



The Effect Of The CTL (*Contextual Teaching And Learning*) Learning Model On Students' Learning Outcomes In The Economics Subject Of Grade XI

Ernike Selviana Damanik¹, Elisabeth Margareta², Lasma Siagian³

Pendidikan Ekonomi, Fakultas Keguruan Dan Ilmu Pendidikan

Universitas HKBP Nommensen, Medan

ernikeselviana.damanik@student.uhn.ac.id, elisabeth.margareta@uhn.ac.id, lasmasiagian@uhn.ac.id

Article History:

Accepted: 7 July 2024

Revised: 9 December 2024

Published: 5 July 2025

Abstract

This study aims to determine the effect of the Contextual Teaching and Learning (CTL) model on students' learning outcomes in the Economics subject for Grade XI students of the Hospitality Program at SMK Negeri 8 Medan. This research is motivated by the low academic performance of students in Economics, especially in the topic of entrepreneurship. The CTL model is designed to relate the learning material to students' real-life contexts to improve their conceptual understanding in a more meaningful way. This study employed a quantitative method with a pre-experimental design using the One Group Pretest-Posttest Design. The sample consisted of 33 students from class XI PH 2, selected randomly from the population of Grade XI Hospitality students. Data collection instruments included multiple-choice tests covering the cognitive aspects of learning outcomes, which were previously tested for validity and reliability. The data analysis techniques used in this study included descriptive analysis, normality test, simple linear regression, t-test, F-test, and N-Gain analysis. The results showed a significant increase in posttest scores compared to pretest scores. The average posttest score was higher than the pretest score. The t-test result showed that $t_{count} = 8.359 > t_{table} = 2.040$, indicating that the alternative hypothesis is accepted. Thus, it can be concluded that the Contextual Teaching and Learning (CTL) model has a positive and significant effect on students' learning outcomes in Economics.

Keywords : Contextual Teaching and Learning (CTL), Learning Outcomes, Economics Learning, Entrepreneurship

INTRODUCTION

Education is a process aimed at optimally developing individual potential, including intellectual, emotional, social, and moral development. The goal of education, as stipulated in Law Number 20 of 2003, is to enlighten the nation and develop individuals who are faithful, pious, and have noble character (Khasanah, 2019). Quality education is considered high when the process is effective, and individuals gain meaningful experiences. Discussing the quality of education is inseparable from the support of the government, teachers, parents, and the community. Teaching and learning activities in schools are crucial. This means that the success or failure of educational achievement depends, among other things, on how students learn at school (Hasan, 2021).

Teaching and learning activities involve several components: students, educators, learning objectives, learning materials, learning models, media, and evaluation. Teachers are the primary determinants in achieving educational goals (Simajuntak, Sinaga, & Thesalonika, 2022). Therefore, teachers must be able to determine teaching and learning strategies so that students can learn effectively and efficiently. By implementing learning models, teachers can create active teaching and learning activities so that learning takes place effectively (Seri, 2019).

Observations in January 2025 at State Vocational High School 8 Medan showed that the average grades of eleventh-grade students in the 2022/2023–2024/2025 academic year varied from year to year. This was evident from the final grades obtained by students, and it can be concluded that student learning outcomes in economics for eleventh-grade students in the 2022/2023–2024/2025 period declined (Hajerina, 2018).

Based on the background of the problem above, the researcher emphasized the need for efforts to evaluate the implementation of the Contextual Teaching and Learning (CTL) model in improving learning outcomes (Andriani, Yuniar, & Abdullah, 2021). Although CTL is intended to connect material to real-life experiences for ease of understanding, the decline in average scores from 2022 to 2024 indicates that its implementation may not be optimal. Therefore, this study aims to analyze the factors influencing the use of the CTL learning model and find solutions to improve learning quality (Kamilah, Mugara, & Ruqoyyah, 2021). Therefore, this research is expected to contribute to the development of more effective learning strategies, thereby optimally improving student learning outcomes (Mulyani & Doyan, 2023).

RESEARCH METHODS

The type of research used by the researchers was quantitative research with an experimental method. This research design was a pre-experimental design with a One Group Pretest-Posttest. In this research design, each group was given a treatment, and then the results were observed for the student learning group. The test administered before the experiment was called a pretest, and the test after the experiment was called a post-test (Haryanto & Arty, 2019).

The research subjects in this study were the information sources used in the study. The sampling technique used was random sampling technique, with 33 students from class XI PH 2 as the experimental class subject (Hasudungan, 2022).

The object of this research is the use of the Contextual Teaching and Learning learning model in improving the learning outcomes of class XI students majoring in hospitality at SMK Negeri 8 Medan (Ansori, Jaelani, & Affandi, 2020).

An operational definition is a concrete or specific explanation of how a variable is measured, observed, or implemented in a study. This definition outlines the indicators or aspects used to identify the variable in a measurable and objective manner. The purpose of an operational definition is to ensure clarity about what is meant by a particular variable.

To collect the desired data, in this study the researcher used the following techniques:

1. Pre-test (first test). This test was conducted before conducting a trial or experiment using the contextual teaching and learning (CTL) model in economics for students at SMK Negeri 8 Medan.
2. Post-test (final test). This test was conducted after the experimental class used the contextual teaching and learning model in economics for students at SMK Negeri 8 Medan.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

To describe the characteristics of the research data simply, the following is a descriptive statistical analysis of student learning outcomes processed using SPSS Version 26. In this study, the analysis was carried out on student learning outcomes in the experimental class before and after being given learning treatment so that the differences in initial and final conditions can be seen (Novitri, 2022).

Table 1. Descriptive Statistics of Learning Outcomes

Statistics		pretest	posttest
N	Valid	33	33
	Missing	0	0
Mean		65.82	89.58
Standard Error of Mean		2,517	1,230
Median		68.00	92.00
Mode		68 ^a	92
Standard Deviation		14,460	7,067
Variance		209,091	49,939
Skewness		-.554	-.356
Standard Error of Skewness		.409	.409
Kurtosis		-.269	-.392

Standard Error of	.798	.798
Kurtosis		
Range	60	28
Minimum	32	72
Maximum	92	100
Sum	2172	2956
Class Length	10	5
Number of Classes	6	6

Hypothesis

Simple Regression Test

The following are the results of a simple regression test from the results of SPSS data analysis:

Table 2. Simple Linear Regression Test Results

Model Summary				
Model	R	R Square	Adjusted R Square	Standard Error of the Estimate
1				
1	.832 ^a	.693	.683	3,980
a. Predictors: (Constant), pretest				

From the summary model , the R value is 0.832, which means there is a strong relationship between variable X and variable Y. The R value is 0.832. square = 0.693 which is 69.3%.

From the analysis of the significance of the regression coefficients, the following data was obtained (Dr. H. Mashudi & Fatimah Azzahro, 2020):

$$Y = a + bX$$

$$Y = 62.805 + 0.407X$$

The constant value (a) shows a value of 62.805 and the regression coefficient (b) shows a value of 0.407. The following regression equation is obtained:

Significance Test of Regression Coefficient (T-Test)

Table 3. Results of the Significance of Regression Coefficients

Coefficients ^a		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	62,805	3,277		19,166	.000
	pretest	.407	.049	.832	8,359	.000

a. Dependent Variable: posttest

Source : SPSS version 26 output, processed by researcher, 2025

Hypothesis

H₀ : There is no significant influence of the CTL model on learning outcome variables.

H₁ : There is a significant influence of the CTL model on learning outcome variables.

From the results of $t_{\text{count}} = 8.359 > t_{\text{table}} = 2.040$ and p value $0.000 < 0.05$. From the data it shows that H₀ is rejected and H₁ is accepted, which means there is a significant influence between the CTL model and learning outcomes (Kistian, 2018).

Regression Significance Test (F Test)

The regression significance test aims to determine whether the regression model used to explain the relationship between the CTL model and student learning outcomes . The test criteria are H₀ is accepted if the calculated $F < F_{\text{table}}$, which means the regression model cannot explain the relationship between variables and is rejected if the calculated $F > F_{\text{table}}$, which means the regression model can be used to explain the relationship between variables / significant.

Table 4. Results of the Regression Significance Test

ANOVA ^a		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1106,922	1	1106,922	69,867	.000 ^b
	Residual	491,139	31	15,843		
	Total	1598,061	32			

a. Dependent Variable: posttest
b. Predictors: (Constant), pretest

Source: SPSS version 26 output, processed by researcher, 2025

Hypothesis

H_0 = the regression model is not significant with the relationship between variables X and Y

H_1 = significant regression model with relationship between variables X and Y

With the decision making $F_{\text{count}} > F_{\text{table}}$ with the test results $F_{\text{count}} = 69.867 > F_{\text{table}} = 4.17$ and $P = 0.000 < 0.005$ then it can be concluded that the regression model used is statistically significant. H_0 is rejected and H_1 is accepted meaning there is a significant influence between treatment before learning on learning outcomes after learning (variable X on variable Y).

N-Gain Test

Table 5. Descriptive Statistics of N-Gain Test Results

Descriptive Statistics													
	N	Range	Minimum	Maximum	Sum	Mean	Standard Deviation	Varian	Skewness	Kurtosis			
	Statistics	Statistics	Statistics	Statistics	Statistics	Statistics	Std. Error	Statistics	Statistics	Statistics	Std. Error	Statistics	Std. Error
NGain_Score	33	.70	.30	1.00	23.92	.7249	.02636	.15141	.023	-	.409	1,113	.798
NGain_Percent	33	70.00	30.00	100.00	2392.05	72.4864	2.63570	15.14093	229,248	-	.409	1,113	.798
Valid N (listwise)	33												

Based on the results of the N-Gain test in Table 4.12 shows the descriptive statistical results of the N-Gain test which includes two variables, namely NGain_Score and NGain_Percent. Data comes from 33 respondents. The N-Gain value has a range of 70, with a minimum value of 1.00 and a maximum of 71.00, and an average of 22.49 and a standard deviation of 15.141. For N-Gain in percent form, the minimum and maximum values are 1.00% and 100.00%, respectively, with an average of 72.64% and a standard deviation of 15.140. The skewness value for both variables is 0.40 which indicates the data distribution is slightly skewed to the right (positive), while the kurtosis is 1.1 which indicates the data distribution tends to be flatter than the normal distribution. These data show that the results of the score increase are quite varied but generally fall in the medium to high category (Mahardhika, 2019).

Discussion

The Influence of the Contextual Teaching and Learning (CTL) Learning Model on Student Learning Outcomes

The results of data analysis show that the Contextual Teaching and Learning (CTL) learning model has a positive effect on learning outcomes, this is evidenced by the results of the t-test where the calculated T is $8.359 > T_{table} 2.040$ with a significance level of $0.000 < 0.05$. Seen from the simple regression analysis, the constant value is 62.805 and the regression coefficient is 0.407, stating that the effect of CTL on learning outcomes is positive. The R square value of 0.693 means that 69.3% of the variation in changes in student learning outcomes is influenced by the application of the CTL model. This value indicates that CTL makes a strong contribution to improving learning outcomes (Rahmawati & Yonata, 2019).

This study provides an overview that the CTL model is not only theoretically relevant but also proven to be effective and empirical in improving student academics. The results of this study are consistent and in line with research conducted by showing a significant difference between students' pretest and posttest scores after CTL learning, which indicates that there is an influence of the contextual teaching and learning model on student learning outcomes (Irwan & Hasnawi, 2021). Then, it is also in line with research by stating that CTL is able to influence student learning outcomes up to 78.95% (Sutarno, 2018).

These findings are supported by teacher and student observations, which show that the application of the contextual teaching and learning model creates a more interactive and meaningful learning environment. During the learning process, students appear more enthusiastic, actively ask questions, and are able to connect the concepts they learn to real-world situations. Student engagement in discussions also increases, making learning more meaningful and easier to understand. This confirms that the contextual teaching and learning model is effective in improving the quality of learning and student learning outcomes.

Effectiveness of the Contextual Teaching and Learning (CTL) Model

The formulation of the problem in this study is "Does the contextual teaching and learning model improve student learning outcomes in the subject of economics for class XI majoring in hospitality at SMK Negeri 8 Medan?". To answer the problem formulation, an analysis was conducted using the N-Gain test which aims to measure the extent to which student learning outcomes have improved before and after the contextual teaching and learning model treatment. The use of the N-Gain test was chosen because it is able to provide a more objective picture of the level of effectiveness of the learning model (Rahman, Zulkifli, Kamaruddin, Azhari, & Supriyadi, 2023). The results of the analysis show that the average N-Gain value obtained is 0.7 which means it is included in the high category (Fauziah & Nurita, 2019). Thus, it can be concluded that the contextual teaching and learning model has an effective effect in improving student learning outcomes and is able to help in understanding the material in a more contextual and meaningful way (Pitnelly, Wahyuni, Elisa, Zurweni, & Malik, 2021).

The success was achieved due to the students' positive activities and responses during the learning process. This is because the *Contextual Teaching and Learning (CTL) learning model* is a way to help students be more active, able to attract students' attention and increase students' enthusiasm to pay more attention to the explanations and lessons given by the teacher, so that it really helps teachers to teach the material and provide understanding to students so that the subject matter will be easier for students to understand (Tedeneke, 2022).

The results of observation and analysis show that learning with the contextual teaching and learning model significantly improves learning outcomes. This study is in line with previous findings, namely research conducted by Adolph (2016) on "The Effect of the Contextual Teaching and Learning (CTL) Learning Model on Learning Outcomes on Style Material in Class XI of SD Inpres Pilasue, Rite Ndao Regency". This finding proves that learning outcomes have increased, this can be seen from the difference in pretest and posttest scores, namely the average pretest score of 52.29 and the posttest score of 72.92 so that this finding concludes that learning outcomes have increased by 39.45% (Wulandari, 2018).

Research Limitations

This study shows that the application of contextual teaching and learning has a positive impact on helping students understand the material and increasing student engagement in the learning process. However, this study has limitations: its scope is limited to one school and one grade level, and the independent variable only highlights the use of contextual teaching and learning (Ahrisya, Praherdhiono, & Adi, 2019). Furthermore, this study has not further examined other factors that could potentially influence learning outcomes, such as motivation, family support, or variations in teacher teaching strategies beyond the application of CTL (Harahap, Husein, & Suroyo, 2021).

CONCLUSION

From the results of the analysis in chapter IV regarding the learning outcomes of class XI students at SMK Negeri 8 Medan after being given the contextual teaching and learning model treatment, the following conclusions can be drawn:

1. The use of the contextual teaching and learning model has a significant effect on student learning outcomes in economics lessons, this can be proven from the R Square value of 0.693, meaning there is an influence of 69.3%.
2. The effectiveness of the implementation of CTL can be seen from the N-Gain analysis, where the increase in student learning outcomes is in the high category with an average N-Gain value of 0.7.

Suggestion

Based on the research that has been conducted, the researcher has the following suggestions:

1. For teachers

Economics teachers, particularly at the vocational high school level, are advised to implement contextual teaching and learning as a learning strategy that can broaden students' understanding. Contextual teaching and learning can connect course material to real-world situations, particularly in the hospitality industry, enabling students to more easily grasp concepts and develop skills in connecting theory to practice.

2. For the principal

In this study, it is hoped that school principals will be able to support the implementation of contextual teaching and learning by providing adequate facilities and resources and can hold training or workshops on the CTL learning model.

3. For researchers furthermore

This study was limited to one school, one grade level, and only focused on the contextual teaching and learning model without considering other factors. Future researchers are advised to expand the scope of their research and consider other variables that influence student learning outcomes, such as motivation, family support, and teacher strategies. The author realizes that there are still many areas that need to be improved in the preparation of this thesis. Therefore, input, criticism, and suggestions from various parties will be invaluable as evaluation and improvement materials for future research.

BIBLIOGRAPHY

- Ahrisya, L., Praherdhiono, H., & Adi, E. P. (2019). Pengaruh Model Pembelajaran Contextual Teaching And Learning (CTL) Terhadap Hasil Belajar Siswa Kelas V Pada Tema 9 Subtema 1 Di MI YPSM Al Manaar. *Jurnal Kajian Teknologi Pendidikan*, 2(4), 306–314.
- Andriani, A., Yuniar, V. D., & Abdullah, F. (2021). Teaching English Grammar In An Indonesian Junior High School. *AL-ISHLAH: Jurnal Pendidikan*, 13(2), 1046–1056. <https://doi.org/10.35445/Alishlah.V13i2.956>
- Ansori, L. I., Jaelani, A. K., & Affandi, L. H. (2020). Pengaruh Model Contextual Teaching And Learning Dengan Media Video Pembelajaran Terhadap Hasil Belajar IPA Siswa Kelas V Sdn 9 Ampenan Tahun Pelajaran 2019/2020. *Progres Pendidikan*, 1(1), 33–41.
- Dr. H. Mashudi, M. P., & Fatimah Azzahro, M. P. (2020). *Contextual Teaching And Learning (CTL)* (M. P. Dr. Hj. Mukni'ah, Red). Jember: LP3DI Press.
- Fauziah, A. M., & Nurita, T. (2019). Activities Of Students In Using Worksheet Based On Contextual Teaching And Learning. *Journal Of Physics: Conference Series*, 1417(1), 012088. <https://doi.org/10.1088/1742-6596/1417/1/012088>
- Hajerina, H. (2018). Penerapan Pendekatan Contextual Teaching And Learning (CTL) Untuk Meningkatkan Hasil Belajar Siswa SMPN 18 Sigi Pada Materi Sistem Persamaan Linear Dua Variabel (SPLDV). *Al-Khwarizmi: Jurnal Pendidikan Matematika Dan Ilmu Pengetahuan Alam*, 5(2), 113–122. <https://doi.org/10.24256/jpmipa.V5i2.270>
- Harahap, T. D., Husein, R., & Suroyo, S. (2021). Pengaruh Model Pembelajaran Contextual Teaching And Learning Terhadap Hasil Belajar Matematika Ditinjau Dari Berpikir

Piezoelectric Power Plant Design Based on Mechanical Pressure in Polytechnic Medan Flights – Prototype Of Control And Monitoring For Flashing Light Sequence Protection Based On The Internet Of Things

Kritis. *Journal Of Education, Humaniora And Social Sciences (JEHSS)*, 3(3), 972–978. <https://doi.org/10.34007/Jehss.V3i3.462>

Haryanto, P. C., & Arty, I. S. (2019). The Application Of Contextual Teaching And Learning In Natural Science To Improve Student's HOTS And Self-Efficacy. *Journal Of Physics: Conference Series*, 1233(1). <https://doi.org/10.1088/1742-6596/1233/1/012106>

Hasan, H. (2021). Meningkatkan Hasil Belajar Matematika Melalui Penerapan Model Contextual Teaching And Learning Pada Era New Normal. *Indonesian Journal Of Educational Development*, 1(4), 630–640. <https://doi.org/https://doi.org/10.5281/Zenodo.4560726>

Hasudungan, A. N. (2022). Pembelajaran Contextual Teaching Learning (CTL) Pada Masa Pandemi COVID-19: Sebuah Tinjauan. *Jurnal Dinamika*, 3(2), 112–126. <https://doi.org/10.18326/Dinamika.V3i2.112-126>

Irwan, I., & Hasnawi, H. (2021). Analisis Model Pembelajaran Contextual Teaching And Learning Dalam Meningkatkan Hasil Belajar Ppkn Di Sekolah Dasar. *EDUKATIF: Jurnal Ilmu Pendidikan*, 3(1), 235–245. Opgehaal Van <http://eprints.unm.ac.id/id/eprint/19399>

Kamilah, A., Mugara, R., & Ruqoyyah, S. (2021). Pembelajaran Daring Membaca Permulaan Siswa Kelas 1 Sd Menggunakan Model Contextual Teaching And Learning Berbantuan Kartu Kata. *Jurnal Ilmu Pendidikan Ahlussunnah*, 4(1), 218–226.

Khasanah, W. M. (2019). PENGARUH PENGGUNAAN MODEL PEMBELAJARAN CONTEXTUAL TEACHING AND LEARNING (CTL) TERHADAP NILAI KOGNITIF SISWA KELAS VA SD NEGERI 16 BANDA ACEH PADA MATERI PERPINDAHAN KALOR. Universitas Bina Bangsa Getsempena.

Kistian, A. (2018). Pengaruh Model Pembelajaran Contextual Teaching And Learning (CTL) Terhadap Hasil Belajar Matematika Siswa Kelas IV SD Negeri Langung Kabupaten Aceh Barat. *Bina Gogik: Jurnal Ilmiah Pendidikan Guru Sekolah Dasar*, 5(2).

Mahardhika, A. (2019). PENGARUH MODEL PEMBELAJARAN CONTEXTUAL TEACHING AND LEARNING (CTL) TERHADAP PRESTASI BELAJAR IPA SISWA SEKOLAH DASAR. *Prosiding Seminar Nasional PGSD UST*, 1.

Mulyani, I., & Doyan, A. (2023). The Effect Of Biology Learning On Increasing Students' Scientific Literacy: A Review. *AMPLITUDO: Journal Of Science And Technology Inovation*, 2(2), 89–94. <https://doi.org/10.56566/Amplitudo.V2i2.104>

Novitri, R. (2022). PENGARUH MODEL PEMBELAJARAN CONTEXTUAL TEACHING AND LEARNING (CTL) TERHADAP HASIL BELAJAR MATEMATIKA DI KELAS V SDN 12 2x11 ENAM LINGKUNG. *Jurnal Pendidikan Nasional*, 2(1), 29–35. <https://doi.org/https://doi.org/10.55249/Jpn.V2i1.21>

Pitnelly, P., Wahyuni, S., Elisa, E., Zurweni, Z., & Malik, A. (2021). Peningkatan Kemampuan Literasi Sains Siswa Menggunakan Model Pembelajaran Contextual

- Teaching And Learning Berbantuan Google Classroom Dimasa Pandemi Covid-19 Pada Mata Pelajaran Kimia. *Journal Of The Indonesian Society Of Integrated Chemistry (On Progress)*, 13(1), 58–65. <https://doi.org/10.22437/jisic.V13i1.14507>
- Rahman, A. A., Zulkifli, Z., Kamaruddin, I., Azhari, D. S., & Supriyadi, A. (2023). The Effect Of Contextual Teaching Learning (CTL) Model On Students' Achievement In Elementary School. *Edunesia: Jurnal Ilmiah Pendidikan*, 4(1), 146–157. <https://doi.org/10.51276/Edu.V4i1.282>
- Rahmawati, A., & Yonata, B. (2019). Pengembangan LKPD Berbasis Contextual Teaching And Learning (CTL) Untuk Melatihkan Keterampilan Proses Sains Pada Materi Kesetimbangan Kimia. *Unesa Journal Of Chemical Education*, 8(2). <https://doi.org/10.26740/Ujced.V8n2.P%25p>
- Seri, E. (2019). Penerapan Strategi Pembelajaran Contextual Teaching And Learning Untuk Peningkatkan Hasil Belajar Siswa Pada Materi Virus Di Kelas X Mia1 SMA Negeri 1 Bubon Aceh Barat. *Bionatural: Jurnal Ilmiah Pendidikan Biologi*, 6(2).
- Simajuntak, F. E. S., Sinaga, C. V., & Thesalonika, E. (2022). Pengaruh Model Pembelajaran Contextual Teaching And Learning Terhadap Hasil Belajar Siswa Pada Subtema 1 Cara Tubuh Mengolah Udara Bersih Di Kelas V SD Negeri 122368 Jln Sibatu-Batu Pematang Siantar. *Jurnal Pendidikan Dan Konseling (JPDK)*, 4(6), 4704–4715. <https://doi.org/10.31004/jpdk.V4i6.9015>
- Sutarno, S. (2018). Pembelajaran Menulis Puisi Bebas Dengan Pendekatan Contextual Teaching And Learning (CTL) Pada Siswa SMP. *Stilistika: Kajian Bahasa, Sastra, Dan Pembelajarannya*, 4(2). <https://doi.org/10.32585/.V4i2.326>
- Tedeneke, A. (2022). Exploring The Practices And Contextual Factors In Teaching Writing Skills In EFL Classrooms: A Case Study. *Ethiopian Renaissance Journal Of Social Sciences And Humanities*, 9(2), 83–101. <https://doi.org/10.4314/Erjssh.V9i2.6>
- Wulandari, P. (2018). *Pengaruh Model Pembelajaran Contextual Teaching And Learning Terhadap Hasil Belajar Peserta Didik Mata Pelajaran Akidah Akhlak Kelas V Di Min 8 Bandar Lampung Tahun Ajaran 2017/2018*. UIN Raden Intan Lampung.