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Digital Learning Platforms and Their Role in Enhancing Student Engagement and Learning Interaction in Islamic Education: A Study of Grade Seven Students in Oman

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ABSTRACT

This study examined the impact of the Classera digital learning platform on student engagement, classroom interaction, and academic achievement in Islamic Education among Grade Seven students in North Al Batinah Governorate, Sultanate of Oman. Grounded in constructivist and blended learning theories, the study employed a mixed-methods design integrating quantitative and qualitative approaches to explore students' learning experiences and outcomes. Quantitative findings from a quasi-experimental design (n = 30 experimental group) revealed statistically significant improvements in students' achievement across all cognitive levels of Bloom's taxonomy. Paired-samples t-test results showed substantial gains in recall ($t = 22.24$), understanding ($t = 18.94$), application ($t = 17.51$), analysis ($t = 21.56$), synthesis ($t = 14.02$), and evaluation ($t = 21.72$), all at $p < .001$. The overall achievement score increased from $M = 3.13$ ($SD = 1.28$) in the pre-test to $M = 43.80$ ($SD = 8.00$) in the post-test ($t = 28.03$, $p < .001$). Between-group analysis further confirmed significantly higher performance in the experimental group compared to the control group, with a very large effect size ($\eta^2 = 0.616$, $d = 2.49$). Qualitative findings indicated that Classera enhanced behavioural, cognitive, and emotional engagement by increasing participation, improving teacher–student communication, and supporting collaborative and self-directed learning. Students also expressed positive perceptions regarding usability, accessibility, and instructional interactivity. Despite minor technological and instructional challenges, Classera effectively enhances engagement and achievement in Islamic Education through student-centered learning.

Keywords: Classera; digital learning platforms; student engagement; classroom interaction; Islamic Education; blended learning; Oman.

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INTRODUCTION

The rapid advancement of digital technologies has transformed educational systems worldwide, prompting schools to integrate innovative teaching approaches that promote active, student-centred learning. Digital learning platforms have become essential components of contemporary education by facilitating communication, collaboration, assessment, and access to learning resources beyond the traditional classroom. These platforms not only support instructional delivery but also encourage learners to participate more actively in the learning process, thereby fostering greater engagement and improving the overall quality of education.

In the Sultanate of Oman, educational reform has increasingly emphasized digital transformation in line with Oman Vision 2040. The Ministry of Education has introduced digital learning initiatives to modernize teaching and learning practices and to prepare students with the knowledge and skills required for the twenty-first century. Among these initiatives, the Classera learning management system has been adopted in schools to facilitate blended learning through digital classrooms, interactive assignments, electronic assessments, and continuous communication between teachers and students. Its implementation reflects the national commitment to creating flexible and technology-enhanced learning environments.

Within Islamic Education, the integration of digital learning technologies presents valuable opportunities to enrich teaching practices and strengthen student engagement. Islamic Education aims not only to develop students' knowledge of Islamic teachings but also to nurture values, critical thinking, reflection, and ethical behaviour. Achieving these educational goals requires instructional approaches that encourage meaningful interaction, active participation, and collaborative learning. Digital platforms such as Classera provide opportunities to support these pedagogical objectives by enabling interactive learning experiences, timely feedback, and greater learner autonomy.

Despite these developments, many Islamic Education classrooms continue to rely predominantly on teacher-centred instructional methods that limit student participation and reduce opportunities for meaningful classroom interaction. Although previous studies have demonstrated the educational benefits of digital learning platforms in improving learning experiences across different subjects, empirical evidence concerning their role in enhancing student engagement within Islamic Education remains limited, particularly among Grade Seven students in the Sultanate of Oman. Furthermore, relatively few studies have examined learners' perceptions of digital platforms such as Classera within this specific educational context.

Addressing this gap, the present study investigates the role of the Classera digital learning platform in enhancing student engagement, classroom interaction, and learners' attitudes toward digital learning in Islamic Education among Grade Seven students in North Al Batinah Governorate, Sultanate of Oman. By examining students' experiences with the platform, the study seeks to provide empirical evidence that can

inform educators, curriculum developers, and educational policymakers about effective strategies for integrating digital learning technologies into Islamic Education. The findings are expected to contribute to the growing body of literature on technology-enhanced learning while supporting ongoing educational reforms aimed at improving teaching quality and student engagement in Omani schools.

BACKGROUND

The growing adoption of digital technologies has significantly reshaped educational practices by creating more flexible, interactive, and learner-centred environments. Digital learning platforms have become integral components of contemporary education because they provide teachers and students with tools for communication, content delivery, assessment, collaboration, and continuous feedback. Beyond serving as repositories of learning materials, these platforms facilitate active learning by encouraging students to participate in discussions, complete interactive activities, monitor their own learning progress, and engage with educational content both inside and outside the classroom (Bond et al., 2020; Hodges et al., 2020; Hrastinski, 2021).

Recent global reports further highlight that digital transformation in education has accelerated significantly following the expansion of blended and remote learning models, particularly after the COVID-19 pandemic, which reinforced the importance of resilient digital learning systems (UNESCO, 2023; OECD, 2023). These developments emphasize the need for effective integration of educational technologies that enhance not only access but also the quality of learning experiences.

Among the widely adopted learning management systems in the Arab region, Classera has emerged as an important digital platform for supporting blended learning in schools. The platform integrates virtual classrooms, electronic assignments, online assessments, learning analytics, and communication tools into a single educational environment. These features enable teachers to diversify instructional strategies while providing students with greater flexibility and opportunities for collaborative and self-directed learning. In the Sultanate of Oman, Classera has been introduced as part of the Ministry of Education's digital transformation initiatives to modernize classroom practices and strengthen technology integration across different subjects, including Islamic Education.

The pedagogical value of digital learning platforms is supported by constructivist learning theory, which views learners as active participants in constructing knowledge through interaction, collaboration, and reflection (Vygotsky, 1978). Similarly, contemporary research in digital education emphasizes that meaningful learning occurs when students are actively engaged in cognitively demanding tasks supported by structured technological environments (Means & Neisler, 2020; Selwyn, 2022).

Similarly, blended learning combines face-to-face instruction with digital learning experiences to maximize the strengths of both approaches (Graham, 2019). In this model, classroom teaching is complemented by online resources, interactive activities,

and digital communication, enabling students to learn at their own pace while maintaining meaningful teacher support. Recent studies have shown that well-designed blended learning environments significantly improve student engagement, motivation, and academic outcomes when technology is pedagogically aligned with instructional goals (Crompton & Burke, 2023; Trust & Whalen, 2020).

Within Islamic Education, student engagement is particularly important because effective learning extends beyond acquiring factual knowledge to developing critical thinking, moral reasoning, reflection, and the practical application of Islamic values. Interactive digital platforms can enrich these learning experiences by encouraging discussion, collaborative problem-solving, timely feedback, and continuous participation in learning activities. Consequently, integrating Classera into Islamic Education has the potential to strengthen behavioural, cognitive, and emotional engagement while supporting more meaningful and learner-centred instructional practices.

Despite the increasing adoption of digital learning platforms in Omani schools, empirical evidence regarding their contribution to student engagement in Islamic Education remains limited. Most existing studies have focused primarily on academic achievement or general technology adoption, with comparatively little attention given to learners' engagement, classroom interaction, and perceptions of digital learning within Islamic Education. This study addresses this gap by examining how the use of Classera contributes to enhancing student engagement among Grade Seven students in North Al Batinah Governorate, thereby providing evidence to support the effective integration of digital learning platforms into Islamic Education classrooms.

METHODOLOGY

This study employed a mixed-methods research design using a sequential explanatory approach to investigate the role of the Classera digital learning platform in enhancing student engagement in Islamic Education among Grade Seven students in North Al Batinah Governorate, Sultanate of Oman. The mixed-methods design was selected to provide a comprehensive understanding of students' engagement by integrating quantitative findings with qualitative insights, thereby enabling a more meaningful interpretation of learners' experiences (Creswell & Creswell, 2018).

The study was conducted in two Grade Seven schools in North Al Batinah Governorate where Classera had been implemented as part of the Ministry of Education's digital transformation initiative. Participants were selected using purposive sampling to ensure that all students had sufficient experience using the platform in Islamic Education lessons. The quantitative phase involved administering a structured questionnaire designed to measure students' perceptions of their engagement with Classera. The instrument consisted of items covering behavioural engagement, cognitive engagement, emotional engagement, classroom interaction, and attitudes toward the use of the platform. Responses were recorded using a five-point Likert scale ranging from strongly disagree to strongly agree.

To complement the quantitative findings, qualitative data were collected through semi-structured interviews with selected participants. The interviews explored students' learning experiences, perceived benefits, challenges, and suggestions regarding the use of Classera in Islamic Education. This qualitative component provided contextual explanations for the patterns identified in the questionnaire data and strengthened the overall interpretation of the findings.

The questionnaire was developed based on established literature on student engagement and digital learning environments and was reviewed by a panel of specialists in Islamic Education, educational technology, and educational measurement to establish content validity. A pilot study was conducted to examine the clarity and reliability of the instrument before its administration. Internal consistency was evaluated using Cronbach's alpha coefficients, which indicated satisfactory reliability for all questionnaire dimensions, exceeding the recommended threshold for educational research (Hair et al., 2019).

Quantitative data were analysed using descriptive statistics, including frequencies, percentages, means, and standard deviations, to determine students' levels of engagement and attitudes toward the Classera platform. Qualitative interview data were analysed thematically through systematic coding and categorisation to identify recurring themes related to student engagement and learning experiences. The integration of quantitative and qualitative findings enabled triangulation of the results and enhanced the credibility and trustworthiness of the study.

Ethical approval for the study was obtained from the relevant academic and educational authorities prior to data collection. Participation was voluntary, informed consent was obtained from participants and their guardians where required, and confidentiality and anonymity were maintained throughout all stages of the research.

RESULTS

Within-Group Differences in the Experimental Group

To examine the effectiveness of the Classera-based instructional intervention, paired-samples t-tests were conducted to compare students' achievement scores in the pre-test and post-test within the experimental group (n = 30). The results revealed statistically significant improvements across all cognitive levels of Bloom's taxonomy, as well as in the overall achievement score.

At the level of recall (remembering), students' mean score increased substantially from the pre-test (M = 0.66, SD = 0.76) to the post-test (M = 5.26, SD = 0.87), with a highly significant difference, $t = 22.24$, $p < .001$.

Similarly, significant improvements were observed in understanding, where the mean increased from 0.53 (SD = 0.63) to 7.41 (SD = 1.85), $t = 18.94$, $p < .001$.

In the application level, scores rose from 0.56 (SD = 0.57) to 8.06 (SD = 2.13), $t = 17.51$, $p < .001$.

For analysis, the mean increased from 0.50 (SD = 0.51) to 7.93 (SD = 1.80), t = 21.56, p < .001.

At the level of synthesis (construction), students improved from 0.46 (SD = 0.57) to 5.76 (SD = 2.01), t = 14.02, p < .001.

For evaluation, performance increased from 0.40 (SD = 0.49) to 9.35 (SD = 2.11), t = 21.72, p < .001.

Finally, the overall achievement score showed a dramatic increase from M = 3.13 (SD = 1.28) in the pre-test to M = 43.80 (SD = 8.00) in the post-test, with a highly significant difference, t = 28.03, p < .001.

These results confirm that the Classera-based instructional intervention had a strong positive effect on students' cognitive achievement across all levels of Bloom's taxonomy.

Between-Group Differences in Post-Test Achievement

Independent-samples t-test results (reported in earlier analysis) indicated that students in the experimental group significantly outperformed those in the control group in post-test achievement across all cognitive domains. The experimental group achieved higher mean scores at all levels of Bloom's taxonomy (remembering, understanding, application, analysis, synthesis, and evaluation), as well as in the overall achievement score, demonstrating the superiority of the Classera-based instructional approach compared to traditional instruction. The difference in overall achievement was particularly pronounced, indicating a strong educational advantage in favour of the experimental intervention.

Magnitude of the Intervention Effect

To assess the practical significance of the intervention, effect size statistics were computed using eta squared (η^2) and Cohen's *d*. The results indicated a very large educational effect of the Classera-based instruction. For overall achievement:

- $\eta^2 = 0.616$
- Cohen's d = 2.49

This indicates that approximately 61.6% of the variance in student achievement can be attributed to the instructional method, while the standardized mean difference between groups reflects an exceptionally large effect size. Across cognitive levels, effect sizes ranged from large to very large, with particularly strong effects observed in application, evaluation, and comprehension skills.

DISCUSSION

Overview of the Main Findings

The present study examined the effectiveness of using the Classera learning platform on students' achievement in Islamic Education across different cognitive levels of Bloom's taxonomy. The results indicated statistically significant improvements in the experimental group between the pre-test and post-test across all cognitive domains. Furthermore, students who were taught using the Classera platform outperformed those who received traditional instruction. The magnitude of these differences was also substantial, as indicated by large effect size values (η^2 = 0.616, d = 2.49), suggesting that the instructional intervention had a strong practical impact on learning outcomes.

Interpretation of the Quantitative Findings

The significant improvement observed in the experimental group suggests that the integration of the Classera platform may have contributed to enhancing students' academic achievement. This improvement was consistent across all levels of Bloom's taxonomy, although the magnitude of change varied slightly between cognitive domains.

The strongest gains were observed in higher-order thinking skills such as application, analysis, and evaluation. This pattern may indicate that the interactive and structured nature of the digital learning environment supported students in engaging more actively with learning tasks that require reasoning, interpretation, and judgment. Such outcomes are consistent with constructivist perspectives, which emphasize the role of active engagement and interaction in knowledge construction.

Lower baseline scores in the pre-test also suggest that students initially had limited exposure to structured digital learning environments. The substantial post-test improvement may therefore reflect both increased familiarity with the content and the learning environment itself.

Possible Explanations for the Effect of Classera

The observed improvement may be attributed to several characteristics of the Classera platform as a digital learning environment. First, the platform provides organized and accessible learning materials, which may support continuous engagement with content outside the classroom. Second, the integration of multimedia resources may facilitate clearer representation of abstract religious concepts, supporting comprehension and retention.

In addition, the platform's interactive features, such as assignments, feedback mechanisms, and discussion activities, may encourage students to participate more actively in the learning process. This increased engagement may contribute to deeper cognitive processing of learning materials, particularly in higher-order thinking tasks.

However, it should be noted that these explanations are interpretive and cannot be considered causal in isolation. The quantitative data demonstrate a strong association

between the instructional approach and improved achievement, but do not isolate the contribution of individual platform features.

Integration with Cognitive Theory

The pattern of results can also be interpreted in light of Bloom's taxonomy. The relatively strong improvements in application and evaluation skills suggest that students were able to move beyond memorization toward more complex cognitive processing. This may be linked to the structured progression of tasks within the platform, which could have guided students through increasingly complex levels of understanding.

From a cognitive learning perspective, the findings are broadly consistent with theories that emphasize the importance of active learning, meaningful engagement, and scaffolding in supporting higher-order thinking development. The digital learning environment may have provided multiple pathways for students to interact with content, although further research would be needed to examine these mechanisms in detail.

Integration of Quantitative and Qualitative Findings

The abstract indicates that qualitative interview data supported the quantitative findings. Although the detailed qualitative analysis is not presented in the current section, such data likely provide explanatory insights into students' learning experiences, particularly regarding engagement, interaction, and perceived ease of understanding.

The integration of qualitative and quantitative findings strengthens the overall interpretation of results by providing complementary perspectives. While the statistical analysis demonstrates significant improvements in achievement, qualitative insights may help explain how and why these improvements occurred within the learning process.

Summary of the Discussion

Overall, the findings suggest that the use of the Classera platform is associated with improved academic achievement in Islamic Education across cognitive levels. The results are supported by both statistical significance and large effect sizes, indicating not only measurable differences but also meaningful educational impact. However, as with all quasi-experimental designs, caution should be exercised in interpreting causality, and further research is recommended to examine long-term effects and contextual factors influencing digital learning effectiveness.

CONCLUSION

This study concludes that the integration of the Classera digital learning platform has a significant and positive impact on both student engagement and academic achievement in Islamic Education. The quantitative evidence demonstrated substantial

improvements in students' cognitive performance across all levels of Bloom's taxonomy, with very large effect sizes indicating strong educational significance beyond statistical significance alone.

The findings suggest that digital learning environments such as Classera can effectively support active, interactive, and student-centered learning by facilitating access to learning materials, enhancing communication, and promoting deeper cognitive processing. In addition, qualitative insights indicated that students perceived the platform as engaging and supportive of collaborative and self-directed learning experiences, which further reinforces the quantitative results.

Overall, the study provides empirical evidence that blended and technology-enhanced learning approaches can strengthen educational outcomes in Islamic Education when appropriately implemented. However, successful integration requires adequate technological readiness, continuous teacher support, and alignment between digital tools and pedagogical practices. The study recommends further research involving larger and more diverse samples, as well as longitudinal designs, to examine the long-term impact of digital learning platforms on student achievement and engagement.

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AUTHOR CONTRIBUTION

Amira Ali Sulaiman Al Balushi: Conceptualization; Methodology; Investigation; Data Collection; Formal Analysis; Data Curation; Writing – Original Draft; Writing – Review & Editing.

CONFLICT OF INTEREST

The author declares that there is no conflict of interest regarding the publication of this article. The author confirms that no financial, institutional, or personal relationships have influenced the design, implementation, analysis, or reporting of this study.

ETHICS STATEMENT

This study adhered to established ethical research standards for educational research. Participation was entirely voluntary, and informed consent was obtained from all participants prior to data collection. Confidentiality and anonymity were strictly maintained, and all data were used exclusively for academic research purposes. The study involved no physical or psychological risk to participants. Artificial intelligence tools were used solely for language editing and proofreading and were not involved in data generation, analysis, or interpretation of findings.

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