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Research Article

Motivational implications of the word-count tracking strategy for improving writing fluency: A study of Saudi undergraduate EFL learners

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This study examines the efficacy and motivational implications of the word-count tracking strategy as a viable teaching strategy for improving writing output among Saudi EFL undergraduates. An intensive writing program was conducted at the English Department Al-Majmaah University with two groups who were taught through two different approaches. The experimental group took a writing session once a week (for six weeks) with the word-count tracking strategy besides their regular credit hours writing classes, while the control group also took a weekly writing session along with regular classes in which students were taught through conventional approach without the word-count tracking strategy. The main hypothesis was that the experimental group would achieve a higher mean score than the control group after the implementation of the word-count tracking strategy. The difference between the mean score of the pre-test and post-test of the experimental group and the control group was found statistically significant at $p<.05$. The experimental group, despite achieving a lower mean score in the pre-test, made a 48.51% improvement in the post-test, while the control group showed only 20.33 % output increase. A questionnaire was also administered at the end of the study to evaluate students' perception of the word-count tracking strategy, the writing program, and their overall motivational level. Students had an overall positive perception of the strategy and believed that the writing program based on the word-count tracking strategy had enhanced their writing fluency as well as their motivation to participate more and more in such writing activities. The study recommends the word-count tracking strategy as a viable quantitative writing improvement strategy for implementation in EFL classes.

Keywords: EFL learners; Fluency; Motivation; Saudi undergraduates; Word-count; Writing skill; Writing output

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1. Introduction

English is a widely recognized global language and one of the most spoken languages in the world. It also plays a crucial role in the Arab world because of its use in various domains, including education, business, science, and technology. English proficiency is of utmost importance for Arab individuals as it opens up opportunities to study abroad and work in multinational companies. Middle Eastern countries have invested tremendous resources and efforts to improve English language teaching and learning. In Saudi Arabia, the English language has received huge attention from the Ministry of Education and people over the past few years

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(Al-Hajailan, 2003). However, various studies show that Arab students are still facing various challenges in learning the English language and their proficiency is relatively low (Al-Mahrooqi & Denman, 2014; Ashraf, 2018; Javid & Al-Malki, 2018). English writing skill is not an exception either. Even though, it is one of the most important language skills (Chmarkh, 2021), yet studies conducted by Gawi (2012), and Mustafa (2012) show low performance of Arab and particularly Saudi learners in the writing skill. Research by Alghizzi and Deen (2020) proves that Saudi students consider writing as the most difficult skill. Alkhairy (2013) believes that Saudi students of English major lack proper vocabulary so they fail to express themselves in writing. Apart from lack of vocabulary, negative transfer from the native Arabic language is another reason that leads to lexical errors in writing (Ababneh, 2017). Students state that since they use Arabic most of the time everywhere outside the classroom, they find fewer opportunities to practice English. A study conducted at Jazan University highlighted numerous syntactic errors committed by Saudi students (Hafiz et al., 2018). Al-Khasawneh (2010) propounded that the grammatical weakness of Saudi EFL / ESL students hampers their progress in academic writing. Besides that, studies have shown that students' motivation level also affects their writing abilities as they consider writing a boring activity which only brings them criticism and negative feedback from their teachers (Fattah, 2015). Ultimately fear of criticism leads to performing anxiously while writing which negatively affects Saudi students' writing skills (Aloairdhi, 2019).

In writing classes, teachers and students pay more attention to grammatical perfectionism and error hunting. In order to avoid bad grades and to preserve the self-respect getting affected by the negative criticism of the teacher, students resort to rote learning and memorization. As a result, students feel frustrated and demotivated about writing. However, these challenges can be overcome if teachers motivate students, because failure and lack of motivation may pile up the daunting challenges of learning (Elyas & Picard, 2018). In order to improve writing fluency, it is imperative to motivate students to write more, without any fear of error hunt (Eshghinejad, 2016). Hence, it is crucial that students are provided with a congenial environment where they may write on topics of their choice, monitor their progress, and get positive collective feedback. Haynes (2007) observes that EFL learners can improve their writing by producing more writing output. Lagan (2000) believes that students will improve their writing by writing more. Tehsildar (2018), after a 12 week long study believes that writing more improves writing. Ismail (2011) also believes that writing skill can improve if the interests of the learners are prioritized and they are given the freedom to write on topics of their interest. In this situation, the need for an innovative and proper teaching strategy for writing skill becomes a vital need. Studies have shown that various strategies have been used to help students overcome their fear of committing mistakes and become prolific and efficient writers. The present study targets one aspect of writing, fluency, and one teaching strategy to improve it, word-count tracking. The major aim is to improve learners' writing output by monitoring their word-count exclusively. It is hypothesized that the word-count tracking strategy will increase the amount of writing. Word-count is the quantitative measurement of writing output, and this study evaluates its efficacy as a viable strategy to improve writing in the Saudi EFL scenario. Word-count tracking has been used as a quantifying criterion in various studies under the Curriculum-Based Measurement approach (Deno, 2003; Lavik, 2014). However, there is a lack of research using it as the sole measurement criterion, particularly in the Saudi EFL scenario. This study aims to fill this research gap.

1.1. Word-Count and Fluency

Word-count is the maximum number of words a student can write within a specific time span. The word-count strategy quantifies writing output to measure students' writing fluency. As Kowal (2014) notes, defining fluency is challenging due to its complex nature, which encompasses writing quickly, effortlessly, and without pauses or revisions. Fluency generally refers to the ease of reproducing language knowledge (Nation, 2014) and is a fundamental component of second language learning (Alisaari & Heikkola, 2016; Elbow, 1973; MacGowan-Gilhooly, 1991). Schmidt

(1992) describes fluency as an "automatic procedural skill relatively free from conscious attention." Writing fluency is often measured by quantity, such as words or units per minute (Chenoweth & Hayes, 2001; Elola, 2006). In quantitative writing assessment, word counts, frequency counts, and paragraph and sentence lengths are used to evaluate writing output (Lavik, 2014). Thus, word-count serves as a measure of writing fluency. Quantifying measurements like word-count may not capture the entire writing process, they provide an objective view of writing progress (Lavik, 2014).

1.2. Word-Count and Motivation

Motivation is the driving force behind our actions and behaviors, serving as the "moving cause" (Petri & Cofer, 2024). It is the satisfaction and sense of achievement that drives us to reach targets and achieve goals. Motivation can be extrinsic, such as rewards or physical benefits, like good grades or certificates of achievement in an academic setting (Dhaif-Allah, 2005). Alternatively, motivation can be intrinsic, stemming from feelings of satisfaction derived from successful problem-solving, goal achievement, or personal growth, like learning a foreign language. Aldosari (2014) notes that intrinsic motivation arises from the value attached to learning and success itself, rather than external rewards. Extrinsic and intrinsic motivations are interconnected, as rewards enhance our sense of achievement, leading to increased zeal and excitement in pursuing tasks. In education, learners' motivation is a crucial factor in their improvement, as they face challenges, set targets, and work hard to achieve them in a supportive environment. This process builds confidence and enhances motivation for further learning, as there is a reciprocal relationship between motivation and learning (Vu et al., 2021). Motivation leads to success, and success fuels further motivation. The cycle of these variables are as in Figure 1.

Figure 1
Motivation-Achievement Cycle (basic idea adapted from Vu et al., 2021)

Note. Adapted from Vu et al. (2021).

Motivation is crucial for maintaining consistency in writing progress. The key question is how the word-count tracking strategy relates to motivation. To understand this relationship, we can explore the theories of motivation, which will provide valuable insights into how word-count tracking influences motivation and ultimately, writing progress.

1.2.1. Maslow's Hierarchy of Needs

Maslow's theory posits that human motivation is driven by a hierarchical structure of needs, ranging from physiological and safety needs to belongingness and esteem needs, culminating in self-actualization (Pichere & Cadiat, 2015). Our actions are driven by the desire to fulfill these needs. For writers, a conducive environment (physiological and safety needs) and encouragement (belongingness and esteem needs) are essential for effective writing. The word-count tracking strategy, combined with a free writing approach, provides an anxiety-free environment,

addressing basic needs. Additionally, it fosters a sense of achievement and progress, satisfying higher-level needs and contributing to self-actualization.

1.2.2. Self-Determination Theory

This theory highlights the significance of intrinsic and extrinsic motivations, emphasizing three fundamental psychological needs: competence, autonomy, and relatedness (Ryan & Deci, 2000). Word-count tracking can fulfill the need for competence by providing tangible progress, thereby enhancing a writer's confidence. Additionally, it supports autonomy as writers set personal goals and track their progress independently. Furthermore, sharing word-count milestones with a community can satisfy the need for relatedness, fostering a sense of connection and belonging.

1.2.3. Goal-Setting Theory

According to Locke and Latham's (2013) Goal-Setting Theory, specific and challenging goals significantly enhance motivation and performance. The word-count tracking strategy directly applies this theory, as setting a specific daily or weekly word-count goal provides a clear and challenging target that motivates writers to persist and work towards achieving it.

1.2.4. Expectancy Theory

Vroom's Expectancy Theory proposes that motivation arises from expected outcomes, comprising three key components: expectancy (the belief in one's ability to achieve the goal), instrumentality (the belief that achieving the goal will lead to a reward), and valence (the value placed on the reward) (Vroom & Deci, 1983). By tracking their word count, writers can clearly see the connection between their effort and progress (expectancy). This tracking often leads to rewards, such as achieving a target or receiving positive feedback (instrumentality), which are highly valued (valence). This process enhances motivation, as writers believe in their ability to achieve their goals and appreciate the rewards that come with it.

1.2.5. Behavioral Theories

Behavioral theories, such as those proposed by Skinner (1953), emphasize reinforcement and punishment as motivators. Positive reinforcement strengthens desired behaviors, while punishment discourages undesired ones. Word-count tracking acts as a form of positive reinforcement, providing immediate feedback and satisfaction, thereby reinforcing regular writing behavior.

The psychological relationship between motivation and word-count is evident. Word-count represents goal setting, achievement, autonomy, and positive reinforcement through feedback. Research has consistently shown the importance of motivation in language learning, with goal setting significantly impacting achievement in ESL and EFL scenarios (Dhaif-Allah, 2005; Fontecha & Gallego, 2012; Che Mat & Yunus, 2014). Motivation can even enable mediocre students to outperform intelligent ones (Fontecha & Gallego, 2012). In the Saudi context, studies have highlighted the crucial role of motivation across various academic levels and gender orientations (Alrabai, 2014; Al-Qahtani, 2013; Dhaif-Allah, 2005; Mohammed, 2015).

To foster motivation, teachers should make courses goal-oriented and relevant to students' lives, instilling positive beliefs and leading to improved performance (Dhaif-Allah, 2005). The teacher's role is vital in seeking innovative techniques to maintain student motivation. With this in mind, the researcher introduced word-count tracking as a motivational strategy, where students quantify and graph their progress, setting targets and experiencing a sense of achievement and competitiveness. This approach provides intrinsic motivation through self-competitiveness and extrinsic value through measurable progress. By implementing word-count tracking, teachers and students can utilize this motivational impetus to enhance writing fluency and quantify progress. This strategy can be implemented by teachers in their classrooms as well as by the students themselves as a Self-Motivated Language Learning [SMLL] practice (Farooqi, 2024) to quantify and improve their writing fluency.

Psychologically, our desire for achievement drives us to set goals, overcome challenges, and feel thrilled and excited about our progress. Behaviorist psychologists suggest that positively rewarded longitudinal activity strengthens engagement with a task, leading to better learning. Bandhu et al. (2024) believe that motivation is the driving force behind engagement, observable behaviors, and cognitive efforts. High-intensity motivation (frequent rewards) fosters deep commitment and focused engagement, while persistent motivation (long-term rewards) sustains engagement over time. Motivation is the enduring force that helps us overcome challenges, set goals, and achieve targets.

In EFL scenarios, where writing is a challenging skill, teachers must encourage students to write without fear of being error-hunted. Strategies like word-count tracking quantify progress, providing a motivational impact. By setting and achieving higher goals, students experience emotional pressure to put in their best effort, leading to improved learning. In our study, the word-count strategy converges extrinsic and intrinsic motivational values, utilizing quantified progress and the sense of achievement to motivate students.

1.3. Word-Count as Goal Setting, Performance Feedback, and Contingent Reward Strategy

The word-count tracking strategy has multidimensional psychological implications. In their "meta-analytic review of the writing fluency interventions literature" López-Escribano et al. (2022) grouped fluency enhancement interventions under eight categories. Three of them are goal setting, performance feedback, and contingent rewards. Goal setting and feedback are integral components of any teaching intervention aimed at motivating students to achieve specific targets. These strategies have been shown to improve academic performance effectively (Alitto et al., 2016; Graham et al., 1998). In such interventions, students set their own targets for writing tasks, such as word count or paragraphs, and their performance serves as feedback. Research by Graham and Perin (2007a, 2007b) demonstrates the efficacy of these interventions in enhancing writing fluency. Regarding contingent rewards, Hansen and Wills (2014) suggest establishing a motivational-based system that provides reinforcement and encouragement when students achieve their identified goals. The word-count tracking strategy meets all three parameters, making it a viable writing enhancement strategy. By setting daily targets and surpassing them, students satisfy their goal-setting and target achievement drives, with success serving as a reward. The self-graphic chart view provides performance feedback, aligning with Alitto et al.'s (2016) finding that continuous self-referenced feedback motivates students and improves learning.

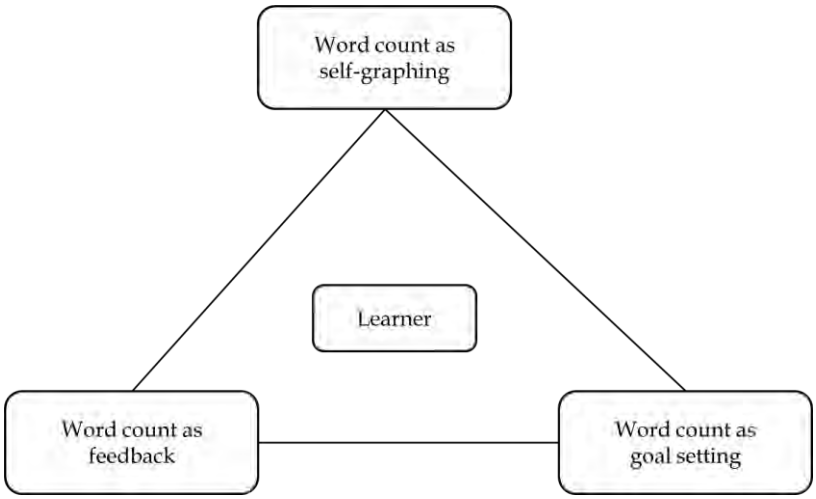
Regarding the implementation of forementioned strategies, Alitto et al. (2016) express the following parameters: 1) Goals should be clear, 2)They should be challenging yet achievable, 3)Feedback on progress should be clear and objective, and 4)Evaluation of students' performance should be through self-referenced standards. These parameters were also observed in the present research. Students were given the sense of targets they had to achieve. Their targets were challenging but achievable. Charting and graphing provided constant feedback about their progress. The evaluation was not superimposed by the teacher, it was a process of self-realization about one's own performance.

1.4. Word-Count and Self-Graphing

The concept of Self-Graphing originates from Curriculum-Based Measurement [CBM], developed by Stan Deno in the 1970s to measure student progress in basic academic areas like math, reading, writing, and spelling (Cusumano, 2007; Deno, 2003). In CBM, short tests (1-5 minutes) are administered, and performance is recorded on a graph. Self-graphing involves visually displaying a learner's progress by converting daily progress into charts and graphs (Figarola et al., 2008; Mace & Kratochwill, 1988; Onoue et al., 2017). Figarola et al. (2008) describe self-graphing as setting an "aim line" or "a goal for each practice session." They used Microsoft Excel to display progress in graph form. Research has shown that combining goal-setting and self-graphing strategies improves students' fluency. Studies have applied self-graphing to various areas, including Attention-Deficit/Hyperactivity Disorder (Codding et al., 2005), reading performance (Gunter et

al., 2003), multiplication problems (Onoue et al., 2017), and behavioral self-management (Farrell & McDougall, 2008). Self-graphing provides feedback, enabling individuals to self-manage their learning process. In our context, word-count and its graphic representation serve as a visual display of progress, a goal-setting activity, and a form of feedback, facilitating self-management of the learning process. This approach has been effective in enhancing student motivation and engagement. By regularly tracking progress, individuals can identify areas for improvement and develop a sense of accomplishment as they achieve their goals. In this way, word count is a trio activity that combines elements of three; self-graphing, goal setting, and feedback (see Figure 2). Viewing one's own progress is a kind of behavioral reinforcement for if the progress is upward the learner is positively motivated, and if the progress goes downward the learner gets a lesson to make it right next time. We used self-graphing to visually showcase the experimental group's progress (see Appendix 3).

Figure 2
Word-count as Trio-activity: self-graphing, goal setting, and feedback



2. Literature Review

Over the past few years, EFL/ESL teachers and researchers have consistently emphasized the need for in-depth investigations into writing fluency, as a significant majority of learners struggle with writing tasks (Williams, 2001). Berninger et al. (2006) argue that fluency is a crucial aspect of writing skill, essential for effective communication. Hier and Eckert (2014) have identified a notable lack of fluency in writing skills at the elementary level, highlighting the need for targeted interventions. Experts recommend supplementary fluency improvement strategies, in addition to existing classroom practices (Limpo et al., 2018; Martens et al., 2011). The primary objective of fluency is to attain proficiency in language, enabling learners to express themselves effectively. In-class strategies incorporating short, timed writing activities and skill improvement practices are considered effective for fluency improvement (Nation, 2014). These strategies aim to assess the length and extent of written text, providing valuable insights into overall content and structure (Hughes et al., 2012). In their research on narrative writing, Alghizzi and Deen (2020) focused on fluency, quantifying it in terms of words, clauses, T-Units, and sentences. Word-count, a basic yet essential metric, serves as a fundamental quantification of fluency, providing a starting point for further analysis.

The word-count tracking strategy is an integral component of Curriculum-Based Measurement [CBM], a widely recognized approach in educational assessment (Deno, 2003; Lavik, 2014). According to Deno (1985), Total Written Words [TWW] count is a reliable and valid CBM criterion for measuring elementary students' writing performance. This approach emphasizes the importance of regular and accurate evaluations of students' academic skills, aligning with the belief that periodic assessments are crucial for measuring progress.

In CBM, students' writing performance is evaluated through time-based tests aligned with their curriculum. The results are graphed to measure progress, and teachers quantify progress using various parameters, including word-count tracking. This strategy evaluates students' writing progress, aligning with O'Brien et al.'s (2013) research on the impact of setting a minimum word-count target on writing tasks. The study demonstrated that setting a word-count target increases writing output, with the experimental group producing an average of 117.43 words compared to the control group's 72.57 words.

Sakihama (2005) explored the impact of word-count limitation on expository writing, finding that students with a 200-word limit wrote fewer essential ideas than those with a 400-word limit and those with no limit. Although the restricted (200 word limit) group excelled in brevity and accuracy, the unlimited group produced more extensive writing. Sakihama concluded that students free from word-count limits can discuss topics more thoroughly, highlighting the importance of flexibility in writing assignments.

Moreover, Alghizzi and Deen (2020) used word count as a frequency measure of fluency in their research on the impact of English native-speaker kids' reading websites on Saudi EFL learners' narrative writing. While they found a positive impact on writing fluency, they did not utilize word-count tracking as a writing improvement strategy. This highlights the potential benefits of incorporating word-count tracking into writing instruction, as it provides a clear and measurable goal for students to work towards.

Wolfe-Quintero et al. (1998) conducted a comprehensive analysis of 39 studies to identify various analytical measures that represent fluency. They calculated words per minute, per clause, and per T-unit as expressions of writing fluency, assuming a correlation between time and fluency. The more words written, the more fluent the writer. Nation (2014) advocated for time-bound writing activities to enhance writing fluency. Alharthi (2021) evaluated the efficacy of journal writing in improving word count in the Saudi EFL context. The experimental group engaged in free writing journal sessions, while the control group received conventional instruction. Daily word count and spelling and punctuation mistakes were tracked, but progress was not graphically demonstrated. Results showed the experimental group improved in word count and reduced errors. Al-Ahdal and Mariam (2021) investigated the impact of anxiety on writing fluency and how strategy intervention could improve output. They found that students with less anxiety wrote significantly more words and sentences than those with higher anxiety. Lavik (2014) used Correct Writing Sequences (CWS) as an outcome measure in a study on goal setting to improve writing fluency. Six participants' writing samples were graded for total words written, correct minus incorrect writing sequences, and correct punctuation marks. Goal setting was effective in improving writing under these quantifying criteria. Kowal's (2014) longitudinal study spanning three years revealed a non-linear pattern of progress in writing fluency among Polish students, with individual variability in writing output. Lee and Al-Khateeb (2021) used word-count as a quantifying measure in their research on the effects of writing media (smartphone vs. paper) on Saudi EFL learners' writing fluency, building on previous research that quantified fluency in terms of words produced in a limited time.

In the aforementioned studies, the word-count strategy is employed in conjunction with other quantification criteria, but not as a standalone quantification or sole writing improvement intervention. This gap in research motivated the current study to investigate the pedagogical benefits of word-count tracking as a writing improvement intervention in the Saudi EFL scenario. Despite its limitations, this micro-focused research aims to contribute to the field. Word-count tracking represents students' effort to write fluently without fear of errors, but it does not necessarily reflect overall structural and grammatical accuracy. As Lavik (2014) suggests, word-count tracking should be used as a fluency enhancement strategy to motivate students to achieve higher proficiency, combined with grammatical and structural teaching strategies for comprehensive writing development.

In addition, word-count tracking aligns with the principles of self-regulated learning, which emphasizes students' agency and autonomy in their learning process (Zimmerman, 2000). By setting targets and tracking progress, students take ownership of their writing development, fostering a growth mindset and motivation to improve. This approach also enables teachers to provide targeted feedback and support, tailoring instruction to meet individual students' needs.

In conclusion, word-count tracking is a valuable strategy in writing instruction, offering a clear and measurable goal for students to work towards. By incorporating this approach into CBM, teachers can evaluate students' writing progress, provide targeted feedback, and foster a growth mindset. As research continues to highlight the importance of writing fluency, word-count tracking emerges as a crucial tool in promoting students' writing development.

The word-count strategy can be integrated into writing improvement interventions, requiring teachers to be innovative and adaptive. Various techniques have been researched in the Saudi EFL scenario, including Strategy-based Instruction (McMullen, 2009), free writing Journal (Alharthi, 2021), word processor (AbuSeileek, 2006), feedback (Al-Saleh, 2018), reading-to-learn strategy for writing (Listyani, 2018), and prewriting (Magulod, 2018). These studies demonstrate teachers' implementation of diverse instructional practices to teach writing (McCarthy & Ro, 2011; Tse & Hui, 2016), highlighting the importance of students' motivational willingness to practice. To overcome writing problems, students need to practice with a positive attitude and intrinsic motivation, as practice with enhanced motivation yields better writing output.

Historically, writing instruction focused on teaching grammatical rules until the 1970s (Pour-Mohammadi et al., 2012). However, the Fluency First Approach (MacGowan-Gilhooly, 1991) shifted the focus to allowing students to express themselves freely before teaching error correction. This approach acknowledges that grammatical constraints can limit fluency and produce anxiety (Graham & Perin, 2007a; Graham & Harris, 2009). Chmarkh (2021) emphasizes the importance of writing in learning and advocates for promoting writing-to-learn activities in the classroom. Manchón and Roca de Larios (2011) also highlight the benefits of intensive English writing activities for students. By adopting a step-by-step approach and providing opportunities for students to write on topics they love, teachers can help students overcome their fear of errors and improve their writing skills. I also believe that teachers need to adopt a step-by-step approach and let the students shun their fear of committing errors by providing them an opportunity to write more on the topics that they love.

With this idea in mind, an intensive writing program was conducted in the English department of Almajmaah University Saudi Arabia. The program aimed at evaluating the efficacy of word-count tracking strategy for motivating students to write more. Considering the importance of writing, the English department had already introduced Writing 1, Writing 2, and Advanced Writing courses in the Baccalaureate program. However, this intensive writing program was an additional booster for enhancing the writing proficiency of students.

In our study, word-count tracking of written output is used as a measurement of progress as well as a motivational impetus for Saudi students to improve their writing skill. Maximizing word count is considered as a sign of fluency and enhanced output on the part of the students. The focus of the study was not the quality of the writing as such but the amount of writing output.

3. The Aim

The main objective of the study is to evaluate the effects of word-count tracking as a viable, effective strategy to improve writing output. Moreover, the research has the following secondary objectives: First, it aims to see the motivational impact of the word-count tracking when students are able to see the visual progression of their output through self-graphing. Second is to introduce the word-count tracking strategy as a supporting technique along with other techniques for improving writing. Finally, it aims to educate students about the word-count tracking strategy and enabling them to use it for improving their writing fluency.

This paper primarily hypothesizes that the word-count tracking strategy will increase the amount of writing. Therefore, this study has these four research questions:

RQ 1) Does the word-count tracking help in improving the quantity of writing output?

RQ 2) To what extent does the word-count tracking help in improving students' quantity of writing output?

RQ 3) How instructional focus on the word-count tracking enhances students' motivation to write more?

RQ 4) What is students' perception about the word-count tracking as a writing output enhancement technique?

4. Methodology

This study was conducted at the English department of Al-Majmaah University Saudi Arabia. The researcher selected two groups of students of English Baccalaureate to teach writing skill (Control Group *N*=22 and Experimental Group *N*=23). The experimental group had to attend weekly sessions (based on the word-count strategy) along with their regular class periods. The control group was taught through conventional instructional method and the curriculum based on the Writing 2 course. They also had a weekly writing session for consecutive six weeks. The process is as summarized in Table 1.

The performance of both the groups was measured in terms of their word count. However, the students in the experimental group monitored their word-count through graphic representations daily, while the control group had no such idea that their words were being counted to measure their output. The researcher used IBM SPSS Statistics 26 to perform the necessary statistical tests and procedures. A pre-test and post-test for each group was conducted and their results were compared. For this purpose, the researcher used Paired sample t-test. This statistical test compares the means of the same group in two conditions to see if there is a significant difference between them. This test is used to see if there is a change in test scores before and after an intervention.

4.1. Participants

The participants of the study comprise of 45 male students of the English language baccalaureate program divided into two groups. All participants were students enrolled in the intermediate-level Writing 2 course, with an age range of 18 to 20 years and a mean age of 19.47 years. Their academic competence was assessed based on their performance in the Writing 1 course, with grades ranging from 85 to 95 percent and a mean score of 89.28. Informed consent was obtained from all participants through a consent form, ensuring their understanding of the research's purpose and procedures. They were assured that their participation posed no physical risks and that their personal information and data would remain confidential and secure, with no sharing or disclosure to external parties. Characteristics of the participants are presented in Table 2.

4.2. Social Validity Scale (Questionnaire)

Secondly, a five-point Likert scale questionnaire of 17 items, based on the Social Validity Scale for students (Intervention Rating Profile (IRP-15) (Martens et al., 1985), was used for the experimental group to determine students' perception towards the word-count tracking technique. The questionnaire was administered through Google Forms, a convenient and accessible online platform. To align with the specific objectives of the present study, the questionnaire was carefully modified and trimmed down to 17 concise questions. During the drafting process, guidance was sought from established research instruments, including Petrić and Czárl's (2003) writing strategies questionnaire, as well as Raoofi et al.'s (2017) work. This ensured that the questionnaire was informed by existing research and optimized for effective data collection. In the light of motivation theories, five pivotal aspects guided the drafting of the questionnaire: 1) Experience of the activity, 2) Perception about the activity, 3) Benefits for writing, 4) Motivation to use the activity, and 5) How it is related to goal setting and achievement.

Table 1
Writing program plan

Programme	*Date*	*Groups*	*Activity*	*Objective*
Session 1 (pre-test)	29.1.2019	Experimental	Word-count tracking	Maximizing writing fluency
		Control	Free writes	General writing
Session 2	5.2.2019	Experimental	Word-count tracking	Maximizing writing fluency
		Control	Free writes	General writing
Session 3	12.2.2019	Experimental	Word-count tracking	Maximizing writing fluency
		Control	Free writes	General writing
Session 4	19.2.2019	Experimental	Word-count tracking	Maximizing writing fluency
		Control	Free writes	General writing
Session 5	5.3.2019	Experimental	Word-count tracking	Maximizing writing fluency
		Control	Free writes	General writing
Session 6 (post-test)	12.3.2019	Experimental	Word-count tracking	Maximizing writing fluency
		Control	Free writes	General writing

Table 2
Demographic analysis of experimental and control group

Group	Age	*Frequency*	*Percentage*	*Grades mean score of Writing 1*
	18 years	4	17.39	89.5
Experimental Group	19 years	8	34.78	88.5
	20 years	11	47.82	89.27
Mean	19.3 years			89.09
Control Group	18 years	1	4.54	87
	19 years	6	27.27	92.33
	20 years	15	68.18	89.13
Mean	19.63 years			89.48
Overall Mean	19.47 years			89.28

The questionnaire was carefully standardized with the valuable input of experts to ensure its cultural relevance and appropriateness for the Saudi cultural context. To facilitate understanding and minimize potential comprehension issues, the questions were presented in both English and Arabic. This dual-language approach was deliberate, as the primary objective of the questionnaire was to gauge students' social response to the word-count strategy, and any reading comprehension problems could have compromised the validity of the results. To ensure clarity and reliability, a brief pilot project was conducted to identify and address any linguistic or comprehension ambiguities. Additionally, Cronbach's alpha was calculated to assess the internal consistency of the questionnaire. The 17-item questionnaire demonstrated an excellent level of reliability, with a Cronbach's alpha of $\alpha = 0.96$, indicating a highly reliable measure. By utilizing two data sources, the research aimed to broaden its scope, enhance dependability, and increase validity (Zohrabi, 2013). This multi-faceted approach enabled a more comprehensive understanding of the research topic.

4.3. Writing Program Committee

A five-member Writing Program Committee was established, comprising the researcher and four expert writing teachers from the department, to oversee the writing sessions and manage the research procedures. This committee was responsible for various aspects of the study, including selecting the sample, maintaining research protocols, conducting writing sessions, ensuring students' participation, collecting and preserving data, and ensuring the overall smooth execution of the research. With their expertise in teaching writing courses, the committee members brought valuable insights and expertise to the research team, contributing to the study's validity and reliability.

4.4. Material

The researcher employed Free-Writes as a technique for generating writing tasks, which are non-graded, informal writing activities that can be conducted with or without a time limit. This approach provides students with the freedom to write about topics of their interest, monitor their progress, and stay motivated. Such techniques offer students the autonomy to explore topics they are passionate about, leading to enhanced writing output (Galegane & Ntereke, 2022). Ferris (2014) also advocates for free writing, suggesting that it improves students' writing skills. To facilitate students, a list of 10 general topics was compiled in consultation with expert writing teachers, as shown in Table 3. Additionally, students were given the flexibility to choose any topic of their preference, provided they felt they had sufficient ideas to write about. Both the experimental and control groups were provided with these topics, ensuring a comprehensive and fair research design.

Table 3
List of Topics

1	My daily routine, morning, noon, evening.	6	Modern technology, its uses, benefits and disadvantages.
2	A memorable family or friend holiday trip.	7	Saudi culture, music, and traditions.
3	My family members and their life stories.	8	Tourist places in KSA.
4	My future dreams and plans for the next 30 years	9	Favorite hobbies and pastimes.
5	My favorite film, book, story, or place.	10	Time travel, unforgettable journey.

4.5. Data Collection

The data was collected from two sources: the intensive writing program and an attitude evaluation questionnaire. The writing program spanned over six weeks, with weekly writing sessions for both the experimental and control groups. Each session lasted 45 minutes, with the first five minutes dedicated to topic discussion and brainstorming. The researcher and other teachers assisted

students in expanding and diversifying their ideas. A special standardized writing page (Appendix 1) was developed, and each student received a file to record their daily writing output. Additionally, a Google sheet was created and shared with the experimental group, where the word count for each session was uploaded, providing a visual representation of their progress. At the end of each session, students counted their words and recorded the total in the designated space on the writing page. The experimental group had one constraint: to surpass their previous session's word count in each subsequent session, with the goal of continuous improvement. In contrast, the control group's data was collected by teachers during their sessions, where students wrote freely on their chosen topics without word count restrictions or limitations. However, they were briefed on the importance of writing fluency, maximizing output, and accuracy, as per the requirements of the Writing 2 course.

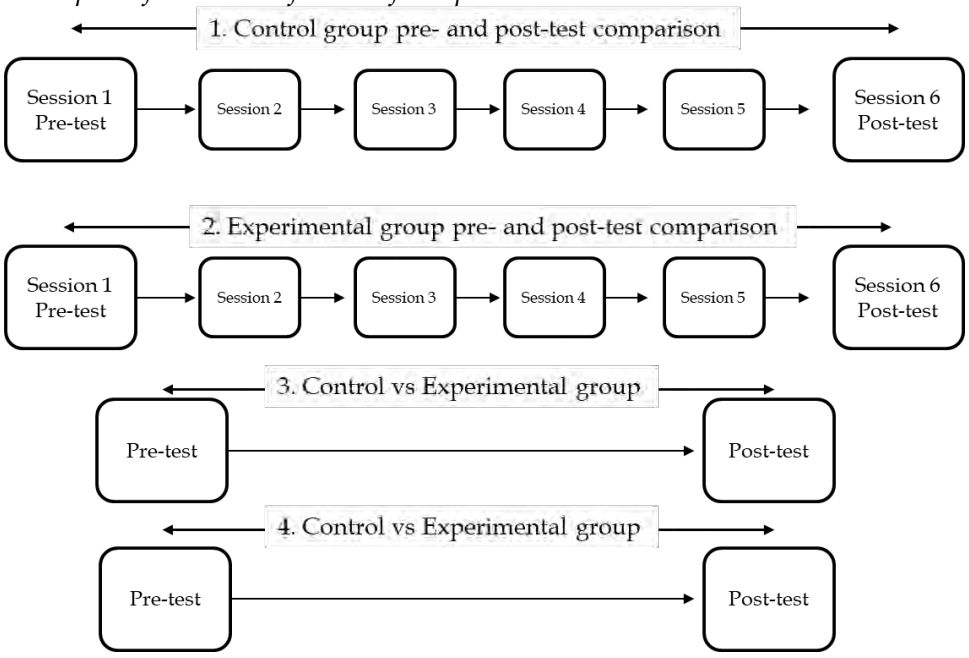
The second source of data was a questionnaire that was administered through Google Forms among the students of the experimental group to assess their perception about the word-count strategy and how it had helped them maximize their writing output and whether they would like to use this technique while performing writing tasks in future or not.

4.6. Conceptual Framework of Data Analysis

This research encompasses a comprehensive analysis of writing output, with data examined at four distinct levels. The first level involves a comparison of the control group's pre-test and post-test results, assessing any changes within the group. The second level similarly compares the experimental group's pre-test and post-test results, evaluating the impact of the writing intervention on their output. At the third level, the writing output of both the control and experimental groups is compared in their pre-tests, providing a baseline understanding of their writing abilities. Finally, at the fourth level, the post-test results of both groups are compared, revealing any differences in their writing output after the intervention. Additionally, the research explores the output of both groups on specific days between the pre-test and post-test, when they completed writing tasks as part of the study. This comprehensive analysis provides a thorough understanding of the research outcomes. The process is presented in Figure 3.

Figure 3

Conceptual framework of levels of comparisons



5. Findings

5.1. Findings of the Writing Program

As discussed earlier, the data was collected from two sources: the intensive writing program and a program questionnaire. First of all, we will analyse the data of the writing program and see what results it yields. The first research question, "Does the word-count tracking help in improving the quantity of writing output?" is based on the hypothetical concept that tracking word count enhances writing output. We hypothesize that the experimental group will achieve a higher mean score than the control group after the implemention of the word-count tracking strategy. To evaluate this hypothesis, we compiled and analyzed the students' writing output data using descriptive statistics. This data was generated in the intensive writing program, where the experimental group was tasked with writing more words than their previous session's performance and counting their words. In contrast, the control group followed conventional practice methods without word-count tracking, focusing on expressing their thoughts accurately and fluently as per the course objectives. Their teachers maintained their word count records. Session 1 served as the pretest.

Due to the unequal sample sizes of the experimental (N=23) and control (N=22) groups, we conducted a variance test to assess the assumption of homogeneity of variance. The result showed a variance ratio of 1.19, less than 4, indicating approximately equal variances between the two groups. We then performed an unpaired t-test to compare the two groups (see Table 4). Both groups performed similarly in the pretest, with the control group having a slightly higher average score. There was no statistically significant difference in scores between the experimental group (M = 87.73, SD = 33.37) and the control group (M = 89.86, SD = 36.46); t (43) = −0.2036, p = .84, with p > .05.

However, the pre-test data shows that the control group (M = 89.86) outperformed the experimental group (M = 87.73) in average word count, with a mean difference (∂mean) of 2.1245. Initially, the experimental group produced 2.36% fewer words within the stipulated time. Notably, the standard deviation of both groups indicates significant variation in word count production within each group, reflecting a wide range of proficiencies. However, the experimental group (SD = 33.37) appears relatively homogeneous compared to the control group (SD = 36.46) (see Table 4). This could be attributed to the procedural briefing provided to the experimental group to write more at the outset.

Table 4
Comparison of Control Group and Experimental Group's Pretest Scores

Group	*N*	*Mean*	*SD*	*t*	*df*	∂_{mean}	*% differ*	SD_{∂}	*p*	*Confidence level*
EXP	*23*	87.73	33.37	−0.2036	43	−2.124506	−2.36	34.91685	0.84	16.04 %
CONT	*22*	89.86	36.46							

The next step in data analysis is to compare the pre-test and post-test scores of the experimental group and the control group. The null hypothesis states that the post-tests have the same mean as the pre-test. To test this hypothesis, a two-tailed paired sample t-test was performed.

The results of the experimental group's pre and post-tests show a highly statistically significant difference, t(22) = 6.1274, p < .05, as reflected in Table 5. The experimental group's post-test has a higher mean score (M = 130.30, SD = 36.92) than the pre-test (M = 87.73, SD = 33.37).

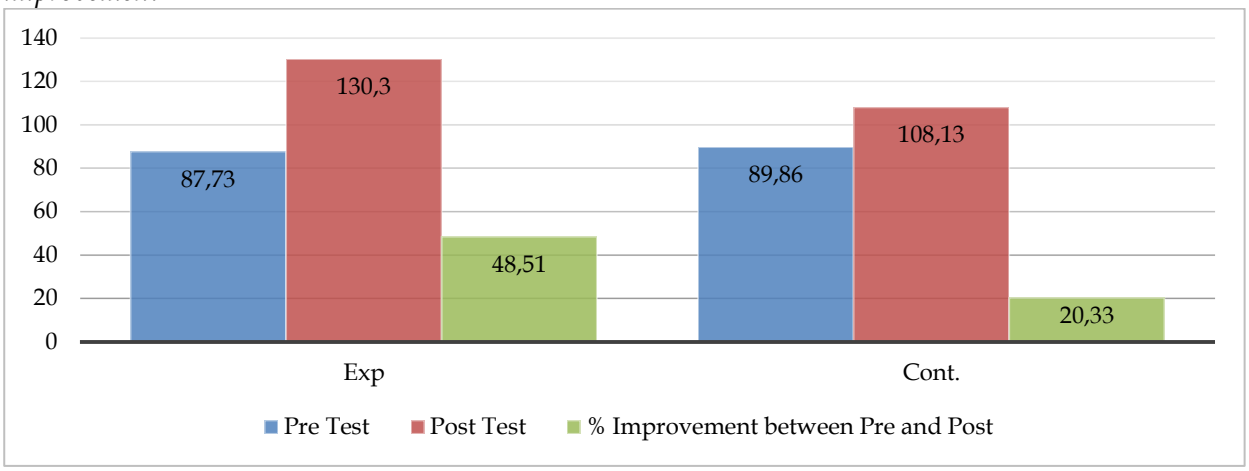
In contrast, the control group's paired sample t-test results show that the difference between the pre and post-tests is not statistically significant, t (21) = 2.0022, p > .05. Although their post-test mean score has increased (M = 108.13, SD = 36.64) from the pre-test score (M = 89.86, SD = 36.46), it is not statistically significant. Hence, the results statistically prove that the word-count tracking strategy has contributed to increasing the writing output of the experimental group, while the control group, taught through the conventional method, did not show significant improvement.

Table 5
Comparison of Experimental Group and Control Group's Pre-test and Post-test Scores

Group	*N*	Group	*Mean*	*SD*	*t*	*df*	∂_{mean}	% differ	SD_{∂}	*p*
EXP	*23*	Pre	87.73	33.37	6.1274	22	42.56	48.51	33.31	<.05
		Post	130.30	36.92						
CONT	*22*	Pre	89.86	36.46	2.0022	21	18.27	20.33	42.80	>.05
		Post	108.13	36.64						

Moreover, Figure 4 illustrates a notable difference in the performance of the experimental and control groups. Initially, the experimental group had a lower mean score (*M* = 87.73) in the pre-test, but after implementing the word-count strategy, their mean score surged significantly to (*M* = 130.30). In contrast, the control group's initial mean score (*M* = 89.86) only increased to (*M* = 108.13). This translates to a remarkable 48.51% improvement in writing output for the experimental group, whereas the control group showed a modest 20.33% improvement between the pre and post-tests.

Figure 4
Comparison of Experimental Group and Control Group's Pre-Test and Post-Test means and percentages of improvement



Next, a two-tailed unpaired t-test was conducted to compare the post-test mean scores of both groups, aiming to determine if the word-count tracking strategy had a significant impact on the experimental group's performance. As shown in Table 6, the results indicate that the experimental group, after utilizing the word-count tracking strategy, achieved a statistically higher post-test mean score (*M* = 130.30, *SD* = 36.92) compared to the control group (*M* = 108.13, *SD* = 36.64). This notable difference suggests that the experimental group made significant progress in their writing output, surpassing the control group's performance.

The difference between the two groups is statistically significant, with t (43) = 2.02, and $p < .05$. This indicates that the probability of observing such a difference solely by chance is less than 5%, making it is unlikely that the null hypothesis is correct. Instead, there is a 95.0466% probability that the null hypothesis is incorrect, bolstering our confidence in the hypothesis that the experimental group would outperform the control group after implementing the word-count tracking strategy. Our confidence level in this hypothesis is therefore 95.5%.

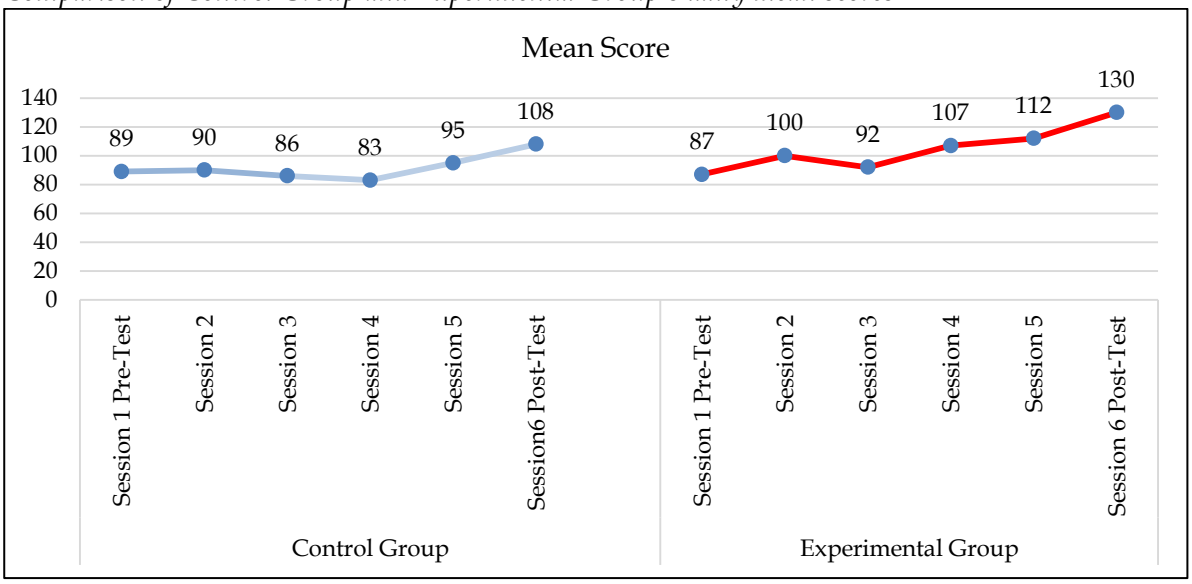
Furthermore, the results show that the experimental group wrote 20.50% more than the control group, a substantial increase that underscores the effectiveness of the word-count tracking strategy in enhancing writing output.

Table 6
Comparison of Experimental Group and Control Group's Post-Test scores

Group	*N*	*Mean*	*SD*	*t*	*df*	∂_{mean}	% *Differ*	*SD* ∂	*p*
EXP	23	130.30	36.92	2.0209	43	22.1679	20.50	36.7877	.0495*
CONT	22	108.13	36.64						

Figure 5 illustrates the remarkable progression of writing output improvement, showcasing the efficacy of the word-count tracking technique. With mean scores rounded up for clarity, both groups started moderately, with the control group at (*M* = 89) and the experimental group at (*M* = 87). However, the experimental group demonstrated a significant surge in the second session, producing more words (*M* = 100), attributed to either the instructional briefing or familiarity with the word-count tracking method. In contrast, the control group showed minimal progress in the second session (*M* = 90) and subsequently experienced a continuous downward trend in sessions 3 (*M* = 86) and session 4 (*M* = 83). Although the control group later showed rapid progress, their maximum output only reached (*M* = 108) words on average by session 6. On the other hand, the experimental group maintained a steady upward trend from session 4 to the post-test session 6, with a maximum output mean of 130 average words, except for a minor dip in session 3 (*M* = 92). The control group's output declined in sessions 3 and session 4, even falling below their starting point, whereas the experimental group exhibited a consistent upward trend, reflecting a continuous learning process and mastery of the new technique.

Figure 5
Comparison of Control Group and Experimental Group's daily mean scores



The progressions of both groups exhibit non-linear patterns, reflecting the natural fluctuations in human performance. Students faced challenges in maintaining consistent growth, with highs and lows in their target achievements. However, the experimental group's goal-setting motivation and target achievement compulsion in every session enabled them to achieve better results, consistent with the findings of Graham and Perin (2007a, 2007b) that goal-setting in writing tasks increases motivational levels and fluency. This pattern is also consistent with Kowal's (2014) study on Polish students, which showed that fluency development follows a non-linear pattern with peaks and valleys.

As shown in Table 7, the experimental group's improvement over the six sessions is notable. Starting from a minus percentage (-2.36%) compared to the control group, they jumped to a 10% increase in the next session. Although session 3 saw a decrease in output percentage, the

experimental group still maintained a 6.84% lead over the control group. In session 4, the experimental group produced 29% more writing output than the control group, partly due to the control group's low productivity (*M* = 83.4), their lowest in the program. Overall, the experimental group showed significant improvement, from a mean score of 87.73 to 130.3, while the control group, despite starting with a higher mean score (89.86), only reached 108.13. Both groups improved their writing output, but the experimental group demonstrated more substantial growth.

Table 7

Experimental Group's percentage of improvement over the six sessions

Session	*EG Mean*	*CG Mean*	*Difference of EG and CG Mean*	*Difference of mean in Percentage*
Session1	87.73	89.86	-2.12	-2.36%
Session2	100.04	90.72	9.31	10.26%
Session3	92.17	86.27	5.9	6.84%
Session4	107.78	83.4	24.37	29.22%
Session5	112.56	95.18	17.38	18.26%
Session6	130.3	108.13	22.16	20.53%

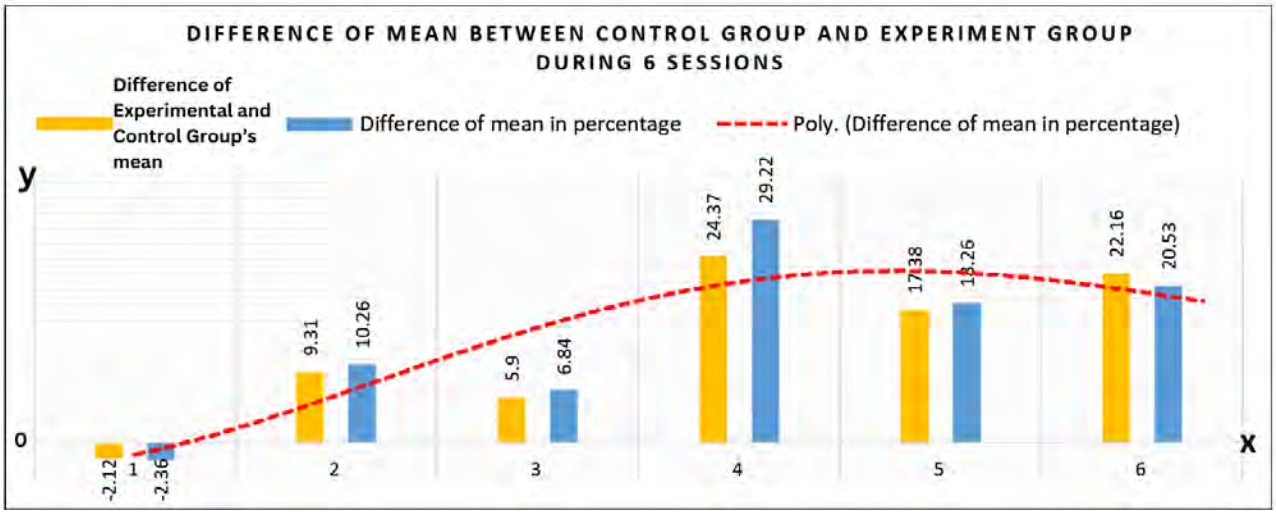
Note. EG: Experimental group; CG: Control group.

Figure 6 provides a visual representation of the widening performance gap between the experimental and control groups, with the y-axis indicating the difference in mean scores between the two groups. Positive values on the y-axis represent higher mean scores in the experimental group, while negative values indicate higher mean scores in the control group. Initially, the experimental group performed lower than the control group, reflected by the negative value in Session 1, but as the sessions progressed, the experimental group's performance improved significantly, resulting in a substantial gap between the two groups.

The polynomial line (dotted line) in Figure 6 shows a steady increase in the performance difference between the groups, with the largest positive mean difference occurring in Session 4, where the experimental group outperformed the control group by a significant margin. Although the control group made a concerted effort to improve in session 5, scoring (*M* = 95.18) and narrowing the gap, the experimental group maintained their lead in the post-test session 6, producing 20.5% more output than the control group. This notable difference in performance suggests that the word-count tracking strategy had a lasting impact on the experimental group's writing output.

Figure 6

The percentage of the experimental group's progress during six sessions as compared to the control group



5.1.1. Homogeneous progress

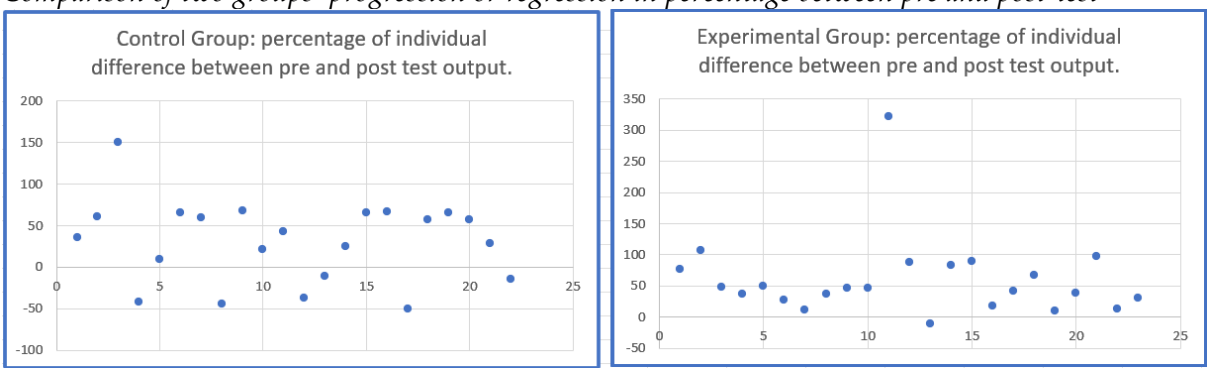
From another perspective, the experimental group's performance surpasses that of the control group. Upon examining the standard deviations (*SD*) of pre-post differences in Table 5, we observe that the experimental group exhibits less variation in their pre-post differences in word-count writing output. Specifically, more students in the experimental group are clustered around the mean value, indicating less dispersion in their score changes (*SD* = 33.31). In contrast, the control group's mean scores are scattered over a broader range (*SD* = 42.80), suggesting a larger range of writing output among students in this group.

To further investigate individual progress, the researcher calculated the percentage difference in each student's writing output between the pretest and post-test, as illustrated in Figure 7.

Zero on the y-axis represents the pretest while the dots show the percentage of the individual's progression or regressions from initial (pre-test) output.

Figure 7

Comparison of two groups' progression or regression in percentage between pre and post-test



This comparison of the pre and post-test results reveals that six students in the control group regressed, producing fewer words than their initial output. In contrast, only one student in the experimental group regressed. This stark difference highlights not only the homogeneity but also the consistent progress made by the experimental group. For a more detailed analysis, see Appendix 2, where negative values signify regression and positive values represent a percentage increase in writing output. This comprehensive analysis reveals the experimental group's consistent improvement, reinforcing the efficacy of the word-count tracking strategy. Although the students in the experimental group were encouraged to write more than their previous outputs, it's important to acknowledge that human behavior can be unpredictable, and complete control over this aspect may not be possible. Nevertheless, the overall results suggest that the word-count strategy had a positive impact on the students' writing output, demonstrating its effectiveness in promoting writing fluency.

5.2. Findings of the Questionnaire

The questionnaire served as the second data collection tool, designed to gather participants' perceptions and opinions about the Word-Count tracking technique and the program. As emphasized by Taherdoost (2016), questionnaires play a vital role in research studies, providing valuable insights into participants' thoughts and feelings. According to Pietriková (2015), participants' responses offer constructive feedback that can shape the research outcome. By utilizing questionnaires, researchers can gain a deeper understanding of participants' attitudes, behaviors, preferences, and experiences related to the research topic (Boynton & Greenhalgh, 2004). Analyzing the questionnaire responses enables researchers to uncover the motivations and reasons behind participants' behaviors and attitudes. In this study, 23 participants from the experimental group completed the questionnaire shortly after the post-test, providing valuable feedback on their experiences with the Word-Count tracking technique. The results are presented in Table 8.

Table 8
Questionnaire and participants' responses

	Question	*Mean*	*Standard Deviation*	*Strongly Agree (%)*	*Agree (%)*	*Neutral (%)*	*Disagree (%)*	*Strongly Disagree (%)*
Q1	Word-Count Tracking was a new idea for me.	3.04	1.30	17.39	26.09	8.70	39.13	8.7
Q2	Word-Count tracking helped me in improving my writing output.	4.30	0.55	34.78	60.87	4.35	0	0
Q3	Word-Count Tracking gave me the motivation to write more.	4.52	0.50	52.17	47.83	0	0	0
Q4	Word-Count Tracking gave me the idea of self-competition.	4.09	0.78	30.43	52.17	13.04	4.35	0
Q5	I enjoyed the word-count tracking program because it gave me a sense of competition with other fellows.	4.74	0.44	73.91	26.09	0	0	0
Q6	My hesitation to write more has been removed.	4.39	0.57	43.48	52.17	4.35	0	0
Q7	Graphic representation of my writing output in each session increased my interest in writing.	4.26	1.03	52.17	34.78	4.35	4.35	4.35
Q8	My thinking process about different topics quickened.	4.26	0.74	39.13	52.17	4.35	4.35	0
Q9	I improved my brainstorming and time management capabilities.	4.65	0.48	65.22	34.78	0	0	0
Q10	The teacher's evaluation before and after the sessions helped me improve the quality and quantity of my writing.	4.83	0.48	86.96	8.70	4.35	0	0
Q11	Word-Count Tracking taught me the importance of setting targets and achieving them.	4.74	0.53	78.26	17.39	4.35	0	0
Q12	My writing fluency has improved.	4.70	0.55	73.91	21.74	4.35	0	0
Q13	Now I realize the importance of practicing writing with speed and accuracy.	4.78	0.41	78.26	21.74	0	0	0
Q14	I have improved my ability to retrieve words from my memory to describe my ideas.	4.35	0.63	43.48	47.83	8.70	0	0
Q15	I enjoyed the Word-Count Tracking program.	4.96	0.20	95.65	4.35	0	0	0
Q16	Such techniques should be used by teachers to improve writing along with other methods.	4.83	0.38	82.61	17.39	0	0	0
Q17	My perception towards writing as a difficult skill has changed and now, I think it is easy.	4.78	0.41	78.26	21.74	0	0	0

Statistical data from the questionnaire reveal that participants generally responded positively to the Word-Count Tracking program, indicating its significant influence on their ability and perception of English writing. The Mean score for most questions are more than 4.0,which indicates that respondents had a very positive experience of the programme. Moreover, the standard deviations are relatively small especially for questions with higher agreement, suggesting that responses were fairly consistent among participants.

However, in some questions, there were mixed answers. For example, when students were asked whether Word-Count Tracking was a new concept (Q1), their responses were mixed, with a considerable portion (39.13%) disagreeing, suggesting their prior familiarity with similar techniques. However, 26.09% agreed, demonstrating that for some participants, this method was relatively new. The Mean score (3.04) indicates a neutral stance on its novelty. The data reflect a substantial improvement in writing output (Q2), with 60.87% agreeing and 34.78% strongly agreeing that Word-Count Tracking enhanced their productivity. Similarly, motivation to write more (Q3) saw highly favorable responses with Mean score (4.52), as 100% participants felt that the program motivated them to write more. This highlights the program's effectiveness in boosting both output and motivation among participants. The sense of self-competition fostered by Word-Count Tracking (Q4) was well received, with 52.17% agreeing and 30.43% strongly agreeing that it introduced the idea of self-competition. However, marginal 13.04% participants remained neutral indicating a possible lack of awareness regarding self-reflective and self-motivated language learning practices (Farooqi, 2024). Participants expressed even stronger enthusiasm for the competitive aspect among peers (Q5), with 73.91% strongly agreeing that it enhanced their engagement with the program. This suggests that competition, both personal and social, played a pivotal role in sustaining interest and commitment to writing. The program proved effective in reducing hesitation to write (Q6), with 43.48% strongly agreeing and 52.17% agreeing that it helped them overcome their reluctance. This is a notable finding, indicating that word-count tracking can alleviate common psychological barriers to writing. The use of graphical tools to represent word output (Q7) was highly appreciated with 52.17% strongly agreeing and a small portion of 4.35% disagreeing. These results suggest that visualizing progress can be a motivating factor, however, it may not resonate equally with all learners because comparatively low mean (4.26) and high standard deviation (1.03) reflects diversity of perspectives. Participants reported quickening of thinking process entailing cognitive improvement (Q8), with 52.17% agreeing and 39.13% strongly agreeing that the program enhanced their ability to think fast about different topics. The program's positive influence on brainstorming and time management (Q9) was further supported by 65.22% of participants who strongly agreed that it enhanced these skills, demonstrating its broader cognitive benefits. Instructor's feedback (Q10) was universally valued aspect of the programme with the highest mean score (4.83) and lowest standard deviation (0.48) as 86.96% participants strongly agreed that evaluations before and after writing sessions significantly improved the quality and quantity of their writing. This underscores the importance of structured, formative feedback in the writing process. The importance of goal setting was another major outcome of the program(Q11). A significant majority (78.26%) strongly agreed that Word-Count Tracking emphasized the value of setting and achieving targets, which contributed to their writing progress. Similarly 73.91% participants strongly agreeing that their fluency increased through the program(Q12) and this opinion was factualy based on their word counts. In the modern world two things are important; speed and accuracy. The ability to write with speed and accuracy (Q13) was rated highly, with 78.26% strongly agreeing on its importance. However, the ability to retrieve words from memory (Q14) showed more variation, as 47.83% agreed and 43.48% strongly agreed, indicating that while vocabulary recall improved for most, it was not a universal outcome. Also 8.7% participants remained neutral which may be because of their knowledge about complex cognitive functioning. 95.65% of participants strongly agreed that they enjoyed the experience (Q15) which reflects this techniqu's viability for classroom practice. That's why 82.61% participants strongly agreed that such techniques should be adopted by teachers to enhance

writing instruction (Q16), indicating that participants saw the broader educational value of the word-count tracking. As a result of all this, we see that the program was instrumental in changing participants' perceptions of writing as a difficult skill (Q17). A large majority (78.26%) strongly agreed that their view of writing had changed and they were finding it easier and more approachable.

6. Discussion

Findings of the present study show a statistically significant improvement in the mean scores of the experimental group, which used the word-count tracking strategy. There is a marked increase in the writing output of the experimental group from its pre and post-tests which comparatively is much higher than the increase of the control group during the same period. There is no doubt that the control group also made progress because conventional methods also proved beneficial and helped in achieving the objectives of the writing course. Moreover, the control group's improvement from *M*=89.86 as average mean score to *M*=108.13 is reflective of Tahseldar's (2018) study, which testifies that regular practice of writing can yield positive results. Hence, the control group also made progress, but its progress was slow and little as compared to the experimental group. The experimental group always had a set target and that was to write more than its previous session's writing output. It observed a steady growth in six consecutive sessions, whereas the growth of the control group initially remained low as well as curvy, a phenomenon as reflected previously in Kowal's (2014) research. Not only that, the growth of the experimental group remained tightly within a certain range of the mean which reflects a homogeneous and continuous growth. This study is in line with the results of O'Brien et al.'s research (2013) regarding the impact of setting a minimum word-count target on writing tasks. It also upholds the results of Sakihama's (2005) research which argues that setting students free from limitations improves their writing output. The questionnaire also validated the experoimental results and proved viability of the word-count strategy for teaching writing.

The aim of the study was to determine whether the word-count tracking could be helpful in improving the quantity of writing output. Based on the research's findings it can be deduced that the word-count tracking continuously involves students in a process of target setting and achieving it through effort which helps in improving writing output which answers the first research question of this study.

The study proved by statistics that the word-count strategy implemented over a period of six weeks encouraged students to write more and have better writing achievement. The ratio of the difference between the means of experimental and control groups shows that the growth of the experimental group's writing output i.e. 48.51% is more than double of that of the control group's 20.33%, which answers the second research question of this study.

Moreover, the word-count strategy also impacted students' attitude towards writing. Results derived from the questionnaire show that the motivation level of the students was enhanced because they monitored their progress through self-evaluation, visual representation of their growth, and achieving targets. They believed that the program had improved their writing output and love of writing as well and it could be valuable if implemented on regular basis in writing classes, which answers both the third and fourth research question of this study. The research emphatically proves efficacy of the word-count tracking as a viable strategy for improving writing in Saudi EFL Scenario.

7. Educational Implications

The study has a number of pedagogical implications. The research highlights the importance of quantified feedback in general which is an essential part of teaching writing. Aided by techniques like graphic representations and visual feedback, such a strategy may inculcate motivational urge in students to enhnce their performance. The word-count strategy emerges as an effective technique for improving writing output. It underlines the importance of quantification and rubrics

development for measuring performance besides showing the motivational implications of graphic feedback. In this research, the role of self-competition and self monitoring has emerged as a contributory factor to enhancing writing output, which underscores the need to incorporate Self-Motivated Language Learning strategies (Farooqi, 2024) in language learning. The researcher is of the opinion that the word-count writing strategy should be used in the classroom along with other viable writing techniques because previous researches like that of Manchón and Roca de Larios (2011) prove that students get benefits from engaging in intensive English writing activities.

8. Limitations and Recommendations

The program exclusively included male students from specific sections, selected based on their grades in the Writing 1 course (ranging from 85 to 95). This selection criterion ensured that participants had a certain level of English language proficiency. The writing intervention consisted of six weekly sessions, which was a relatively brief program. A more extensive program would be beneficial for more comprehensive results. It is important to note that the focus of this program was not on providing detailed grammatical and structural feedback to students, as this is beyond the scope of the word-count tracking strategy. Additionally, the program did not focus on micro error analysis, such as subject-verb agreement and punctuation, as these aspects were not within the program's objectives.

The research was conducted at the English Department of Almajmaah University's male section and does not evaluate efficacy of the word-count writing strategy from female perspective. Furthermore, its efficacy for different age groups and different cultural settings also needs more studies. Besides, the research was conducted during limited time of six weeks. A longitudinal and more intensive study could have yielded better and detailed results. Here are some recommendations for future research in the field of word-count tracking:

- Longitudinal Studies**:** Long-term studies spanning over longer time are required to observe the sustained impact of word-count tracking on improving writing skills. This could provide insights into the long-term benefits or limitations of this strategy.
- Diverse Educational Settings**:** There is a need to use word-count tracking strategies in diverse educational settings and contexts, including different genders, groups, subjects, and cultural backgrounds, to assess the generalizability of the findings.
- Comparative Studies**:** Comparative studies of word-count tracking with other writing improvement strategies are required to determine its efficacy. This could include AI tools, peer reviews, or different types of writing prompts like short films, storylines, and flashcards, etc.
- Motivational Factors**:** Extrinsic and intrinsic motivations in the form of rewards and appreciation letters as well as social approvals could be used to further investigate the specific motivational impact of such things. This could help to increase the motivational level of the word-count strategy.
- Technology Integration**:** With the integration of technology and writing analytics software, the word-count tracking process could be made easier to evaluate. This could help in providing real-time feedback, and text analysis.
- Qualitative Research**:** Teachers and students' perspectives and attitudes can be focused through qualitative studies to explore their personal opinions and experiences of using word-count tracking.
- Neurological Aspects**:** The neurological impact of the word-count tracking on the brain could be examined during the writing process. Neuroimaging tools can help us in the deep study of brain functionality during the activity.
- Interdisciplinary Approaches**:** There is a need to use the word-count tracking in different language settings and in different disciplines like psychology and special education so that a more holistic approach to improving writing skill could evolved.

- Quantifiable practices**:** Educators and policy makers need to look for more quantifiable measures and rubrics which could make writing evaluation more objective, and straightforward in and outside the classroom.

These recommendations would not only help us benefit from the word-count tracking as a viable writing strategy but also refine and optimize it for diverse learning environments and populations.

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Data availability: The data supporting this study's findings are available upon request. Interested researchers may contact the corresponding author for access to the data.

Declaration of interest: The authors declare that no competing interests exist.

Ethical statement: All subjects who participated in the study have given their consent for participation, for data collection, and for the analysis of the collected data. The data was analyzed only in anonymized form, and personal information that could lead to the identification of the participants has been removed. No additional ethical approvement was needed.

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Appendix 1. Special page for word-count tracking

Word-Count Tracking

Name:_____ Date_____

Topic_____ Session_____

	Space for writing	words
1		
2		
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26		
27		
	Total	

Appendix 2. Comparison of two groups' progression or regression in percentage between pre- and post-test

Experimental Group: percentage of individual difference between pre and post test output.	Control Group: percentage of individual difference between pre and post test output.
-10.79545455	-50
9.677419355	-44.86486486
11.11111111	-41.44144144
13.84615385	-37.07865169
17.8343949	-14.61538462
27.69230769	-10.79545455
30.33707865	9.803921569
36.48648649	21.53846154
37.25490196	24.61538462
39.16666667	29.03225806
41.30434783	36.14457831
45.78313253	42.30769231
46.23655914	56.92307692
48	56.92307692
50	59.30232558
66.66666667	60.29411765
76.92307692	66.07142857
83.13253012	66.07142857
87.83783784	66.07142857
89.24731183	66.15384615
98.21428571	67.46987952
106.779661	150
321.7391304	

Appendix 3. Experimental Group: Writing Output Self-Graphing