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THE EFFECTIVENESS OF ONLINE ASSIGNMENTS AS A COMMUNICATION MEDIUM IN DEVELOPING RELIGIOUS CONCEPTS AMONG UNIVERSITY STUDENTS

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Abstract

This research aimed to determine the degree to which electronic assignments facilitate the comprehension of doctrinal and jurisprudential religious concepts among first-year female university students in Saudi Arabia, through the use of educational electronic communication. The study utilised a descriptive and quasi-experimental design with a pre- and post-test control group methodology. The study involved 62 students from Prince Sattam bin Abdulaziz University, with 31 assigned to the experimental group and 31 to the control group. The experimental group completed eight assignments on Blackboard, whereas the control group was tasked with submitting paper copies of the same assignments. The 50-item multiple-choice test was designed to assess students' understanding of subjects through memory, comprehension, and application levels. All the data indicated that the experimental group would yield superior outcomes compared to the control group at the conclusion of the experiment. The results suggest that structured digital tasks can facilitate active educational communication. This indicates that they enhance students' involvement and understanding of concepts. Delivery methods like as Blackboard and other online platforms were regarded not merely as tools for distribution but also as facilitators of interactive educational communication. The results affirm the necessity of integrating digital communication technology into Islamic education, aligning with the overarching objectives of Saudi Vision 2030, which promotes innovation and digitalisation in higher education. Consequently, structured tasks in educational electronic communication are advocated as an effective method for enhancing students' religious comprehension and engagement.

Keywords: Electronic Assignments, E-learning Platforms, Islamic Concepts, University Level, Saudi Arabia.

1. INTRODUCTION

A defining feature of the modern era is the swift progression of technology, which has fostered the

emergence of educational technologies that complement this advancement, thereby improving the educational process. These technologies enhance learning flexibility and interactivity through the use of digital tools and contemporary platforms that enable access to information resources and foster self-directed and lifelong learning concepts (Alotaibi, 2022). In light of ongoing technological breakthroughs, numerous countries have included e-learning into their educational systems to prepare generations adept at confidently and successfully navigating the digital era (Al Fraidan & Alaliwi, 2024). In this backdrop, Saudi Arabia has prioritised education, which is experiencing substantial advancement under the Vision 2030 framework. Assignments, e-learning platforms, Islamic principles, university level, Kingdom of Saudi Arabia. The vision aims to create an educational society via e-learning efforts that improve learning processes to attain flexible and inclusive education standards that meet contemporary demands (Allothman, 2025). The objective seeks to enhance the accessibility of knowledge alongside improved educational outcomes (Rahman & Qattan, 2021).

The educational sector has progressively embraced e-learning for its recognised significance as an essential instructional instrument. Its integration enhances information accessibility and promotes more efficient student discourse. The advantages of employing this technique encompass adaptable learning frameworks that remove time and spatial constraints, facilitating ongoing assessment and clear feedback (Fuchs et al., 2023). The effective adoption of the Blackboard e-learning system among Saudi universities is attributed to its flexibility and ability to meet the demands of higher education. Bohunovsky et al. (2023) propose that the platform enhances educational accessibility via scalability, content diversity, and adaptable characteristics.

Electronic assignments, an essential component of e-learning systems, facilitate the acquisition of knowledge alongside the development of academic research and analytical abilities through digital media utilisation. Giannakos, Mikalef and Pappas (2022) underscore that these tasks serve as a viable alternative to conventional homework formats. In contemporary higher education, electronic assignments play a crucial role in facilitating material understanding and providing immediate formative assessment (Storr & McGrath, 2023). Furthermore, the use of multimedia capabilities enhances student performance and contributes to the educational experience. Salame and Hanna (2020) assert that such assignments alter student engagement within a learning environment, resulting in extended academic work durations and increased class involvement.

In light of the technological transformation occurring globally, there is an urgent necessity to develop and use innovative teaching tools within Islamic studies curricula, which are essential for fostering student identities and promoting value-based learning. The advancement of this in favour of incremental legal principles is endorsed.

All of these are imparted in Islamic studies, which emphasise the formation of the principles that are the foundation of the Islamic value system. These concepts enrich learners' personalities by examining the intermediate domain of religious edicts within a contextual framework and subsequently implementing them in practical scenarios (Deif & Cochrane, 2022). The heightened worldwide media exposure, together with varied intellectual trends, requires the promotion of these religious beliefs in shaping student identity culture. It is commendable to employ contemporary teaching methods (digital assignments) to advance this discipline. Research has been limited to evaluating the overall impact of these instruments on religious conceptual development.

Despite the extensive implementation of e-learning in Saudi Arabia, there is a notable deficiency of targeted research about the impact of electronic assignments on enhancing the profound understanding of religious principles. Current studies on instructional technology in Islamic sciences have not adequately examined their efficacy in cultivating Islamic principles. This study gap underscores the need for additional inquiry within the Saudi educational framework to guide curriculum modernisation initiatives

that correspond with technological advancements. This study rectifies the shortcoming by employing descriptive and quantitative methodologies, utilising data from 62 female students at the College of Business Administration, Prince Sattam bin Abdulaziz University. The research seeks to evaluate the extent to which electronic assignments can improve conceptual comprehension in Islamic studies. Educational institutions must achieve designated learning objectives, with the university phase being pivotal for imparting knowledge, skills, and values to students. This phase allows pupils to react adeptly to evolving problems and societal changes. University-level courses in Islamic culture are essential for confronting ideological and social threats to Islamic identity. These courses provide students with religious knowledge and attitudes that enhance their involvement with the wider community. Consequently, this training is regarded as essential for preserving cultural resilience in an increasingly dynamic environment.

Course administrators have emphasised enhancing content by incorporating doctrinal and jurisprudential components. Nevertheless, research has consistently demonstrated that pupils have difficulties in mastering these concepts. Koch-Weser and Guggenheim (2021) discerned subpar performance in the comprehension of Islamic legal principles, ascribing the problem to inadequate educational methods and limited technological incorporation. Jenuri et al. (2025) also observed that dependence on conventional instructional approaches hinders the understanding of religious content. These findings advocate for the revision of educational methodologies to integrate contemporary technological solutions.

This study corresponds with national strategic objectives, including those articulated at the “Future of E-Learning in the Kingdom of Saudi Arabia” conference and the Vision 2030 project. These frameworks promote the incorporation of digital platforms in education to address modern learning requirements. Consistent with previous research by Chankseliani and McCowan (2021) that highlighted the educational benefits of electronic assignments, the present study examines their contribution to enhancing Islamic conceptual knowledge among female university students. The primary research topic arises immediately from this setting, establishing the basis of the study’s problem statement.

2. STUDY QUESTIONS

2.1. The Main Research Question

What is the effectiveness of electronic assignments in developing Islamic concepts among female university students?

This main question branches into a set of sub-questions as follows:

1. What legal and religious ideas covered in the “Introduction to Islamic Culture” course should women learn in university?
2. How useful are electronically delivered assignments for helping female university students learn doctrinal concepts?
3. Do electronic assignments help female university students better learn jurisprudential concepts?
4. How well do girls at the university develop Islamic doctrinal and jurisprudential concepts through electronic assignments?

2.1.1. Study Objectives

1. Identify the doctrinal and jurisprudential Islamic concepts that require development among first-year female university students.
2. Assess the effectiveness of electronic assignments in developing doctrinal concepts.

3. Evaluate the effectiveness of electronic assignments in enhancing jurisprudential concepts.
4. Determine the overall impact of electronic assignments on developing Islamic concepts among female university students.

2.2. Study Hypotheses

According to the goals of the study being carried out, a main set of hypotheses has been developed for the research.

- 1) At the 0.05 significance level, the experimental group's post-test scores for doctrinal concepts are higher than those of the control group.
- 2) Significant results at 0.05 level reveal that the mean scores for the experimental group on the post-test for jurisprudential concepts are higher than those of the control group.
- 3) Significant differences in favor of the experimental group were recorded at the 0.05 level between the average scores of the experimental and control groups for Islamic concepts as a whole (doctrinal and jurisprudential) in the post-test.

2.3. Study Significance

2.3.1. Theoretical Importance

This study fills a notable void in the current literature by examining the particular impact of electronic assignments on the evolution of doctrinal and jurisprudential Islamic notions, a subject that has garnered less attention in modern educational research. A theoretical model has been developed by synthesising concepts from constructivist, behavioural, and cognitive learning theories, demonstrating how digital tasks facilitate concept creation in faith-based educational settings. This synthesis provides a thorough framework for comprehending the ways by which religious conceptions are internalised in digitally mediated contexts. Furthermore, the implementation of a quasi-experimental methodology enhances the theoretical discussion by facilitating a systematic analysis of the causal linkages between the utilisation of e-learning tools and the advancement of Islamic conceptual knowledge. The study thus enhances methodological approaches in Islamic education research and emphasises the significance of theory-driven investigation.

2.3.2. Practical Importance

This study presents evidence that advocates for the modernisation of religious education in Saudi institutions by illustrating the pedagogical benefits of Blackboard-based electronic assignments, thereby fitting with the strategic goals of Vision 2030. The results provide practical insights for curriculum developers and educators aiming to improve understanding, engagement, and assessment quality in Islamic cultural education using technology-enhanced learning. The findings underscore the capacity of digital assignments to address deficiencies in conventional approaches and enhance profound learning experiences for students. Moreover, by focussing on first-year female university students, the study enhances the dialogue on digital learning equity and addresses gender-specific educational requirements. The scalable characteristics of its recommended interventions provide realistic solutions applicable in similar institutional and cultural contexts to enhance the delivery of religious education.

2.4. Study Scopes

2.4.1. Objective Scope

This study examines the efficacy of electronic assignments, created through the Blackboard platform, in cultivating religious concepts—specifically doctrinal and jurisprudential—among university students. The objective is to assess learning improvements derived from these assignments using a quasi-experimental methodology that contrasts control and experimental groups.

2.4.2. Time Scope

The research for this study was conducted during the inaugural semester of the 1446 Hijri year. This time range enabled researchers to regulate the conditions preceding and following the implementation of teachings.

2.4.3. Spatial Scope

Research was completed at the College of Business Administration, Prince Sattam bin Abdulaziz University, in Al-Hawtah Bani Tamim city, Saudi Arabia. The school was picked because it was easy for the lead staff to access and had been using the Blackboard e-learning platform regularly.

2.4.4. Human Scope

The study focused on 62 first-year female university students enrolled in “Introduction to Islamic Culture.” Employing methodologically rigorous processes, participants were randomly allocated into two groups: one completing traditional coursework and the other executing the same assignments online.

2.5. Theoretical Framework

This section outlines the theoretical foundations that inform the current investigation. Initially, basic concepts are elucidated through precise academic and operational definitions, followed by an integration of educational theories about the role of electronic assignments in the development of legal Islamic concepts. The two foundations collectively form the conceptual and methodological framework essential for investigating the primary question of this study. We will adhere to the subsequent subsections outlined below.

The First Section Consists of Core Concepts and Operational Definitions

A thorough characterisation of the fundamental concepts of a study is essential to ensure conceptual clarity and minimise interpretative ambiguity, so facilitating theoretical consistency. This section delineates essential words that anchor the current research both academically and in relation to their practical counterparts within the study setting. The definitions of the major concepts are articulated as follows: Effectiveness: As stated by Karauri and Kyongo (2024), effectiveness denotes the degree to which the used components are appropriate for attaining the desired goals or objectives. This study defines efficacy as the extent of impact from implementing electronic assignments in the “Introduction to Islamic Culture” course on the development of Islamic conceptions among female university students. The test findings indicated the quantifiable effect of electronic assignments on enhancing students’ comprehension of Islamic concepts in the “Introduction to Islamic Culture” course was operationally characterised.

2.6. Electronic Assignments

Electronic assignments are digital platforms utilised for the allocation, submission, and assessment of student tasks, with integrated feedback mechanisms (Galón-Muros, 2023). Operationally characterised as academic assignments disseminated through Blackboard, comprising structured enquiries pertaining to Islamic culture, which are completed and returned online with prompt response (Scott et al., 2022).

2.6.1. Islamic Concepts

Islamic ideas are linguistically based phrases that signify doctrinal, behavioural, or legal aspects drawn from Islamic teachings. Operationally described as specific key concepts and phrases integrated into the course content that embody fundamental Islamic values and are assessed through assignments requiring conceptual knowledge and application (Metwally, Alabdaly, & Bouziane, 2022).

2.6.2. *Conceptual Development*

Conceptual development is the cognitive process of acquiring, structuring, and applying complex knowledge in meaningful ways (Cottafava et al., 2022). *Operationally defined as* students' ability to understand, internalize, and use Islamic concepts in academic contexts, as measured by a structured performance-based test.

2.6.3. *Development of Islamic Concepts*

The researcher operationally described it as pupils' capacity to understand and comprehend the Islamic notion, develop an accurate perspective of it, and apply it to diverse situations. The assessment is based on the grades pupils obtain from an exam on Islamic ideas specifically designed for this evaluation (Achmad & Prastowo, 2022; Yuniartin et al., 2024).

Second section: Theoretical Foundations: Educational Theories Guiding the Study

This study's theoretical foundation pertains solely to educational theories directly related to the research design. The objective is to provide a succinct analytical discourse on how these theories elucidate the educational mechanisms via which electronic assignments facilitate the acquisition of jurisprudential concepts. The assumptions, key characteristics, and significance pertaining to the examination of digitally mediated Islamic education are encapsulated for each theory.

Behaviourist theory posits that learning is characterised by quantifiable alterations in behaviour resulting from external stimuli (Fia, Ghasemzadeh, & Paletta, 2022). This study applies the idea using digital tasks, such as iterative quizzes that provide recurrent exposure to jurisprudential knowledge. Reinforcement mechanisms deliver instant feedback that strengthens right answers, resulting in selective reinforcement that improves retention and facilitates mastery.

Cognitive theory examines internal mental processes, including memory, cognitive organisation, and comprehension. Active participants acquire input and retrieval via structured methodologies (Guaca-Moya et al., 2024). This study examines how sequenced, digestible chunks of legal knowledge promote analysis, reflection, and categorisation to improve understanding and long-term retention of electronic assignments.

Instructional design theory (IDT) posits that educational objectives, content, and learner requirements are intentionally synchronised to optimise the efficacy of an educational program (Sheehy & Chen, 2024). This approach, grounded in cognitive and behavioural models, offers the theoretical foundation for the design of electronic assignments that progressively introduce content and rigorously assess students' comprehension. The tasks aim to activate past knowledge and introduce new content in alignment with the sequence of legal learning objectives.

Collectively, these theories form a cohesive foundation as a conceptual framework for this investigation. Constructivist theory advocates for student-centered exploration, whereas behaviourist theory emphasises mastery via repetition, and cognitive theory ensures alignment with mental processing techniques. Employing instructional design theory facilitates the systematic organisation of content delivery. Electronic assignments reinforce the aforementioned instructional logic and collectively affirm it.

Third sections: Pedagogical Foundations and Empirical Contexts of the Study

This research is founded on the pedagogical and empirical principles outlined in this section. The focus is on the examination of Islamic conceptual growth, particularly in jurisprudence and electronic tasks, within educational contexts. Two primary areas are addressed: actual findings about the evolution of the Islamic concept and prevailing trends related to the implementation of digital assignments. Empirical study has directly investigated the evolution of Islamic concepts at educational levels. Fadlillah and Kusaeri (2024) assert that secondary pupils achieve enhanced conceptual knowledge when authentic assessments involving real-life projects are employed. Okuley et al. (2025) employed

animated cartoons to facilitate engagement and comprehension of interpretive texts among younger pupils. Additionally, learner-centred methodologies such as constructivist-based programs (Arar & Al-Khawaldeh, 2020), brain-based learning (Avelar & Pajuelo-Moreno, 2024), flipped classrooms, and jigsaw tactics (Hamamoto, 2022) have also influenced conceptual acquisition.

Technology-integrated models have exhibited robust outcomes. Students' comprehension of legal ideas was enhanced by modelling techniques, their post-test performance was elevated by generative learning models, among other factors. Augmented reality enhanced motivation and cognition. The findings collectively delineate instructional conditions that significantly enhance the development of jurisprudential concepts, including: (i) instructional interactions emphasising reciprocal and experiential exploration of ideas; (ii) instruction abundant in cognitive demands; and (iii) instruction rooted in substantial and contextually pertinent activities.

Electronic assignments have progressively evolved into valuable educational resources, particularly in the post-pandemic period. Timotheou et al. (2023) asserted a contribution to promoting autonomy and sustained performance through structured feedback. Puthucherril and Peters (2022) document improvements in history education; González-Torre and Suárez-Serrano (2022) observe contentment with digital assignment submissions; their findings are favourable across disciplines. The tasks provided via Google Forms enhanced class involvement.

This study is based on empirical and pedagogical insights while expanding upon them by examining how electronic assignments facilitate the development of jurisprudential concepts in higher education Islamic culture courses. This study addresses a gap by concentrating on university-level students now utilising Blackboard, in contrast to prior research aimed at the school level. As Islamic education adapts to contemporary demands, digital tools are increasingly essential in modern academic environments.

Fourth Section: Educational Electronic Communication: Conceptual Foundations

2.6.4. Introduction to the Concept

The notion of electronic communication in education has become a fundamental aspect of modern teaching methodologies. It denotes the intentional, educationally driven interaction between educators and learners utilising digital tools to enhance comprehension, feedback, and academic success. In contrast to the static content distribution approach, this model employs synchronous and asynchronous platforms (such as LMS tools, e-assignments, forums, and virtual classrooms) to enable dynamic and iterative communication (Antova, 2023; Kostikova & Fedotova, 2022).

2.6.5. Operational Definition within This Study

This study operationally defines educational electronic communication as the systematic use of Blackboard-based assignments to deliver Islamic religious content, wherein communication transcends mere information transfer to engage learners in concept reinforcement, clarification, and applied reflection. These activities encompass doctrinal and jurisprudential exercises that integrate feedback and aspects of interactive design (Shindina et al., 2024).

2.6.6. Importance and Educational Value

The importance of educational electronic communication is in its ability to facilitate profound learning via substantive interaction, particularly in disciplines focused on value transmission such as Islamic education. This methodology facilitates learner autonomy, provides ongoing formative assessment, and cultivates critical thinking skills. Furthermore, it aligns with the Vision 2030 objectives for digital transformation in education in Saudi Arabia, thereby situating Islamic studies within the framework of advanced, technology-enhanced learning (Praseeda, 2024).

2.7. Theoretical Foundations

Multiple theoretical frameworks support the function of educational electronic communication: **Sociocultural Theory:** founded on Vygotsky's principles, asserts that learning is fundamentally social and facilitated through tools and interaction. It emphasises the significance of scaffolding via digital communication and collaborative tasks (McLachlan & Tippett, 2023).

Transactional Distance: Theory examines the psychological and linguistic disparities between educators and students in online settings, highlighting the importance of minimising "distance" through effective interaction (Singleton & Furber, 2024).

Media Synchronicity: Theory examines the influence of time and synchronicity in digital communications on understanding and collaborative learning. It facilitates the strategic implementation of synchronous (e.g., live sessions) and asynchronous tools (e.g., discussion boards) to enhance educational clarity (Reddy, Nagamalla, & Kaur, 2024).

These theories together endorse the educational necessity of electronic communication in fostering cognitive development, promoting active learning, and facilitating conceptual understanding within digital learning environments. In conclusion, educational electronic communication serves as a fundamental component in digitally enriched learning environments, especially in fields that prioritise conceptual depth and value development, such as Islamic education.

This kind of communication entails interaction, reflection, and the application of knowledge through the integration of its functions via platforms like Blackboard. Sociocultural Theory, Transactional Distance Theory, and Media Synchronicity Theory, among other academic frameworks, jointly underscore the communicative, cognitive, and affective dimensions that render electronic assignments pedagogically effective. The primary rationale of the study is grounded in this conceptual framework; to evaluate the extent of structured digital.

3. METHODOLOGY

The efficacy of online instruction in developing religious concepts among first-year female university students was examined utilising descriptive and quasi-experimental methodologies. The descriptive phase gathered significant themes from the "Introduction to Islamic Culture" course, whilst the quasi-experimental phase evaluated students with pre- and post-tests over a duration of two months. Sixty-two students from Prince Sattam bin Abdulaziz University were allocated to control and experimental groups to facilitate the study, ensuring that all subjects received identical curricular input. The experimental group completed eight electronic assignments on Blackboard, whereas the control group executed their tasks on paper. The research comprised 62 students from Prince Sattam bin Abdulaziz University, with 31 participants allocated to the experimental group and the other 31 to the control group.

A 50-item multiple-choice examination, grounded in Bloom's lower-order cognitive levels and encompassing 28 doctrinal and 22 jurisprudential topics, was created via content analysis and expert validation. Apparent validity and internal consistency were validated, with Pearson correlation coefficients between 0.530 to 0.771. Cronbach's alpha demonstrated robust reliability (0.812 doctrinal, 0.829 jurisprudential), with all items conforming to established psychometric criteria. Statistical analysis was performed utilising SPSS28, encompassing independent samples t-tests, Pearson correlations, Cronbach's alpha, and Blake's gain equation, with a significant threshold established at 0.05. Table 1 results indicated significant correlations ($p < 0.01$), affirming good internal consistency and robust validity for the doctrinal idea assessment.

Table 1: Pearson Correlation Coefficient for the Doctrinal Concepts Test Items with the Total Score for the Dimension to which they Belong.

Recall		Comprehension		Application	
Statement	Correlation Coefficient	Statement	Correlation Coefficient	Statement	Correlation Coefficient
1	0.572**	2	0.530**	3	0.689**
10	0.644**	4	0.682**	7	0.630**
11	0.751**	5	0.559**	12	0.616**
13	0.633**	6	0.670**	16	0.648**
15	0.687**	8	0.681**	23	0.567**
18	0.613**	9	0.611**	24	0.637**
19	0.588**	14	0.645**	25	0.738**
20	0.714**	17	0.707**	27	0.745**
21	0.700**	22	0.771**	28	0.719**
-	-	26	0.597**	-	-
0.838**		0.750**		0.732**	

Source: Study Sample. ** Significant at the (0.01) level.

Table 2: Pearson Correlation Coefficient for the Jurisprudential Concepts Test Items with the Total Score for the Dimension to which they Belong.

Recall		Comprehension		Application	
Statement	Correlation Coefficient	Statement	Correlation Coefficient	Statement	Correlation Coefficient
1	0.517**	2	0.531**	3	0.699**
11	0.673**	4	0.589**	5	0.737**
15	0.681**	6	0.730**	7	0.572**
16	0.619**	8	0.580**	9	0.771**
17	0.699**	10	0.598**	12	0.609**
18	0.736**	14	0.718**	13	0.893**
19	0.871**	22	0.656**	20	0.767**
-	-	-	-	21	0.791**
0.736**		0.799**		0.800**	

Source: Study Sample. ** Significant at the (0.01) level.

Table 2 indicates that every correlation between jurisprudential test items and the scores from each area was highly significant (0.01 level) and had values ranging from 0.517 to 0.893 and levels from 0.736 to 0.800. As a result, the consistency between items is high, so the test is likely to be both valid and reliable. The high internal consistency coefficients point to the test's validity and can be trusted when applying variation in jurisprudential concepts.

The study tool's reliability was investigated by computing its Cronbach's alpha reliability coefficient, yielding a value of

Table (3) reveals that the doctrinal concepts test is statistically reliable because the Alpha coefficient is approximately 0.812 and indicates a high degree of consistency. High reliability coefficients ranging from 0.755 to 0.794 mean that the findings of the current study tool can be counted on and trusted.

Table 3: Cronbach's Alpha Coefficient for Measuring the Reliability of the Doctrinal Concepts Test.

Level	Number of Statements	Reliability Coefficient
1 Recall	9	0.786
2 Comprehension	10	0.755
3 Application	9	0.794
Overall Reliability	28	0.812

Source: Study Sample.

Table 4 demonstrates that the jurisprudential ideas test possesses satisfactory statistical reliability, evidenced by a total alpha coefficient of 0.829, signifying robust consistency. The reliability coefficients of the test measures varied from 0.722 to 0.811, signifying a dependable value that justifies confidence in employing this instrument in the present study.

Table 4: The Reliability Measurement of the Jurisprudential Concepts Test using Cronbach's Alpha Coefficient.

Level	Number of Statements	Reliability Coefficient
1 Recall	7	0.722
2 Comprehension	7	0.742
3 Application	8	0.811
Overall Reliability	22	0.829

Source: Study Sample.

Table 5: Difficulty and Ease Index for the Doctrinal Concepts Test.

Item	Ease Coefficient	Difficulty Coefficient	Item	Ease Coefficient	Difficulty Coefficient
1	0.61	0.39	15	0.52	0.48
2	0.68	0.32	16	0.52	0.48
3	0.65	0.35	17	0.55	0.45
4	0.58	0.42	18	0.39	0.61
5	0.42	0.58	19	0.48	0.52
6	0.68	0.32	20	0.77	0.23
7	0.65	0.35	21	0.65	0.35
8	0.77	0.23	22	0.55	0.45
9	0.61	0.39	23	0.68	0.32
10	0.71	0.29	24	0.45	0.55
11	0.74	0.26	25	0.61	0.39
12	0.74	0.26	26	0.42	0.58
13	0.84	0.16	27	0.52	0.48
14	0.52	0.48	28	0.42	0.58

Source: Study Sample.

Table 6: Difficulty and Ease Index for the Jurisprudential Concepts Test.

Item	Ease Coefficient	Difficulty Coefficient	Item	Ease Coefficient	Difficulty Coefficient
1	0.58	0.42	12	0.71	0.29
2	0.52	0.48	13	0.42	0.58
3	0.65	0.35	14	0.35	0.65
4	0.48	0.52	15	0.32	0.68
5	0.77	0.23	16	0.68	0.32
6	0.61	0.39	17	0.65	0.35
7	0.35	0.65	18	0.55	0.45
8	0.65	0.35	19	0.42	0.58
9	0.61	0.39	20	0.58	0.42
10	0.68	0.32	21	0.65	0.35
11	0.58	0.42	22	0.71	0.29

Source: Study Sample.

The subsequent formula computes the difficulty and easiness scores of the test items: Ease index = (Number of pupils providing correct answers / Total respondents that participated). The calculation of the test item easy index is based on the ratio of students who replied correctly to the total number

of students who attempted the item.

The findings of the difficulty and ease index for the test, as shown in Table (5), reveal that the ease coefficients for the doctrinal ideas test questions varied from 0.39 to 0.84, indicating that the test items are appropriate for the study's objectives. Table 6 illustrates that the difficulty coefficients for the jurisprudential ideas test items varied from 0.32 to 0.77, signifying their appropriateness for the study's objectives.

Discrimination Index: According to the discrimination index for the test items, the following equation was used: $(X - Y) / N$, as follows:

Table 7: Shows the Discrimination Coefficients for the Doctrinal Concept Test Items.

Item	Discrimination Coefficient	Item	Discrimination Coefficient
1	0.75	15	0.63
2	0.75	16	0.88
3	0.63	17	0.5
4	0.5	18	0.5
5	0.5	19	0.63
6	0.88	20	0.38
7	0.38	21	0.63
8	0.38	22	0.38
9	0.5	23	0.5
10	0.5	24	0.63
11	0.5	25	0.38
12	0.5	26	0.5
13	0.38	27	0.5
14	0.5	28	0.75

Source: Study Sample.

Table 7 clearly demonstrates that the discrimination coefficients for the doctrinal ideas test varied between 0.38 and 0.88, suggesting the appropriateness of the test questions for the study's objectives.

Table 8: The Discrimination Coefficients for Jurisprudential Concept Test Items.

Item	Discrimination Coefficient	Item	Discrimination Coefficient
1	0.5	12	0.5
2	0.38	13	0.75
3	0.5	14	0.75
4	0.75	15	0.5
5	0.63	16	0.38
6	0.38	17	0.5
7	0.75	18	0.63
8	0.5	19	0.5
9	0.63	20	0.63
10	0.63	21	0.5
11	0.5	22	0.75

Source: Study Sample.

The discriminating coefficients in Table 8 range from 0.38 to 0.75, indicating that all objects utilised in the investigation meet the requisite level.

The average time taken by each student to complete the task was calculated by dividing the sum of 47 and 69 by two, resulting in 58 minutes.

Test scores were determined by assigning one point for each correct response, while no points were

awarded for incorrect or unanswered questions. Scores on all subtests varied from 0 to 50. A pretest was administered to assess the pupils' first comprehension and ensure the groups were equivalent. Prior to the commencement of the experiment, an independent samples t-test indicated no significant difference between the control and experimental groups.

Table 9: Results of the Independent Sample T-Test for the Differences between the Mean Scores of the Experimental and Control Groups in the Pre-test Application of the Doctrinal Concepts Test.

Level	Group	Number	Mean	Standard Deviation	Degrees of Freedom	t-value	Significance Level
Recall	Control Pre-test	31	4.45	1.23	60	1.145	0.257
	Experimental Pre-test	31	4.03	1.62			
Comprehension	Control Pre-test	31	4.42	1.06	60	0.387	0.7
	Experimental Pre-test	31	4.55	1.52			
Application	Control Pre-test	31	4.65	1.74	60	0.647	0.52
	Experimental Pre-test	31	4.9	1.37			
Total Test Score	Control Pre-test	31	13.52	2.62	60	0.047	
	Experimental Pre-test	31	13.48	2.73			

Source: Study Sample.

The findings in Table 9 demonstrate that there were no statistically significant differences between the mean scores of the experimental and control groups in the pre-test for the overall score of the doctrinal concepts assessment and its subcategories: recall, understanding, and application. The significance levels for the individual sublevels were 0.257, 0.700, and 0.520, while the total score was 0.962, all beyond 0.05, so showing a lack of statistical significance. The aforementioned outcome indicates the convergence of students' performance levels in both the experimental and control groups during the pre-test, demonstrating the equality of the two groups.

Table 10: Presents the Independent Samples t-test Results Comparing the Experimental and Control Groups' Mean Scores on the Pre-test of Jurisprudential Concepts.

Level	Group	Number	Mean	Standard Deviation	Degrees of Freedom	t-value	Significance Level
Recall	Control Pre-test	31	3.42	1.09	60	0.126	0.9
	Experimental Pre-test	31	3.45	0.93			
Comprehension	Control Pre-test	31	3.19	1.11	60	0.622	0.537
	Experimental Pre-test	31	3.39	1.33			
Application	Control Pre-test	31	4.06	1.46	60	0.197	0.844
	Experimental Pre-test	31	4.13	1.09			
Total Test Score	Control Pre-test	31	10.68	1.6	60	0.705	0.484
	Experimental Pre-test	31	10.97	1.64			

Source: Study Sample.

Table 10 indicates that there were no significant differences in the mean scores between the two student groups during the pre-test of the jurisprudential concepts assessment and its sub-levels (recall, understanding, and application). The significance thresholds exceeded 0.05 for each sublevel: 0.900, 0.537, and 0.844, as well as for the total score, 0.484. The pre-test results indicate that the scores of students in both the experimental and control groups are comparable, demonstrating the similarity between the groups.

4. RESULTS

This section delineates the study's conclusions by addressing each research topic through

comprehensive statistical and interpretive analysis. The findings concentrate on identifying essential doctrinal and jurisprudential concepts and assessing the efficacy of electronic assignments in enhancing students' comprehension of these notions. Independent samples t-tests and Blake's gain equation are utilised to assess instructional effectiveness. We will give it as follows: each question will be addressed separately, followed by a discussion of the findings in relation to pertinent educational literature and theoretical implications. This part delineates the results by addressing the subsequent enquiries:

First Question: Which doctrinal and jurisprudential themes from the "Introduction to Islamic Culture" course should be cultivated among female university students?

The researcher compiled a list of doctrinal and jurisprudential topics to address this inquiry. Upon assessment by the judges, the final iteration of the list comprised fifty legal concepts, consisting of twenty-eight doctrinal concepts and twenty-two jurisprudential concepts, as outlined in the development of the study tools.

Second Question: To what extent do electronic assignments facilitate the comprehension of doctrinal principles among female university students? The researcher evaluated the validity of the study hypothesis: "The mean scores for the doctrinal concepts test post-application were statistically higher in the experimental group compared to the control group." An independent samples t-test was conducted, and the results are presented in Table 11.

Table 11: Results of the Independent Samples t-test for the Differences Between the Mean Scores of the Experimental and Control Groups in the Post-Application of the Doctrinal Concepts Test.

Level	Group	Number	Mean	Standard Deviation	Degrees of Freedom	t-value	Significance Level
Recall	Control Pre-test	31	5.00	1.53	60	6.189	0.001
	Experimental	31	7.19	1.25			
Comprehension	Control Pre-test	31	5.10	1.33	60	4.591	0.001
	Experimental	31	6.77	1.54			
Application	Control Pre-test	31	5.10	1.27	60	6.603	0.001
	Experimental	31	7.06	1.06			
Total Test Score	Control Pre-test	31	15.19	2.30	60	9.209	0.001
	Experimental	31	21.03	2.68			

Source: Study Sample.

It is shown in Table 11 that at the 0.05 level, the experimental groups had better results in the post-test for doctrinal concepts and each of its three sub-dimensions. There was a strong effect since the T-value was 9.209 and the p-value was 0.001. Based on mean scores, the alternative hypothesis can be accepted since the experimental group scored higher than the control group: 21.03 (SD = 2.68) and 15.19 (SD = 2.30). Our findings show that electronic assignments greatly improve female students' knowledge of doctrines at the university level. Besides, gain percentages were recalculated applying Blake's equation to determine whether the electronic assignments affected students' doctrinal concept development. Table 12 shows that the Blake equation values for adjusted gain in the experimental group's pre- and post-test scores for doctrinal concepts and their sub-dimensions—recall (1.28), understanding (1.22), and application (1.25)—yielded a total gain of 1.27. All values exceeded the minimum effectiveness threshold of 1.2, as established by Blake, indicating a high level of instructional effectiveness. This gain is attributed to the use of electronic assignments, confirming their impact on enhancing doctrinal concept acquisition among university female students.

Table 12: Results of Calculating the Black Equation Values for the Experimental Group in the Pre-test and Post-test Measurements of the Doctrinal Concepts Test.

Level	Group	Number	Mean	Standard Deviation	Test Score	Black's Gain Rate
Recall	Experimental Pre-test	31	4.03	1.62	9	1.28
	Experimental Post-test	31	7.19	1.25		
Comprehension	Experimental Pre-test	31	4.55	1.52	10	1.22
	Experimental Post-test	31	6.77	1.54		
Application	Experimental Pre-test	31	4.9	1.37	9	1.25
	Experimental Post-test	31	7.06	1.06		
Total Test Score	Experimental Pre-test	31	13.48	2.73	28	1.27
	Experimental Post-test	31	21.03	2.68		

Source: Study Sample.

These findings align with prior studies by Bany Oraba (2022), which support the role of educational technologies in promoting doctrinal understanding. The consistency highlights the value of integrating modern digital tools in religious education to support conceptual growth.

Question 3: What is the effectiveness of electronic assignments in developing the five concepts among university-level female students?

This research question was solved by first making this hypothesis: Experimental group post-test scores on fiqh concepts are statistically higher than those of the control group at the 0.05 level. The data was analyzed using an independent samples t-test and the results are available in the table below.

Table 13: The Comparison of Mean Post-test Scores between the Experimental and Control Groups.

Level	Group	Number	Mean	Standard Deviation	Degrees of Freedom	t-value	Significance Level
Recall	Control	31	3.94	0.93	60	4.769	0.001
	Experimental	31	5.19	1.14			
Comprehension	Control	31	3.84	1.1	60	4.302	0.001
	Experimental	31	5.13	1.26			
Application	Control	31	5.16	1.39	60	6.185	0.001
	Experimental	31	7	0.89			
Total Test Score	Control	31	12.97	2.36	60	7.772	0.001
	Experimental	31	17.32	2.07			

Source: Study Sample.

The outcomes of the fiqh concepts assessment and its subcategories—memorization, understanding, and application—present statistically significant results at the 0.05 level, indicating that female students in the experimental group outperformed those in the control group. A significant effect was observed, shown by a t-value of 7.772 and a p-value of 0.001. The mean scores for the experimental group were 17.32 (SD = 2.07), while the control group had mean scores of 12.97 (SD = 2.36), findings that support the alternative hypothesis. The results indicate that assignments conducted on electronic devices enhance university students' comprehension of fiqh subjects. I also performed adjustments to the ratios using Blake's formula to see the role of electronic assignments on study topics related to fiqh. By comparing scores from before and after the program, we found out the difference this made in the experimental group. Table 14 indicates that the Blake effectiveness criterion of 1.2 was surpassed for adjusted gain across all dimensions of the experimental group. This achievement is attributable to the implementation of electronic submissions, which demonstrate their efficacy in facilitating students' comprehension of law.

Table 14: The Blake Equation are shown for the Pre- and Post-test Scores on the Jurisprudential Concepts Test.

Level	Group	Number	Mean	Standard Deviation	Test Score	Black's Gain Rate
Recall	Experimental Pre-test	31	3.45	0.93	7	1.24
	Experimental Post-test	31	5.19	1.14		
Comprehension	Experimental Pre-test	31	3.39	1.33	7	1.21
	Experimental Post-test	31	5.13	1.26		
Application	Experimental Pre-test	31	4.13	1.09	8	1.32
	Experimental Post-test	31	7	0.89		
Total Test Score	Experimental Pre-test	31	10.97	1.64	22	1.36
	Experimental Post-test	31	17.32	2.07		

Source: Study Sample.

The findings of our study align with those of Al-Maliki and Bukhari (2024), who also assert that modern technologies enhance the acquisition of jurisprudential principles. Our findings indicate that the use of technology in education enhances students' comprehension of topics. The fourth point to explore is: what effect do electronic assignments have on the formation of comprehensive religious beliefs and doctrines among university students? The study examined the impact of this inquiry according to the subsequent hypothesis: A statistically significant difference at the 0.05 level exists between the post-test results of the two groups on general religious concepts, with the experimental group showing superior outcomes. The hypothesis was examined using an independent samples t-test, and the results are presented in the subsequent table.

Table 15: T-test Results Comparing Post-test Scores of the Experimental and Control Groups on the Overall Religious Concepts Test.

Group	Number	Mean	Standard Deviation	Degrees of Freedom	t-value	Significance Level
Control	31	28.16	3.77	60	10.389	0.001
Experimental	31	38.36	3.95			

Source: Study Sample.

Both data tables demonstrate that the experimental group significantly outperformed the control group on the religious ideas test. A t-value of 10.389 ($p = 0.001$) demonstrated that the experimental group ($M = 38.36$, $SD = 3.95$) and the control group ($M = 28.16$, $SD = 3.77$) exhibited a significant difference. This outcome indicates that electronic assignments enhance students' religious education and supports the alternative hypothesis. Furthermore, adjusted gain ratios were computed using Blake's equation to assess the influence of electronic assignments (the independent variable) on religious conceptions (the dependent variable) for the students participating in the experiment, by comparing their pre- and post-test results.

Table 16: Blake Equation Results for Pre- and Post-Test Scores on Religious Concepts in the Experimental Group.

Group	Number	Mean	Standard Deviation	Test Score	Black's Gain Rate
Experimental Pre-test	31	24.45	3.97	50	1.32
Experimental (Post)	31	38.36	3.95		

Source: Study Sample.

The corrected gain value for the experimental group is 1.32, as seen in Table 16. This score exceeds 1.2, indicating that pupils' comprehension of religious themes has enhanced through the utilisation of electronic assignments. Digital technology has evidently enhanced the academic performance of college students, as demonstrated by the observed transformation. Kirkham and Laing (2023) discovered that pupils achieved superior outcomes through the utilisation of paper assignments. The variability in students and their environments likely resulted in discrepancies in the test outcomes. The current outcomes are comprehended through several cognitive frameworks. Students utilised interactive online activities to enhance their comprehension of ideas. Receiving immediate feedback on my errors facilitated my correction of mistakes and enhanced my comprehension of the class. My capacity to review the responses enhanced my critical thinking and improved my retention of the key elements. Furthermore, the use of multimedia and interactive information maintained students' engagement and motivation to persist. The convenience of self-directed study facilitated my learning, and established deadlines enhanced my concentration on academic tasks. The comprehension of religious concepts was improved due to these attributes. Ultimately, the use of electronic assignments fostered active learning among students and aligned with constructivist learning theory. Due to their efficacy, they are considered significant in Islamic education and instruction as a whole.

5. DISCUSSIONS

Research revealed that female university students utilising electronic assignments exhibited a superior comprehension of Islamic concepts. The examination of these 50 concepts indicated that the experimental group outperformed the control group in doctrinal comprehension ($M = 21.03$ vs. $M = 15.19$, $p = 0.001$), with Blake's gain rate measuring 1.27—exceeding the requisite efficacy threshold. There was a significant enhancement in memory, comprehension, and application domains. Likewise, electronic assignments shown efficacy in improving comprehension of jurisprudential principles. The experimental group exhibited enhanced performance ($M = 17.32$, $SD = 2.07$) relative to the control group ($M = 12.97$, $SD = 2.36$), yielding a statistically significant t-value of 7.772 ($p = 0.001$). Blake's modified gain rate of 1.36 for the comprehensive jurisprudential ideas assessment further substantiated the intervention's efficacy, with enhancements noted in all cognitive domains: memory (1.24), comprehension (1.21), and application (1.32).

The analysis of the overall influence on religious notions, both doctrinal and jurisprudential, yielded persuasive evidence endorsing the efficacy of electronic assignments. The experimental group had significantly higher scores ($M = 38.36$, $SD = 3.95$) compared to the control group ($M = 28.16$, $SD = 3.77$), evidenced by a t-value of 10.389 and a significance level of $p = 0.001$. The adjusted gain rate of 1.32 for religious concepts indicates that the intervention provided substantial educational advantages. The findings align with the growing evidence advocating for the integration of technology in religious education (Adinda, Jatmiko, & Mustofa, 2024; Anam & Mubin, 2023; Hilman, 2025; Laras Agustin, 2023; Mansir, 2022; Mayarisa, 2023; Prilianti, Sutarto, & Yanto, 2021; Zakiyyah, 2024). Due to interactive sessions, prompt feedback, ease of study, engaging movies and music, autonomous learning, and stringent deadlines, educators perceive electronic assignments as more effective than conventional ones. These factors facilitated enhanced comprehension and retention of Islamic ideas among students. The findings contribute to the evidence that incorporating digital education into religious lessons might enhance students' understanding of complex theological concepts. Our research corroborates the constructivist learning theory, asserting that learning occurs via interaction and experience, and demonstrates the efficacy of electronic assignments in modern Islamic education.

6. CONCLUSION

Contemporary society employs advanced e-learning tools to foster student independence, enhance communication skills, and improve instruction across all disciplines. In accordance with Saudi Arabia's Vision 2030, e-learning is pivotal to the modernisation of education and the enhancement of accessibility. Among these methods, electronic assignments have demonstrated potential in enhancing student engagement, facilitating peer cooperation, developing analytical abilities, and advancing religious concept comprehension—particularly within Islamic studies curriculum.

Despite its promise, there is scant scholarly research on the function of electronic assignments in the development of doctrinal and jurisprudential notions. In Saudi institutions, numerous students encounter difficulties in religious understanding owing to inadequate incorporation of contemporary educational tools in Islamic cultural courses. This study examined the efficacy of electronic assignments in enhancing students' comprehension of certain religious principles.

A descriptive and quasi-experimental method was employed to investigate the "Introduction to Islamic Culture" course at Prince Sattam bin Abdulaziz University. The sample comprised 62 first-year female students, evenly allocated to experimental and control groups. Electronic assignments functioned as the independent variable, while student comprehension of religious concepts served as the dependent variable. The findings corroborated the beneficial effects of electronic assignments. The experimental group surpassed the control group in both doctrinal and jurisprudential post-tests. The independent samples t-tests and Blake's gain equation corroborated the efficacy of the assignments. The findings indicate that electronic assignments markedly improve student performance in religious education and should be regarded as an essential instrument in the integration of educational technology.

6.1. Recommendations

Based on the study's findings, the researcher proposes various measures to improve the efficacy of teaching religious concepts in university environments. It is recommended to utilise the compilation of legal principles established in this study as a reference for constructing Islamic culture curricula, assuring conformity with fundamental doctrinal and jurisprudential content. Secondly, a heightened focus should be directed towards incorporating electronic assignments into the educational framework via e-learning platforms, which have demonstrated a marked enhancement in learning outcomes. Moreover, it is essential to review and enhance Islamic culture curricula by organising their material to integrate contemporary educational technology that facilitate significant and engaging learning experiences. Finally, it is advisable to instruct faculty members specialising in Islamic sciences on the effective design and implementation of electronic assignments via digital educational platforms, thereby equipping them with the necessary skills to optimise technology-enhanced learning.

6.2. Study Implications and Future Directions

The study advocates for the implementation of diverse pedagogical approaches to enhance students' comprehension of religious themes in Islamic culture courses. Future research should evaluate the influence of electronic assignments on general education students, specifically on their effects on critical thinking, creativity, and the practical application of religious knowledge. Subsequent research might investigate the impact of AI technologies on religious education and assess how digital assignments affect female students' attitudes and involvement, thereby guiding the development of more successful curricula.

6.3. Study Limitations

The study demonstrates that electronic assignments facilitate the advancement of legal concepts; yet, specific restrictions hinder the generalisation of the findings. The sample comprised exclusively first-year female business students at Prince Sattam bin Abdulaziz University. Only electronic work was evaluated, with no consideration of alternative educational methods. Furthermore, as the results were derived from a singular course, their applicability to other domains is constrained.

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IBRAHIM MOHAMMED AL.DAWOOD
THE EFFECTIVENESS OF ONLINE ASSIGNMENTS AS A COMMUNICATION MEDIUM IN DEVELOPING
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IBRAHIM MOHAMMED AL.DAWOOD
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