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# Effectiveness of Information Services with a Contextual Teaching and Learning Approach to Improve Independence in Learning

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**ABSTRACT**

**Purpose** – This study aims to analyze the effectiveness of information services using the Contextual Teaching and Learning (CTL) approach in improving students' learning independence. The background of this study is the continued dominance of the lecture method in information services, which does not encourage student activity and independence. Therefore, a more contextual and participatory approach is needed.

**Methodology**– This study uses a quasi-experimental framework featuring a non-equivalent control group pretest-posttest design. The research sample consisted of 56 students from grades XIA and XIB at SMK Negeri 1 Kutalimbaru, comprising 28 students in the experimental group and 28 in the control group. The instrument used was a Likert scale that had undergone Validation and reliability testing, with a significance value (Sig.) greater than 0.05. The research method involved a pretest, providing CTL-based information services to the experimental group, traditional services to the control group, and a posttest. The Wilcoxon test and t-test were used to analyze the data.

**Findings** – The study found a difference in the increase in learning independence between the two groups. The experimental group obtained a higher average score (145.50) than the control group (137.21). The difference value after treatment was 8.29, indicating a moderate effect. This indicates that the CTL approach is more effective than conventional methods in increasing student learning independence.

**Contribution**– This research provides practical guidance for guidance and counseling teachers on developing more innovative, interactive, and contextually relevant information services, enabling them to increase students' learning independence optimally.

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## INTRODUCTION

Education is a vital endeavor aimed at developing an individual's innate abilities as intended by the Creator, designed by the individual, for the individual, and through the individual's own actions. Therefore, when we talk about education, we are essentially referring to human beings; in other words, discussions about education based on scientific understanding center on the individual in all their complexity, from the essence of individual identity to everyday realities and continuing until the end of life (Mutmainah and DKK, 2020).

In the context of education, independence means that students understand their own educational journey, can identify the actions they need to take to learn, can independently seek educational materials, and can engage in self-assessment and reflection on their learning experiences. Independent students tend to demonstrate strong self-confidence (Ranti *et al.*, 2017).

The following characterize self-directed learning: (1) Learners aim to increase their accountability in making choices, (2) Independence is considered an innate trait in every individual and learning context, (3) Being independent does not mean isolating oneself from others, (4) Self-directed learning allows learners to apply what they know and their skills to a variety of situations, (5) Students engaged in self-directed learning can use a variety of resources and methods such as independent reading, collaborative learning, practical exercises, and letter-writing activities, (6) The role of teachers in encouraging self-directed learning remains vital, including participating in discussions with students, searching for materials, assessing outcomes, and fostering critical thinking skills, and (7) Many educational institutions have identified ways to promote self-directed learning through the implementation of open learning initiatives (Sobri, 2020).

"The process of guidance and counseling is rooted in human experience. In reality, throughout life, individuals face various challenges. People differ in both their characteristics and skills; some individuals can overcome their problems independently, while others may struggle without assistance. Everyone must gain a deep understanding of themselves. When individuals are self-aware, they can make decisions that align with their abilities. However, not everyone can fully identify all of their strengths; they often need the support of others to gain insight into themselves and fully understand their skills, which can be offered through guidance and counseling" (Ariyati, 2021).

Based on observations and interviews conducted on June 19, 2025, with the guidance and counseling teacher at SMK Negeri 1 Kutalimbaru, the information service continues to use the lecture method. The guidance and counseling teacher considers the lecture method effective for delivering information services. Ideally, various approaches can be used to implement information services to prevent students from becoming bored or tired of classroom learning activities. One model for information services to improve student independence in learning is the contextual teaching and learning approach.

Contextual Teaching and Learning (CTL) refers to educational strategies that help educators connect learning content to students' real-life experiences. This approach encourages students to connect their knowledge to relevant situations they encounter as individuals within their families and communities. The contextual learning model is limitless and can be integrated with a range of other educational frameworks, including experiential learning, discovery-based activities, skill-building processes, experiments, presentations, discussions, and more (Firman, Nadya Kencana Pramudiastuti, 2016).

To successfully implement contextual strategies, educators must be imaginative, effective, adaptive, impactful, and skilled at fostering a supportive and effective learning environment. The role of teachers has evolved from being primary sources of knowledge to facilitators and motivators of students, who now play a central role in the learning process. Consequently, increased student engagement can be achieved through a variety of teaching methods, resources, and media formats (Hasibuan et al., 2018).

Based on the previous explanation, contextual teaching and learning methods are expected to increase student autonomy, allowing them to articulate their views during lessons and to complete assignments independently without resorting to dishonest practices. This method is believed to foster learning independence by offering a variety of resources tailored to students' situations, especially beneficial for those who hesitate to share their thoughts in class discussions. Consequently, with the application of contextual

teaching and learning methods, students will gain the ability to convey their ideas during educational activities (Rustam, 2025). From the above phenomenon, the researcher seeks to develop information services to increase insight, understanding, and direct assessment, and to foster attitudes, master certain methods or habits, and understand needs and overcome problems, especially in efforts to improve student independence in learning.

## METHODOLOGY

### ResearchDesign

The approach used in this study is a quasi-experimental method. The quasi-experiment used in this study is a non-equivalent control group design, also known as a non-randomized pretest-posttest control group design. This design follows the pre-test-post-test control-group format common in experimental studies. The purpose of this study is to determine whether there is a cause-and-effect relationship and to assess the extent of the effect of the treatment on the experimental group relative to the control group (Sugiyono, 2019).
This study consisted of two groups: a control group and an experimental group. Each group received a pretest before the treatment to evaluate students' initial abilities. The experimental group received instruction using the selected learning strategy or teaching method, while the control group received instruction using a conventional approach. At the end of the treatment phase, both groups took a posttest to assess changes in learning outcomes.

**Table 1.** Research Experimental Design

| Group | Pretest | Treatment | Posttest |
|---|---|---|---|
| experimental group | $O_1$ | X | $O_2$ |
| control group | $O_3$ | – | $O_4$ |

Explanation: $O_1$ is pretest score for the experimental class group, $O_2$ is posttest score for the experimental class group, O is pretest score for the control class group, $O_4$ is posttest score for the control class group, and X is treatment using the selected method.

A quasi-experimental design was deemed suitable, as the researcher was unable to randomly assign participants to groups due to prevailing classroom conditions and school policies. In educational research, random assignment is often challenging to implement since the classes have already been organized administratively by the school. Consequently, this design allows the researcher to conduct experimental research in a genuine educational environment while still exercising control over the treatment process.
Compared with other research methodologies, such as true experimental or descriptive designs, the quasi-experimental design offers several benefits. Genuine experimental design requires random assignment, which is often impractical in educational settings. At the same time, descriptive research solely depicts phenomena without investigating causal connections. The quasi-experimental design better fits this study, as it enables the researcher to assess the effectiveness of a treatment and compare results across groups, even in the absence of randomization. As a result, this design provides more compelling evidence of causal relationships than descriptive or correlational studies.

### Population and Sample

The process of selecting participants must ensure that the chosen subjects (sample) accurately reflect the real conditions of the population. Fundamentally, the sample should represent the traits of the population (Arikunto, 2022). This research employed a purposive sampling technique. Purposive sampling is a technique in which researchers select participants based on specific criteria and goals relevant to the study. (Sugiyono., 2019). explains that purposive sampling is a technique for choosing a sample according to particular criteria set by the researcher to gather data considered suitable and relevant to the research aims.

The researcher chose this method because the selected traits align with the study's expectations, specifically the learning environment and student count, making it suitable for comparison in an experimental

design. As a result, purposive sampling is considered the most suitable approach to ensure the efficiency of research methods. The subjects in this study were students in class XII at SMK Negeri 1 Kutalimbaru, comprising two classes. Class XII A, totaling 28 people, as the experimental group and Class XII B, totaling 28 people, as the control group.

The subjects of this research were twelfth-grade students in a senior high school. The participants were chosen due to their perceived adequate learning experience and academic capability relevant to the research goals. The participants ranged in age from 16 to 18 years and shared a common school background, contributing to the uniformity of the research conditions.

The characteristics of participants based on gender are presented in the following table.

**Table 2.** Gender Distribution of Participants

| Class | Male | Female | Total |
|---|---|---|---|
| XII A (Experimental Group) | 12 | 16 | 28 |
| XII B (Control Group) | 11 | 17 | 28 |
| Total | 23 | 33 | 56 |

**Data Collection**

The research activity, providing information services with a contextual teaching and learning approach as a form of treatment, is conducted once a week for 2 teaching hours across 7 meetings, including pretest and posttest. After confirming that both research groups (experimental and control) were equal in size, we proceeded with the experiment. The experimental group received information services using a contextual teaching and learning approach, while the control group received information services without such an approach. After the experiment was carried out as planned, the students were again given the independence-learning instrument.

**Research Instruments**

The tool employed in this study was a questionnaire on students' learning independence (Student Learning Independence Questionnaire) using a Likert scale. (Arikunto, 2022)states that employing appropriate data collection methods can yield meaningful outcomes when the researcher selects techniques that align with the data type and research goals.

The Likert scale was used because it was deemed efficient for assessing students' attitudes, perceptions, and levels of learning autonomy. The survey included various statements concerning students' self-directed learning habits. The instrument used in this research is the lembar angket kemandirian belajar siswa, in Likert scale format. According to Arikunto (2022), this technique will yield significant results if researchers choose the appropriate type based on the data to be collected and the formulated research objectives. To determine whether the instrument's contents were appropriate, expert validity was conducted by three people: one guidance and counseling teacher and one homeroom teacher. With the answer choices being: (D) Disagree, (LA) Less Agree, (QA) Quite Agree, (A) Agree, (SA) Strongly Agree.

**Table 3.** Likert Scale Scoring Criteria

| No | Response Category | Abbreviation | Score |
|---|---|---|---|
| 1 | Strongly Agree | SA | 5 |
| 2 | Agree | A | 4 |
| 3 | Quitle Agree | QA | 3 |
| 4 | Lase Agree | LA | 2 |
| 5 | Disagree | D | 1 |

Expert validity was conducted prior to distributing the instrument to participants to confirm that its content was suitable and relevant to the research objectives. The validation process included three validators: a guidance and counseling teacher, a homeroom teacher, and an education specialist. The validators assessed

the questionnaire items for language clarity, relevance to the indicators, and alignment with the students' characteristics. The tool utilized in this research assessed various dimensions of students' learning autonomy. These elements were derived from the concepts of self-directed learning and autonomous learning behavior. The metrics assessed by the instrument are shown in the table below.

**Table 4.** Indicators of Learning Independence Instrument

| No | Aspects of Learning Independence | Indicators Measured |
|---|---|---|
| 1 | Self-confidence | Students' confidence in completing learning tasks independently |
| 2 | Learning responsibility | Students' responsibility in completing assignments and following learning activities |
| 3 | Learning initiative | Students' ability to start learning activities without being instructed |
| 4 | Self-discipline | Students' consistency in managing study time and obeying learning rules |
| 5 | Decision-making ability | Students' ability to make decisions related to learning activities |
| 6 | Problem-solving ability | Students' ability to overcome learning difficulties independently |

The following table lists research instruments that have undergone validity testing and are considered effective in accurately assessing student learning independence. In accordance with relevant provisions, validity testing is conducted by comparing the calculated r value for each item with the table r value at a 5% significance level. An item is considered valid if the calculated r value exceeds the table r value. The findings from the validity assessment of the learning independence tools are shown in Table 5 below.

**Table 5.** Results of the Reliability Test of Learning Independence Instrument

| Number | r-count | r-table | Information Valid (V) |
|---|---|---|---|
| 1 | 0,576 | 0, 349 | V |
| 2 | 0,698 | 0, 349 | V |
| 3 | 0,487 | 0, 349 | V |
| 4 | 0,438 | 0, 349 | V |
| 5 | 0,485 | 0, 349 | V |
| 6 | 0,507 | 0, 349 | V |
| 7 | 0,560 | 0, 349 | V |
| 8 | 0, 579 | 0, 349 | V |
| 9 | 0,601 | 0, 349 | V |
| 10 | 0,412 | 0, 349 | V |
| 11 | 0,466 | 0, 349 | V |
| 12 | 0,534 | 0, 349 | V |
| 13 | 0,518 | 0, 349 | V |
| 14 | 0, 473 | 0, 349 | V |
| 15 | 0, 621 | 0, 349 | V |
| 16 | 0, 589 | 0, 349 | V |
| 17 | 0, 557 | 0, 349 | V |
| 18 | 0, 541 | 0, 349 | V |
| 19 | 0, 502 | 0, 349 | V |
| 20 | 0, 576 | 0, 349 | V |
| 21 | 0, 698 | 0, 349 | V |
| 22 | 0, 487 | 0, 349 | V |
| 23 | 0, 438 | 0, 349 | V |
| 24 | 0, 485 | 0, 349 | V |
| 25 | 0, 507 | 0, 349 | V |

| Number | r-count | r-table | Information Valid (V) |
|---|---|---|---|
| 26 | 0, 560 | 0, 349 | V |
| 27 | 0, 579 | 0, 349 | V |
| 28 | 0, 601 | 0, 349 | V |
| 29 | 0, 412 | 0, 349 | V |
| 30 | 0, 466 | 0, 349 | V |
| 31 | 0, 534 | 0, 349 | V |
| 32 | 0, 518 | 0, 349 | V |
| 33 | 0, 576 | 0, 349 | V |
| 34 | 0, 698 | 0, 349 | V |
| 35 | 0, 487 | 0, 349 | V |
| 36 | 0, 438 | 0, 349 | V |
| 37 | 0, 485 | 0, 349 | V |
| 38 | 0, 507 | 0, 349 | V |
| 39 | 0, 560 | 0, 349 | V |
| 40 | 0, 579 | 0, 349 | V |
| 41 | 0, 601 | 0, 349 | V |
| 42 | 0, 412 | 0, 349 | V |
| 43 | 0, 466 | 0, 349 | V |
| 44 | 0, 534 | 0, 349 | V |
| 45 | 0, 518 | 0, 349 | V |
| 46 | 0, 473 | 0, 349 | V |

Based on the validity test results, all questionnaire items obtained a calculated r-value higher than the table r-value of 0, 349 at a 5% significance level with 32 respondents. This indicates that all questionnaire items are valid and suitable for use in measuring students' learning independence. Therefore, the instrument can be used as a data collection tool in this study.

**Data Analysis Techniques**

The data's attributes guide the choice of data analysis method. Research data aimed at improving student learning autonomy have the following characteristics: (1) paired (pretest-posttest), (2) limited sample size (research subjects), and (3) experimental research implementation. The Wilcoxon Signed Rank Test was used to assess changes in student learning autonomy before and after the intervention. To evaluate the experimental group relative to the control group, an independent-samples t-test was used to compare the means, with two independent samples.

## FINDINGS

**Posttest Results Between the Experimental and Control Groups**

Based on the research conducted, we obtained the posttest results for the experimental and control classes. The data are presented in Table 6.

**Table 6.** Descriptive Statistics of Control and Experimental Groups: Normality Test

| Group | Mean | Standard Deviation | Median | Minimum | Maximum |
|---|---|---|---|---|---|
| Control | 137.21 | 16.91 | 135.00 | 110 | 185 |
| Experimental (CTL) | 145.50 | 16.85 | 141.00 | 130 | 175 |

According to Table 6, the experimental group achieved a mean score of 145.50 and a standard deviation of 16.85. This mean score ranged from 130 to 175. These results indicate that students in the experimental group demonstrated a significant level of learning independence after the TCL intervention. In contrast, the control group achieved a mean score of 137.21 and a standard deviation of 16.91. According to Table 6, the experimental group achieved a mean score of 145.50 and a standard deviation of 16.85. These mean scores

ranged from 130 to 175. These results indicate that students in the experimental group demonstrated a significant level of learning independence after the TCL intervention. In contrast, the control group achieved a mean score of 137.21 and a standard deviation of 16.91. The median score was 135.00, while the mean scores ranged from 110 to 185. Compared to the experimental group, the control group's mean score decreased.

Analysis of the two groups revealed a mean difference of 8.29 points, with the experimental group performing better than the control group. Furthermore, the minimum score in the experimental group exceeded that in the control group, indicating that students in the experimental group generally demonstrated greater learning independence. The results indicate that implementing TCL had a positive impact on students' learning independence. This is evident in the higher mean scores achieved by the experimental group compared to the control group after the treatment.

**Posttest Results of the Control Groups**

To provide a clearer picture of students' learning independence in the control class, the researcher classified the data into several categories based on students' questionnaire scores. The purpose of this categorization was to identify the distribution of students according to their level of learning independence, ranging from very good to sufficient. The results of the categorization in the control class are presented in Table 7 below.

Table 7 shows the distribution of students' learning independence levels in the control class, where the learning process used conventional teaching methods. Based on the table, 4 students (14.3%) were categorized as having a very good level of learning independence, while the majority, 16 students (57.1%), were categorized as having a good level of learning independence. Furthermore, 8 students (28.6%) were categorized as having sufficient learning independence. It is classified as 'Enough' in the very good category, with only 28.6% obtained, indicating that the conventional method had a low success rate. As for the experimental class, it is shown in the table below.

**Table 7.** Percentage of Control Class Contribution

| Category | Frequency | Percent % |
|---|---|---|
| Very Good | 4 | 14,3 |
| Good | 16 | 57,1 |
| Enough | 8 | 28,6 |
| Total | 28 | 100 |

**Posttest Results: Experimental Groups**

To provide an overview of the level of student learning independence in the experimental class, the questionnaire results were classified into several categories based on students' scores after implementing the CTL learning approach. The purpose of this categorization is to show the distribution of student learning independence levels, ranging from Very Good to Sufficient. The categorization results for the experimental class are presented in Table 8 below.

**Table 8.** Percentage of Experimental Class Contribution (CTL)

| Category | Frequency | Percent % |
|---|---|---|
| Very good | 8 | 28,6 |
| Good | 20 | 71,4 |
| Enough | 0 | 0, 0 |
| Total | 28 | 100 |

Based on the comparison between the two groups, the experimental class demonstrated better student learning independence than the control class. In the Very Good category, the experimental class comprised 8 students (28.6%), while the control class comprised 4 students (14.3%). This indicates a higher number of students in the Very Good category in the experimental class.

Similarly, the experimental class had 20 students (71.4%), while the control class had 16 students (57.1%). These findings indicate that students who received learning through the CTL approach tended to demonstrate higher levels of learning independence than students who learned using conventional methods. Overall, the results of this study indicate that implementing the CTL approach positively contributed to improving students' learning independence. This is evident in the higher percentage of students in the Very Good and Good categories in the experimental class compared to the control class.

**Inferential Statistical Analysis**

To determine statistical variances, an independent-samples t-test was used to assess differences between the experimental and control groups. This test aimed to compare the average scores of two distinct groups: the control class taught through traditional methods, and the experimental class taught using the CTL strategy. The independent-samples t-test was appropriate because the data came from two distinct groups receiving different treatments. The t-test can be performed if the necessary assumptions, specifically normality and homogeneity, are satisfied. After satisfying these assumptions, the hypothesis testing proceeds with an independent sample t-test to assess the impact of the CTL method on student learning independence.

***Normality of Test***

Hypothesis testing requires a preliminary normality check to ensure the data distribution satisfies parametric assumptions. A normality test is performed to determine whether the data from the control and experimental groups meet the assumptions of normality. In this study, normality was assessed using the Kolmogorov–Smirnov and Shapiro–Wilk tests. Data are considered normally distributed if the significance value (p-value) is greater than 0.05. The results of the normality test are presented in Table 9 below.

**Table 9.** Results of the Normality Test

| Group | Kolmogorov-Smirnov | | | Shapiro-Wilk | | |
|---|---|---|---|---|---|---|
| | Statistics | df | Sig. | Statistics | df | Sig. |
| Control | 0,118 | 28 | 0,200 | 0,958 | 28 | 0,276 |
| Experiment | 0,115 | 28 | 0,200 | 0,964 | 28 | 0,312 |

Based on the table above, we used the Kolmogorov–Smirnov and Shapiro–Wilk tests to assess whether the data in both groups followed a normal distribution. Data were considered normal if the significance value (Sig.) was greater than 0, 05. After calculating using the Kolmogorov–Smirnov test, the test results presented in Table 5 were obtained. The significance value for the control group was 0, 200. At the same time, the experimental group also obtained a significance value of 0.200. Because both significance values were greater than 0,05, it can be concluded that both groups were normally distributed, as determined by the Kolmogorov–Smirnov test. In addition, the results of the Shapiro–Wilk test indicate that the control group had a p-value of 0.276, while the experimental group had a p-value of 0.312. Both values exceed 0.05, indicating that the data from both the control and experimental groups are normally distributed according to the Shapiro–Wilk test. The results of the Kolmogorov–Smirnov and Shapiro–Wilk tests indicate that the data meet the assumption of normality.

***Homogeneity of Test***

Once the normality assumption is satisfied, the next step is to perform a homogeneity test. The homogeneity test assesses whether the variances of the control and experimental groups are equal. In this research, Levene's Test was used to assess homogeneity of variance. Data are deemed homogeneous when the significance value exceeds 0.05. The outcomes of the homogeneity test are shown in Table 10 below.

**Table 10.** Results from the Homogeneity Test

| Testing Basics | Levene Statistics | df1 | df2 | Sig. |
|---|---|---|---|---|
| Mean | 1, 636 | 1 | 54 | 0, 208 |
| Median | 1, 550 | 1 | 54 | 0, 220 |
| Median (adjusted df) | 1, 550 | 1 | 52,378 | 0, 221 |
| Trimmed Mean | 1, 620 | 1 | 54 | 0, 210 |

Based on the Homogeneity Test Table (Levene Test), it was obtained that the significance value (Sig.) on all test bases, both based on the mean, median, median with adjusted df, and trimmed mean, was greater than 0, 05.1.

**Table 11.** The Results of the Independent t-Test Sample

| Group | Mean | Standard Deviation | Median | Minimum |
|---|---|---|---|---|
| Control | 137.21 | 16.91 | 135.00 | 110 |
| Experimental (CTL) | 145.50 | 16.85 | 141.00 | 130 |

According to Table 11, the experimental group achieved a greater average score (145.50) than the control group (137.21). The average score discrepancy between the two groups was 8.29 points. Moreover, the experimental class exhibited a higher minimum score than the control class, suggesting that students in the experimental class typically demonstrated greater learning independence. The independent-samples t-test results showed that the CTL method positively influenced students' learning independence. Students using the CTL approach often achieved higher scores in learning independence than those who were taught through traditional methods.

## DISCUSSION

The results of this study indicate that information services using the Contextual Teaching and Learning (CTL) method have a positive effect on student learning independence. According to pretest and posttest findings, students in the experimental group demonstrated significant improvements in learning independence compared to students in the control group who received traditional information services. This is evident in the experimental group's posttest average score of 145.50, compared with the control group's average score of 137.21. The 8.29-point difference indicates that the CTL approach effectively enhances student learning independence.

These research findings have significant implications for counseling and guidance practices in educational institutions. Teachers in guidance and counseling can utilize information services using the CTL approach as a different tactic to enhance students' independence in learning. The integration of contextual and interactive learning tasks can help students understand the importance of learning independence and motivate them to become more engaged and responsible learners. Furthermore, schools are urged to promote the adoption of student-centered learning methods that offer students opportunities to participate in educational activities actively.

Overall, this study's findings confirm that the Contextual Teaching and Learning (CTL) approach is effective in enhancing students' learning independence. This approach not only improves students' understanding of the material but also develops their self-confidence, initiative, responsibility, and ability to regulate their own learning. Therefore, the CTL approach can be considered an effective learning strategy for fostering independent learning behavior among students.

The results of the study showed that during the pretest, the condition of student independence in learning in class XI of SMK 1 Kutalimbaru was in the same moderate category. After being given treatment, namely by providing information services with a contextual teaching and learning approach to the experimental group and conventional information services to the control group, based on the provision of this treatment, student independence in learning increased.

**Differences in Student Independence in Learning in the Experimental Group (Pretest and Posttest)**

The results of this research suggest that using information services through the Contextual Teaching and Learning (CTL) method successfully enhanced students' learning autonomy. This was reflected in the experimental group's mean score, which rose from 106.90 during the pretest to 145.50 in the posttest, indicating a 38.6% improvement. These findings suggest that students underwent noteworthy transformations following the CTL method.

This rise in learning autonomy happened because the CTL method places students as engaged contributors in the educational process. Students are motivated to relate learning resources to real-world scenarios, engage in conversations, share viewpoints, and tackle challenges autonomously. This educational setting indirectly helps students develop greater responsibility, discipline, and confidence in overseeing their own learning tasks. The success of CTL in this research is closely linked to the idea of independent learning, in which students are motivated to manage and guide their own learning journey. By engaging in contextual learning activities, students increase their awareness of their learning responsibilities and demonstrate greater initiative in completing assignments independently. Learners do not merely absorb information; they actively build knowledge through experiences and interactions. Furthermore, the CTL approach aligns with the principles of student-centered learning because it provides students with broader opportunities to explore ideas, actively participate, and develop learning strategies tailored to their abilities. The role of the teacher or counselor in this approach is more of a facilitator, guiding students throughout the learning process. As a result, students become more motivated and demonstrate greater independence in learning activities.

These findings also reinforce the constructivist perspective, which states that learners actively construct knowledge through direct experience. Students in the experimental class were not only asked to understand the material theoretically but were also encouraged to connect it to everyday life situations. This process made learning more meaningful and helped students develop stronger independent learning behaviors.

**Differences in Student Learning Independence Between the Experimental and Control Groups**

The results also revealed differences in student learning independence between the experimental and control groups. The experimental group obtained a higher average posttest score of 145.50, while the control group obtained an average score of 137.21. The 8.29-point difference indicates that the CTL approach made a more positive contribution to improving learning independence compared to conventional information services. The higher achievement in the experimental class indicates that contextual and interactive learning activities are more effective in encouraging students to become independent learners. In conventional learning, students tend to passively receive information, which limits opportunities to develop initiative and responsibility in learning. In contrast, the CTL approach encourages students to actively participate in discussions, collaborate with peers, and solve problems in real-world contexts. This learning environment makes students more engaged and motivated during the learning process.

The findings of this study are also relevant to the concept of active learning, where students learn more effectively when they are directly involved in learning activities. Students in the experimental class demonstrated greater enthusiasm, confidence, and participation during the implementation of information services. This active engagement contributes to the development of student independence as they are trained to think critically, make decisions, and complete tasks independently.

From a practical standpoint, this study's findings suggest that guidance and counseling educators can use the CTL approach as an alternative to enhance students' autonomy in learning. Contextually and interactively designed information services can foster more meaningful learning experiences and motivate students to take greater initiative and responsibility in their education. Consequently, schools are expected to promote the adoption of student-centered, context-based learning methods to enhance students' educational and personal growth.

## CONCLUSION

Based on the findings of this study, it can be concluded that information services using the Contextual Teaching and Learning (CTL) approach are effective in enhancing student learning independence at SMK Negeri 1 Kutalimbaru. The implementation of contextual, student-centered learning activities encourages students to be more active, responsible, confident, and independent in managing their learning. Students who receive information services through the CTL approach demonstrate greater learning independence than students who receive conventional information services.

The findings of this study reinforce the view that learning independence can be effectively developed through meaningful learning experiences that connect educational material to students' real-life situations. The CTL approach not only enhances students' understanding of the material but also helps them develop important personal qualities, such as self-discipline, initiative, decision-making skills, and problem-solving skills. Thus, the learning process becomes more interactive and meaningful for students.

This study also provides practical implications for guidance and counseling teachers and schools. Guidance and counseling teachers are encouraged to adopt a contextual, interactive approach to information services to create a more engaging learning environment and support the development of independent learning behaviors among students. Schools are also expected to support the implementation of innovative, student-centered learning strategies that encourage active participation in educational activities.

Furthermore, this research contributes to the development of guidance and counseling practices, particularly in the use of the CTL approach in information services. This study extends previous research by demonstrating that contextual learning strategies can be effectively integrated into guidance and counseling activities to enhance student learning independence. Therefore, the CTL approach can be considered an effective alternative strategy for enhancing students' academic and personal development in educational settings.

## REFERENCES


Arikunto (2022) “Prosedur Penelitian Suatu Pendekatan Praktek. Jakarta: PT. Rineka Cipta.”

Ariyati, I. (2021) "Pengembangan Materi Bimbingan dan Konseling Bidang Belajar Menggunakan Layanan Konseling Pada Siswa. Bulletin of Counseling and Psychotherapy."

Asrori, A. (2020) *Psikologi Pendidikan Pendekatan Multidisipliner.Surabaya: Pena Persada*.

Bayyinah, S.A. (2023) “Layanan Informasi dan Motivasi Belajar dalam Meningkatkan Kemandirian Siswa di Mts. Negeri 3 Langkat,” 9(2), pp. 990–998.

Daryanto, M.F. (2015) *Bimbingan Konseling Panduan Guru BK dan Guru Umum. Yogyakarta: Gava Media.*

Firman, Nadya Kencana Pramudiastuti, dan F. (2016). Konseling Contextual Teaching and Learning ( CTL) Dengan Prinsip. *Konselor Jurnal Ilmiah*, (2), pp. 1–10,

Fitri, E., Ifdil, I., & Neviyarni, S. (2016) “Efektivitas layanan informasi dengan menggunakan metode blended learning untuk meningkatkan motivasi belajar. *Jurnal Psikologi Pendidikan dan Konseling: Jurnal Kajian Psikologi Pendidikan dan Bimbingan Konseling,* 2(2), 84–92,” *2016* [Preprint].

Hasanah, R.M., Supriadi, D. and ... (2022) “Penggunaan Metode Pembelajaran Konvesional Pada Mata Pelajaran Ipa Siswa Sekolah Dasar,” *Prosiding Teknologi*, pp. 72–75.

Hasibuan, M.F. *et al.* (2018) “Jurnal Bimbingan dan Konseling Ar-Rahman Pendekatan Contextual Teaching and Learning. 4, pp. 1–10,

Indah Berkat Tini Gea *et al.* (2024) “Efektivitas Layanan Informasi untuk Meningkatkan Pemahaman Perencanaan Karir,” *Wibawa : Jurnal Manajemen Pendidikan*, 4(2), pp. 1–17. Available at: https://doi.org/10, 57113/wib.v4i2.397.

Kintan Melati Tirtha, D. (2022) “Pengaruh Bimbingan Klasikal Untuk Meningkatkan Kemandirian Belajar Siswa pp.7523- https://r.search.yahoo.com/_ylt=AwrKEkKub9tpRQIAF_rLQwx.;_ylu=Y29sbwNzZzMEcG9zAzMEdnRpZAMEc2VjA3Ny/RV=2/RE=1777198254/RO=10/RU=https%3a%2f%2fjournal.universitaspahlawan

.ac.id," 4, pp. 7523–7529.

Mutmainah, N. and DKK (2020) "Efektivitas Layanan Informasi Karier Menggunakan Teori Donald. E. Super Untuk Meningkatkan Kesiapan Kerja Siswa," *QUANTA: Jurnal Kajian Bimbingan dan Konseling dalam Pendidikan*, 4(3), pp. 114–125. Available at: https://doi.org/10, 22460/q.v4i3p114-125.1983.

Nofan Hiru Sandi, D. (2022) "Peningkatan Kemandirian Belajar Melalui Bimbingan Klasikal Pada Siswa Kelas XI SMA Negeri 1 Pagar Gunung pp 230-236: https://www.researchgate.net/publication/362815394_PENINGKATAN_KEMANDIRIAN_BELAJAR_MELALUI_BIMBINGAN_KLASIKAL_PADA_SISWA_KELAS_XI_SMA_NEGER," 2(3), pp. 230–236.

Patimah, E. (2022) "Kemandirian Belajar Peserta Didik Pada Pembelajaran Darin : Literature Review," 4(1), pp. 993–1005.

Prayitno. (2017) "Konseling Profesional Yang Berhasil Layanan Dan Kegiatan Pendukung. I. ed. Prayitno. Jakarta."

Ranti, M.G. *et al.* (2017) "Pengaruh Kemandirian Belajar ( Self Regulated Learning ) Terhadap Hasil Belajar Mahasiswa Pada Mata Kuliah Struktur Aljabar," 3(1), pp. 75–83.

Rustam, A. (2025) "Efektivitas Modul Pembelajaran Berbasis Contextual Teaching and Learning dalam Meningkatkan Kemandirian Belajar Siswa MIS Nurul."

Sobri, M. (2020) *Kontribusi kemandirian dan kedisplinan terhadap hasil belajar, Jakarta: Guepedia, 2020,*

Sugiyono. (2019). "Metode Penelitian Kuantitatif, Kualitatif, dan R&D. Bandung: Alfabeta."

Suryani (2018) "Upaya Meningkatkan Kemandirian Belajar Siswa Melalui Layanan Bimbingan Klasikal di Kelas VIII-6 SMP pp 65-77: https://www.researchgate.net/publication/368532334_UPAYA_MENINGKATKAN_KEMANDIRIAN_BELAJAR_SISWA_MELALUI_LAYANAN_BIMBINGAN_KLASIKAL_DI_KELAS_VIII-," pp. 65–73.

Winkel, W., & Hast. ti, M. (2010) *Bimbingan dan Konseling di Institusi Pendidikan, edisi ketujuh. Yogyakarta. : Media Abadi.*