The Effect of Classical Guidance Services Using the Jigsaw Cooperative Learning Model on Students' Self-Regulation at SMA Negeri 8 Medan

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ABSTRACT

Self-regulation is an essential factor that influences students' ability to manage their learning processes effectively and achieve academic success. However, preliminary observations conducted at SMA Negeri 8 Medan indicated that many students demonstrated low levels of self-regulation, as reflected in poor time management, procrastination, low learning motivation, and limited responsibility toward academic tasks. This study aimed to examine the effect of classical guidance services using the Jigsaw cooperative learning model on students' self-regulation in learning. The study employed a quantitative approach with a pre-experimental one-group pretest-posttest design. The participants consisted of 36 students from Class XI-8 at SMA Negeri 8 Medan, selected through purposive sampling based on preliminary assessments indicating low self-regulation levels. Data were collected using a self-regulation questionnaire developed based on Zimmerman's theory, encompassing planning, self-monitoring, self-control, and self-evaluation dimensions. The instrument demonstrated excellent reliability with a Cronbach's Alpha coefficient of 0.917. Data were analyzed using descriptive statistics, the Shapiro–Wilk normality test, and a paired-samples t-test. The results revealed that the mean self-regulation score increased from 82.22 in the pretest to 99.58 in the posttest, representing an average improvement of 17.36 points or approximately 21%. Furthermore, the paired-samples t-test indicated a statistically significant difference between pretest and posttest scores ($p < .001$). These findings demonstrate that classical guidance services utilizing the Jigsaw cooperative learning model effectively enhance students' self-regulation in learning. The study suggests that integrating cooperative learning strategies into guidance and counseling services can promote students' responsibility, independence, and active engagement in learning.

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Introduction

Education is a fundamental aspect of human life that plays a crucial role in developing individuals' potential across spiritual, personal, intellectual, and practical dimensions (Law No. 20 of 2003; Mukhlis, 2018). Through education, individuals are expected to develop into well-rounded persons who possess the capacity for lifelong learning and are able to adapt to the demands of an increasingly complex society (Estari, 2020). Consequently, educational institutions are not only responsible for transmitting knowledge but also for fostering students' ability to manage their own learning processes effectively.

One of the essential competencies that support successful learning is self-regulation. Self-regulation refers to an individual's ability to plan, monitor, control, and evaluate learning activities in order to achieve specific academic goals (Zimmerman, 1990). Students with strong self-regulation skills tend to demonstrate better learning strategies, higher motivation, greater persistence, and superior academic achievement (Pintrich & De Groot, 1990). Conversely, students with poor self-regulation often experience difficulties in managing their time, maintaining motivation, completing assignments, and sustaining attention during learning activities.

Preliminary observations, interviews, and analyses using the Problem Checklist (Daftar Cek Masalah/DCM) and General Problem Identification Instrument (Alat Ungkap Masalah/AUM) conducted at SMA Negeri 8 Medan revealed that many students exhibited low levels of self-regulation. These difficulties were reflected in behaviors such as procrastinating on assignments, poor time management, low learning motivation, lack of discipline, truancy, limited classroom engagement, and inadequate responsibility toward academic tasks. Such behaviors may negatively affect students' academic performance and overall learning development if not addressed appropriately.

To address these challenges, effective guidance and counseling interventions are required.

One of the most widely implemented services in schools is classical guidance, which enables school counselors to provide developmental assistance to students in a classroom setting. Classical guidance services aim to support students' personal, social, academic, and career development through structured learning experiences (Santoso, 2011). However, the effectiveness of classical guidance largely depends on the instructional strategies employed during service delivery. Therefore, innovative and student-centered approaches are needed to actively engage students and promote meaningful learning experiences.

One promising approach is the Jigsaw cooperative learning model. Jigsaw is a collaborative learning strategy that emphasizes positive interdependence, individual accountability, active participation, and peer interaction. Through this model, students work collaboratively in small groups, become responsible for mastering specific content, and subsequently teach that content to their peers. Previous studies have demonstrated that Jigsaw can enhance students' engagement, learning motivation, communication skills, and academic achievement (Saputra, 2020). Furthermore, the collaborative nature of Jigsaw aligns with Vygotsky's social constructivist perspective, which emphasizes that knowledge is constructed through social interaction and collaborative learning experiences.

Several previous studies have reported positive outcomes associated with the implementation of classical guidance services and cooperative learning strategies. Sari et al. (2014) found that the Jigsaw method improved students' understanding of self-regulated learning, while Himawan et al. (2020) reported that classical guidance services using the Jigsaw approach significantly enhanced students' self-control in smartphone use. Other studies have highlighted the effectiveness of cooperative learning in promoting student participation and academic performance. Nevertheless, research specifically examining the effectiveness of Jigsaw-based classical guidance services in improving students' self-regulation remains limited, particularly at the senior high school level. Most previous studies have focused on academic achievement, classroom engagement, or behavioral control rather than comprehensive self-regulation skills encompassing planning, monitoring, controlling, and evaluating learning activities.

This gap in the literature highlights the need for further investigation into the potential contribution of Jigsaw-based classical guidance services to the development of students' self-regulation. The novelty of this study lies in its integration of guidance and counseling services with the Jigsaw cooperative learning model to enhance self-regulation among senior high school students. Unlike previous studies that primarily focused on instructional outcomes, this study specifically examines self-regulation as a developmental outcome within the context of guidance and counseling services.

Based on the aforementioned rationale, this study aims to examine the effect of classical guidance services using the Jigsaw cooperative learning model on students' self-regulation in learning at SMA Negeri 8 Medan. The findings are expected to contribute to the development of evidence-based guidance and counseling practices and provide practical implications for school counselors seeking effective strategies to improve students' self-regulated learning skills.

Method

Research Design

This study employed a quantitative approach using a pre-experimental one-group pretest-posttest design. This design was selected to examine the effect of classical guidance services utilizing the Jigsaw cooperative learning model on students' self-regulation in learning. The one-group pretest-posttest design allows researchers to compare participants' conditions before and after the intervention, thereby providing preliminary evidence regarding the effectiveness of the treatment. Although this design has limitations in controlling external variables due to the absence of a control group, it is considered appropriate for evaluating interventions under actual school conditions.

Participants and Sampling

The study was conducted at SMA Negeri 8 Medan during the second semester of the 2024/2025 academic year. The participants consisted of 36 students from Class XI-8. The sample was selected using purposive sampling based on preliminary assessments conducted through observations, interviews, the Problem Checklist (Daftar Cek Masalah/DCM), and the General Problem

Identification Instrument (Alat Ungkap Masalah/AUM). These assessments indicated that students in Class XI-8 demonstrated relatively low levels of self-regulation compared to other classes, making them suitable participants for the intervention.

The primary source of data was obtained directly from students through a self-regulation questionnaire administered before and after the intervention.

Instrumentation

Data were collected using a self-regulation in learning questionnaire developed based on Zimmerman's (1990) theory of self-regulated learning. The instrument measured four dimensions of self-regulation: planning, self-monitoring, self-control, and self-evaluation.

Initially, the questionnaire consisted of 40 items. Following validity testing, 30 items were retained and considered valid for use in the study, while 10 items were excluded due to low item-total correlation values. Reliability analysis yielded a Cronbach's Alpha coefficient of 0.917, indicating excellent internal consistency and suggesting that the instrument was highly reliable for measuring students' self-regulation.

Data Collection Procedures

Data collection was conducted in two stages. First, a pretest was administered to assess students' baseline levels of self-regulation prior to the intervention. Subsequently, students participated in a series of classical guidance sessions utilizing the Jigsaw cooperative learning model. During these sessions, students worked collaboratively in small groups, shared learning responsibilities, and actively engaged in peer discussions designed to promote self-regulatory skills.

After the intervention was completed, a posttest was administered using the same questionnaire to measure changes in students' self-regulation levels.

Data Analysis

The collected data were analyzed quantitatively using statistical software. Prior to hypothesis testing, a Shapiro–Wilk normality test was conducted to examine whether the data were normally distributed. Since the data met the assumptions of normality, a paired-samples t-test was employed to determine whether there were statistically significant differences between pretest and posttest scores.

Descriptive statistics, including means and standard deviations, were also calculated to describe changes in students' self-regulation levels before and after the intervention. The results were presented in tables and interpreted to determine the effectiveness of Jigsaw-based classical guidance services in enhancing students' self-regulated learning.

Result and Discussion

Results

Descriptive Analysis of Students' Self-Regulation Scores

A comparison of students' self-regulation scores before and after the implementation of classical guidance services using the Jigsaw cooperative learning model revealed a positive improvement across all participants. Table 1 presents the pretest and posttest scores of the 36 students involved in the study.

The results indicate that the total pretest score was 2,960, with a mean score of 82.22. Following the intervention, the total posttest score increased to 3,585, resulting in a mean score of 99.58. The average gain score was 17.36 points, representing an improvement of approximately 21% in students' self-regulation levels.

These findings suggest that students demonstrated better abilities in planning, monitoring, controlling, and evaluating their learning activities after participating in the Jigsaw-based classical guidance sessions. The consistent improvement observed across all participants indicates that the intervention contributed positively to the development of self-regulated learning behaviors.

Normality Test

Prior to hypothesis testing, the normality of the data was examined using the Shapiro–Wilk test. The results are presented in Table 1.

Table 1. Test of Normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pretest	.155	36	.029	.959	36	.201
Posttest	.176	36	.006	.956	36	.164
a. Lilliefors Significance Correction						

The Shapiro–Wilk test yielded significance values of 0.201 for the pretest scores and 0.164 for the posttest scores. Since both values exceeded the significance threshold of 0.05, the data were considered normally distributed. Therefore, the assumptions for conducting parametric statistical analysis were satisfied.

Hypothesis Testing

To determine whether there was a statistically significant difference between students' self-regulation scores before and after the intervention, a paired-samples t-test was conducted. The results revealed a mean difference of -17.36 points (SD = 0.68), with a t-value of -152.614 and a significance value of $p < .001$. These findings indicate a statistically significant improvement in students' self-regulation following participation in classical guidance services utilizing the Jigsaw cooperative learning model.

Therefore, the null hypothesis was rejected, and the alternative hypothesis was accepted. This result confirms that Jigsaw-based classical guidance services had a significant positive effect on students' self-regulation in learning.

Table 2. Paired Samples Test

Paired Samples Test								
	Paired Differences							
	Mean	Std. Deviation	Std. Error mean	95% Confidence Interval of the Diference		t	df	Sig. (2-tailed)
				Lower	Upper			
Pair 1 pretest - posttest	-17. 36111	.68255	.11376	-17.59205	-17. 13017	152.614	36	<,001

Discussion

Improvement of Students' Self-Regulation in Learning

The findings of this study demonstrated that classical guidance services utilizing the Jigsaw cooperative learning model significantly improved students' self-regulation in learning. This improvement was evidenced by the increase in the mean self-regulation score from 82.22 on the pretest to 99.58 on the posttest, representing an average gain of 17.36 points or approximately 21%. Furthermore, the paired-samples t-test revealed a statistically significant difference between pretest and posttest scores ($p < .001$), indicating that the intervention effectively enhanced students' self-regulatory abilities.

The improvement observed in this study suggests that students became more capable of managing their learning activities, including planning study schedules, monitoring learning progress, controlling distractions, and evaluating learning outcomes. These changes were also reflected in students' behavioral improvements, such as completing assignments on time, demonstrating greater responsibility, maintaining attention during learning activities, and showing increased commitment toward academic tasks.

The Contribution of the Jigsaw Cooperative Learning Model

The positive impact of the intervention can be attributed to the characteristics of the Jigsaw cooperative learning model. This model requires students to actively participate in group discussions, master specific learning materials, and share their understanding with other group

members. Such learning experiences encourage students to become more responsible for their own learning while simultaneously contributing to the learning of their peers.

The collaborative structure of Jigsaw promotes active engagement, individual accountability, and positive interdependence among students. As students are required to prepare, explain, and discuss learning materials, they become more aware of their learning processes and are encouraged to regulate their behavior to achieve group and individual goals. Consequently, the Jigsaw model creates learning conditions that naturally foster self-regulatory skills.

Interpretation Based on Self-Regulated Learning Theory

The findings support Zimmerman's (1990) theory of self-regulated learning, which emphasizes that successful learners actively engage in planning, monitoring, controlling, and evaluating their learning activities. According to Zimmerman, self-regulation involves metacognitive, motivational, and behavioral processes that enable students to achieve academic goals effectively.

The implementation of the Jigsaw model facilitated these processes by requiring students to prepare learning materials independently, monitor their own understanding, regulate their participation in discussions, and evaluate their learning outcomes through interactions with peers. Therefore, the observed improvement in self-regulation scores suggests that the intervention successfully strengthened students' metacognitive awareness and self-management skills.

Interpretation Based on Social Constructivist Theory

The findings are also consistent with Vygotsky's Social Constructivist Theory, which argues that learning occurs through social interaction and collaborative knowledge construction. Through Jigsaw activities, students actively exchanged ideas, discussed concepts, and solved learning problems collectively. These interactions provided opportunities for students to learn from one another and gradually develop greater autonomy in managing their learning processes.

The cooperative nature of Jigsaw creates a learning environment in which students are not merely passive recipients of information but active participants in constructing knowledge. Such experiences contribute to the development of self-regulation because students learn to take responsibility for their own learning while simultaneously supporting the learning of others.

Comparison with Previous Studies

The findings of this study are consistent with previous research demonstrating the effectiveness of cooperative learning and classical guidance services in promoting positive student development. Sari et al. (2014) reported that the Jigsaw method improved students' understanding of self-regulated learning, while Himawan et al. (2020) found that Jigsaw-based classical guidance services enhanced students' self-control and learning responsibility. Similarly, Saputra (2020) concluded that cooperative learning strategies increase student participation, motivation, and academic engagement.

However, unlike previous studies that primarily focused on academic achievement or behavioral outcomes, the present study specifically examined self-regulation as a developmental outcome within the context of guidance and counseling services. This distinction highlights the contribution of the study to the growing body of research on school counseling interventions and self-regulated learning.

Practical Implications for Guidance and Counseling Services

The findings have important implications for school counselors. The results suggest that classical guidance services integrated with cooperative learning strategies can serve as an effective intervention for improving students' self-regulation. School counselors may utilize the Jigsaw model not only to address academic concerns but also to foster responsibility, independence, self-discipline, and collaborative skills among students.

Therefore, the integration of active learning strategies into guidance and counseling programs is recommended as a means of enhancing students' personal and academic development. Such approaches may help students become more autonomous learners and better prepared to face academic challenges in both school and future educational settings.

Limitations and Future Research

Although the findings provide evidence regarding the effectiveness of Jigsaw-based classical guidance services, this study employed a one-group pretest-posttest design without a control group, which limits the ability to establish causal relationships conclusively. Future studies are encouraged to employ quasi-experimental or experimental designs involving larger and more diverse samples. Additionally, future research may explore the long-term effects of Jigsaw-based interventions on

students' self-regulation and other developmental outcomes, such as academic resilience, learning motivation, and academic achievement.

Conclusion

The findings of this study demonstrate that classical guidance services utilizing the Jigsaw cooperative learning model significantly improve students' self-regulation in learning. This conclusion is supported by the increase in the mean self-regulation score from 82.22 in the pretest to 99.58 in the posttest, representing an average improvement of 17.36 points or approximately 21%. Furthermore, the paired-samples t-test revealed a statistically significant difference between pretest and posttest scores ($p < .001$), indicating that the intervention effectively enhanced students' self-regulatory abilities.

The improvement in self-regulation suggests that students became more capable of planning, monitoring, controlling, and evaluating their learning activities. Through the Jigsaw cooperative learning model, students were encouraged to actively participate in learning, take responsibility for mastering and sharing information, collaborate with peers, and engage in reflective learning processes. These experiences contributed to the development of greater learning independence, responsibility, and self-discipline.

The findings support Zimmerman's Self-Regulated Learning Theory, which emphasizes the importance of learners' active involvement in managing their own learning processes. The results also align with Vygotsky's Social Constructivist Theory, highlighting the role of social interaction and collaborative learning in promoting students' cognitive and personal development. Therefore, integrating cooperative learning strategies into classical guidance services can serve as an effective approach for fostering students' self-regulated learning.

Practically, this study suggests that school counselors should consider incorporating active and collaborative learning models such as Jigsaw into guidance and counseling programs to enhance students' academic and personal development. Such approaches may help students become more autonomous learners and better prepared to cope with academic challenges.

Despite its positive findings, this study was limited by the use of a one-group pretest-posttest design without a control group. Future research is recommended to employ more rigorous experimental designs, involve larger samples, and investigate the long-term effects of Jigsaw-based classical guidance services on self-regulation and other educational outcomes.

References

Andriani, R. (2020). Pengaruh Layanan Bimbingan Klasikal terhadap Regulasi Diri Siswa. Jurnal Bimbingan dan Konseling, 8(1), 45–52.

Agung Nugroho, A., Rohastono Ajie, G., & Studi Bimbingan dan Konseling, P. (2019). Reproduksi Siswa Melalui Layanan Bimbingan Klasikal Metode Jigsaw. *Jurnal Bimbingan Dan Konseling Indonesia*, *4*(2), 49–55.

Abdiah, & Ayu. (2020). Stategi belajar Siswa. *Jurnal Pendidikan*

Chu, S.-Y. (2014). Application of the Jigsaw Cooperative Learning Method in Economics Course. *International Journal of Managerial Studies and Research*, *2*(10), 166–172. www.arcjournals.org

Depdiknas. 2003. Undang-Undang RI No. 20 Tahun 2003 tentang Sistem PendidikanNasional.Diakses dari https://jdih.kemdikbud.go.id/sjdih/siperpu/dokumen/salinan/UU_tahun2003_ nomor020.pdf

Harianingsih, I., & Jusoh, Z. (2022). A Review of Studies on Cooperative Learning in Language Classroom seen from Students' attitudes. *International Journal of English and Applied Linguistics (IJEAL)*, *2*(1), 62–74. https://doi.org/10.47709/ijeal.v2i1.1423

Himawan, A., Fitriana, S., & Wahyu Lestari, F. (2020). Pengaruh Bimbingan Klasikal Dengan Metode Jigsaw Terhadap Kontrol Diri Siswa Dalam Penggunaan Handphone Di Sekolah Pada Kelas IX SMP Negeri 7 Pemalang. *Pedagogik: Jurnal Pendidikan*, *15*(1), 67–73. https://doi.org/10.33084/pedagogik.v15i1.1301

Hermina, C., & Hariyono, D. S. (2018). Kajian Metode Konseling Kelompok Untuk Meningkatkan Kemampuan Interaksi Sosial Pada Anak Yang Berhadapan Dengan Hukum. *Psycho Idea*, *16*(2), 163–174.

Juliana, M., & Surya, E. (2017). An analysis of jigsaw cooperative efectiveness to improve the self-confidence and learning result of vacational high school students. *International Journal of Advance Research and Innovative Ideas in Education*, *3*(2), 3520–3526.

Karyanti; Setiawan. (2019). Bimbingan Klasikal Islami. In *Bimbingan Klasikal Berlandaskan fFlsafah Adil Ka'Talino, Bacuramin ka'Saruga Basengat Ka'Jubata* (Issue Yogyakarta).

Nugroho, G. B., & Hulu, F. (2022). Gambaran Regulasi Diri Dalam Belajar Siswa Smp Bunda Hati Kudus Grogol Tahun Pelajaran 2021/2022. *Psiko Edukasi*, *20*(2), 133–150. https://doi.org/10.25170/psikoedukasi.v20i2.3419

Oktaffiana, O., & Sulaeman, B. (2023). Hubungan Self-Regulated Learning dengan Goal Orientation pada Mahasiswa Universitas X di Masa Pandemi. *Business Economic, Communication, and Social Sciences Journal (BECOSS)*, *5*(2), 137–146. https://doi.org/10.21512/becossjournal.v5i2.9872

Rizki, A. (2021). Analisis Pengukuran Regulasi Diri. *Empati : Jurnal Bimbingan Dan Konseling*, *8*(2), 137–144. https://doi.org/10.26877/empati.v8i2.8957

Sari, K., Setiyowati, E., & Indrawati, S. A. (2014). PENGARUH PENERAPAN METODE COOPERATIVE LEARNING MODEL JIGSAW PADA LAYANAN BIMBINGAN KLASIKAL TERHADAP PEMAHAMANSELF REGULATED LEARNING (Studi Eksperimen Pada Siswa Kelas XI Tata Boga 3 SMK Negeri 30 Jakarta). *Insight: Jurnal Bimbingan Konseling*, *3*(2), 63. https://doi.org/10.21009/insight.032.11

Sugiyono. 2018. *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Bandung: Alfabeta.