

The Effectiveness of the Cooperative Learning Strategy in Developing Critical Reading Skills among First-Year Students at the College of Law

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DOI : <https://doi.org/10.61796/ijss.v3i2.136>



Sections Info

Article history:

Submitted: April 25, 2026

Final Revised: May 15, 2026

Accepted: June 10, 2026

Published: June 27, 2026

Keywords:

Cooperative learning

Critical reading

Law students

Higher education

Critical thinking

ABSTRACT

Objective: This study aims to identify the effectiveness of the cooperative learning strategy in developing critical reading skills among first-year students at the College of Law, Al-Ayen Iraqi University. **Method:** Cooperative learning is considered a modern teaching strategy based on positive interaction, organized group work, role distribution, and participatory knowledge construction. The study adopted a quasi-experimental design with two equivalent groups: an experimental group taught through cooperative learning and a control group taught through the traditional method. The sample consisted of 350 first-year law students, including 200 males and 150 females. The sample was divided into two groups: the experimental group, which studied according to the cooperative learning strategy, and the control group, which studied according to the traditional method. The researcher prepared a critical reading skills test that measured the ability to analyze ideas, distinguish facts from opinions, infer implicit meanings, evaluate arguments and evidence, identify fallacies, and formulate critical judgments. The validity of the test was verified through expert judgment, and its reliability was verified using Cronbach's alpha. **Results:** The results showed statistically significant differences at the 0.05 level in favor of the experimental group in the post-test, with a large effect size. This indicates the effectiveness of the cooperative learning strategy in developing critical reading skills among law students. **Novelty:** Cooperative learning is considered a modern teaching strategy based on positive interaction, organized group work, role distribution, and participatory knowledge construction. This study aims to identify the effectiveness of the cooperative learning strategy in developing critical reading skills among first-year students at the College of Law, Al-Ayen Iraqi University. In light of these results, the study recommends adopting this strategy in higher education, especially in courses that require text analysis, interpretation, and evaluation.

INTRODUCTION

Research Problem

Critical reading skills are among the essential skills that university students should possess, particularly students at the College of Law. The nature of their study requires reading and analyzing legal texts, distinguishing between opinion and argument, evaluating evidence, inferring implicit meanings, and issuing objective judgments. Critical reading does not stop at understanding the apparent meaning of a text; rather, it extends to analyzing its structure, uncovering its assumptions, evaluating its internal logic, and determining the consistency of its ideas [1], [2].

Despite the importance of these skills, educational observation indicates that many students tend to rely on direct reading based on memorization and information recall more than on analytical and critical reading. This is partly due to the continued use of traditional teaching methods that make the student a passive recipient and do not

provide sufficient opportunities for discussion, dialogue, exchange of opinions, and practice of critical thinking in the classroom [3], [4].

Therefore, there is a need to employ modern teaching strategies that activate the student's role and transform the learner from a recipient into an active participant in knowledge construction. The cooperative learning strategy is one of the appropriate strategies for this purpose because it is based on positive interaction among students, role distribution, individual and collective responsibility, and dialogue about texts [5]–[7]. Accordingly, the research problem is defined in the following main question: What is the effectiveness of the cooperative learning strategy in developing critical reading skills among first-year students at the College of Law?

1. Are there statistically significant differences between the mean scores of the experimental group and the control group in the post-test of critical reading skills?
2. What is the effect size of the cooperative learning strategy in developing critical reading skills among first-year students at the College of Law?
3. Which critical reading subskills improve the most when cooperative learning is used?

Significance of the Study

The significance of the study stems from the importance of critical reading as a basic entry point to conscious university learning, and from the importance of cooperative learning as an active strategy consistent with modern trends in university teaching. The theoretical and practical significance of the study can be summarized as follows:

A. Theoretical Significance

1. It contributes to enriching Arabic and Iraqi educational literature related to the cooperative learning strategy and its relationship with developing critical reading skills in higher education [8], [9].
2. It provides a theoretical framework linking the principles of cooperative learning with modern learning theories, particularly constructivist theory and social learning theory.
3. It directs research attention to students at the College of Law, whose academic study requires advanced skills in text reading, argument analysis, and interpretation of meanings.
4. It provides a theoretical basis that may benefit researchers and specialists in university teaching methods and critical reading skills.

B. Practical Significance

1. It provides instructors with practical mechanisms for employing cooperative learning in teaching legal and humanities-related texts.
2. It presents an organized test for measuring critical reading skills that may be used in later studies after adaptation and psychometric verification [10].
3. It helps colleges of law improve their educational outcomes in light of critical thinking, analysis, and inference skills.
4. It provides statistical results that may support the adoption of active teaching strategies in higher education.

Objectives of the Study

1. To identify the level of critical reading skills among first-year students at the College of Law before applying the cooperative learning strategy.
2. To reveal the effect of the cooperative learning strategy on developing critical reading skills among students in the experimental group.
3. To determine the statistical differences between the mean scores of the experimental and control groups in the post-test of critical reading.
4. To measure the effect size of the cooperative learning strategy in developing critical reading skills.
5. To present recommendations and suggestions that contribute to developing the teaching of critical reading at the university level.

Research Hypotheses

The hypotheses of the study were formulated as follows:

1. There are no statistically significant differences at the 0.05 level between the mean scores of the experimental and control groups in the pre-test of critical reading skills.
2. There are statistically significant differences at the 0.05 level between the mean scores of the experimental and control groups in the post-test of critical reading skills in favor of the experimental group.
3. There are statistically significant differences at the 0.05 level between the mean scores of the experimental group in the pre-test and post-test in favor of the post-test.
4. The cooperative learning strategy achieves a large effect size in developing critical reading skills among first-year students at the College of Law.

Limits of the Study

1. Human limits: first-year students at the College of Law, Al-Ayen Iraqi University.
2. Spatial limits: College of Law, Al-Ayen Iraqi University.
3. Time limits: the first semester of the academic year 2025-2026.
4. Subject limits: the cooperative learning strategy and critical reading skills in educational and legal texts.

Definition of Terms

1. Effectiveness

Effectiveness refers to the extent to which an educational strategy is able to achieve predetermined objectives and reach the desired outcomes. Operationally, in this study, it refers to the amount of improvement in the scores of the experimental group students in the critical reading skills test after being taught according to the cooperative learning strategy.

2. Cooperative Learning Strategy

Cooperative learning is a teaching strategy based on organizing students into small heterogeneous groups whose members work jointly to achieve specific educational objectives, with each student assuming responsibility for his or her own learning and contributing to the learning of peers. Operationally, it refers to the method used in teaching the experimental group through organized group work, role distribution, discussion, and shared evaluation.

3. Critical Reading

Critical reading is a mental process that goes beyond direct understanding of a text to include analysis, interpretation, evaluation, and judgment based on logical and objective criteria. Operationally, it is the score obtained by the student in the critical reading skills test prepared for this study, which measures six subskills.

4. First-Year Students at the College of Law

This term refers to students enrolled in undergraduate first-year study at the College of Law, Al-Ayen Iraqi University, whose number in the research sample was 350 male and female students.

Literature Review

Theoretical Framework and Previous Studies

1. Cooperative Learning Strategy

Cooperative learning is based on the idea that learning becomes more effective when learners interact with one another within small groups. Students exchange ideas, ask questions, compare solutions, and each member assumes responsibility for his or her own learning and for the learning of peers. This type of learning represents a shift from teacher-centered instruction to learner-centered instruction, where the student becomes a participant in knowledge construction rather than a mere recipient.

Cooperative learning takes several forms, including learning circles, group competition among teams, cooperative integration of fragmented information, cooperative inquiry, team games and tournaments, and individual competition within a collective structure. These forms share several main principles: positive interdependence, individual responsibility, direct interaction, social skills, and group work evaluation.

In the context of teaching critical reading, cooperative learning gives students the opportunity to discuss and analyze texts from multiple perspectives. This helps them discover implicit ideas, compare opinions, examine arguments, and justify judgments. Therefore, it is particularly suitable for students at the College of Law, as their study requires dealing with analytical and inferential texts.

2. Critical Reading

Critical reading represents an advanced level of reading. It is not limited to understanding words and sentences, but includes interpreting the text, analyzing its structure, and evaluating its arguments. A critical reader neither accepts ideas as they are nor rejects them without evidence; instead, the reader examines them according to rational and objective standards and distinguishes between fact and opinion, evidence and claim, and logical and weak inference [11].

Critical reading is closely related to critical thinking because it requires the reader to be able to compare, analyze, infer, evaluate, and issue judgments. It also requires awareness of language, context, and the purpose the writer seeks to achieve. Therefore, developing critical reading among university students is an important objective in light of the requirements of modern knowledge [12].

In this study, critical reading skills are defined in six main subskills: analyzing main and supporting ideas, distinguishing fact from opinion, inferring implicit meanings,

evaluating arguments and evidence, identifying logical fallacies, and formulating critical judgments supported by reasons.

3. The Relationship between Cooperative Learning and Critical Reading

The relationship between cooperative learning and critical reading is based on the fact that critical reading requires both mental and social interaction. When a student reads a text within a group, the student does not rely only on individual understanding; rather, the student tests that understanding in light of the views of peers. Group discussion also helps reveal biases, identify strengths and weaknesses in arguments, and generate new questions about the text. Recent studies have indicated that cooperative models contribute to the development of reading and critical comprehension skills when applied through a clear design and appropriate follow-up [13]-[15].

RESEARCH METHOD

1. Research Method and Design

The study adopted the quasi-experimental method because it is the most appropriate method for measuring the effect of an independent variable, the cooperative learning strategy, on a dependent variable, critical reading skills. The study used the equivalent two-group design with a pre-test and post-test. The experimental group studied according to the cooperative learning strategy, whereas the control group studied according to the traditional method.

Table 1. Experimental Design of the Study

Group	Pre-test	Instructional Treatment	Post-test
Experimental	Critical reading skills test	Teaching according to the cooperative learning strategy	Critical reading skills test
Control	Critical reading skills test	Teaching according to the traditional method	Critical reading skills test

2. Population and Sample of the Study

The population of the study consisted of first-year students at the College of Law, Al-Ayen Iraqi University. The sample consisted of 350 male and female students, including 200 males and 150 females. The sample was divided into two equivalent groups: an experimental group and a control group, with 175 students in each group, while maintaining gender balance within each group.

Table 2. Distribution of the Research Sample by Group and Gender

Group	Males	Females	Total	Percentage
Experimental	100	75	175	50%
Control	100	75	175	50%
Total	200	150	350	100%

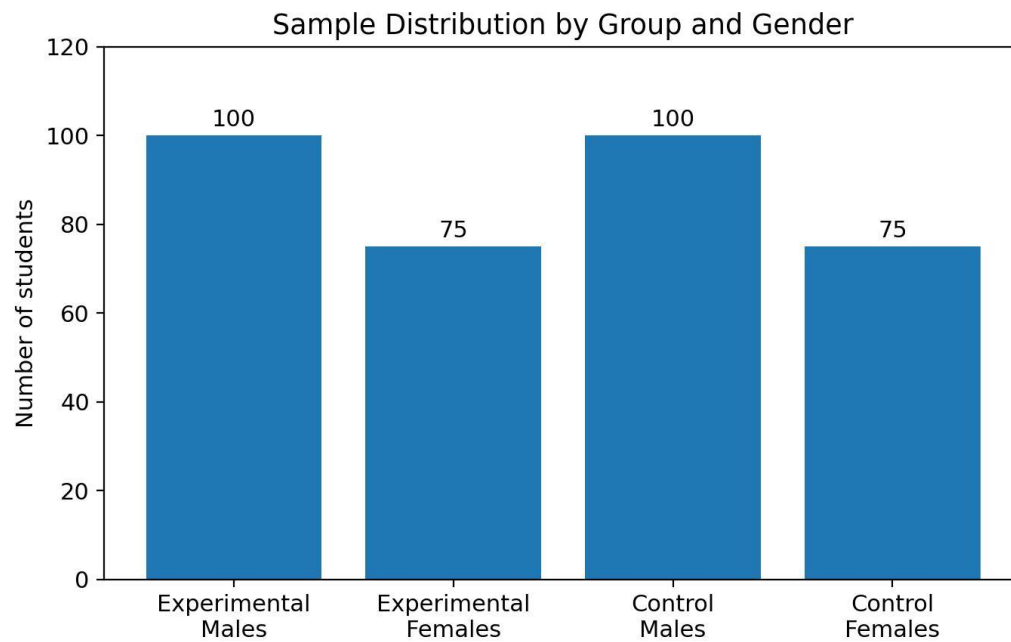


Figure 1. Distribution of the Research Sample by Group and Gender

3. Lecture Schedule for the Application

The experiment was implemented within the first-year lecture schedule at the College of Law. The lectures were allocated to training students in critical reading skills through short educational and legal texts, while students were organized into small cooperative groups. The following table presents the teaching application plan:

Table 3. Lecture Schedule for Applying the Cooperative Learning Strategy at the College of Law-First Year

Week	Lecture	Target Skill	Application Activity
Week 1	Lecture 1	Introducing the study and dividing groups	Explaining roles and rules of cooperative work
Week 1	Lecture 2	Pre-test	Administering the critical reading test before treatment
Week 2	Lectures 3-4	Analyzing main and supporting ideas	Reading a short legal text and discussing its structure
Week 3	Lectures 5-6	Distinguishing fact from opinion	Group activity for classifying statements and analyzing evidence

Week	Lecture	Target Skill	Application Activity
Week 4	Lectures 7-8	Inferring implicit meanings	Inferring unstated meanings from the text Discussing the strength and weakness of arguments and justifying judgments
Week 5	Lectures 9-10	Evaluating arguments and evidence	Analyzing examples of reasoning errors
Week 6	Lectures 11-12	Identifying logical fallacies	Writing evidence-supported critical judgments
Week 7	Lectures 13-14	Formulating critical judgment	Group evaluation of performance and correction of errors
Week 8	Lecture 15	Review and feedback	Administering the critical reading test after treatment
Week 8	Lecture 16	Post-test	

4. Research Instrument

The research instrument was a critical reading skills test prepared in two equivalent forms: a pre-test form and a post-test form. The test consisted of 40 items distributed over six subskills, and the total score of the test was 100. When preparing the items, consideration was given to their suitability for first-year students at the College of Law and to the inclusion of short texts that could be analyzed, interpreted, and evaluated.

Table 4. Test Specifications for Critical Reading Skills

Skill	No. of Items	Score	Percentage
Analysis of main and supporting ideas	8	20	20%
Distinguishing fact from opinion	6	15	15%
Inferring implicit meanings	6	15	15%

Skill	No. of Items	Score	Percentage
Evaluating arguments and evidence	8	20	20%
Identifying logical fallacies	6	15	15%
Formulating critical judgment	6	15	15%
Total	40	100	100%

5. Validity and Reliability of the Instrument

The validity of the test was verified by presenting it to a panel of specialists in teaching methods, measurement and evaluation, Arabic language, and law. The specialists were asked to judge the suitability of the items for the targeted skills, the clarity of wording, and the appropriateness of the scoring. After considering their comments, some items were modified and unsuitable items were removed.

Reliability was verified using Cronbach's alpha on a pilot sample outside the main research sample. The total reliability coefficient was 0.86, which is educationally acceptable. Test-retest reliability was also calculated and reached 0.83, indicating the consistency and stability of the instrument.

Table 5. Validity and Reliability Coefficients of the Research Instrument

Procedure	Method Used	Value / Result	Interpretation
Content validity	Expert judgment	89% agreement among judges	Acceptable
Internal consistency	Cronbach's alpha	0.86	High
Test-retest reliability	Re-administration of the test	0.83	High
Item discrimination	Discrimination coefficient	0.31 - 0.68	Acceptable
Item difficulty	Difficulty coefficient	0.37 - 0.72	Acceptable

6. Statistical Methods

The following statistical methods were used to analyze the data: arithmetic mean, standard deviation, independent-samples t-test, paired-samples t-test, Cronbach's alpha coefficient, and effect size coefficient (Cohen's d). The significance level of 0.05 was adopted for judging statistical differences.

RESULTS AND DISCUSSION

Results

Equivalence of the Two Groups in the Pre-test

To verify the equivalence of the two groups before applying the experiment, the means and standard deviations of students' scores in the pre-test were calculated, and an independent-samples t-test was used. The following table presents the results:

Table 6. T-test Results for Differences between the Two Groups in the Pre-test

Group	N	Mean	Standard Deviation	t-value	Sig. Level	Significance
Experimental	175	48.62	8.74	0.76	0.447	Not significant
Control	175	47.91	8.66			

Table 6 shows that the t-value was 0.76, which is not statistically significant at the 0.05 level. This indicates that the two groups were equivalent in critical reading skills before the experiment began.

Differences between the Two Groups in the Post-test

After implementing the instructional treatment, the means and standard deviations of students' scores in the post-test were calculated, and an independent-samples t-test was used to identify the significance of the differences between the two groups.

Table 7. T-test Results for Differences between the Two Groups in the Post-test

Group	N	Mean	Standard Deviation	t-value	Sig. Level	Effect Size d	Significance
Experimental	175	78.34	7.92	18.46	0.000	1.97	Significant in favor of experimental
Control	175	62.20	8.43				

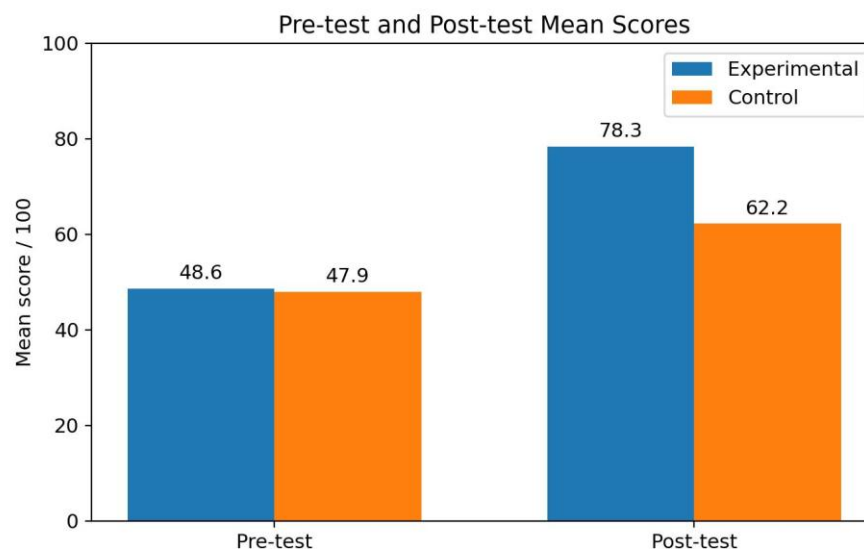


Figure 2. Comparison of Pre-test and Post-test Mean Scores between the Two Groups

Table 7 and Figure 2 show statistically significant differences between the mean score of the experimental group and that of the control group in the post-test. The mean score of the experimental group was 78.34, while the mean score of the control group was 62.20. The calculated t-value was 18.46, which is significant at the 0.05 level, and the effect size was 1.97, which is considered a very large effect. This result indicates that the cooperative learning strategy effectively contributed to developing critical reading skills among first-year students at the College of Law.

Development of the Experimental Group’s Performance between the Pre-test and Post-test

Table 8. Comparison between the Pre-test and Post-test of the Experimental Group

Test	N	Mean	Standard Deviation	t-value	Sig. Level	Significance
Pre-test	175	48.62	8.74	31.68	0.000	Significant in favor of post-test
Post-test	175	78.34	7.92			

Table 8 shows that the performance of the experimental group improved clearly after applying the cooperative learning strategy. The mean score increased from 48.62 in the pre-test to 78.34 in the post-test. This improvement reflects the effect of organized group work on developing students’ ability to analyze texts, discuss evidence, and form critical judgments.

Critical Reading Subskills

Table 9. Differences between the Two Groups in Critical Reading Subskills in the Post-test

Skill	Score	Experimental Mean	Experimental SD	Control Mean	Control SD	t	d
Analysis of main and supporting ideas	20	15.90	2.05	12.70	2.30	13.74	1.47
Distinguishing fact from opinion	15	12.10	1.70	10.00	1.90	10.90	1.16
Inferring implicit meanings	15	11.80	1.80	9.40	2.10	11.48	1.23
Evaluating arguments and evidence	20	15.60	2.20	12.30	2.50	13.11	1.40

Skill	Score	Experimental Mean	Experimental SD	Control Mean	Control SD	t	d
Identifying logical fallacies	15	11.40	1.90	8.80	2.15	11.99	1.28
Formulating critical judgment	15	11.54	1.60	9.00	1.80	13.95	1.49

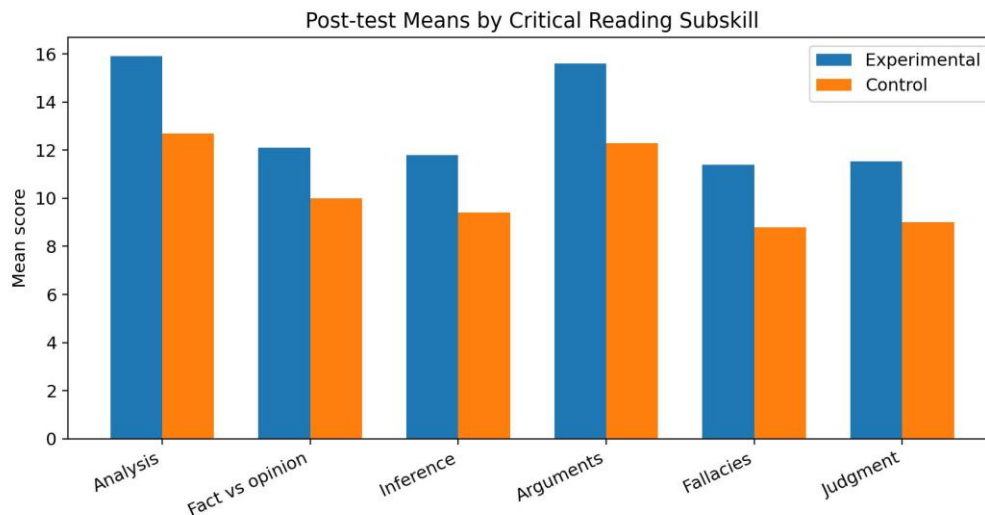


Figure 3. Mean Scores of Critical Reading Subskills in the Post-test

The results in Table 9 and Figure 3 indicate that the differences were in favor of the experimental group in all subskills. The largest differences appeared in analyzing ideas, evaluating arguments, and formulating critical judgment. These skills are directly connected with group dialogue, exchange of interpretations, and justification of answers within the group. This result indicates that cooperative learning does not merely improve the total score; rather, it also contributes to improving the components of critical reading in a balanced manner.

Discussion

The results are consistent with the quasi-experimental method used in the study. The two-group design with a pre-test and post-test made it possible to compare the effect of the cooperative learning strategy with the traditional method. The pre-test results showed that the two groups were equivalent, which strengthens confidence that the post-test differences were largely due to the instructional treatment rather than prior differences between students.

The results indicate that cooperative learning provided an active learning environment that helped students practice critical reading through dialogue and exchange of opinions. When students discuss a text with their peers, they review their understanding, defend their interpretations, compare evidence, and discover weaknesses

in conclusions. These processes explain the major improvement in the skills of analyzing ideas, evaluating arguments, and formulating critical judgments.

This result is consistent with Mustamir, who found that the cooperative learning model improved reading comprehension among first-year students compared with the traditional method [13]. It is also consistent with Ramdani et al., who confirmed that cooperative learning contributes to developing critical thinking and metacognitive skills [14], and with Setiawan et al., whose meta-analysis showed that cooperative learning models have a positive effect on improving critical reading skills [15].

The superiority of the experimental group over the control group can be explained by the fact that the traditional method often focuses on direct explanation and receiving information, whereas cooperative learning gives students wider opportunities to analyze and interpret texts in realistic group situations. Role distribution within the group, such as reader, analyst, critic, and reporter, helped students assume responsibility and move from superficial understanding to analytical understanding.

Thus, the results answer the research questions and achieve the research objectives. They proved the existence of statistically significant differences in favor of the experimental group, revealed a large effect size for the cooperative learning strategy, and showed that all critical reading subskills improved to varying degrees. This confirms that the strategy is appropriate for developing critical reading instruction in the College of Law and in higher education generally.

CONCLUSION

Fundamental Finding : The results showed a clear positive effect of the cooperative learning strategy in developing critical reading skills among first-year students at the College of Law. The experimental group outperformed the control group in the post-test with statistically significant differences. The effect size of the cooperative learning strategy was 1.97, which is a very large effect according to Cohen's *d* criterion. All critical reading subskills improved among the experimental group, especially analysis of ideas, evaluation of arguments, and formulation of critical judgment. **Implication :** The cooperative learning strategy is an effective teaching method for developing critical reading skills because it provides opportunities for positive interaction, exchange of experiences, discussion of texts, and analysis of arguments and evidence. It also helped create a motivating learning environment that encourages participation and individual and collective responsibility, which was positively reflected in students' academic performance. **Limitation :** The study was conducted only among first-year students at the College of Law, limiting the generalizability of the findings to other academic levels and disciplines. **Future Research :** Future studies should examine the implementation of cooperative learning in other university contexts, integrate digital technologies and educational platforms to support cooperative work, and develop periodic measurement tools to monitor the growth of critical reading skills among students.

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