Learning (UDL). The greatest improvements were observed in listening skills (9.6 points) and speaking skills (9.3 points), indicating that collaborative activities and student-to-student interactions had a positive impact on students' oral communication abilities. Meanwhile, reading skills improved by 8.7 points, and writing skills improved by 7.3 points. Although the improvement in writing was slightly lower compared to other skills, these results still indicate significant progress following the learning process.

Based on the N-Gain analysis, reading skills attained the highest score of 0.75, categorising them as exhibiting significant improvement. This finding indicates that the UDL-based collaborative learning approach effectively enhanced students' understanding and interpretative skills through configurable learning resources and interactive activities. Listening skills achieved an N-Gain score of 0.67, whereas writing and speaking skills each attained an N-Gain score of 0.56, all classified as

modest improvement. The N-Gain results demonstrate that the application of the UDL strategy positively influenced the improvement of students' English proficiency in all four language skills.

f. Implementation Fidelity

Implementation fidelity refers to the extent to which the UDL-based collaborative learning approach was implemented in accordance with the planned instructional design. The data in this section was obtained through classroom observations during the learning process as well as brief interviews with three English teachers who observed the learning activities. Based on the results of classroom observations, the implementation of this method went well through various activities such as group discussions, educational games, and collaborative activities that actively involved students. In addition, the teachers involved in the semi-structured interview process provided feedback regarding the implementation of this approach in English classes. The qualitative findings from interviews are summarized in Table 9.

Table 9. Teachers' feedback

Teachers	Feedback
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Teacher A	"I believe the UDL approach helps teachers address different student needs in the classroom. Students were more motivated to participate in the lesson."
Teacher B	UDL-based learning makes the English class more interesting and interactive. Students feel more comfortable expressing their ideas."
Teacher C	"Collaborative activities make the classroom atmosphere more lively and encourage students to work together in understanding the lesson."

Feedback from the teachers also indicated a positive perception of the implementation of Universal Design for Learning (UDL)-based collaborative learning in the classroom. The teacher A statement mentions that the UDL approach helps teachers accommodate the diverse learning needs of students in the classroom. Additionally, teachers observed that students became more motivated to actively engage in learning activities following the implementation of this approach.

The teacher B shared a similar perspective, this indicates that UDL-based learning can create a more engaging and interactive classroom environment, enabling students to feel more at ease when sharing their opinions. Meanwhile,

the teacher C statement indicates that the collaborative activities implemented in the learning process are able to create a more lively classroom atmosphere and encourage cooperation among students in understanding the learning material together.

2. Discussion

The findings of this study indicate that the implementation of a collaborative learning model based on Universal Design for Learning (UDL) significantly enhanced students' English language skills. The results showed improvements in all four English language skills: listening, reading, writing, and speaking. The most significant improvements have been found in listening and speaking skills, followed by reading and writing skills. These findings shows that collaborative learning activities combined with flexible instructional strategies provided students with greater opportunities to engage actively in English through discussions, presentations, peer interactions, and group activities.

The findings are consistent with the Universal Design for Learning principles established by CAST (2018), particularly the principles of multiple means of engagement, representation, and action and expression. Students were encouraged to engage actively in the learning process through collaborative and interactive activities, access materials through various forms of media, and demonstrate their understanding in different ways according to their abilities and learning preferences. This flexibility may explain why students showed



improvement in all English language skills after the implementation of the UDL-based collaborative learning model. Recent researchers also support the effectiveness of UDL in language learning contexts. Rao and Torres (2023) stated that UDL enhanced learner engagement and accessibility by providing adaptable learning opportunities that accommodate learner variability. Similarly, Tobin and Behling (2024) emphasized that UDL helps teachers create more inclusive and student-centred learning environments that support student engagement and academic achievement.

The significant improvement in listening and speaking skills may be explained by the collaborative aspect of the learning process. During classroom activities, students frequently participated in peer discussions, oral presentations, educational games, and communicative tasks that required active interaction using English. According to Vygotsky's social constructivist theory indicates that language development occurs through social interaction and communication with others. Therefore, collaborative learning activities provided substantial opportunities for students to practice English in authentic communicative situations. These findings are consistent with Setiawati and Nur'aeni (2025), who reported that collaborative learning activities significantly improved primary school students' speaking skills through peer interaction and group discussions. The questionnaire results also support these findings, as students mentioned that collaborative activities helped them feel

more confident and comfortable when speaking English in groups.

The N-Gain analysis further highlights the effectiveness of the intervention. Reading skills attained the highest N-Gain score (0.75), categorized as high improvement, while listening (0.67), writing (0.56), and speaking (0.56) were categorized as medium improvement. The high improvement in reading skills may be related to the implementation of multiple means of representation throughout the learning process. Students were provided with various forms of learning materials such as images, videos, explanations, discussions, and interactive activities that helped them understand the lesson more effectively. According to UDL theory, multiple representations allow students with diverse learning styles and skills to access information more easily. The questionnaire results indicate that the representation aspect received the highest percentage score (95.78%). Students stated that different explanations, examples, illustrations, and activities helped them understand the lessons more clearly and effectively.

Furthermore, the improvement in writing skills demonstrates that adaptable instructional approaches can help students express their understanding more confidently. Through collaborative projects, group discussions, and varied assignments, students were given opportunities to communicate their ideas using different forms of expression. The questionnaire results showed that the action and expression aspect received a very positive response (94.22%), indicating that students appreciated



having multiple ways to express their understanding. These findings support the UDL principle that students should be provided with flexible methods for expressing knowledge and skills according to their individual skills and preferences.

The engagement aspect also achieved highly positive results, with a percentage score of 94.11%. Students reported that the learning activities were enjoyable, interesting, and motivating. This finding indicates that collaborative learning activities integrated with UDL principles can enhance students' emotional engagement and classroom participation. Implementing interactive activities, teamwork, and student-centred learning strategies created a more positive classroom atmosphere and encouraged students to participate more actively during English lessons. These findings are supported by Wulandari et al. (2025), who discovered that cooperative learning in English language classrooms can improve student engagement, motivation, and confidence in using English.

Moreover, teacher interview results further strengthened the findings of this study. Teachers reported that the UDL approach helped accommodate diverse student needs and learning preferences within the classroom. Teachers also revealed that students became more motivated, confident, and actively involved during the learning process. Therefore, the integration of UDL principles not only improves students' academic performance but also supports more inclusive and engaging classroom practices. The result are also compatible

with Capp (2017), who argued that UDL helps teachers design inclusive learning environments that accommodate learner variability and diverse student needs. Through adaptable instruction, varied learning resources, and collaborative activities, students with different abilities and learning preferences engaged more actively and confidently in classroom learning. As a result, the implementation of the UDL approach in this study not only improved students' English language skills but also supported the creation of a more inclusive, participatory, and student-centred learning environment.

In the context of the Cambridge curriculum in primary EFL classrooms, the integration of UDL principles also provides important practical implications. The Cambridge curriculum emphasizes communicative competence, active participation, and student-centred learning, which are aligning with the principles of UDL. Therefore, integrating UDL into Cambridge English learning can help teachers provide more adaptable teaching, differentiated classroom activities, multidimensional learning resources, and varied assessment methods that accommodate students' diverse learning needs. Teachers may integrate collaborative activities, project-based learning, visual supports, educational games, and interactive digital media to enhance students' engagement and participation in English learning activities. This integration can help create more accessible and inclusive English learning environments while supporting the communicative objectives of the Cambridge curriculum.



Overall, the findings of this research support established theories and previous research regarding the effectiveness of UDL and collaborative learning in improving students' learning outcomes, participation, and classroom engagement. The integration of UDL principles into Cambridge-based English learning not only enhances students' English language proficiency but also promotes a more adaptable, inclusive, and student-centred learning environment in primary EFL classrooms.

D. Conclusion

UDL-based collaborative learning in a Cambridge primary EFL classroom provides practical support for inclusive, flexible, and student-centred English instruction. By combining the principles of engagement, representation, and action and expression with collaborative learning activities, this approach can accommodate diverse learning needs while encouraging students to participate actively in classroom tasks. It also helps create a more supportive learning environment in which students can develop confidence, interaction skills, and meaningful English learning experiences. English teachers should integrate UDL principles into lesson planning, learning materials, classroom activities, and assessment practices. Teachers can provide varied learning resources, collaborative tasks, and multiple opportunities for students to demonstrate their understanding. Schools should also support this implementation through professional development, adequate learning facilities, accessible resources,

and appropriate educational technology. Future research should examine the long-term effects of UDL-based collaborative learning in different primary EFL contexts. Further studies may also investigate the use of digital tools, differentiated assessment, and broader samples to strengthen evidence regarding its effectiveness in improving English learning outcomes and inclusive classroom participation.

E. References

- Aprianti, D., & Ayu, M. (2020). *Think-Pair-Share: Engaging Students In Speaking Activities In Classroom*. *Journal of English Language Teaching and Learning*, 1(1), 13–19. <http://jim.teknokrat.ac.id/index.php/english-language-teaching/index>
- Bayagna, H. K., Cantos, M. A., Tapulgo, J. A., Tomaquin, A., & Justol, J. B. Q. (2025). *The Influence of Face-to-Face Social Interaction on Grammar Skills among English Students*. *International Journal of Multidisciplinary Educational Research and Innovation*, 3(3), 141–164. <http://www.ijmeri.com/>
- Bray, A., Devitt, A., Banks, J., Sanchez Fuentes, S., Sandoval, M., Riviou, K., Byrne, D., Flood, M., Reale, J., & Terrenzio, S. (2024). *What next for Universal Design for Learning? A systematic literature review of technology in UDL implementations at second level*. *British Journal of Educational Technology*, 55(1), 113–138. <https://doi.org/10.1111/bjet.13328>



- Cambridge University Press. (2020). *Cambridge English Curriculum*. Diperoleh dari <https://www.cambridge.org/education>
- CAST. (2018). *Universal Design for Learning Guidelines version 2.2*. Diperoleh dari <http://udlguidelines.cast.org>
- Capp, M. J. (2017). The effectiveness of universal design for learning: A meta-analysis of literature between 2013 and 2016. *International Journal of Inclusive Education*, 21(8), 791–807.
- Dendodi, D., Nudiana, N., Astuti, Y. D., Aunurrahman, A., & Warneri, W. (2024). Dampak dan tantangan terhadap Transformasi kurikulum di Satuan Pendidikan. *Journal of Education Research*, 5(2), 1071–1080.
- Fatmawati, D., & Darmawan, P. (2023). Pengaruh Keragaman Siswa Sekolah Dasar Terhadap Pencapaian Target Kurikulum Dan Solusi Strategi. *Bisnis Dan Pendidikan*, 3(10). <https://doi.org/10.17977/um066.v3.i10.2023.1>
- Harahap, D., Silalahi, D., Hutagalung, E., Purba, M., & Tansliova, L. (2024). Analisis Tantangan dan Solusi Guru Dalam Implementasi Strategi Pembelajaran. *QISTINA: Jurnal Multidisiplin Indonesia*, 3(1).
- Hutabarat, R. G. N. (2020). Pembelajaran Bahasa Inggris untuk Siswa Sekolah Dasar dalam *Perspektif Fun and Active Learning Approach*: Sebuah Refleksi Teoretis. *Intelektiva: Jurnal Ekonomi, Sosial & Humaniora*, 1(11), 136–143.
- Liens Mariyanti Gowasa, & Opirman Waruwu. (2026). AN ANALYSIS OF FIGURATIVE LANGUAGE IN THE SONG LYRICS OF NADIN AMIZAH. *Research on English Language Education*, 7(2), 65–82. <https://doi.org/10.57094/relation.v7i2.4628>
- Kusyairi, Fazaraul F. Ad, & Habibatul U. (2024). Menumbuhkan Keterampilan Berbicara Dalam Pembelajaran Bahasa di Sekolah. *Demagogi: Journal of Social Sciences, Economics and Education*, 2(4), 239–251. <https://doi.org/10.61166/demagogi.v2i4.58>
- Judijanto, L., Caroline, C., & Aminudin S, Muh. D. (2025). Jurnal Ilmiah Edukatif Strategi Pendidikan Inklusif: Studi Literatur tentang Upaya Mengatasi Kesenjangan Pendidikan di Berbagai Negara. *Jurnal Ilmiah Edukatif*, 11(1), 10–25.
- Magnan, M. L. (2025). Embracing Universal Design for Learning to Support Learner Variability in ACTFL-Aligned Classrooms. *NECTFL Review*, 95, 117–126.
- Pillai, A. G. (2023). *Universal Design for Learning as a Drive for Inclusive Language Development*. *Journal of English Language Teaching*, 65(5), 17–23.
- Rao, K., & Torres, C. (2023). Universal Design for Learning in language education.
- Rusconi, L., & Squillaci, M. (2023). *Effects of a Universal Design for Learning (UDL) Training Course on the Development Teachers' Competences*:



- A Systematic Review. In Education Sciences* (Vol. 13, Issue 5). MDPI. <https://doi.org/10.3390/educsci13050466>
- Sabariah, S., Rofi'i, R., Nadiroh, A., Lestari, D., Sulistiami, S., & Baidowi, A. (2025). *Integrating technological innovations in teacher professional development: A case study on enhancing learning outcomes*. J-Abdi: Jurnal Pengabdian Kepada Masyarakat.
- Salamah, E. R. (2022). Pentingnya Interaksi Guru Dan Siswa Dalam Pembelajaran Jarak Jauh. *Membangun Karakter Dan Budaya Literasi Dalam Pembelajaran Tatap Muka Terbatas Di SD*, 72–82.
- Setiawati, S., & Nur'aeni, I. (2025). Improvement Of Speaking Skills Based on Collaborative Learning Models in Students Class V Elementary School. *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, 13(2), 5077–5095.
- Susanto, A., & Yohana, Y. (2025). *Pengaruh Keragaman Individu Terhadap Proses Pembelajaran Dan Pengajaran*. 15(I). www.ejournal.an-nadwah.ac.id
- Telaumbanua, E. D. P., & Harefa, A. R. (2024). Pengaruh Gaya Belajar terhadap Hasil Belajar Siswa. *Journal of Education Research*, 5(1), 691–697.
- Tobin, T. J., & Behling, K. T. (2024). *Reach Everyone, Teach Everyone: Universal Design for Learning in Higher Education*.
- Wulandari, R., Abduh, A., & Halim, A. (2025). The Use of Cooperative Learning to Enhance Students Engagement in English Classroom. *International Journal of Language, Education, and Literature*, 2(4), 540–554.
- Waruwu, O. (2026). THE VITALITY OF THE NIAS LANGUAGE IN THE ERA OF GLOBALIZATION: A SOCIOLINGUISTIC STUDY OF THE YOUNGER GENERATION. *KOHESI : Jurnal Pendidikan Bahasa Dan Sastra Indonesia*, 6(1), 77-93. <https://doi.org/10.57094/kohesi.v6i1.4973>
- Waruwu, O., & Branco Guterres, R. (2026). EXAMINING THE DISTRIBUTION OF LANGUAGE SKILLS IN EFL TEXTBOOKS FOR JUNIOR HIGH SCHOOLS: PATTERNS, GAPS, AND PEDAGOGICAL SOLUTIONS. *Research on English Language Education*, 8(1), 43-58. <https://doi.org/10.57094/relation.v8i1.5140>
- Zeng, Q., Liu, Y., Zhang, C., Li, Y., & Wang, Y. (2025). *The influence of the cooperative learning evaluation programme on social interaction of primary school students in China*. *Educational Psychology in Practice*, 41(3), 317–331. <https://doi.org/10.1080/02667363.2025.2482938>

