

## THE INFLUENCE OF GAMIFICATION TECHNIQUES IN CLASSICAL GUIDANCE SERVICES ON STUDENTS' LEARNING MOTIVATION AT SDN 005 TARAKAN

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### ABSTRACT

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Learning motivation plays a fundamental role in determining students' academic engagement and learning achievement, particularly at the elementary school level. However, conventional classical guidance services frequently rely on lecture-based approaches that fail to actively engage students. This study aimed to examine the effect of gamification techniques implemented in classical guidance services on the learning motivation of fifth-grade students at SDN 005 Tarakan. A quantitative pre-experimental approach employing a one-group pretest-posttest design was adopted. The participants consisted of 28 fifth-grade students selected using simple random sampling. Learning motivation was measured using a validated Likert-scale questionnaire comprising 38 items with a Cronbach's Alpha reliability coefficient of 0.907. Data were analyzed using descriptive statistics and the Wilcoxon Signed Rank Test because the pretest data were not normally distributed. The findings revealed that the mean learning motivation score increased from 120.07 (SD = 13.59) before the intervention to 123.86 (SD = 13.65) after the intervention. The proportion of students classified in the high motivation category also increased from 75.00% to 82.14%, while no students remained in the low motivation category following the intervention. The Wilcoxon Signed Rank Test demonstrated a statistically significant difference between pretest and posttest scores ( $Z = -2.390$ ,  $p = 0.017$ ), indicating that gamification-based classical guidance services significantly improved students' learning motivation. Improvements were consistently observed across the three motivational dimensions, namely persistence in completing tasks, perseverance in facing learning difficulties, and interest in solving various problems. These findings suggest that integrating game elements such as points, badges, challenges, rewards, and collaborative missions into guidance services creates a more engaging learning environment that strengthens students' intrinsic motivation and active participation. Therefore, gamification represents an effective and innovative strategy for enhancing learning motivation within elementary school guidance and counseling programs.



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### INTRODUCTION

Learning motivation is widely recognized as one of the most important psychological determinants of students' academic success because it influences cognitive engagement, persistence, self-regulation, and learning achievement. According to Ryan and Deci (2020), learning motivation refers to the internal and external psychological processes that initiate, direct, and sustain goal-oriented learning behaviors. Students with high motivation tend to demonstrate greater persistence when facing academic challenges, actively participate in classroom activities, and employ more effective learning strategies. Similarly, Schunk and DiBenedetto (2020) emphasized that motivated learners exhibit stronger self-efficacy, deeper cognitive processing, and greater resilience in completing academic tasks, ultimately leading to better educational outcomes. Consequently, enhancing motivation to learn has become a major priority in educational systems worldwide because it directly contributes to students' academic development and lifelong learning.

The importance of learning motivation is particularly evident at the elementary school level, where children are still developing their cognitive, emotional, and social competencies. During this developmental stage, students are naturally attracted to learning experiences that are interactive, enjoyable, and meaningful rather than passive teacher-centered instruction. Learning environments that stimulate curiosity and active participation have been shown to strengthen intrinsic motivation and improve learning persistence (Ryan & Deci, 2020). Conversely, monotonous instructional approaches often reduce students' attention, classroom participation, and willingness to complete academic tasks, resulting in lower academic performance and declining learning enthusiasm (OECD, 2023). Therefore, educational innovations capable of creating enjoyable learning experiences are increasingly required to foster students' motivation from an early age.

These educational expectations are also reflected in Indonesian educational policy. Government Regulation No. 32 of 2013 concerning National Education Standards emphasizes that learning activities should be interactive, inspiring, enjoyable, challenging, and capable of motivating students to participate actively while encouraging creativity, independence, and personal development. These national objectives are consistent with international recommendations advocating student-centered learning as an essential strategy for improving educational quality (OECD, 2023; UNESCO, 2023). Accordingly, schools are expected not only to deliver academic knowledge but also to create learning environments that strengthen students' psychological readiness and motivation.

Within this context, guidance and counseling services have an essential role in supporting students' academic development beyond traditional classroom instruction. Modern school counseling programs emphasize preventive and developmental approaches designed to facilitate students' academic, personal, social, and career competencies rather than merely addressing behavioral problems after they occur. The American School Counselor Association (2022) reported that comprehensive school counseling programs positively influence students' academic engagement, self-awareness, decision-making skills, and learning behaviors. Likewise, Indonesia's Regulation of the Minister of Education and Culture No. 111 of 2014 recognizes guidance and counseling as an integral component of the educational process that supports students' holistic development across all educational levels.

Among various counseling services implemented in schools, classical guidance represents one of the most efficient approaches because it enables counselors to deliver developmental interventions simultaneously to an entire classroom. According to Harumbina et al. (2022), classical guidance services effectively facilitate students' academic, personal, and social development through structured classroom-based activities. Nevertheless, their implementation frequently relies on conventional lecture-based methods that limit students' interaction, participation, and enthusiasm. Ghufroon et al. (2022) further observed that teacher-centered counseling sessions often fail to maintain elementary school students' attention because learners become passive recipients of information instead of active participants in the learning process. These limitations highlight the need for innovative instructional approaches capable of transforming classical guidance into a more engaging and student-centered experience.

One promising innovation that has attracted considerable attention in recent educational research is gamification. Gamification refers to the application of game design elements including points, badges, leaderboards, rewards, challenges, feedback, and progress

indicators within non-game contexts to increase users' engagement and motivation. Sailer and Homner (2020) demonstrated through a meta-analysis that gamification significantly improves cognitive outcomes, behavioral engagement, and motivational variables across various educational settings. Likewise, Koivisto and Hamari (2019) reported that reward systems and achievement mechanisms enhance learners' participation, commitment, and satisfaction during instructional activities. Unlike educational games, gamification does not replace instructional content but enriches existing learning activities by incorporating motivational elements that encourage continuous participation and positive behavioral change.

The effectiveness of gamification is strongly supported by Self-Determination Theory, which proposes that motivation develops when three basic psychological needs autonomy, competence, and relatedness are fulfilled (Ryan & Deci, 2020). Game elements such as immediate feedback, progressive challenges, rewards, and collaborative activities satisfy these psychological needs by providing students with opportunities to experience achievement, social interaction, and mastery throughout the learning process. Consequently, students become more intrinsically motivated because learning activities are perceived as enjoyable, meaningful, and personally rewarding rather than compulsory academic obligations (Sailer et al., 2021). These motivational mechanisms explain why gamification has become increasingly popular in educational environments worldwide.

Gamification can generally be categorized into structural gamification and content gamification. Structural gamification incorporates game elements without modifying instructional content, whereas content gamification redesigns learning materials into game-based scenarios. Structural gamification is considered more practical for school implementation because it can be integrated into existing instructional or counseling activities without requiring substantial curricular modification. Pujianingsih et al. (2024) reported that structural gamification effectively improves students' motivation through systematic implementation of points, achievement systems, rewards, and performance feedback that reinforce positive learning behaviors. Consequently, structural gamification appears particularly suitable for integration into classical guidance services at the elementary school level.

Previous empirical studies consistently demonstrate the educational benefits of gamification; however, most investigations have focused primarily on classroom instruction, online learning environments, digital platforms, and higher education settings (Hamari et al., 2020; Sailer et al., 2021; Zainuddin et al., 2020). Comparatively fewer studies have examined the application of gamification within school guidance and counseling services, particularly classical guidance programs designed to strengthen students' psychological readiness for learning. This research gap is especially evident in Indonesian elementary schools, where empirical evidence regarding gamification-based counseling interventions remains limited despite growing interest in student-centered educational innovation.

Preliminary observations conducted during the School Field Practice (PLP) program at SDN 005 Tarakan between September and December 2025 revealed several indicators of low learning motivation among fifth-grade students. Many students demonstrated limited attention during classroom instruction, frequently engaged in off-task conversations, rarely participated in classroom discussions, neglected note-taking activities, and often failed to complete assignments on time. Interviews with classroom teachers and the vice principal

responsible for curriculum affairs further confirmed that students generally exhibited low enthusiasm, passive participation, and rapid boredom during learning activities. Similar findings have been reported by Susanti et al. (2024), who identified monotonous instructional approaches, limited classroom interaction, and insufficient learner engagement as major factors contributing to declining learning motivation among elementary school students.

Considering these educational challenges, integrating structural gamification into classical guidance services represents a promising strategy for transforming conventional counseling sessions into interactive, enjoyable, and meaningful learning experiences. Through the incorporation of points, challenges, collaborative missions, achievement badges, rewards, and immediate feedback, students are expected to become more actively engaged while simultaneously strengthening both their intrinsic and extrinsic motivation toward learning. Such an approach is consistent with contemporary student-centered learning principles emphasizing active participation, collaborative learning, and experiential engagement as essential components of effective education (Sailer et al., 2021).

Therefore, this study aims to investigate the influence of structural gamification techniques implemented within classical guidance services on the learning motivation of fifth-grade students at SDN 005 Tarakan. Unlike previous studies that primarily examined gamification within classroom instruction, the present research contributes to the literature by exploring gamification from the perspective of school guidance and counseling. The findings are expected to provide empirical evidence supporting the integration of innovative counseling strategies into elementary education while offering practical recommendations for counselors and educators seeking to enhance students' motivation, classroom engagement, and overall academic development.

## METHOD

This study employed a quantitative approach using a pre-experimental one-group pretest-posttest design to investigate the effect of structural gamification techniques integrated into classical guidance services on students' learning motivation. This design enables researchers to evaluate changes in participants' learning motivation before and after the intervention without involving a control group (Creswell & Creswell, 2018; Sugiyono, 2023). The study was conducted at SDN 005 Tarakan, North Kalimantan, Indonesia, during the 2025/2026 academic year. The population comprised 84 fifth-grade students distributed equally across three classes (VA, VB, and VC). The research sample was selected through probability sampling using the simple random sampling technique, resulting in Class VC ( $n = 28$ ) being chosen as the experimental group (Mushofa et al., 2024). The intervention consisted of four classroom guidance sessions incorporating structural gamification elements, including points, rewards, badges, challenges, collaborative activities, and immediate feedback. The first session included the administration of a pretest and an introduction to learning motivation and gamification procedures, followed by three intervention sessions focusing sequentially on persistence in completing academic tasks, resilience in overcoming learning difficulties, and interest in solving learning problems. The final session concluded with the administration of a posttest using the same instrument to evaluate changes in students' learning motivation.

Learning motivation was measured using a self-developed psychological scale based on the motivational dimensions proposed by Herwati et al. (2023), namely persistence in completing tasks, resilience in facing difficulties, and interest in solving various learning problems. The instrument initially comprised 40 four-point Likert-scale items, of which 38 items were retained after validity testing using the Pearson Product-Moment correlation,

while two items were excluded because they did not satisfy the validity criterion (Azwar, 2018). Instrument reliability was evaluated using Cronbach's Alpha, yielding a coefficient of 0.907, indicating excellent internal consistency (Hair et al., 2022; Taber, 2018). Data were analyzed using IBM SPSS Statistics version 27. Descriptive statistics, including frequencies, percentages, means, and standard deviations, were employed to describe students' learning motivation before and after the intervention. The normality of the data was examined using the Shapiro-Wilk test, which indicated that the data were not normally distributed. Therefore, hypothesis testing was conducted using the Wilcoxon Signed-Rank Test, a non-parametric procedure appropriate for paired observations that violate the assumption of normality (Field, 2024; Razali & Wah, 2019). Statistical significance was determined at the 5% significance level ( $p < 0.05$ ).

## RESULT AND DISCUSSION

### Effect of Gamification-Based Classical Guidance on Students' Learning Motivation

The present study examined whether gamification techniques integrated into classical guidance services significantly improved the learning motivation of fifth-grade students at SDN 005 Tarakan. Learning motivation was measured before (pretest) and after (posttest) the intervention using a validated motivation questionnaire administered to 28 students. The descriptive analysis demonstrated an overall improvement in students' motivation following the implementation of gamified guidance activities.

**Table 1.**

Distribution of Students' Learning Motivation Before and After the Intervention

| Motivation Level | Score Interval | Pretest n (%) | Posttest n (%) |
|------------------|----------------|---------------|----------------|
| High             | $\geq 114$     | 21 (75.00)    | 23 (82.14)     |
| Moderate         | 76–113         | 6 (21.43)     | 5 (17.86)      |
| Low              | $< 76$         | 1 (3.57)      | 0 (0.00)       |
| <b>Total</b>     |                | <b>28</b>     | <b>28</b>      |

*Source: data processing results*

Table 1 indicates that students' learning motivation improved after receiving gamification-based classical guidance services. Before the intervention, 75.00% of students were categorized as having high learning motivation, whereas after the intervention the proportion increased to 82.14%. Simultaneously, the percentage of students in the moderate category declined from 21.43% to 17.86%, while no students remained in the low motivation category after treatment. These findings suggest that the incorporation of game elements into guidance activities successfully stimulated greater student engagement and enthusiasm during learning.

The improvement observed in this study is consistent with Self-Determination Theory (SDT) proposed by Ryan and Deci (2020), which argues that learning motivation develops when educational activities satisfy learners' psychological needs for autonomy, competence, and relatedness. Throughout the intervention, students were encouraged to complete missions independently, collaborate with peers, and receive immediate feedback through points and rewards. Such experiences strengthen intrinsic motivation because students perceive learning as enjoyable rather than compulsory.

Moreover, the findings are also consistent with Expectancy-Value Theory, which states that students become more motivated when they believe they are capable of succeeding and perceive educational tasks as meaningful (Eccles & Wigfield, 2020). Gamification creates achievable challenges, incremental goals, and continuous reinforcement, thereby increasing students' confidence in completing learning tasks. Consequently, students become more willing to participate actively during guidance sessions.

Similar findings have been reported internationally. Sailer and Homner (2020), through a comprehensive meta-analysis, concluded that gamification significantly improves learning motivation, behavioral engagement, and academic achievement across various educational settings. Likewise, Koivisto and Hamari (2019) demonstrated that reward systems, progress indicators, and achievement badges substantially increase learner participation and persistence. More recently, Zainuddin et al. (2020) also found that gamification enhances students' classroom engagement by creating meaningful learning experiences that combine challenge, collaboration, and immediate feedback.

### Individual Changes in Learning Motivation

To further understand the effectiveness of the intervention, individual pretest and posttest scores were compared.

**Table 2.**  
Individual Comparison of Pretest and Posttest Scores

| No. | Student Code | Pretest Score | Pretest Level | Posttest Score | Posttest Level | Score Change |
|-----|--------------|---------------|---------------|----------------|----------------|--------------|
| 1   | AZF          | 125           | High          | 124            | High           | -1           |
| 2   | AZE          | 135           | High          | 146            | High           | +11          |
| 3   | ANI          | 111           | Moderate      | 141            | High           | +30          |
| 4   | AGK          | 125           | High          | 138            | High           | +13          |
| 5   | D            | 118           | High          | 117            | High           | -1           |
| 6   | DAS          | 75            | Low           | 103            | Moderate       | +28          |
| 7   | HNL          | 116           | High          | 121            | High           | +5           |
| 8   | KIM          | 133           | High          | 101            | Moderate       | -32          |
| 9   | KN           | 129           | High          | 127            | High           | -2           |
| 10  | LIJ          | 111           | Moderate      | 121            | High           | +10          |
| 11  | MA           | 132           | High          | 133            | High           | +1           |
| 12  | MAR          | 110           | Moderate      | 114            | High           | +4           |
| 13  | MB           | 125           | High          | 118            | High           | -7           |
| 14  | MJ           | 122           | High          | 131            | High           | +9           |
| 15  | MKA          | 117           | High          | 118            | High           | +1           |
| 16  | MR           | 122           | High          | 128            | High           | +6           |
| 17  | MRS          | 121           | High          | 126            | High           | +5           |
| 18  | MY           | 100           | Moderate      | 99             | Moderate       | -1           |
| 19  | NS           | 113           | Moderate      | 101            | Moderate       | -12          |
| 20  | NA           | 131           | High          | 139            | High           | +8           |
| 21  | PAR          | 99            | Moderate      | 106            | Moderate       | +7           |
| 22  | QFH          | 131           | High          | 133            | High           | +2           |
| 23  | R            | 133           | High          | 138            | High           | +5           |
| 24  | SAM          | 119           | High          | 119            | High           | 0            |
| 25  | SAF          | 122           | High          | 122            | High           | 0            |
| 26  | ZAN          | 114           | High          | 123            | High           | +9           |
| 27  | ZND          | 143           | High          | 146            | High           | +3           |
| 28  | S            | 130           | High          | 137            | High           | +7           |

Source: data processing results

The individual analysis reveals that most participants experienced positive changes following the intervention. Student ANI demonstrated the greatest improvement, with an

increase of 30 points, while student DAS improved by 28 points, moving from the low motivation category to the moderate category. Several other students also moved from the moderate to the high motivation category, indicating that gamification was particularly beneficial for students who initially demonstrated lower levels of motivation.

Although eight students experienced slight decreases in motivation scores, these reductions were relatively small compared with the improvements observed among the majority of participants. Educational psychologists have long acknowledged that learning motivation is influenced by numerous external and internal factors, including personality, parental support, peer interaction, emotional conditions, and classroom climate (Schunk & DiBenedetto, 2020). Therefore, slight fluctuations among several students should be interpreted as normal variations rather than evidence of intervention failure.

Overall, the dominance of positive score changes indicates that gamification provided an engaging learning environment capable of encouraging students to participate more actively during classical guidance sessions.

### Descriptive Statistics of Learning Motivation

To obtain an initial overview of students learning motivation before and after the implementation of gamification-based classical guidance services, descriptive statistical analysis was conducted. This analysis summarizes the distribution of learning motivation scores by presenting the minimum score, maximum score, mean, and standard deviation for both the pretest and posttest. The descriptive findings provide preliminary evidence regarding changes in students' motivation before hypothesis testing and facilitate interpretation of the effectiveness of the intervention.

**Table 3.**  
Descriptive Statistics

| Variable | N  | Minimum | Maximum | Mean   | SD    |
|----------|----|---------|---------|--------|-------|
| Pretest  | 28 | 75      | 143     | 120.07 | 13.59 |
| Posttest | 28 | 99      | 146     | 123.86 | 13.65 |

*Source: data processing results*

The descriptive statistics further confirm the positive influence of gamification. The average motivation score increased from **120.07** before treatment to **123.86** after treatment. Although the numerical increase appears relatively modest, it reflects a consistent upward trend across the participant group. Meanwhile, the standard deviation remained relatively stable, suggesting that motivational improvement occurred across most students rather than only among a few high-performing individuals.

The increase in mean scores supports previous empirical evidence indicating that gamification primarily affects students' behavioral and emotional engagement before producing substantial improvements in academic performance (Sailer et al., 2021). In elementary school contexts, increased engagement often represents the first stage toward long-term academic development because motivated students are more willing to participate, ask questions, complete assignments, and collaborate with peers.

### Changes Across Learning Motivation Indicators

Learning motivation was further analyzed according to its three theoretical dimensions: persistence in completing tasks, perseverance when facing difficulties, and interest in solving problems.

**Table 4.**  
Persistence in Completing Tasks

| Category | Pretest     | Posttest    |
|----------|-------------|-------------|
| High     | 20 (71.43%) | 23 (82.14%) |
| Moderate | 8 (28.57%)  | 5 (17.86%)  |

| Category | Pretest | Posttest |
|----------|---------|----------|
| Low      | 0       | 0        |

Source: data processing results

The largest improvement occurred in students' persistence in completing tasks. Following the intervention, more students consistently completed assigned activities and demonstrated greater responsibility during classroom tasks. During the gamified sessions, students remained focused on completing missions because every successfully completed activity contributed to their team score and leaderboard ranking.

This finding is consistent with Goal-Setting Theory, which suggests that specific goals accompanied by immediate feedback enhance learners' persistence and performance (Locke & Latham, 2019). The use of missions, badges, and reward systems likely strengthened students' commitment to completing instructional activities.

**Table 5.**  
Perseverance in Facing Difficulties

| Category | Pretest     | Posttest    |
|----------|-------------|-------------|
| High     | 12 (42.86%) | 14 (50.00%) |
| Moderate | 16 (57.14%) | 14 (50.00%) |
| Low      | 0           | 0           |

Source: data processing results

Although this indicator also improved, the increase was relatively smaller than that observed for task persistence. Perseverance represents a more stable psychological characteristic that generally requires longer periods of intervention to develop. Nevertheless, students demonstrated greater willingness to attempt difficult activities rather than avoiding them.

The findings align with Flow Theory proposed by Csikszentmihalyi, where optimal learning occurs when task difficulty matches learners' abilities. Gamification provided progressively challenging activities that encouraged students to continue participating without experiencing excessive anxiety or boredom.

**Table 6.**  
Interest in Solving Problems

| Category | Pretest     | Posttest    |
|----------|-------------|-------------|
| High     | 21 (75.00%) | 24 (85.71%) |
| Moderate | 7 (25.00%)  | 4 (14.29%)  |
| Low      | 0           | 0           |

Source: data processing results

Students also demonstrated increased curiosity toward solving academic problems. During gamified activities, students actively discussed solutions, asked questions, exchanged ideas, and collaborated to complete group missions. Such behaviors indicate higher levels of cognitive engagement, one of the essential dimensions of learning motivation.

Problem-solving missions incorporated within gamification encourage exploratory learning, allowing students to construct knowledge through interaction rather than passive information reception. According to constructivist learning theory, meaningful learning occurs when students actively engage in authentic problem-solving situations instead of merely receiving information from teachers.

Normality testing indicated that pretest data were not normally distributed (Shapiro-Wilk = 0.018), whereas posttest data satisfied the normality assumption (0.314). Consequently, the Wilcoxon Signed-Rank Test was employed.

**Table 7.**  
Wilcoxon Signed-Rank Test

| Statistic              | Value  |
|------------------------|--------|
| Positive Ranks         | 18     |
| Negative Ranks         | 8      |
| Ties                   | 2      |
| Z                      | -2.390 |
| Asymp. Sig. (2-tailed) | 0.017  |

*Source: data processing results*

The Wilcoxon Signed-Rank Test demonstrated a statistically significant difference between pretest and posttest scores ( $Z = -2.390$ ;  $p = 0.017$ ). Since the significance level was below 0.05, the null hypothesis was rejected, confirming that gamification-based classical guidance significantly improved students' learning motivation.

From a practical perspective, the intervention successfully transformed guidance sessions from conventional lecture-based activities into interactive learning experiences characterized by challenge, collaboration, competition, and immediate feedback. These findings reinforce growing international evidence suggesting that gamification is not merely an entertaining instructional strategy but also a psychologically grounded intervention capable of fostering intrinsic motivation, engagement, and sustained participation in educational settings (Ryan & Deci, 2020; Sailer & Homner, 2020; Kapp, 2022; Koivisto & Hamari, 2019).

## CONCLUSION

This study concludes that the implementation of gamification techniques in classical guidance services has a significant positive effect on the learning motivation of fifth-grade students at SDN 005 Tarakan. The findings demonstrate that integrating game elements—including points, badges, challenges, rewards, and collaborative activities—creates a more engaging and interactive learning environment that encourages students to participate actively throughout the guidance process. Statistical analysis using the Wilcoxon Signed Rank Test revealed a significant difference between pretest and posttest learning motivation scores ( $Z = -2.390$ ;  $p = 0.017$ ), confirming the effectiveness of the intervention.

Descriptive analysis further showed that the mean learning motivation score increased from 120.07 before the intervention to 123.86 after the intervention. Likewise, the proportion of students categorized as having high learning motivation increased from 75.00% to 82.14%, while no students remained in the low-motivation category following the treatment. Improvements were consistently observed across the three motivational dimensions, namely persistence in completing tasks, perseverance in overcoming learning difficulties, and interest in solving various learning problems. These findings support the application of gamification as an innovative strategy for strengthening students' intrinsic motivation within school guidance and counseling programs. Although the study was limited by its pre-experimental design, single-group approach, and relatively small sample size, it provides empirical evidence that gamification-based classical guidance services can effectively enhance students' motivation and offers a practical foundation for future counseling interventions in elementary education.

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