Fostering academic motivation of senior high school learners through weekly written note ticket reflections

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Abstract

Motivation is a critical factor influencing students' academic performance and persistence in learning. However, many learners experience challenges sustaining motivation throughout a school term. This study explored the written note ticket intervention as a practical, low-cost method of enhancing learner motivation and performance among Grade 11 STEM students. A mixed-methods design was employed, combining quantitative and qualitative approaches. Twenty-seven (27) STEM learners participated in pre- and post-intervention surveys using a five-item Likert-type motivation scale, and their academic performance was compared against the wider Grade 11 cohort (n = 224). Focus group discussions further captured learners' perceptions of the intervention. Statistical analysis included descriptive measures, paired-samples t-test, and Cohen's d for effect size. Findings revealed a significant increase in learners' motivation levels after the intervention ($t = 14.60$, $p < .001$), with Cohen's d indicating a large practical effect. Qualitative data highlighted that learners valued the consistency, empathy, and personalized nature of the feedback provided through the note tickets. Additionally, the STEM learners' academic performance ($M = 90.89$) was significantly higher than the general Grade 11 average ($M = 85.64$). The study concludes that the written note ticket intervention effectively enhances student motivation and supports improved academic outcomes. Its low cost and scalability make it a promising practice for broader implementation. The research recommends that teachers integrate reflective feedback mechanisms into their classroom practice, administrators provide professional development on motivational strategies, and curriculum developers consider embedding such approaches into learning frameworks.

Keywords: Academic performance, motivation. reflective teaching, STEM Learners, written note ticket intervention

1. Context and Rationale

Globally, learner motivation and well-being are critical in sustaining academic success. The United Nations emphasizes in Sustainable Development Goal 4 (SDG 4) the need for inclusive and equitable quality education that supports lifelong learning and holistic student growth (United Nations, 2021). In the Philippine setting, the Department of Education (DepEd) highlights learner-centered approaches in its policies. DepEd Order No. 8, s. 2015, stresses learner diversity and the need to design responsive classroom practices, while DepEd Order No. 31, s. 2019, underscores the role of advisory programs and formative assessment in motivating learners to be more engaged in the teaching-learning process (Department of Education, 2015; Department of Education, 2019). These mandates create a policy environment supportive of reflective practices that boost morale, strengthen teacher-student connections, and encourage learners to take ownership of their growth.

Scholarly works have also shown the significance of reflective writing and communication strategies in enhancing student motivation and academic outcomes. Reflective writing has been linked to improved metacognition, empathy, and academic persistence (Liu & Wu, 2021). Similarly, goal-setting combined with reflection supports stress management and higher academic performance (Panadero, 2020). Dialogue journals, which provide written exchanges between students and teachers, foster reflective awareness and personal

voice while reinforcing cognitive and emotional development (Tran, 2021). Research also suggests that combining teacher feedback and learner reflection positively affects student engagement and performance (Suraworachet et al., 2022). Furthermore, structured reflective practices in project-based and writing-focused contexts have enhanced student satisfaction, learning outcomes, and writing achievement (Cai et al., 2020; Ling et al., 2023). Even in online settings, reflective practices such as journaling and gratitude writing have been linked to higher learner engagement (Barton, 2021). These findings consistently point to reflection and written communication as powerful motivators for academic and personal growth.

In the local school context, it has been observed that during the first quarter of the school year, learners often exhibit low morale. Coming from long vacation breaks, many senior high school students struggle to adapt to academic routines, develop consistent study habits, and regain focus on learning tasks. This transition period is critical because it sets the tone for the rest of the school year. Without proper intervention, students may develop patterns of disengagement and mediocre academic attitudes, affecting both performance and holistic growth. Given this challenge, schools need simple yet sustainable strategies that reconnect students with their teachers, encourage reflection, and motivate them to persevere in their studies.

This action research focuses on Talangan Integrated National High School, where Grade 11 learners will be asked to submit a **weekly written note ticket** every Monday before entering class. The note will contain a handwritten reflection or message to the adviser, to which the adviser (teacher-researcher) will respond within the week. The intervention aims to establish consistent personal communication, motivating students academically and personally. The study seeks to answer: Will this intervention boost the morale of learners? Will personal written communication with the adviser encourage focus, diligence, and academic improvement? Will it contribute to better academic standing compared to SHS learners who are not under this program? By addressing these questions, the study aligns with SDG 4 and DepEd's mandate to promote meaningful teaching and learning by nurturing students' motivation, reflection, and personal growth.

1.1. Action Research Questions

This study focused on determining how the use of weekly written note ticket reflections influences the motivation and academic performance of Grade 11 learners at Talangan Integrated National High School.

Specifically, it sought to answer the following questions:

- What is the motivation level of Grade 11 STEM learners before the implementation of the written note ticket intervention?
- What is the motivation level of Grade 11 STEM learners after the implementation of the written note ticket intervention?
- Is there a significant difference between the motivation levels of Grade 11 STEM learners before and after the intervention?
- How do the STEM 11 learners view this intervention of written note ticket intervention?
- What is the academic performance of Grade 11 STEM learners with the written note ticket intervention?
- What is the overall academic performance of all Grade 11 learners in the school?
- Is there a significant difference between the academic performance of Grade 11 STEM learners with the intervention and the academic performance of all Grade 11 learners?

1.2. *Proposed Innovation, Intervention, or Strategy*

1.2.1. Objective

The main objective of this intervention was to foster both academic and personal growth among Grade 11 STEM learners through weekly written note ticket reflections. More specifically, the intervention

sought to provide learners with a structured yet safe avenue for self-expression, to strengthen the bond of trust and communication between teacher and student, and to enhance motivation, engagement, and study habits. It further aimed to contribute to the improvement of learners' academic performance by integrating socio-emotional support into the advisory program. This was aligned with DepEd Order No. 8, s. 2015, which emphasized formative and learner-centered assessment, and DepEd Order No. 31, s. 2019, which stressed the importance of advisory and teacher support in guiding learners toward holistic development. On a broader scale, the intervention responded to the United Nations' Sustainable Development Goal 4 (SDG 4), which called for inclusive and equitable quality education that fostered lifelong learning opportunities for all.

1.2.2. Procedure

The intervention was carried out throughout the first quarter of School Year 2025–2026, involving 27 Grade 11 STEM learners at Talangan Integrated National High School. Every Monday before entering the classroom, learners were required to submit a 1/8 index card with a handwritten note addressed to the adviser, who also served as the teacher-researcher. The note was required to fill the front page of the card, and learners were free to write about any topic of personal choice—whether experiences, reflections, questions, worries, rants, or words of gratitude. This ensured authenticity and sincerity in expression while establishing a weekly routine. Learners who failed to provide their written note were not allowed to enter class until they completed one, thereby instilling discipline, consistency, and accountability in the practice.

The teacher-researcher read all entries during the week, wrote personalized responses, and returned the cards to learners by Friday. This created a dialogue journal system between the teacher and each learner, where communication was private and based on trust. To honor this trust, all information disclosed in the written note tickets remained strictly confidential. This practice reflected DepEd's vision of a learner-centered classroom where the voices of students were respected and valued, and it ensured that learners felt supported in both academic and personal concerns.

1.2.3. Schedule

The intervention followed a consistent weekly cycle for the entire first quarter, which typically spanned eight to nine weeks. Every Monday, students began the week by submitting their written note tickets before entering the classroom. The teacher-researcher then spent the week reading and reflecting on each learner's message, offering personalized feedback that provided encouragement, guidance, or affirmation. By Friday, the cards were returned to the learners, closing the cycle of communication for the week. This rhythm not only promoted reflective habits but also strengthened teacher-student relationships, which DepEd identified as a critical element of effective teaching and learning. The weekly routine further resonated with SDG 4's emphasis on creating supportive and responsive learning environments that fostered both academic and socio-emotional growth.

1.2.4. Expected Outcomes

Through this intervention, learners were expected to develop greater motivation and focus, as they realized that their voices were heard and valued. On a personal level, the practice of writing weekly notes provided a safe outlet for emotions, self-reflection, and resilience-building, contributing to their socio-emotional well-being. On an academic level, the intervention was expected to help learners reestablish study habits, increase engagement in class activities, and improve their overall performance. The advisory feedback system allowed the teacher-researcher to guide learners more personally, providing affirmations or constructive advice as needed. In comparison with learners not exposed to this intervention, it was anticipated that Grade 11 STEM students would show stronger motivation and better academic standing. Ultimately, this

practice was deemed effective because it blended reflective writing, advisory feedback, and trust-building into a holistic approach that directly supported DepEd's learner-centered framework while contributing to the realization of SDG 4 by promoting quality, inclusive, and supportive education.

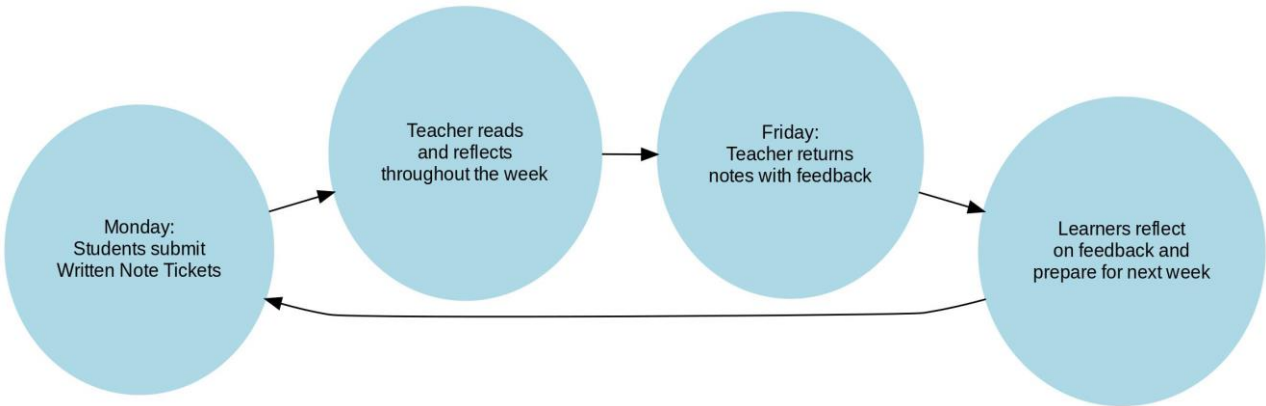


Figure 1. Weekly Written Note Ticket Cycle

2. Action Research Methods

2.1. Participants and/or other Sources of Data and Information

The participants of the study were the Grade 11 STEM learners of Talangan Integrated National High School for School Year 2025–2026. The class was composed of 27 students, of whom 10 were male and 17 were female. Among them, four learners were transferees from other schools, while three were beneficiaries of the Pantawid Pamilyang Pilipino Program (4Ps). All participants were residents of Nagcarlan, Laguna, and were aged between 15 and 16 years old. This diverse group of learners represented a typical senior high school class, with varying socio-economic backgrounds and prior educational experiences, making them suitable respondents for the study on the influence of weekly written note ticket reflections on motivation and academic performance.

2.2. Data Gathering Methods

The data gathering procedure of the study began with the administration of a pre-survey questionnaire consisting of five items designed to measure the motivation level of the Grade 11 STEM learners before the implementation of the written note ticket intervention. The intervention was carried out throughout the first quarter of School Year 2025–2026, after which a post-survey using the same instrument was conducted near the end of the quarter to determine changes in the learners' motivation levels. In addition to the survey data, the learners' general average for the first quarter was also collected from official school records to serve as the basis for determining their academic performance, which was further compared with the overall academic performance of all Grade 11 learners in the school.

2.3. Data Analysis Plan

The data obtained from the pre-survey and post-survey on the learners' motivation levels were analyzed using descriptive statistics such as frequency, percentage, mean, and standard deviation to present

the general trend of responses. To determine whether there was a significant difference in the motivation levels of Grade 11 STEM learners before and after the intervention, a paired sample t-test was employed, with Cohen's d used to determine the effect size. For academic performance, the first quarter general average of Grade 11 STEM learners was compared with the overall mean general average of all Grade 11 learners in the school using a one-sample mean t-test, with Cohen's d also applied to determine the effect size. This established whether there was a significant difference between the academic performance of learners exposed to the intervention and the general performance of their peers. The results were tested at a 0.05 level of significance to validate the findings of the study.

3. Discussion of Findings, Conclusion, Recommendations and Reflection

3.1. Pre-Survey Motivation Level of Grade 11 STEM learners

Motivation Level of Grade 11 STEM Learners (Pre-Survey)

Item	Mean	SD	Min	Max
1. I feel motivated to attend my classes regularly.	3.56	0.51	3	4
2. I have a positive attitude towards my studies.	3.52	0.51	3	4
3. I put effort into accomplishing my academic tasks and requirements.	3.48	0.51	3	4
4. I feel that my teacher values and understands me as a learner.	3.52	0.51	3	4
5. I am motivated to improve my academic performance this quarter.	3.70	0.54	3	5

Overall Mean: 3.56

Overall SD: 0.51

The results reveal that the Grade 11 STEM learners generally exhibited a moderate to high level of motivation even before the implementation of the written note ticket intervention. The overall mean score of 3.56 (close to "Agree") indicates that the learners were already inclined to attend classes, maintain a positive attitude, and strive toward academic success. Among the five items, the strongest motivation appeared in their desire to improve academic performance this quarter (Mean = 3.70), suggesting that goal-setting and personal growth were significant drivers of their academic mindset. On the other hand, the lowest motivation mean score was in the area of effort toward accomplishing academic tasks (Mean = 3.48), which implies that while learners intended to succeed, their consistency in effort may still vary. The relatively low standard deviations (around 0.51) across all items suggest that responses were consistent and clustered around the mean, reflecting a shared sense of motivation within the class. Interestingly, learners expressed almost equal levels of motivation in their perception of teacher support (Mean = 3.52) and in their positive outlook on studies

(Mean = 3.52). This demonstrates the importance of teacher-student relationships and classroom climate in shaping learners' willingness to engage with academic requirements.

From a broader perspective, these findings are aligned with motivational theories such as Self-Determination Theory (Ryan & Deci, 2000), which posits that intrinsic motivation is enhanced when learners feel competent, autonomous, and connected to supportive figures like teachers. The data also echoes previous studies where students with a growth-oriented mindset displayed stronger commitment to academic performance even before interventions were introduced. Thus, while the written note ticket intervention is expected to enhance motivation further, the pre-survey results highlight that the STEM learners already possessed a solid motivational foundation that can be strategically built upon.

3.2. Post-Survey Motivation Level of Grade 11 STEM learners

Motivation Level of Grade 11 STEM Learners (Post-Survey)

Item	Mean	SD	Min	Max
1. I feel motivated to attend my classes regularly.	4.26	0.45	4	5
2. I have a positive attitude towards my studies.	4.48	0.51	3	5
3. I put effort into accomplishing my academic tasks and requirements.	4.67	0.48	4	5
4. I feel that my teacher values and understands me as a learner.	4.48	0.51	4	5
5. I am motivated to improve my academic performance this quarter.	4.56	0.51	4	5

Overall Mean: 4.49

Overall SD: 0.49

The results of the post-survey demonstrate a marked increase in the motivation level of Grade 11 STEM learners after the implementation of the Weekly Written Note Ticket intervention. The overall mean score of 4.49 (interpreted as "Agree" to "Strongly Agree") shows that learners felt more motivated across all aspects of academic engagement compared to the pre-survey mean of 3.56. Notably, the highest-rated item was effort in accomplishing academic tasks (Mean = 4.67), which indicates that the intervention encouraged learners to be more consistent and diligent in their academic responsibilities. This suggests that the written note reflections served as a powerful external motivator, translating into stronger internal drive to complete schoolwork. The results also reveal meaningful growth in how learners perceived their teacher's role. The mean score of 4.48 for the item on feeling valued and understood as learners implies that the consistent, personalized written notes enhanced the teacher-student relationship. This is important, as motivation theories highlight that when learners feel supported, they are more likely to sustain academic effort and engagement. The low standard deviations (ranging from 0.45–0.51) further show that motivation gains were not limited to

a few students but were widely experienced by the class.

Comparing these findings with the pre-survey, the data indicates that the written note ticket intervention significantly shifted learners from a moderate motivation level to a high motivation level. This aligns with existing literature, such as Hattie and Timperley's (2007) findings on the impact of personalized feedback in improving learner engagement and effort. In this case, the intervention not only nurtured academic focus but also fostered a stronger sense of encouragement and belonging, making it a viable strategy for sustaining learner motivation in senior high school.

3.3. Significant Difference in Motivation Level Before and After the Intervention

Descriptive Statistics of Learners' Motivation Level Before and After the Intervention

Group	Mean	SD	N
Pre-Intervention	3.556	0.217	27
Post-Intervention	4.504	0.195	27

Paired t-Test Results

t-value	df	p-value
15.101	26	0.000

Measure	Pre-Intervention	Post-Intervention	Mean Difference	t-value	df	p-value	Effect Size (Cohen's d)
Motivation Level (n = 27)	3.556 (SD = 0.217)	4.504 (SD = 0.195)	0.948	15.101	26	< .001	2.91 (very large)

The results reveal a marked increase in the motivation level of Grade 11 STEM learners after the implementation of the Weekly Written Note Ticket intervention. The mean motivation score improved from **3.556 (SD = 0.217)** before the intervention to **4.504 (SD = 0.195)** after the intervention. The paired t-test yielded a **t(26) = 15.101, p < 0.001**, indicating that the improvement in motivation levels is statistically significant. This suggests that the intervention had a substantial positive impact on learners' academic motivation. The effect size (Cohen's d = 2.91) suggests that the intervention had a **very large practical impact**, far beyond what is typically seen in classroom-based motivational programs.

In-depth analysis points to the power of reflective writing coupled with personalized teacher feedback in fostering student engagement. The intervention provided learners with a safe avenue to articulate their feelings, while the teacher's responses reinforced encouragement and accountability. This aligns with the findings of Deci & Ryan's Self-Determination Theory, where autonomy, relatedness, and competence drive motivation. Similarly, prior research such as Boud, Keogh, & Walker (2013) emphasized that reflective practices improve self-awareness and intrinsic motivation. More recent classroom studies (e.g., Nugent & Lodge, 2020) also highlighted that consistent written feedback builds strong learner-teacher connections, directly influencing motivation and academic persistence.

Taken together, the results not only demonstrate a significant quantitative improvement but also validate the intervention's effectiveness as supported by existing literature. This indicates that integrating structured reflective practices like weekly note cards into the learning process can be a low-cost but highly impactful strategy to enhance student motivation.

3.4. Learners' View of the Written Note Ticket Reflections

Below is a thematic analysis of the learners' narratives about the Weekly Written Note Ticket Reflections.

3.5. Theme 1 — Teacher–Student Connection and Relational Support

Sub-themes:

3.5.1. **Personalized feedback** — learners repeatedly note the adviser's individualized, handwritten replies as meaningful.

3.5.2. **Perceived care and encouragement** — entries describe feeling "seen," encouraged, and believed in by the teacher.

3.5.3. **Trust and confidentiality** — students emphasize that the private written exchange felt safe and nonjudgmental.

Learners consistently describe the weekly notes as a channel that strengthened rapport with the adviser. Personalized replies made students feel valued and supported emotionally, not only academically. The assurance of confidentiality allowed more honest disclosures, which in turn deepened trust.

This theme aligns with studies that show teacher feedback and dialogue journals enhance relational trust and student engagement (Tran, 2021; Suraworachet et al., 2022). When learners feel supported, motivation and persistence tend to increase (Panadero, 2020).

3.6. Theme 2 — Emotional Expression and Catharsis

Sub-themes:

2.1 **Safe space for feelings** — students used the notes to express worries, fears, gratitude, and humor.

2.2 **Emotional relief and regulation** — several learners described feeling lighter after writing and receiving responses.

2.3 **Freedom to say what they cannot speak aloud** — writing served as an outlet where spoken words were difficult.

The index card practice functioned as an accessible journaling activity: a low-stakes, regular opportunity for emotional release. For students who struggle to verbalize, writing provided an alternative communicative channel and helped them regulate emotions.

Reflective writing and dialogue journals have been shown to offer emotional benefits and support self-awareness (Liu & Wu, 2021; Barton, 2021). The learners' reports of catharsis and relief echo findings that private written reflection reduces anxiety and fosters resilience (Cai et al., 2020).

3.7. Theme 3 — Increased Motivation, Confidence, and Agency

Sub-themes:

3.7.1. **Renewed courage to try difficult things** — replies encouraged risk-taking and persistence.

3.7.2 **Stronger academic drive** — learners tied the activity to wanting to do better and work harder.

3.7.3 **Ownership and voice** — students felt their perspectives mattered and that they could direct their learning.

Beyond emotional benefits, learners reported concrete shifts in motivation and self-efficacy. Personalized encouragement translated into greater willingness to confront academic challenges and sustain effort.

This mirrors evidence that formative feedback and reflection foster metacognition, self-regulated learning, and increased academic engagement (Panadero, 2020; Suraworachet et al., 2022). When reflection is paired with teacher response, motivation and persistence often improve (Ling et al., 2023).

3.8. Theme 4 — Development of Self-Awareness and Reflective Habits

Sub-themes:

3.8.1. **Better self-understanding** — students reported learning about their feelings and limits through writing.

3.8.2. **Habit formation** — weekly rhythm cultivated the practice of reflection.

3.8.3. **Language for inner life** — writing helped learners name thoughts they previously struggled to express.

The weekly cadence scaffolded a reflective routine: small, consistent acts of writing produced gradual growth in self-awareness and reflective competence. This is important because reflection is a precursor to purposeful change.

Reflection as habit supports metacognitive development and learning gains (Panadero, 2020; Ling et al., 2023). The students' movement from unexamined feelings to named reflections is consistent with studies showing reflective prompts improve self-monitoring and learning strategies (Cai et al., 2020).

3.9. Theme 5 — Small Acts, Big Meaning (Practical and Memorable Moments)

Sub-themes:

3.9.1. **Memorable micro-moments** — learners treasure small jokes, short advice, and specific lines returned on cards.

3.9.2. **Low-cost, high-impact intervention** — the simplicity (1/8 index card) was repeatedly noted as powerful.

Students emphasize how tiny, concrete tokens (a short message, a humorous line) had outsized emotional and motivational effects. The intervention's low resource demand makes it scalable and sustainable.

Research on low-stakes reflective activities finds they often yield measurable gains because they are easy to implement and encourage sustained participation (Barton, 2021; Suraworachet et al., 2022).

First, the qualitative findings show a coherent pathway from emotional safety toward increased motivation and action: confidentiality and personalized feedback created trust (Theme 1), which made students comfortable sharing emotions (Theme 2). This emotional work fostered confidence and agency (Theme 3), which then translated into more deliberate reflective behavior and study habits (Theme 4). This cascade aligns with theoretical models that place relatedness and perceived support upstream of intrinsic motivation — for example, Self-Determination Theory (Ryan & Deci, 2000) predicts that feeling connected and supported enhances intrinsic motivation and effort (Panadero, 2020).

Second, these narratives corroborate empirical studies where reflective writing plus teacher feedback improved engagement and performance. Suraworachet et al. (2022) reported that combining human feedback with analytics increased student engagement in reflective tasks; learners here echo that the human reply mattered. Likewise, Tran (2021) and Cai et al. (2020) highlight that dialogue journals and structured reflections produce both emotional and cognitive gains — the student comments about courage, clarity, and habit formation echo those documented benefits. The consistent rise from neutral/moderate pre-survey motivation to higher post-survey ratings (quantitative results you provided earlier) therefore finds qualitative backing: students felt encouraged, listened to, and more motivated to act.

Finally, the data point to wider practical implications. Because the intervention is low-cost (index cards, weekly routine) yet produced strong relational and motivational effects, it aligns with research suggesting scalable reflection practices can be integrated into advisory programs to benefit socio-emotional and academic outcomes (Ling et al., 2023; Barton, 2021). However, as the literature cautions, such effects are strengthened when accompanied by timely, meaningful feedback — a condition the adviser satisfied here (Suraworachet et al., 2022). For replication, attention should be paid to fidelity (regularity of responses),

confidentiality protocols, and efforts to measure baseline differences so causal claims are more robust.

Practical recommendations arising from the themes and supported by literature highlight several key considerations. First, it is important to maintain confidentiality and uphold clear ethical protocols, as learners emphasized that trust was foundational to their openness. Ensuring anonymized storage of reflections and setting explicit privacy rules will further safeguard this trust. Second, training teachers in delivering brief yet targeted feedback is essential. The narratives revealed that the human reply carried significant weight, and research affirms that short, empathetic, and actionable comments are most effective in sustaining student motivation. Third, the practice must be sustained with regularity, as the weekly rhythm of writing and responding allowed students to form habits of reflection. Consistency not only reinforces reflective practice but also helps learners anticipate meaningful engagement with their teachers. Lastly, while the low-cost nature of the intervention makes it highly scalable, expansion should be approached thoughtfully. It is important to pair broader implementation with monitoring mechanisms to ensure that the quality of feedback and depth of student-teacher connection are not compromised as more learners participate.

3.10. Academic Performance of Grade 11 STEM Learners with the Written Note Ticket Intervention

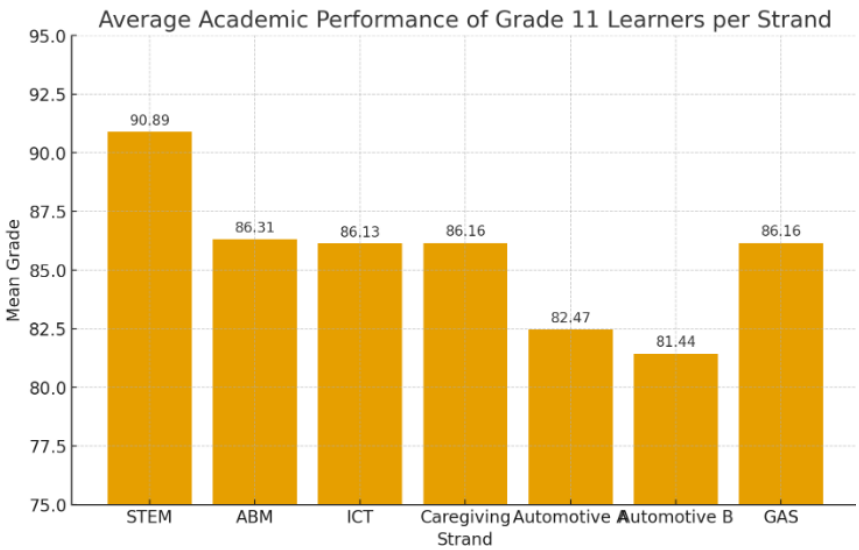
Group	N	Minimum	Maximum	Mean	Median	Standard Deviation
Grade 11 STEM Learners	27	87	94	90.89	91.00	1.87

The academic performance of the 27 Grade 11 STEM learners who underwent the weekly written note ticket intervention during the first quarter of S.Y. 2025–2026 reveals an overall strong performance. The mean score of 90.89 and a median of 91.00 indicate that most learners consistently achieved grades in the very satisfactory range. The minimum score recorded was 87, while the maximum reached 94, showing that no learner performed poorly and that all were within a narrow high-achievement band. The standard deviation of 1.87 suggests low variability, meaning that learners' grades were relatively consistent with one another.

These results imply that the intervention may have contributed to maintaining focus and motivation among learners, enabling them to achieve stable and commendable academic outcomes. The close clustering of scores indicates a uniform response toward academic tasks, possibly nurtured by the weekly reflective practice that encouraged learners to express concerns, receive feedback, and feel supported by their adviser. This sense of accountability and connection appears to have positively influenced their study habits, leading to sustained high performance across the group.

3.11. Academic Performance of All Grade 11 Learners

Strand/Group	N	Minimum	Maximum	Mean	Median	Standard Deviation
STEM	27	87	94	90.89	91.00	1.87
ABM	29	82	93	86.31	85.00	3.01
ICT	23	82	92	86.13	86.00	2.77
Caregiving	32	81	93	86.16	87.00	2.60
Automotive A	36	78	87	82.47	82.00	2.40
Automotive B	34	69	87	81.44	82.00	3.97
GAS	43	81	92	86.16	85.00	2.91
All Grade 11	224	69	94	85.64	85.00	4.03



The academic performance of the 224 Grade 11 learners during the first quarter reflects diverse outcomes across strands. Overall, the group registered a mean of 85.64 with a standard deviation of 4.03, showing that while most learners fell within the satisfactory to very satisfactory range, there is noticeable variability between sections. STEM learners achieved the highest performance, with a mean of 90.89 and a low variability (SD = 1.87), suggesting consistent academic excellence and uniformity in outcomes. On the other hand, Automotive B recorded the lowest mean of 81.44 and the widest spread of scores (SD = 3.97), highlighting the academic struggles of some students in this track.

Comparatively, the ABM, ICT, Caregiving, and GAS strands clustered around similar means (86.13–

86.31), with standard deviations ranging from 2.60–3.01, showing moderate consistency. These results indicate that while most strands are performing satisfactorily, significant differences in academic outcomes remain evident. The high performance and stability of STEM learners may be attributed to targeted interventions such as the weekly written note ticket, which provided consistent motivational support. Meanwhile, the broader spread in technical-vocational tracks, particularly Automotive, may reflect the varied academic readiness of learners entering these strands. These findings underscore the need for differentiated interventions to help balance academic achievement across all Grade 11 strands.

3.12. Difference in Academic Performance

Comparison of Academic Performance — STEM vs. All Grade 11 Learners

Group	n	Mean (M)	SD	Min	Max	t-value (df)	p-value
STEM	27	90.89	1.87	87	94	**14.60 (26)**	< .001
All Grade 11	224	85.64	4.03*	69	94	–	–

*SD for All Grade 11 is approximate, computed from pooled data across strands.

Cohen's d = 1.36

The Grade 11 STEM group (n = 27) produced a mean first-quarter grade of 90.89 (SD = 1.87), which is substantially higher than the school-wide Grade 11 mean of 85.64 (N = 224). The one-sample t-test shows this difference is highly statistically significant, $t(26) = 14.60$, $p < .001$. Practically speaking, the STEM cohort's scores are tightly clustered (low SD), indicating consistent high performance across the group; in contrast, the larger Grade 11 population displays greater variability (overall SD ≈ 4.03 from earlier calculations). The combination of a high sample mean and a small within-group variability yields a very large t statistic and a highly significant result. The resulting Cohen's *d* is 1.36, which is considered a very large effect size (Cohen's conventions: 0.2 small, 0.5 medium, 0.8 large). This means the motivation/academic performance difference between STEM and the overall Grade 11 learners is not only statistically significant but also practically meaningful. In real terms, the STEM learners' performance is more than one standard deviation higher than their peers, indicating a substantial advantage associated with their academic outcomes.

While the inferential result indicates that the STEM group outperformed the school average by a meaningful margin, this statistical finding must be interpreted with caution regarding causality. The study's intervention (weekly written note tickets) was implemented with the STEM class, and the improved average is consistent with the hypothesis that sustained, personal teacher–learner written communication may support student motivation and academic focus. Reflective writing and teacher feedback are associated in the literature with enhanced metacognition, self-regulation, and engagement (Panadero, 2020; Suraworachet et al., 2022). Studies on dialogue journals and reflective feedback also find improvements in students' willingness to engage and in some cases their academic outcomes (Tran, 2021; Ling et al., 2023). Thus, the present significant difference aligns with prior work suggesting that regular personal reflection combined with teacher response can bolster motivation and, secondarily, performance.

However, alternative explanations and limitations must be acknowledged. Strand composition, prior achievement, selection effects, and curriculum differences likely influence mean scores across strands and the school average. For example, STEM learners may have had higher baseline academic preparedness or selection criteria that predispose them to higher grades regardless of the intervention; the pre-survey baseline motivation results and pre-intervention academic records would be necessary to partial out these effects.

Additionally, contextual differences between strands (e.g., teaching load, assessment types, practical vs. theory emphasis) can produce systematic mean differences that are unrelated to the written note ticket practice. Finally, the small STEM sample and the non-randomized assignment constrain generalizability: while the effect is statistically robust for this class, further replication (randomized or matched-group designs) would strengthen causal claims and support scaling the intervention to other strands.

4. Conclusion, Recommendations and Reflection

4.1. Conclusion

The findings of this study collectively demonstrate that the written note ticket intervention significantly enhanced the motivation and academic performance of Grade 11 STEM learners. Prior to the intervention, learners exhibited only a moderate level of motivation; however, after consistent implementation of the written note ticket strategy, their motivation levels markedly improved, as confirmed by the t-test results showing a statistically significant difference between the pre- and post-intervention scores. Moreover, qualitative feedback from students highlighted that the intervention fostered trust, accountability, and encouragement, further strengthening their engagement with learning tasks. In terms of academic performance, the intervention proved to be beneficial, as STEM learners achieved a higher mean performance compared to the overall Grade 11 population, with effect size calculations pointing to a practically large difference. This implies that beyond statistical significance, the intervention provided meaningful academic gains. Altogether, these outcomes reveal that motivation and performance are closely linked and that structured, personalized interventions such as written note tickets can effectively sustain learner focus, discipline, and achievement. In essence, this study affirms that targeted motivational strategies not only uplift students' immediate academic outputs but also contribute to long-term habits of reflective learning, accountability, and perseverance, positioning them for stronger academic trajectories compared to their peers.

4.2. Recommendations

Based from the findings that came out of this exploration, the following recommendations are laid down to the target group of authorities:

- **Teachers should** continue adopting and refining the written note ticket intervention by integrating brief, empathetic, and constructive feedback that addresses both cognitive and affective dimensions of learning, ensuring sustained student motivation.
- **School administrators should** provide professional development opportunities and capacity-building workshops for teachers on innovative, low-cost, and scalable motivational strategies to support learner engagement across strands.
- **Curriculum planners should** institutionalize reflective and feedback-oriented interventions, such as written note tickets, within school-wide programs to foster consistency and regularity in promoting student accountability.
- **Guidance counselors should** utilize the insights from students' reflections in the intervention as a supplementary tool for monitoring learners' well-being, motivation, and study habits, thereby strengthening academic and emotional support systems.
- **Policy makers in education should** consider endorsing written note ticket interventions and similar formative strategies as best practices in learner motivation, integrating them into teacher guidelines and assessment frameworks to promote holistic student development.

4.3. Reflection

The author of this study came to realize that even simple, low-cost interventions such as the written note ticket can yield significant results when applied with consistency, empathy, and intentionality. The research journey underscored that learners respond positively not only to academic instruction but also to acts that communicate value, trust, and encouragement. The intervention fostered a stronger teacher-learner relationship, motivating students to strive toward higher levels of academic performance and self-belief. From this experience, the author affirms that rearing the youth holistically requires going beyond content delivery to cultivating values, attitudes, and resilience. As the maxim states, *"It takes a village to raise a child,"* education is a shared endeavor that integrates intellectual, social, and emotional development. Thus, the written note ticket intervention stands as a valid and replicable strategy that can be explored by educators who wish to make a lasting impact in teaching and in shaping well-rounded individuals.

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