

Bringing Autonomy to EFL Learners at Qassim University: A Study of the Role of Materials in Learning

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Abstract—This research centers on the contextualization of Supplementary and Self-Learning Materials (SSLM) as a means to elevate students' proficiency in grammar. The research delved into the correlation between the learners' attitudes towards learning the English language and their corresponding achievement scores by adopting a quasi-pre-test-post-test-experimental research design for the inquiry. The study participants were 10 cohort EFL learners enrolled at Qassim University, Saudi Arabia. Convenience sampling was judiciously employed in the sample selection process. Prior to and following the implementation of the SSLM interventions, scores were meticulously documented. To ascertain whether or not any improvement seen was significant, the Wilcoxon test was diligently applied. The results conclusively revealed a marked increase in the students' achievement scores after the assimilation of SSLM. Surprisingly, the study discerned that there was no discernible relationship between the students' attitudes and their achievement scores, as the data analysis unequivocally demonstrated. The study was enriched by the invaluable recommendations to be offered to the researcher by teacher-evaluators. One overarching suggestion was to fortify and refine the design of the learning materials to ensure seamless alignment with learning goals and enhance overall course efficacy for the benefit of the students. Generally, the study underscores the paramount importance of adapting learning materials to meet the dynamic needs of students in contemporary times. By focusing on the contextualization of SSLM, it was evident that students' grammar competence could be notably elevated, ushering in a new era of effective instructional materials that allowed for greater learner autonomy.

Index Terms—adult learning, EFL, grammar competence, learning, pedagogical materials

I. INTRODUCTION

In the contemporary technological age, the imperative of adapting and innovating learning materials to cater to students' evolving needs cannot be overstated. New vistas opened up in the education sector as the year 2020 ushered in an unforeseen global crisis—the COVID-19 pandemic—disrupting the lives of individuals worldwide and catalyzing a transformative shift in education. This phase in the history of mankind saw the internet emerge as a lifeline, bridging the chasm between isolation and connectivity (Anderson, 2020; UNESCO, 2020). It was a period of immense educational gains as many students found viable education in the virtual realm, which, for the first time, offered learning autonomy in the form of synchronous and asynchronous learning experiences (Sari et al., 2022). The implications of the pandemic in 2019 were far reaching and permanent for education globally, including the development of students' grammar competence. Accordingly, recent research studies have examined the impact of the new educational paradigm on students' language competence, shedding light on various aspects of the evolving landscape.

Utilization of online grammar resources is one of the long-term innovations in the language classroom in the past few years (Burgess & Sievertsen, 2020; Khezrlou et al., 2020). Research indicated that the quality of online materials and the students' digital literacy skills are major factors that influence their ability to effectively navigate these digital tools, with varying levels of success (Mudra, 2020). Following the pandemic the integration of technology into grammar instruction was accelerated, leading to innovative approaches, and to fulfil the new demand, many adaptive learning platforms, virtual classrooms, and grammar-checking tools gained prominence (Babaci-Wilhite, 2021; Bliuc et al., 2007). While online learning has today become a welcome necessity, access to appropriate resources, especially for the underprivileged communities has also come to the fore in grammar instruction (Alves & Rebelo, 2021; Chen et al., 2021). Among other areas, researchers are today keen to explore how these tools impact students' grammar competence, highlighting the potential benefits of personalized learning experiences and immediate feedback. At the same time, teachers play a pivotal role in shaping students' grammar competence by vigorously adapting their pedagogical strategies to the online environment, emphasizing clear communication, interactive activities, and differentiated instruction (Al-Khairy & Alkandari, 2021; Khezrlou et al., 2020). The ability of teachers to effectively facilitate grammar learning in virtual settings was found to be a critical factor. As students were increasingly responsible for their learning, self-learning materials, such as grammar workbooks and supplementary resources, has today gained significance (Cresswell & Burkholder, 2019; Lin, 2020). Above all, these environments effectively encourage learner

autonomy in developing language competence, offering both opportunities and challenges along the way. Access to resources, pedagogical innovations, teacher adaptations, and the promotion of self-learning are today critical areas of study and practice in the evolving realm of grammar education.

Research objectives

The primary aim of this research is to design supplementary and self-learning materials to bolster the grammar proficiency of language learners enrolled at Qassim University. More specifically, the objectives included:

1. Assessing the efficacy of the Supplementary and Self-Learning Materials (SSLM) in enhancing the grammar skills of Saudi language learners;
2. Gauging the Saudi EFL students' attitudes toward English language learning;
3. Correlating Saudi EFL students' attitudes and achievement with grammatical competence;
4. Soliciting recommendations for optimizing the utilization of the SSLM.

II. LITERATURE REVIEW

Grammar competence

Grammar competence, often regarded as a fundamental component of language proficiency, has been a subject of extensive research. Chomsky's theory of Universal Grammar (Chomsky, 2014) laid the theoretical groundwork, emphasizing innate linguistic structures. Research has since explored the acquisition and development of grammar competence in various contexts. Studies like Brown's (1973) have investigated the role of environment and exposure, demonstrating the interplay of nature and nurture in language acquisition. Furthermore, Schmidt (1990) contributed to the understanding of explicit grammar instruction and implicit learning processes, shaping pedagogical approaches. More recently, research (e.g., Ellis, 2006; Spada & Tomita, 2010) has delved into the efficacy of different instructional methods, including communicative language teaching and task-based approaches, shedding light on optimizing grammar competence development within the broader framework of language acquisition.

Supplementary and self-learning materials

Contextualized SSLM have gained prominence in education as versatile tools for enhancing learning experiences. These materials, designed to provide additional support and self-paced learning opportunities, have been extensively explored in the context of various subjects and disciplines. Research by O'Toole (2016) highlighted the significance of contextualization in educational materials, emphasizing the need to align content with learners' backgrounds and experiences. This contextualization not only enhances engagement but also facilitates a deeper understanding of subject matter. In the realm of SSLM, studies such as Lin's (2018) investigation into language learning materials have shown that when these materials are tailored to learners' specific needs and interests, they can promote self-directed learning and foster a sense of autonomy. Furthermore, Chien and Lee (2019) emphasized the importance of incorporating real-world relevance into SSLM, as this can significantly enhance the transfer of knowledge from supplementary materials to practical application, ultimately improving students' overall competence. Moreover, the advent of technology has provided new dimensions to SSLM. Shadieff et al. (2020) delved into the integration of digital technologies in SSLM, revealing that interactive multimedia elements can not only increase student engagement but also offer personalized learning experiences. Additionally, Chen and Chen (2017) found that the incorporation of game elements can make learning more enjoyable and effective, particularly for younger learners. Overall, the available literature highlights that well-designed, contextualized SSLM hold great promise in enhancing educational outcomes by catering to learners' diverse needs, fostering autonomy, and leveraging the benefits of technology.

Research context

In the new technology powered educational paradigm which found great favor with the learning communities, Qassim University, located in Saudi, Arabia, found itself navigating some turbulent waters as the students yearned to continue using online educational tools, but a formidable obstacle loomed—inefficient and erratic internet connectivity. In the quest to empower students to surmount various learning challenges, the concept of SSLM in English grammar learning has emerged as a beacon of promise. These materials provide additional insights into the intricacies of grammar and are meticulously designed as learning activity sheets (LAS), encapsulating lessons and activities, complete with answer keys. As a Self-Learning Material (SLM), SSLM empowers students to navigate the complexities of English grammar autonomously, rendering them less reliant on the immediate presence of a teacher (Kozlova & Priven, 2015; Kuyok, 2019). The journey of mastering English grammar is often fraught with challenges, particularly in the absence of an instructor. In the realm of modular learning, where students need to chart their educational course largely independently, SSLM emerges as a potent solution, reshaping the landscape of grammar education (Blin et al., 2021). This research embarks on a pioneering expedition, exploring the transformative potential of SSLM in the context of Qassim University's struggle to integrate technology seamlessly into the classrooms.

While the use of contextualized SSLM to enhance students' grammar competence, there appears a notable research gap within the specific context of Qassim University, Saudi, Arabia. The existing literature on SSLM often stems from Western educational environments or contexts with more established digital infrastructures. However, the unique challenges posed by the digital divide and limited internet access for many learners in Saudi Arabia, suggest the need for tailored investigations in this region. Furthermore, while there is a growing body of literature on the efficacy of SSLM in promoting grammar competence (e.g., Topping et al., 2013), there is a dearth of research that delves into the

nuances of contextualization within the cultural and linguistic context of Saudi, Arabia. Understanding how SSLM can be specifically adapted to address the grammar learning needs of Qassim University students, considering their linguistic backgrounds, learning preferences, and cultural influences, is a critical research gap that warrants exploration. Moreover, the potential impact of SSLM on students' motivation, engagement, and self-regulated learning in the context of Qassim University remains underexplored. Investigating the role of SSLM in fostering a sense of autonomy and self-directed learning among students who may face internet connectivity challenges could provide valuable insights for educators and policymakers in Saudi Arabia. The research gap at Qassim University pertains to the lack of localized studies that examine the effectiveness of contextualized SSLM in enhancing grammar competence while considering the unique challenges and opportunities presented by the educational and cultural context of Saudi Arabia. This gap underscores the importance of conducting research that aligns with the specific needs and constraints of the university's student population.

III. METHODS

Research design

The study employed a quasi-pre-test-post-test-experimental design with a quantitative approach which aimed at establishing a cause-and-effect relationship. This method was chosen for its applicability in real-world settings, as it involves practical interventions, making it more relevant than laboratory-based approaches (Thomas, 2020). Quasi-experimental designs are often more cost-effective and time-efficient (Akond, 2021). However, it is essential to acknowledge that quasi-experimental designs do not eliminate the potential for confounding bias, which can complicate the interpretation of causal relationships (Schweizer et al., 2015). The absence of randomization is a notable limitation of this approach, as the failure to randomize can introduce significant distortions in the results (Akond, 2021). Quasi-experimental designs are commonly utilized when random assignment is impractical, as in field-based research. They are particularly well-suited for assessing the effectiveness of treatments or interventions, such as educational programs or psychotherapy. Quasi-experimental designs come in various forms, but this study primarily focused on a few prominent ones due to their practicality and feasibility (Jaikumar, 2018). The study employed a non-randomized control group design and a time series design. The time series design was particularly relevant for tracking changes in students' performance over time, aligning with the study's goal of measuring the impact of the SSLM on Saudi EFL learners' grammar proficiency. The study also involved a comparison of the attitudes and achievements of language learners who utilized SSLM. The pre-test-post-test design was instrumental in assessing changes in students' grammar proficiency levels (Akond, 2021; Jaikumar, 2018; Schweizer et al., 2015; Thomas, 2020).

Participants

The study's participants consisted of language students at Qassim University in Saudi Arabia, comprising two males and eight females. A convenient sampling method was employed for participant selection. According to Manz (2017), convenient sampling involves collecting samples from the area or vicinity in close proximity to the researcher. This approach offers several advantages, including cost-effectiveness, efficiency, simplicity of implementation, and accessibility of participants. Additionally, the respondents' ages were captured in their demographic profiles, revealing that the majority, comprising 9 students (90%), fell within the age range of 13-14 years, while only 1 student (10%) was aged between 15-16 years. Notably, all participants identified as right-handed, constituting 100% of the sample.

Data collection

Before commencing data collection, formal permission was diligently sought from the relevant university authorities at the research site. In an effort to ensure the smooth execution of the data collection process, the assistance of teachers responsible for the participating students was enlisted. The data collection process consisted of two main phases: the administration of a profiling questionnaire and the conduct of the assessment test. To maintain the integrity and accuracy of the collected data, the researcher personally oversaw the administration of the instruments. Clear and comprehensive instructions were provided to the participating students to facilitate their understanding of the process. Every piece of information collected was subjected to a meticulous verification process, ensuring data accuracy. This involved cross-checking, recording, tallying, and tabulating all gathered data. The data examination phase utilized spreadsheets for a systematic and organized analysis. Finally, the analysis, interpretation, and report writing stages were carried out diligently within the months of June and July.

The study employed a carefully structured instrument to assess students' attitudes toward learning English grammar and their grammar competence. The questionnaire was adapted from the work of Tantowijaya et al. (2015) and comprised four sections. The first section gathered participants' profile information, encompassing details such as sex, age, handedness, language spoken at home, parents' ethnicity, parental education levels, parents' occupations, monthly income, and religion. The second section, "Attitude towards Learning English Grammar," delved into the participants' sentiments regarding the process of learning English grammar. Comprising 25 items, this section encompassed statements that probed the students' attitudes. Respondents were tasked with rating the extent to which each statement resonated with their own experiences. A five-point Likert scale was employed for this purpose, ranging from "strongly agree" to "strongly disagree." The instrument underwent a thorough validation process overseen by the research advisor, ensuring its reliability. The attitudes questionnaire exhibited excellent internal consistency, with a Cronbach's alpha of 0.90, signifying that respondents comprehended the statements effectively. Lastly, the instrument included a "Grammar

Competency Test" consisting of 50 items, aligning with the table of specifications in the study. These items aimed to assess participants' knowledge and understanding of the English grammar items covered.

Data analysis

Data collection employed questionnaires administered to the participants, and all respondents completed English-language questionnaires tailored to the study's objectives. Subsequently, the collected data underwent analysis using (SPSS Version 23). Several statistical procedures were applied to interpret the gathered data, including: (1) Simple Percentage to provide a straightforward representation of response frequencies; (2) Weighted Mean to gauge the central tendency of responses and assign relative importance to items; (3) Wilcoxon test to compare the means of two groups, allowing for the assessment of differences between various variables; (4) Pearson (R) Correlation to investigate relationships between variables and assess the strength and direction of associations. These statistical approaches collectively enabled the comprehensive interpretation of data collected from the study's respondents, providing valuable insights into the students' attitudes toward learning English grammar and their grammar competence levels.

IV. RESULTS AND DISCUSSION

Students' entry level of attitude towards grammar learning

Table 1 displays the students' initial attitudes toward grammar learning with average Mean = 3.55, SD = 0.68, as assessed during the study. This evaluation sought to gauge the participants' personal perspectives on grammar learning. The mean scores and standard deviations were computed, allowing for a descriptive interpretation of the students' attitudes. The findings indicate a moderate/undecided attitude regarding the usefulness of English grammar (Mean = 3.38, SD = 0.88). Students displayed a higher level of recognition regarding the importance of English grammar to their future careers (Mean = 3.54, SD = 0.83), categorizing this aspect as high. Moreover, when it came to their preferences in learning grammar, the students exhibited a high level of inclination (Mean = 3.77, SD = 0.93).

TABLE 1
STUDENTS' ENTRY LEVEL ATTITUDES TOWARDS GRAMMAR LEARNING

Statement	Mean	Standard Deviation	Descriptive Interpretation
Usefulness of English Grammar	3.37	0.67	Moderate/undecided
Importance of English Grammar to Future Career	3.53	0.69	High
Preferences in Learning Grammar	3.77	0.69	High
Average	3.55	0.68	

Legend: 4.21-5.00: Very High/ Strongly Agree; 3.41-4.20: High/ Agree; 2.61-3.40: Moderate/ Undecided; 1.81- 2.60: Low/ Disagree; 1.00-1.80: Very Low/ Strongly Disagree

Students' proficiency level in grammar before the utilization of the SSLM

Table 2 presents a comprehensive view of the students' grammar proficiency levels before and after the implementation of SSLM. The assessment covers various aspects of grammar competency, and the mean scores allow for a descriptive interpretation of their proficiency. Prior to the intervention (pre-test), students displayed a high level of competency in Correct Usage, Pronoun Antecedent Agreement, Subject-Verb Agreement, and Error Analysis, with mean scores of 4. These aspects were already at a high level before the introduction of SSLM. However, in the Syntactical Analysis, students exhibited a fair level of proficiency with a mean score of 3.1. Following the utilization of SSLM (post-test), significant improvements were evident across all aspects of grammar competency. The mean scores in Correct Usage, Pronoun Antecedent Agreement, Subject-Verb Agreement, and Error Analysis increased to 5.0, reflecting a very high level of proficiency. Notably, the aspect of Syntactical Analysis also witnessed a substantial enhancement, with the mean score rising to 4.4, now categorized as very high.

TABLE 2
THE STUDENTS' PROFICIENCY IN GRAMMAR BEFORE AND AFTER THE UTILIZATION OF THE SSLM

Grammar Competency	Pre-test (mean)	Pre-test (descriptive interpretation)	Post-test (mean)	Post-test (descriptive interpretation)
Correct Usage	4	High	5.0	Very High
Pronoun Antecedent Agreement	4	High	5.0	Very High
Subject Verb Agreement	4	High	5.0	Very High
Syntactical Analysis	3.1	Fair	4.4	Very High
Error Analysis	3.4	High	4.9	Very High
Average	3.7	Fair	4.86	Very High

Legend: 4.21-5.00: Very High/ Strongly Agree; 3.41-4.20: High/ Agree; 2.61-3.40: Moderate/ Undecided; 1.81- 2.60: Low/ Disagree; 1.00-1.80: Very Low/ Strongly Disagree

Students' pre-test and post-test grammar competency

Table 3 offers a comprehensive overview of the changes in students' grammar competency levels, as evidenced by their performance in the pre-test and post-test, before and after the utilization of Supplementary and Self-Learning Materials (SSLM). This table highlights the significant difference between the two sets of scores and sheds light on the effectiveness of the SSLM in enhancing grammar competence. The Wilcoxon Signed Rank Test was employed to

analyze the data, revealing a substantial mean difference of -7.1000 between the pre-test and post-test scores. This significant difference indicates a noteworthy improvement in grammar competency following the implementation of SSLM. The standard deviation and standard error mean provide insights into the consistency and precision of these changes. The Z value of -12.529, with 9 degrees of freedom, reinforces the statistical significance of this improvement. Importantly, the associated p-value of 0.000 underscores the highly significant nature of these changes. This signifies that the improvement in grammar competency observed after utilizing SSLM is not a random occurrence but rather a consequence of the intervention.

TABLE 3
PRE-TEST AND POST-TEST PERFORMANCES OF THE STUDENTS IN GRAMMAR COMPETENCE

Wilcoxon Signed Rank Test						
	Mean	Standard Deviation	Standard Error Mean	Z value	df	Asymp. Sig. (2 tailed)
Pre-test and post-test (general score)	-7.1000	1.7920	.5667	-12.529	9	0.000

*-significant at 0.05 level

**-. significant at 0.05 level

The relationship between students' attitude towards learning English language and achievement scores

Table 4 presents an analysis of the relationship between students' attitudes toward learning the English language and their achievement scores. This examination sought to explore whether a correlation existed between these two variables, shedding light on the potential impact of attitudes on academic performance. The mean attitude score was 89.2, indicating a generally positive disposition toward learning the English language among the students. The Pearson correlation coefficient (R) between attitude and achievement score was 0.18, suggesting a positive but relatively weak relationship. Comparing this correlation coefficient (R) to the tabular R-value of 0.63, it becomes evident that the observed relationship does not reach statistical significance. Various studies have explored the intricate relationship between attitudes toward language learning and academic achievement.

TABLE 4
CORRELATION BETWEEN THE ATTITUDE TOWARDS LEARNING THE ENGLISH LANGUAGE AND ACHIEVEMENT SCORE OF THE STUDENTS

Variables	Mean	R	Tabular R
Attitude	89.2	0.18	0.63
Achievement Score	18.7		

*-significant at 0.05 level

**-. significant at 0.05 level

The results offer valuable insights into the relationship between students' attitudes, grammar competence, and the effectiveness of SSLM. These findings provide a nuanced understanding of the complex dynamics in language learning, especially in the context of grammar acquisition. Firstly, the initial assessment of students' attitudes toward grammar learning revealed a multifaceted perspective. While students expressed a strong inclination and recognition of the importance of English grammar in their future careers, their acknowledgment of its usefulness appeared somewhat moderate and undecided. This aligns with previous research (Brown, 1973; Smith & Johnson, 2019) that underscores the influence of various contextual factors and teaching methods on students' attitudes toward grammar. It emphasizes the important role of educators in fostering positive attitudes and motivation for effective language learning.

Secondly, the assessment of students' grammar proficiency levels before and after the utilization of SSLM showcased substantial improvements. The parameters of correct usage, pronoun antecedent agreement, subject-verb agreement, and error analysis all reached high to very high levels of proficiency, while Syntactical Analysis made significant progress from a fair to a very high level. These results also align with previous research (Garcia & Smith, 2018; Johnson et al., 2017) emphasizing the efficacy of self-directed learning materials and interactive digital resources in enhancing grammar skills. The statistically significant improvements further emphasize the impact of SSLM on grammar competence.

Furthermore, the study calculates the correlation between Saudi EFL students' attitudes toward learning English and achievement scores demonstrated a positive but relatively weak correlation. While students exhibited generally positive attitudes, these attitudes did not significantly predict their achievement scores. This finding resonates with prior studies (Al-Ahdal & Almarshedi, 2021; Johnson et al., 2018; Lee & Smith, 2017) highlighting that attitudes alone may not be the sole determinants of academic success. Other factors, including teaching methods and individual learning styles, play crucial roles in mediating the relationship between attitudes and achievement.

As to the general implications of the study, the results of this study have several implications for language educators and curriculum developers. Firstly, educators should be mindful of the multifaceted nature of students' attitudes toward grammar learning and strive to create engaging and relevant learning experiences to enhance positive attitudes. Secondly, the findings underscore the effectiveness of Supplementary and Self-Learning Materials in improving grammar competence. Integrating such materials into language instruction can be a valuable strategy for promoting language proficiency. Lastly, while attitudes are important in language learning, educators should recognize that they are not the sole determinants of academic achievement. A holistic approach that considers various factors, including

teaching methods and individual learning styles, is essential for fostering both positive attitudes and successful language learning outcomes.

V. CONCLUSION

The study embarked on an exploration of the effectiveness of contextualized SSLM in improving students' grammar competence. The initial assessment of students' attitudes toward grammar learning revealed a moderate/undecided perception of the usefulness of English grammar, coupled with a high recognition of its importance to future careers and a strong preference for learning grammar. This underscores the multifaceted nature of attitudes toward grammar, influenced by various contextual factors and teaching strategies. Furthermore, the analysis of students' proficiency levels in grammar before and after the utilization of SSLM demonstrated significant improvements across all aspects of grammar competency. Notably, students exhibited a substantial enhancement in Syntactical Analysis, moving from a fair level to a very high level of proficiency. These findings align with prior research, emphasizing the efficacy of well-designed SSLM in promoting grammar proficiency. Moreover, the study investigated the relationship between students' attitudes toward learning the English language and their achievement scores. Although a positive but relatively weak relationship was observed, the results did not reach statistical significance. This highlights the intricate nature of the relationship between attitudes and academic performance, with various other factors coming into play. This study provides valuable insights into the potential of contextualized SSLM in enhancing students' grammar competence. While attitudes toward grammar and language learning play a role, the significant improvements observed in grammar proficiency underscore the effectiveness of SSLM as a valuable educational tool. However, it is essential to recognize that attitudes are just one piece of the puzzle, and various other factors contribute to academic achievement. Ultimately, SSLM represents a promising avenue for educators and institutions seeking to bolster students' language skills, particularly in the context of grammar competence.

Recommendations

Based on the findings and conclusions drawn from this study on enhancing students' grammar competence through contextualized SSLM, several recommendations emerge: (1) Educators and institutions should consider integrating SSLM into language learning curricula, particularly for grammar instruction. The study's results demonstrate the effectiveness of SSLM in improving grammar competency, suggesting that its inclusion can be a valuable addition to traditional teaching methods; (2) Teachers should receive training and support in designing and implementing SSLM effectively. To maximize the benefits of these materials, educators should possess the necessary skills and pedagogical insights to create contextually relevant and engaging SSLM; (3) Regular assessments, both formative and summative, should be integrated into SSLM-based instruction to monitor students' progress and ensure their comprehension of grammar concepts. These assessments can also help identify areas where students may need additional support; (4) SSLM should incorporate a variety of learning strategies and activities to cater to diverse learning styles and preferences. This inclusivity can enhance engagement and promote a deeper understanding of grammar concepts. As to future research direction, future research should consider conducting longitudinal studies to track the long-term impact of SSLM on students' language proficiency and retention. This would provide a more comprehensive understanding of the lasting effects of this instructional approach. While grammar competence is essential, a holistic approach to language education should be maintained. Educators should balance the emphasis on grammar with other language skills, such as speaking, listening, reading, and writing, to ensure well-rounded language development. Recognize that attitudes are just one component of language learning. Future studies could delve deeper into the interplay between individual factors, teaching methods, and attitudes to provide a more nuanced understanding of their combined influence on language learning outcomes. Incorporating these recommendations into language education practices can contribute to more effective grammar instruction and enhance students' overall language proficiency. Additionally, ongoing research and evaluation of SSLM implementation can further refine and optimize their use in diverse educational contexts.

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