



Utilizing electronic learning platforms to improve children's educational attainment

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Abstract

The objective of this research was to examine the impact of electronic educational platforms on developing children's academic achievement, specifically focusing on the "Madrasati" platform as a primary model. The study was conducted on a random sample of 392 mothers of children enrolled in the first, second, and third grades of primary school.

Classified as descriptive research, this study employed a sample survey methodology. A questionnaire was utilized as the primary tool for data collection, and the resulting data were analyzed using frequencies and percentages. The researchers derived several key findings from the questionnaire results:

The findings indicated that 78.3% of mothers found the duration of time their children spent using the Madrasati platform to be suitable. Regarding the platform's usability, 32.39% of mothers expressed concerns regarding the difficulty of the operational mechanism; however, this was balanced by 48.46% of mothers who agreed that the platform provides easy access to virtual classrooms.

Furthermore, 57.65% of mothers agreed that teachers play a clear and effective role in delivering information and monitoring the child's progress. In terms of academic outcomes, 32.12% of mothers agreed that there was a notable rise in academic achievement after using the electronic educational platform, while an additional 28.8% strongly agreed with this improvement.

Keywords: Electronic educational platforms, Academic achievement.

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Introduction

Childhood is undoubtedly one of the most critical stages in human life. During this period, a child's cognitive capacity for learning evolves significantly, enabling them to acquire and retain information within remarkably short durations. Education serves as the child's primary experience in cognitive growth and structured interaction, surrounded by teachers and peers. The importance of education is evident to any rational mind; it develops capabilities, skills, and relationships, preparing children for success in future life tasks.

The educational process has witnessed numerous advancements and qualitative leaps to keep pace with the characteristics and challenges of the current era. Consequently, e-learning and internet networks have become a necessity to activate modern technologies in an effort to enhance academic achievement. E-learning is defined as "a system for delivering curricula and courses via the Internet, local networks, satellites, discs, or interactive television to reach learners" (Al-Shehri, 2002, p. 5).

Electronic platforms have also emerged as a safe solution, providing basic education under healthy conditions that protect children from the risks of physical classrooms and contact with others, particularly in light of the COVID-19 pandemic. The Kingdom of Saudi Arabia was among the first countries to develop robust and pioneering educational platforms to sustain the educational process across all levels. Among these is the "Madrasati" platform, established by the Ministry of Education in 2020 to facilitate learning for students across various grades.

Educational platforms aid in increasing academic achievement, as they allow teachers to communicate with

students via audio and video, monitor progress, and conduct various interactive activities. Furthermore, students can access recorded lessons and educational videos and share them with the class. Academic achievement is a primary goal of education, focusing on equipping students with the knowledge and skills required for the 21st century. It is measured through various methods, including diverse types of tests and continuous assessment. When measuring achievement, it is essential to consider individual differences, social upbringing, and student motivation. Our study focuses specifically on the impact of using electronic educational platforms on developing the child's achievement levels and increasing their desire and motivation toward learning.

Literature Review

Previous studies emphasize this impact:

- **Osman & Ahmed (2019):** Titled "*Revealing the Effectiveness of E-learning Platforms in Developing Achievement Skills, Motivation, and Attitudes*," the study found statistically significant differences between the average scores of the experimental and control groups in the post-test of achievement and learning motivation.
- **Reem Al-Rashoud (2014):** Titled "*The Effectiveness of the Edmodo Site in Developing Academic Achievement and Problem-Solving Skills*," the results confirmed the site's effectiveness in enhancing achievement and problem-solving skills in the Communication Skills course.

Research Problem

With the continuous evolution of educational technology and the necessity of maintaining education during the COVID-19 pandemic, e-learning platforms became the most suitable method. These platforms vary from subscription-based tools to free resources like YouTube, where lessons are converted into accessible videos. Academic achievement results serve as a vital indicator of the surrounding environment's impact. By identifying factors influencing achievement, we can understand obstacles and study methods to avoid them. While these platforms offer smart models for curricula, they face challenges, most notably the lack of expertise in developing self-learning competencies.

Based on previous research:

- **Tasneem Al-Teehi (2019):** Found differences in motivation levels favoring high-achieving students compared to low-achievers.
- **Majda Al-Bawi (2018):** Titled "*The Effect of Using Google Classroom on the Achievement of Computer Department Students*," the results showed no statistically significant differences in achievement or attitudes between students using the platform and those using traditional methods.

The problem of this research is summarized as: "Clarifying the extent of the impact of using electronic educational platforms on developing the child's academic achievement."

Significance of the Research

1. The importance of platforms in making the educational process more flexible and smoother.
2. The role of academic achievement in improving performance and reaching academic competence.
3. The ability of platforms to present educational material in diverse forms that enhance achievement.
4. The importance for primary grades in providing interactive activities that increase learning motivation.

Research Objectives

1. Identify the role of electronic educational platforms in developing children's academic achievement.
2. Determine the duration of platform use that best supports achievement.
3. Specify the optimal times for using these platforms to enhance learning.
4. Identify the relationship between platform use and achievement growth.
5. Examine the impact of platform design quality on children's academic achievement.

Research Questions

Main Question: What is the impact of electronic educational platforms on developing the child's academic achievement?

- *Sub-questions include:* What is the role of these platforms? What is the ideal duration and timing? What is the relationship between the platform and achievement? How does design quality affect the outcome?

Research Scope

- **Subject Scope:** Utilizing electronic educational platforms to develop achievement (Case Study: Madrasati/Our School Platform).
- **Spatial Scope:** Mothers of primary school children (Grades 1, 2, and 3) in Sharkia Governorate.

- **Temporal Scope:** Second semester of the academic year 2024/2025.

Research Procedures

- **Type and Methodology:** This is a **Descriptive Research** project using the **Sample Survey Method**. It expresses phenomena qualitatively (description) and quantitatively (numbers and estimates).
- **Population:** Mothers of students in Grades 1, 2, and 3 at Al-Nasiriyah Primary School in Zagazig.
- **Sample:** A sample of 392 mothers of primary school children.
- **Tools:** A questionnaire was used for data collection.

Research Terminology

- **E-Learning:** "The use of technologies and digital media to deliver, support, and enhance the teaching, learning, and assessment process" (Abdul Aziz, 2016, p. 4).
- **Distance Learning:** "An educational process where the student is separated from the professor by a geographical distance, usually bridged by modern communication means" (Abdul Aziz, 2016, p. 6).
- **Electronic Platform:** An integrated, interactive software system on the Internet for providing courses and educational activities synchronously or asynchronously, enabling teachers to evaluate learners (Al-Randi, 2019, p. 65).
- **Academic Achievement:** The knowledge or skills acquired by a student through school subjects, measured by scores obtained in achievement tests (Al-Fakhiri, 2018; Amzian, 2019).
- **Operational Definition of the "Madrasatuna" Platform:** In this research, it refers to an electronic platform containing virtual classrooms and supplementary programs through which teachers instruct students. Here is the academic translation of the first pillar of your theoretical framework into English:

Theoretical Framework

Pillar I: Electronic Educational Platforms

The Concept of E-Learning

E-learning is the utilization of technology and digital tools in education, harnessing them for both collective and self-directed student learning. It shifts the student to the center of the lecture or lesson, starting from classroom presentation technologies—such as multimedia and electronic devices—and extending to non-physical educational components like smart schools and virtual classrooms, which facilitate interaction between all parties in the educational process (Al-Aqqad, 2019, p. 172).

The Concept of Distance Learning

Distance learning is an educational process in which the student is geographically separated from the instructor, a gap that is typically bridged using modern communication tools. It is considered a non-traditional educational system that enables students to achieve academic progress and benefit from all aspects of the educational process without physically moving to a campus. Likewise, it allows teachers to deliver information and conduct discussions with recipients remotely (Abdel-Naeem, 2016, p. 6).

Virtual Education

Virtual education is a form of e-learning provided through academic institutions (universities) with organizational structures similar to traditional universities; these are known as "Virtual Universities." This model enables students to study online from their places of residence via a personal computer. Students can follow their education in real-time while the teacher is instructing or accessing it later. Additionally, virtual education allows students to take exams in specialized halls equipped with computers connected to the virtual university via the Internet.

E-Learning by Information Delivery Method

E-learning is an instructional method that transmits information to learners using computers, the Internet, and various multimedia through modern communication mechanisms. Different technologies are employed to transfer knowledge with minimal time and energy and maximum benefit, while providing the ability to manage, monitor, measure, and evaluate learner performance.

Furthermore, e-learning seeks to create an interactive environment between the teacher and the learner through multi-directional electronic media. It develops essential skills for handling technology and keeping pace with continuous scientific developments. It offers educational strategies suited to all age groups, accommodating individual differences and assisting both teachers and students in achieving pre-defined educational goals with clarity (Tawfiq, 2019, p. 266).

Components of E-Learning Environments

E-learning management systems are divided into commercial software and open-source (free) software. In commercial systems, users or companies pay fees in exchange for continuous technical support from the provider (e.g., Blackboard or WebCT). Open-source programs are subject to modification and development by

any user; examples include Moodle and Dokeos (Al-Zahrani, 2020, p. 361).

E-learning systems typically include:

- **Learning Management Systems (LMS):** Focus on managing the administrative process, including registration, planning, content delivery, testing, and tracking student progress to overcome difficulties.
- **Content Management Systems (CMS):** Tools that enable teachers to author specific educational content and deliver it online without prior knowledge of programming languages.
- **Learning Activity Management Systems (LAMS):** Provides an environment for learners to communicate and interact, supporting the creation of collective educational activities through personalized or collaborative systems.

The Concept of Electronic Educational Platforms

Mei (2012) defines these platforms as "web-technology-based remote training environments." They serve as arenas for displaying work and everything related to e-learning, including electronic courses and activities. Through these platforms, the learning process is realized using communication tools that enable learners to access their required curricula and information.

Ahmed Zeidan defines them as "intensive electronic courses targeting a massive number of students (MOOCs), consisting of explanatory videos by professors and experts, reading materials, tests, and forums for student-teacher and peer-to-peer communication." These are often asynchronous, relying on the student's self-pacing (Zeidan, 2013).

They are also defined as: "An interactive educational environment employing web technology that combines the features of electronic content management systems with social networks (like Facebook and Twitter)." They enable teachers to publish lessons, set objectives, assign homework, and implement group activities while fostering a high-quality educational output.

Importance of Educational Platforms

1. Assisting institutions in designing courses and evaluation methods and providing modern digital content via distance learning.
2. Offering educational services to all segments of society, allowing learning at any time and place.
3. Enhancing interaction between students and providing opportunities to use various resources in teaching activities.
4. Providing flexibility by allowing the exchange of developed course expertise between universities to encourage innovation and creativity.

Benefits of Electronic Educational Platforms

1. **Breaking Time and Space Barriers:** A learner only needs a standard computer and an internet connection to enroll in a course from the comfort of their home.
2. **Diverse Topics and Fields:** Courses range across languages, humanities, medicine, astronomy, chemistry, and mathematics, enhancing the learner's culture and scientific knowledge.
3. **Diversity in Presentation Styles:** Materials are offered through lectures, discussion sessions, seminars, video calls, and recordings, allowing participants to choose the style that suits them best.
4. **Trust in the Source:** These platforms ensure information accuracy, as content is provided by experienced professors and doctors, distinguishing it from unverified internet information (Zuraibi, Mukhalafa, et al., 2017).

Services Provided by the Platforms

- Student admission and registration.
- Tracking student progress and providing data on their academic standing.
- Assigning, receiving, grading, and commenting on homework and tasks.
- Providing teacher profiles and contact information.
- Managing and grading electronic exams.
- Providing academic calendars and schedules.
- Organizing virtual "office hours" for teacher-student interaction (Amer, 2019, p. 23).

Features of Educational Platforms

Ozatok & Brett (2012) highlight several features, including:

- Ease of use and implementation.
- Support for various e-learning tools and multimedia.
- Availability of ready-made templates to serve diverse content.
- Engagement of students with the curriculum and constant updates to match scientific developments.
- Allowing parents to view their children's results.

- Achieving a psychological and socially safe atmosphere between students and teachers.

Requirements for Electronic Educational Platforms

E-learning does not eliminate the teacher's role; rather, it makes it more complex, as the teacher becomes a leader, critic, and facilitator. Success requires:

First: The student

- Sufficient time to commit to the study schedule.
- A genuine desire for this type of learning (rather than traditional models).
- Computer literacy and internet proficiency.
- Commitment to completing assigned tasks.

Second: The Teacher

- Understanding the characteristics and needs of online students.
- Focusing on educational goals while covering the curriculum.
- Advanced computer literacy (higher than the students).
- Spending significant time online to provide immediate feedback to student inquiries.
- Enjoying the use of technology and adopting teaching styles suitable for children in an electronic environment (Al-Atrebi, 2019, p. 52).

Advantages of Integrating Information and Communication Technology (ICT) in Teaching and Learning

Digital technologies profoundly impact the economy, society, and the way we work, communicate, and engage with others in various activities, entertainment, and play. They also foster innovation across many different fields of life. Unsurprisingly, there is a strong correlation between the development of educational skills and the use of digital technology in various life domains (Al-Saai, 2013).

Integrating ICT into teaching and learning is of paramount importance; however, its application faces the same negative obstacles that hinder a full and correct implementation.

1. Improving the Teaching and Learning Process (Al-Subhi, 2016)

ICT has a significant and clear impact on teaching, learning, and scientific research, as evidenced in the following elements:

- **Curricula:** ICT provides clear support for modern, skills-based curricula, emphasizing the generation of information rather than just its transmission (Performance-based curricula). The focus has shifted toward *how* information is used rather than just its content. Computers have evolved into a **Cognitive Tool** rather than a mere data display device, providing suitable alternatives and diverse resources for complex curricular components.
- **The Teacher:** Through technological tools, teachers have been trained in cooperative learning methods and various thinking strategies. This has positively reflected on their abilities to design effective, real-world educational experiences, transforming the student into an active contributor to knowledge rather than a passive recipient in a stimulating environment.
- **Teaching Strategies:** The flexible timeframe provided by integrating curricula with ICT has increased student interaction with information. This necessitates self-understanding followed by peer communication to exchange expertise. Consequently, new teaching methods have emerged, such as **Collaborative Learning, Play-based Learning, Inquiry-based Learning, Project-based Learning,** and the **Flipped Classroom,** with ICT acting as a **Catalyst.**
- **The student:** ICT has increased student motivation, encouraging them to enjoy self-inquiry, creative thinking, and problem-solving. This has enhanced their acquisition of 21st-century skills, such as self-learning, self-assessment, and networking for expertise exchange. According to UNESCO (2007), using Web 2.0 tools like Skype, Blogs, and Forums to establish networks with other learners, teachers, and experts is considered a form of professional development.

2. Improving Quality and Accessibility of Education

ICT grants learners the freedom to access and publish information, enabling learning anytime and anywhere. It also allows access to best practices, helping to remove barriers for learners, especially those with special needs, the underprivileged, and the impoverished (Al-Atrash, 2017).

3. Improving the Learning Environment

ICT transforms teaching and learning processes by adding vital elements to educational environments, including:

- **Multiplicity of Knowledge Sources:** Particularly web-based and multimedia sources, transforming the learning environment into an active, stimulating one based on open-ended learning rather than mere information transfer (Al-Areini, 2003, p. 72).
- **Addressing Individual Differences:** Tailoring scientific content, media, and tasks to meet students' needs and providing them with immediate feedback.

4. Increasing Learning Motivation

The integration of ICT has increased learner engagement by:

- Shifting curricula from central-content programs to competency-based curricula related to the knowledge society.
- Translating educational experiences into realistic practices to prepare learners for the labor market.
- Replacing traditional teaching patterns with more effective ones where learners are partners in exploring knowledge.
- Giving students the opportunity to provide feedback for themselves and their school environment, increasing their sense of responsibility.

5. Enhancing Academic Performance

Research indicates that proper ICT integration contributes to the reform of curricula and teaching methods. A study by Kulik (1994) shows that, on average, students using ICT achieve higher academic results than their peers, learn faster, and show a stronger positive emotional connection to their classes. Fuchs and Weissman (2004), using PISA international results, supported these findings. Researchers attribute this to increased motivation, which extends learning time outside the classroom and fosters self-learning and communication skills.

Negative Effects of Using Technology

Despite the advantages, several negative impacts must be addressed:

- **Over-reliance on Calculators:** Leading to a lack of basic **Arithmetic skills**.
- **Reliance on Computer Applications:** Resulting in a failure to acquire essential **Literacy skills** (reading, writing, and spelling).
- **Distraction:** Students may focus on the technology itself rather than the scientific content; platforms like Facebook, Twitter, YouTube, and Instagram can become major distractions.
- **Moral Decay:** Technology has facilitated access to suspicious sites and inappropriate materials.
- **Erosion of Cultural Identity:** Real social networks and citizenship are sometimes replaced by virtual ones, affecting societal values.
- **Lack of Privacy:** Files can be easily leaked through spyware. Minors are often exploited due to their lack of experience regarding the risks of sharing private photos, exposing them to threats and blackmail.
- **Internet Addiction and Health Issues:** Excessive use can lead to psychological and physical problems. A major risk is **Cyberbullying**, where a child is threatened or humiliated. A study by Juvonen and Goss (2008) on 1,450 students (ages 12–17) found that 77% had experienced at least one cyberbullying incident.
- **Academic Plagiarism:** The ease of "copy and paste" has made it simpler to rely on unauthorized work rather than verifying information and citing reliable sources.

Here is the academic translation of the final section of your theoretical framework into English:

Barriers to Integrating Information and Communication Technology (ICT) in Education

The use of ICT in the teaching and learning process is accompanied by various challenges, which can be categorized as follows:

1. First-Order Barriers:

- **Lack of Hardware and Equipment:** Insufficient availability of computers and digital tools.
- **Lack of Support:** Specifically technical support; hardware malfunctions present significant difficulties for teachers.
- **Lack of Funding:** Maintenance and networking require substantial budgets that some countries—and even individual families—struggle to provide. Providing devices and internet data outside the classroom remains a major obstacle to expanding ICT use.
- **Environmental and Spatial Constraints:** Limited room sizes and the absence of proper infrastructure (e.g., electrical outlets and internet networks) hinder technology integration. Studies in Jordan and Greece noted that IT rooms were often unsuitable because they were originally designed as standard classrooms, not specialized tech spaces (Al-Anzi, 2011).
- **Classroom Conditions:** High student density consumes teachers' time and effort when ensuring every student successfully logs into educational programs.

- **Unavailability of Suitable Software.**

2. Second-Order Barriers:

- **Teachers' Attitudes and Pedagogical Beliefs:** Many teachers resist widespread ICT use because they believe it fosters isolation, causes children to abandon traditional play in favor of screen time, and because children may lack the necessary prerequisite skills. Some teachers prefer traditional methods as they are perceived as less burdensome in terms of time, effort, and commitment.
- **Lack of Training.**
- **Lack of Self-Confidence:** Teachers may doubt their ability to employ technology correctly within an educational context.

Leading Educational Platforms

1. Blackboard:

An online learning management system (LMS) designed to help instructors and students interact through online lectures or virtual classrooms. It enables teachers to provide course materials, discussion forums, chats, quizzes, and academic resources.

- **Features:** Student profile and file sharing, private course notes, instant chat rooms managed by the teacher, and integrated calendars. It provides teachers with detailed reports on student login times, dates, and frequency (Al-Zahrani, 2020, p. 336).
- **Interaction Tools:** Announcement boards, scheduling tools, task boards, grade centers, and address books (Afifi, 2018, p. 288).
- **Barriers to Use:** Difficulty applying it to courses requiring physical observation, lack of experience in synchronous lecture planning, lack of student devices, and technical outages (Al-Saeed, 2020, p. 9).

2. Edmodo:

An educational social networking platform that combines the features of Facebook and Blackboard. It uses Web 2.0 technology, allowing teachers to communicate with students in an open space to exchange messages, grades, quizzes, and assignments (Al-Mutairi, 2018, p. 50).

3. EasyClass:

A free learning management system that allows teachers to create digital classes, store lessons online, manage discussions, and provide feedback in an easy-to-use, Arabic-supported interface (Al-Rubayan, 2017, p. 190).

The "Madrasati" Platform

Concept: The Madrasati platform is a distinguished electronic service provided by the Saudi Ministry of Education, launched during the COVID-19 crisis. It embodies the Ministry's commitment to ensuring educational stability for the academic year 1442 AH (Al-Muhi, 2020). It was designed to balance student health with the preservation of academic achievement levels.

Key Services:

- **Simplified Curricula:** Access to clear explanations of subjects from home.
- **Attendance Tracking:** Students can register their presence in classes after listening to the lesson.
- **Parent-Teacher Communication:** Facilitating follow-ups on student achievement and school decisions.
- **Interactive Tools:** Homework portals, online testing, and "Madrasati Mushaf" (Quran app).
- **Enrichment Resources:** Access to an "Action Bank" for supplementary materials and content moderated by educational supervisors (Basyouni, 2021; Al-Sayed, 2020).

Strategic Integration: The Ministry officially adopted distance learning for all stages via Madrasati, featuring diverse content that respects individual differences. The platform allows school leaders to manage virtual classrooms as if they were in a physical school. It integrates augmented reality (AR) and has been merged with other resources like the "Ien" channel as part of the realization of **Saudi Vision 2030**.

Technical Features (Al-Atrebi, 2019, p. 63):

- **Graphical User Interface (GUI):** Easy navigation with customizable themes.
- **Scheduling and Content Management:** Organizing courses by week and setting deadlines.
- **Virtual Classrooms:** Integrated online spaces for live instruction.
- **Mobile Learning:** Full support for smartphones and computers, adapting to the device's nature.

Stakeholders: The platform provides specialized tools for **students, guardians, teachers, school officials, and educational directors**. Notably, it includes dedicated accessibility tools for persons with disabilities.

Here is the academic translation of this section into English:

School Classes on the Madrasati Platform

Since the platform integrates all educational stages, curricula, subjects, and various teams, it was essential to segment the curricula into specific classes distributed throughout the day. This prevents overlap or confusion between the schedules and classes of each respective stage.

Consequently, there are specific start and end times for each stage. The platform follows the schedule with strict regularity; classes are broadcasted at the exact scheduled second to ensure there is no interference with other programs or classes.

- **Primary Stage:** Classes begin in the afternoon period only, from 3:00 PM to 6:30 PM. The Ministry of Education has determined that each class duration for the primary stage is approximately thirty-five minutes.

How to check the class schedule: To find the duration and timing of a specific course on the Madrasati platform, follow these steps:

1. Log in to the Madrasati educational platform.
2. Sign in using your platform email (Microsoft account or other).
3. Access the platform's homepage.
4. Click on the user's personal account and search for the "**My Schedule**" (**Jadwal**) option.
5. Upon clicking "My Schedule," all schedules for the courses and stages you have selected will appear (Madrasati Platform Class Duration, 2020).

Educational Tools on the Madrasati Platform

- **Augmented Reality (AR):** AR is considered one of the latest technologies that merges electronic images with multimedia, such as video, audio clips, animation, still images, and interactive text (Al-Husseini, 2014). The Madrasati platform offers over 100 experiments explaining scientific concepts (e.g., physics experiments on magnetism, mirrors, and motion; chemistry experiments on gases and reactions; and biology experiments) using AR technology. These experiments can be viewed or downloaded to smartphones or personal computers via the platform.
- **Play and Learn:** These consist of approximately 70 diverse activities that combine entertainment with educational value. They explain specific mathematical concepts and exercises by integrating play with education. Examples include:
 - Number Strips
 - Missing Arrows
 - Mental Balance
 - Hamiltonian Path
 - Electric Fields

Features of the Madrasati Platform

- **A Qualitative Leap:** The platform has affected a qualitative shift in the concept of e-learning in the Kingdom. It has enhanced educational value through distance learning, as attested by several international organizations. The National Center for e-Learning announced that six international bodies completed comprehensive studies on the Kingdom's distance learning experience during the COVID-19 pandemic to document its success.
- **Technological Empowerment for Teachers:** Madrasati provides teachers with technologies that meet current and future digital requirements. This includes diverse interactive educational tracks, a bank of over 100,000 moderated electronic questions, and digital platforms containing over 62,000 diverse digital contents (visuals, games, 3D resources, and educational stories). It also includes an English language learning club, a mathematics club, and over 450,000 electronic lesson plans.
- **Interaction and Digital Health:** Since interaction is vital, the platform provides discussion forums to help students overcome psychological isolation. To promote digital health, students and teachers can communicate synchronously via chat rooms or asynchronously via email and "Teachers' Rooms" to receive feedback on activities and assessments (Madrasati, 2020).
- **Social Impact:** The platform introduced new variables to society and parents. The Ministry encouraged officials and teachers to assist families in navigating devices and accessing information broader than what is found in traditional textbooks.
- **National Project:** Madrasati has become a national project managed by a clear strategy and integrated teams. It successfully accommodated 6 million students and 525,000 educational staff simultaneously. It has established a modern educational experience that monitors updates and impacts on the educational reality, ensuring a seamless environment where students manage daily attendance and assignments remotely (Ministry of Education, 2020).

Enrichment Resources on Madrasati

<https://reviewofconphil.com>

The platform provides resources that broaden a student's knowledge beyond the standard curriculum. For instance:

- **Programming Languages:** Resources for learning Scratch, Raspberry Pi, Micro:bit, and Android/iOS app development via the **Thunkable** platform.
- **Civic Education:** Resources educating students on human, citizen, and student rights, categorized by level and language.
- **Culture and Clubs:** A page showcasing 50 Islamic contributions (historical and contemporary), a reading club, a math club, traffic safety education, and English language resources.
- **STEM Center:** A link to the Center for the Development of Science, Technology, Engineering, and Mathematics (STEM), aligned with **Saudi Vision 2030** (Maalla, 2020).

Frequently Asked Questions (FAQ)

To assist students and parents with this new experience, the platform addresses common queries:

- **Service Errors:** If a "Service unavailable" message appears, app users should reinstall the app. Browser users should clear their cache and try again or submit a report with a screenshot.
- **Notifications:** Alerts for virtual lessons, assignments, or tests appear via the "Notification Icon" on the platform.
- **Communication:** Teachers can contact students by clicking the "My Messages" tab and selecting "New Message."
- **Profile Updates:** Users can modify personal data via the "Edit Personal Information" page in the main side menu.
- **Social Interaction:** To add friends in the "Madrasati Community," users visit the profile of the student or teacher and click "Send Friend Request."
- **Scope:** Currently, the Madrasati platform serves **government schools only**.
- **Technical Support:** Users can contact support directly via the unified number.

Pillar II: Academic Achievement

Academic achievement is a primary indicator of success in the educational process. For the **individual**, it is the foundation for future success, self-actualization, and psychological and social adjustment. For **society**, it indicates improved outcomes, production rates in the educational system, and a decrease in dropout and delay rates (Al-Fakhiri, 2018, p. 7).

The concept of "school achievement" is closely linked to "school learning," which refers to changes in performance under specific conditions of training and practice. While learning includes all outcomes, achievement is specifically linked to the **desirable outcomes** associated with educational goals.

Achievement is a vital aspect of mental activity that manifests as academic excellence. It is defined as:

- The student attaining higher levels of knowledge.
- The "degree" or score a learner obtains on a specific test.
- **Modern Definition:** The scientific and organized acquisition of school knowledge and skills, focusing on both

cognitive (intellectual) and performance-based outcomes (Wadi, 2020, p. 513).

Ultimately, academic achievement serves as the fundamental criterion for judging what students can achieve in the future and is the cumulative result of various environmental and personal factors (Halima et al., 2014, p. 38).

Here is the comprehensive English translation of the provided section on Academic Achievement:

The Concept of Academic Achievement

Academic achievement is a widely used concept, particularly in the fields of education and psychology, due to its immense importance in evaluating student performance. It serves as a primary criterion for learning, enabling the determination of academic levels and the judgment of educational output in terms of both quantity and quality.

Scholars approach the concept of academic achievement through various lenses, often linking it to the concept of **school learning**. Achievement tests are used to determine what an individual has learned after receiving a specific type of instruction based on prior planning—typically after a set period of education.

Key conceptual perspectives include:

- **Pressey's View:** Academic achievement encompasses everything a student learns in school, whether related to cognitive, motivational, social, or emotional aspects.

- **Fouad Abu Hatab:** Defines it as the acquisition of information, skills, and thinking methods, as well as changes in attitudes and values, and the modification of adjustment patterns (covering both desirable and undesirable outcomes).
- **Hussein Al-Kamel:** Emphasizes that achievement represents the occurrence of "desirable learning processes," including facts, skills, and values.
- **Raja Mahmoud Abu Allam & Hassan Qoura:** Define it as the extent of student comprehension of specific experiences in a prescribed subject, measured by the grade the student receives. It is the "achieved knowledge or actual skills in school subjects as measured by teacher-assigned grades."
- **Efficiency Perspective (Warren):** Views achievement as an aspect of academic accomplishment defined as "performance efficiency" measured by standardized tests.
- **Chaplin:** Sees it as a specific level of accomplishment or proficiency in a skill or a body of information.
- **Morgan:** Regards it as the actual, present achievement on a knowledge test, rather than a mere potentiality.

In summary, academic achievement is the process of acquiring school knowledge in an organized, planned manner, demonstrated through student responses to school tests or standardized achievement tests (Abdul-Raouf, 2018).

The Importance of Academic Achievement

Mustafa Fahim notes that academic achievement is a central concern for educators and educational psychologists because of its impact on the lives of students, parents, and teachers. It is a vital criterion for evaluating student progress across all educational levels.

Psychologists study achievement from several angles: the relationship between achievement and personality/cognition, the impact of school and non-school environments, and the interaction between heredity and environment.

For Parents, it is the primary indicator of their children's progress and advancement from one grade to the next.

For Students, it is a means of self-actualization. Socially, it serves as a tool for future security, helping to combat unemployment, instability, and extremist conflicts. Training and educational activity are considered the primary drivers of development in the 21st century.

Social and National Impact: Any society seeking growth must invest in the academic achievement of its youth. For a nation to develop, its citizens must be capable of using complex technology and possessing the capacity for innovation. This investment is a prerequisite for long-term economic and social development.

Psychological Impact: Achievement significantly influences student personality. Reaching appropriate achievement levels builds self-confidence, supports self-image, and reduces anxiety. Conversely, failure leads to frustration, a sense of inferiority, and stress, which are detrimental to mental health.

Importance of Achievement for the Individual and Society

First: For Students

- **Goal Attainment:** Achievement leads to obtaining certificates, securing employment, and satisfying psychological needs (security, success, respect).
- **Predictability:** High achievement in one stage often predicts success in the next.
- **Motivation:** It motivates students to put in more effort and provides a baseline to evaluate their individual abilities and skills.

Second: For Society

- **Systemic Efficiency:** It is an indicator of the educational system's productivity and a guarantor of a return on educational spending.
- **Human Capital:** It ensures the fulfillment of society's needs for trained manpower, aligning educational outcomes with actual labor market needs.
- **Equal Opportunity:** High achievement is the actual guarantee of "equality of educational opportunity," allowing individuals to successfully pursue the stages of education they enter.

Objectives of Academic Achievement

- **Self-Assessment:** Helping students understand their academic standing relative to peers.
- **Demonstration of Understanding:** Allowing students to express their mastery of academic disciplines scientifically.

- **Differentiation:** Providing a way for teachers to identify individual differences (gifted, average, or struggling students).
- **Educational Efficiency:** Improving the process to reach clear goals for the student's benefit.
- **Guidance and Planning:** Assisting students in choosing paths that suit their abilities and interests.
- **Corrective Measures:** Helping teachers identify which concepts are difficult to understand and which responses need reinforcement.

Characteristics of Academic Achievement

Academic achievement is primarily concerned with theoretical and practical fields of knowledge found in school subjects (e.g., Science, Mathematics, Geography).

- **Curriculum-Based:** It is tied to the content of a specific curriculum.
- **Measurable:** Expressed through answers to written, oral, or performance-based exams.
- **Group-Oriented:** Focuses on the general level of typical students in a class rather than individual traits (Lunas, 2014, p. 20).
- **Interactive:** Requires the teacher to act as a facilitator to stimulate student motivation and trigger changes in their understanding.

Principles of Academic Achievement

- **Novelty and Innovation:** Repeating activities leads to boredom. Introducing new problems stimulates intellectual effort and discovery.
- **Motivation:** Based on Keller's theories, motivation is essential for attracting students to lessons. Even the best programs fail without it.
- **Interest and Readiness:** Learners must be physically, mentally, and socially ready. Interest increases achievement, and achievement increases interest.
- **Participation:** Active interaction and curiosity lead to better skill development.
- **The Law of Effect:** Positive behavior should be rewarded to ensure its continuation; a "joyful effect" improves academic performance.
- **Environment:** Success depends on safe, supportive surroundings—both physical and psychological.

Factors Affecting Academic Achievement

1. Family Factors

- **Stability:** Harmony and good communication within the family increase a child's readiness to learn.
- **Economic Status:** In the context of **distance learning**, the ability to provide electronic devices and internet access is a crucial factor.
- **Cultural Background:** Educated families provide continuous support and foster cognitive skills.

2. Personal Factors

- **Physical Health:** Sound physical health and intact senses are necessary for absorbing knowledge.
- **Psychological Health:** High levels of anxiety or depression lead to decreased achievement.
- **Intelligence:** There is a strong correlation between high IQ and high academic marks (Al-Salkhi, 2013).
- **Previous Experience:** Success depends on the concepts previously learned and mastered.

3. School Factors

- **The Teacher:** A competent teacher is the engine of the educational process, acting as a guide and evaluator.
- **The Curriculum:** Interrelated elements (objectives, content, activities) that help students grow holistically.
- **Instructional Media:** Tools that simplify concepts and make learning engaging.
- **Evaluation Methods:** If tests are too long, unclearly phrased, or ignore individual differences, they can negatively impact achievement scores (Al-Hadramiyah et al., 2019, p. 14).

Requirements for Academic Achievement

1. Student-Specific Requirements

These are subjective conditions related to the student's personality, interests, and innate abilities:

- **Sound Physical Constitution:** The student must possess a healthy physical build and functional senses (sight, hearing, etc.) to receive knowledge. They should be free from physical disabilities that might hinder concentration or comprehension.
- **Mental Integrity:** This involves the ability to understand, think, and acquire cognitive skills. Mental health is essential to avoid learning difficulties. Furthermore, intelligence quotient (IQ) tests are necessary as intelligence is closely linked to achievement.
- **Distinct Personal Characteristics:** To reach a high level of achievement, a student must exhibit:

- **Perseverance:** Continuous study and commitment; interruption in learning is a primary cause of academic weakness.
- **Freedom of Choice:** Choosing the appropriate times for studying to maximize retention.
- **Review:** Repeatedly reviewing material, starting from the easiest to the most difficult, and ensuring understanding before repetition to avoid boredom.
- **Documentation:** Recording all information received both inside and outside the classroom.

2. Family Environment Requirements

Success is achieved by fostering an environment that empowers the student:

- Maintaining a good cultural and educational level within the family.
- Creating a study-friendly climate (providing healthy food, clothing, housing, books, and tools).
- Avoiding domestic conflicts and maintaining positive relationships.
- Helping children build social relationships to satisfy their social needs and boost their self-esteem.

3. Classroom Environment Requirements

- **Competent Teachers:** Selecting qualified teachers, especially in early stages, to ensure fundamentals are mastered.
- **Creative Curricula:** Providing curricula that foster research, thinking, and creativity.
- **Instructional Tools:** Diversifying teaching methods and technology to match student interests.
- **Support Services:** Providing psychological, educational, and health services within the school environment.

Conditions for Effective Learning

Learning is a change in behavior that follows specific conditions:

1. **Veneration of Knowledge:** Students must respect knowledge and their teachers. Conversely, teachers must model ethical behavior that commands respect.
2. **Diligence:** Continuous effort and high ambition in seeking knowledge.
3. **Repetition with Understanding:** Information sticks when repeated with focus and teacher guidance (Qanani, 2017).
4. **Wholistic vs. Part-by-Part Method:** Experiments show the "Wholistic Method" is better for short, logical material, while complex topics may require breaking down (Halima et al., 2015).
5. **Self-Activity:** This is the ideal way to acquire skills. Knowledge gained through one's own effort is more stable and permanent (Bin Saadia et al., 2014).
6. **Guidance:** Counseling helps students discover their potential, leading to faster results with less effort.
7. **Physical and Psychological State:** Hunger, thirst, anxiety, and fear negatively impact achievement.
8. **Feedback:** Students must be aware of their results constantly to encourage further effort.

Methods of Measuring Academic Achievement

The most common tools are examinations, categorized into three types:

1. Oral Exams

Questions asked without writing to measure the student's expression and experience (Qanani, 2016).

- **Disadvantages:** Subjective grading and time-consuming (testing one student at a time).

2. Written Exams

- **Objective Tests:** (Multiple choice, True/False, Matching, Completion).
 - **Pros:** Covers many students, objective, quick to answer.
 - **Cons:** Requires significant time and effort to design.
- **Essay Exams:** Free-response answers on a specific topic.
 - **Pros:** Shows problem-solving skills, freedom of expression, and ability to link concepts.

3. Practical (Performance) Exams

These focus on **scientific performance** rather than theoretical or linguistic performance. They measure the effectiveness of theoretical study through applied action (Qanani, 2016).

Tools for Measuring Achievement

1. **Observation:** A strategy where the teacher monitors the student in an active situation to judge skills, values, and behavior. It must be objective, planned, and recorded immediately.
2. **Reports and Research Projects:** These measure creativity, planning, and the ability to integrate parts of knowledge or work in a team.
3. **Self-Evaluation:** Students determine their own level using rubrics or checklists.
4. **Interviews:** Individual or group discussions to estimate depth of thinking and attitudes.
5. **Achievement Tests:** Used for selection, feedback, and program evaluation (Al-Shayeb, 2017).

Causes of Low Academic Achievement

Low achievement is a significant problem involving the student, teacher, and family. It is defined as a deficit in performance compared to peers or falling below a certain grade threshold. If left unaddressed in core subjects, it can lead to the collapse of the student's entire educational path (Jabr, 2018).

Remedial Activities:

These are activities provided during or after class to overcome weaknesses and develop strengths. They help teachers identify unachieved learning outcomes and provide the student with extra support to "catch up" with their peers (Al-Azizi, 2010).

The Role of the Teacher:

The teacher is the cornerstone of the educational process. A successful teacher engages students in activities and fosters a positive environment (Israel & Braulieu, 2004). **Factors for low achievement related to the**

teacher include:

- Use of ineffective teaching methods.
- Lack of familiarity with remedial strategies.
- Weak personality or uninspiring behavior.
- Use of non-educational or discouraging language.
- Lack of professional competencies or incentives for students (Rashid, 2001).

Literature Review

Pillar I: E-Learning Platforms

Benta, Bologa & Dzitac (2014): *The Impact of Using E-Learning Platforms on Developing and Activating the Education Process and Task Participation.* Conducted in Romania, this study aimed to uncover the impact of e-learning platforms on educational development and task engagement. Researchers analyzed 2,970 service center logs over three months. The sample included 202 university students divided into an experimental group (98 students) taught via an e-learning platform with specialized training, and a control group (104 students) taught via traditional methods. Results showed a statistically significant impact of the platform on motivating students and increasing their participation in cognitive tasks. Significant differences in academic achievement and performance were also found in favor of the experimental group.

Stergioulas et al. (2014): *The Use of E-Learning Platforms and Their Impact on the Learning Process.* Based in the United Kingdom, this study explored the influence of e-learning platforms on learning. The sample of 82 students was split into experimental (platform-based) and control (traditional) groups. Data collection via testing revealed that the platforms were easy to use and had a positive impact on the learning process.

Al-Anezi (2017): *The Effectiveness of Using Edmodo Educational Platforms for Mathematics and Computer Science Students at the College of Basic Education.* This study aimed to identify the effectiveness of Edmodo in Kuwait. A questionnaire was administered to a random sample of 200 students (2015/2016 academic year). Results indicated that students possessed the personal capabilities and motivation to use computer labs but lacked the material resources to facilitate use. The study highlighted that students benefited from programs that developed self-learning and peer experience exchange. No statistically significant differences were found based on specialization, GPA, or International Computer Driving License (ICDL) status.

Heggart & Yoo (2018): *Researching the Effectiveness of Using the Google Classroom Platform.* Using an analytical approach and a questionnaire administered to 450 participants, this study found that student participation increased significantly within virtual classrooms. The study also highlighted the utility of various learning platforms in helping students acquire online pedagogical skills.

Weston et al. (2018): *Parallel Design for Platform Creation.* This study utilized a parallel design to create two platforms, applying an analytical method with a questionnaire on a sample of 99 specialized teachers using multimedia platforms (*GoAnimate* and *LessonSketch*). The findings confirmed that these platforms have effective and positive impacts on teachers.

Pillar II: Academic Achievement

Al-Qahtani & Al-Qasim (2019): *The Effectiveness of Teaching Science Using Self-Questioning Strategy in Academic Achievement and Developing Reflective Thinking Skills.* This experimental study involved 100 middle school girls in Khamis Mushait, Saudi Arabia. Divided into two equal groups, the results showed statistically significant differences at the (0.05) level in favor of the self-questioning strategy regarding both academic achievement and reflective thinking skills compared to traditional methods.

Qasir Abdul Razzaq (2019): *The Role of Educational Technology in Improving Academic Achievement for Physical Activity and Sports Science Students.* This descriptive study used a questionnaire on 30 students. Key findings indicated that educational technology raises learning motivation and solves pedagogical problems. It emphasized that instructional media are vital for improving achievement, necessitating the support of the educational journey through proper tool provision.

Nasser Al-Oud (2020): *Problems Affecting the Academic Achievement of New Students in Saudi Universities.* Using a social survey method with 207 students, this study identified social, psychological, educational, and economic problems facing first-year university students. The results confirmed that new students face multi-dimensional challenges that impact their academic performance.

Al-Ghamdi & Qutb (2020): *The Effectiveness of Augmented Reality in Developing Academic Achievement and Critical Thinking Among High School Girls in Dammam.* This study combined descriptive and quasi-experimental methods on 44 students (22 experimental using AR; 22 control using traditional methods). Using an achievement test, a critical thinking scale, and an attitude scale, the study concluded that AR is highly effective and recommended its integration into teaching and higher-order thinking skill development.

Ahmed Abdul Aziz Al-Shaqqi (2025): *The Impact of Digital Platforms on the Ethical System in Palestine (A Survey of Israa University Students).* This survey-based study focused on how social media and digital platforms reshape ethical concepts like privacy, respect, and social responsibility. It called for awareness programs to ensure the ethical and optimal use of digital resources in academic environments.

Research Methodology

The choice of methodology depends on the nature of the phenomenon being studied. This research employs the **Descriptive Analytical Method**.

- **Descriptive Method:** A scientific approach based on describing the subject of research by tracking its details and expressing them qualitatively (describing the state) and quantitatively (using numbers, estimates, and degrees) to reach an integrated scientific description (Prius, 2019).
- **Sample Survey:** Since a comprehensive survey of the entire population is difficult, a sample survey was used to identify the opinions and suggestions of **mothers** regarding the use of e-learning platforms to develop their children's academic achievement.

Research Population

The research population is defined as the total sum of individuals or elements related to the phenomenon under study (Abu al-Nasr, 2017). For this study, the population consists of **mothers of primary school children**.

Research Sample

A research sample involves selecting a specific portion of the research population to undergo the study (Hafez, 2012, p. 61). Researchers emphasize that the sampling system has become the standard in childhood studies; the researcher selects a limited number of subjects whose characteristics and traits represent the broader population, aligning with the research objectives.

The study was applied to a **random sample of 392 respondents**, consisting of mothers of primary school children in the early grades (first, second, and third) in Cairo.

Demographic Distribution of Respondents

Table (1): Distribution of Respondents by Age

Age Group	Frequency (f)	Percentage (%)
18 – 25	67	17.1%
26 – 30	61	15.6%
31 – 35	77	19.6%
36 and older	187	47.7%
Total	392	100%

The data in the table above indicates that the largest segment of the sample was aged **36 and older**, accounting for **47.7%**. The age group 31–35 followed at **19.6%**, then 18–25 at **17.1%**. The smallest segment was the 26–30 age group, representing **15.6%**.

Table (2): Distribution of Respondents by Educational Level

Educational Level	Frequency (f)	Percentage (%)
Primary	61	15.6%
Intermediate	33	8.4%
Secondary	94	24%
University	204	52%
Total	392	100%

The educational level data shows that the **University level** comprised the majority of the sample at **52%**. This was followed by the Secondary level at **24%**, the Primary level at **15.6%**, and finally the Intermediate level at the lowest percentage of **8.4%**.

Table (3): Distribution of Respondents by Family Economic Level

Family Economic Level (Monthly Income)	Frequency (f)	Percentage (%)
High (7,000 – 9,000)	151	38.5%
Medium (4,000 – 6,000)	154	39.3%
Low (1,500 – 3,000)	87	22.2%
Total	392	100%

The economic level data for the sample shows that **39.3%** have a **Medium** economic level (4,000 – 6,000), while **38.5%** have a **High** level (7,000 – 9,000). The lowest percentage was **22.2%**, representing the **Low** economic level (1,500 – 3,000).

Research Tool: The Questionnaire

- **Definition:** The questionnaire is a common tool used to obtain information and facts regarding the opinions and attitudes of a population concerning a specific topic or situation (Al-Maghrabi, 2011, p. 135).
- **The "Form":** Maurice Angers refers to it as the "form," most commonly known as a "survey." It is a direct technique for asking individuals directed questions because the response formats are pre-determined. This allows for quantitative processing to discover mathematical relationships and establish quantitative comparisons (Angers, 2006, p. 204).

Steps for Designing the Questionnaire:

The researcher must follow a specific sequence of steps:

1. Define the research population and study sample.
2. Determine the characteristics of the population.
3. Formulate questions aimed at answering research queries or providing information to prove/refute hypotheses.
4. Conduct a **Pre-test** (pilot study) to assess question clarity and the time required for completion.
5. Subject the questionnaire to a **Panel of Experts** for arbitration.
6. Determine the **Validity** and **Reliability** of the questionnaire (Hafez, 2012, p. 50).

Rules for Formulating Questionnaire Questions:

1. Use clear phrases and simple words with limited meanings to ensure the requirement is easily understood.
2. Prefer common words with universally agreed-upon meanings.
3. Ensure sentences are short and relevant to the meaning.
4. Each question should contain only one idea.
5. Avoid questions that make the subject feel embarrassed.
6. Clarify all possible response options, focusing on the primary ones.
7. Include an "open-ended" item for the possibility of other options.
8. Formulate quantitative questions accurately and directly (Dwaidri, 2000, p. 205).

Types of Questionnaires:

1. **Closed (Restricted):** Requires the subject to choose from a set of answers (e.g., Yes, No, Rarely). It is easy to answer, classify, and analyze, yielding high response rates. **Disadvantage:** It restricts the respondent to specific answers.
2. **Open-ended:** Gives the subject freedom to express opinions in detail. It helps reveal motives and factors. **Disadvantages:** Responses may deviate from the researcher's intent; they are difficult to classify and analyze statistically, and often suffer from low response rates as subjects may be reluctant to write in detail.

3. **Closed-Open:** Combines closed questions with open-ended sections for topics not explicitly asked by the researcher.
4. **Pictorial:** Questions are presented as drawings or images. This is useful for children, illiterate individuals, and psychological analysis. **Disadvantage:** Limited to visually distinguishable situations and difficult to standardize.

Advantages of the Questionnaire:

- Collects vast information with limited effort and appropriate cost.
- Suitable for research where respondents wish to remain anonymous.
- Helps avoid researcher bias or influence on the respondent.
- Grants the respondent full freedom to choose the time and place to answer (Hafez, 2012, p. 49).

Disadvantages of the Questionnaire:

- Lengthy questionnaires cause boredom and non-response.
- Lacks personal contact, depriving the researcher of observing non-verbal reactions.
- Limited to populations with high literacy rates.
- Inability to verify the honesty of responses.
- Lacks flexibility; if a respondent misunderstands a question, there is no one to correct them (especially in mail-in surveys).
- Potential for sample bias, as respondents often represent a more educated segment of the population (Ibrahim, 2000, p. 170).

Validity and Reliability

A) Validity Test:

This refers to the suitability of the tool to measure what it is intended to measure. To ensure **Content Validity**, the researchers defined the study objectives based on theoretical literature and previous studies. **Face Validity** was established by presenting the tool to a panel of experts to ensure clarity and relevance to study goals.

B) Reliability Test:

This refers to the accuracy of the measurement. The researchers used the **Test-Retest** method. The questionnaire was applied to a sample, and then re-applied to the same sample after two weeks. The results were consistent, yielding a **Reliability Coefficient of 90%**, indicating high clarity and suitability for application.

Research Results and Discussion

1. Child's Use of the E-Learning Platform

Table (4): Child's Use of the E-Learning Platform

Response	Frequency	Percentage (%)
Yes	338	86.2%
No	54	13.8%
Total	392	100%

The data in the previous table indicates that the percentage of children using e-learning platforms reached **99.5%**. This demonstrates that the vast majority of children have completed distance education using electronic platforms, while children who do not use e-learning platforms accounted for only **0.5%**.

2. Child's Use of the "Madrasati" Platform

Table (5): Use of the Madrasati Platform

Usage	Frequency (f)	Percentage (%)
Yes	382	97.5%
No	10	2.5%
Total	392	100%

The data in the table above shows that the percentage of children who used the **Madrasati** platform reached **97.5%**. From this, we can infer that Madrasati is one of the primary e-learning platforms adopted by the Ministry of Education to facilitate the educational process. Meanwhile, children who do not use the Madrasati platform accounted for **2.5%**, indicating that a small percentage of children receive their education through other platforms.

3. Child Accessing the E-Learning Platform Independently

Table (6): Independent Access to the E-Learning Platform

Usage	Frequency (f)	Percentage (%)
Yes	322	82.1%
No	70	17.9%
Total	392	100%

The data in the table above indicates that the percentage of children capable of logging into the e-learning platform independently reached **82.1%**. Conversely, children who cannot access the platform without parental assistance reached **17.9%**.

4. Suitability of Usage Duration on the E-Learning Platform

Table (7): Suitability of the Usage Duration

Usage	Frequency (f)	Percentage (%)
Yes	307	78.3%
No	85	21.7%
Total	392	100%

The data in the table above shows that the duration of e-learning platform use is suitable for **78.3%** of the sample, as the majority believe the timeframe aligns with their children's abilities and potential. Meanwhile, **21.7%** believe the duration of use is not suitable for them.

5. Use of Supplementary Tools Provided by the Platform

Table (8): Child's Use of Supplementary Tools Provided by the Platform

Usage	Frequency (f)	Percentage (%)
Yes	323	82.4%
No	69	17.6%
Total	392	100%

The data in the previous table indicates that children's use of the supplementary tools provided by the e-learning platform reached **82.4%**, while those who do not use them accounted for **17.6%**.

6. Daily Duration of E-Learning Platform Usage by the Child

Table (9): Time Spent Daily on the E-Learning Platform

Duration	Frequency (f)	Percentage (%)
Two Hours	18	4.6%
Three Hours	116	29.6%
Four Hours	163	41.6%
Five Hours	89	22.7%
Other	6	1.5%
Total	392	100%

The data in the table above shows that the most common duration of daily platform use is **four hours**, at **41.6%**. Usage for **three hours** stood at **29.6%**, and **five hours** at **22.7%**. For those who chose "Other" (**1.5%**), specific responses from mothers included: (three mothers agreed on 6 hours, 3.5 hours, live streaming, and 8 hours).

7. Frequency of Platform Access per Day

Table (10): Number of times the child accesses the e-learning platform daily.

Usage	Frequency (f)	Percentage (%)
Once	130	33.2%
Twice	139	35.5%
Three times	35	8.9%
Four times	39	9.9%
Other	49	12.5%
Total	392	100%

The data in the table shows that the highest frequency of platform access is **twice a day** at **35.5%**, followed by once a day at **33.2%**. The "Other" category accounted for **12.5%**, while four times a day reached **9.9%**. The lowest frequency was three times a day at **8.9%**.

8. Platform Tools Facilitating Academic Enrichment

Table (11): Supplementary tools on the electronic platform that easily impact the enrichment of achievement.

Tool / Usage	Frequency (f)	Percentage (%)
Muting/Unmuting audio	88	22.4%
Opening camera/Participating with the teacher	18	4.6%
On-screen writing and text highlighting	22	5.6%
Video recording of the session	10	2.6%
All of the above	254	64.8%
Total	392	100%

Data indicates that **64.8%** of respondents believe **all the aforementioned tools** impact achievement. Individually, muting/unmuting audio was selected by **22.4%**, on-screen writing/highlighting by **5.6%**, and opening the camera/participating with the teacher by **4.6%**. The lowest percentage was for video recording sessions at **2.6%**.

9. Student Grades Prior to Using the Platform

Table (12): Child's grades before using the e-learning platform.

Grade Range / Usage	Frequency (f)	Percentage (%)
Excellent (40 – 50)	289	73.72%
Average (30 – 40)	90	22.95%
Acceptable (20 – 30)	8	2%
Weak (10 – 20)	5	1.2%
Total	392	100%

As shown above, the highest percentage (**73.72%**) of respondents reported their children's grades were **Excellent** before using the platform. **22.95%** reported average grades, **2%** reported acceptable grades, and **1.2%** reported weak grades.

10. Ease of Platform Mechanics

Table (13): The child faces difficulty in the mechanics of using the e-learning platform.

Response	Frequency (f)	Percentage (%)
Strongly Agree	54	13.77%
Agree	71	18.11%
Neutral	94	23.97%
Disagree	127	32.39%
Strongly Disagree	46	11.73%
Total	392	100%

The highest percentage belonged to those who **Disagree (32.39%)**, meaning they believe the child faces no difficulty using the platform. Neutral respondents accounted for **23.97%**, while **18.11%** agreed that their child faces difficulties. **13.77%** strongly agreed, and **11.73%** (the lowest percentage) strongly disagreed.

11. Accessibility of Virtual Classrooms

Table (14): The e-learning platform is characterized by easy access to the virtual classroom.

Response	Frequency (f)	Percentage (%)
Strongly Agree	167	42.60%
Agree	190	48.46%
Neutral	22	5.61%
Disagree	5	1.27%

Response	Frequency (f)	Percentage (%)
Strongly Disagree	8	2%
Total	392	100%

The data shows that **48.46% Agree** that the platform is smooth and easy to access, followed by **42.60%** who **Strongly Agree**. Neutral responses stood at **5.61%**, while Disagree and Strongly Disagree represented a very small portion (**1.27%** and **2%**, respectively).

12. Platform Design and Positive Interaction

Table (15): The design of the e-learning platform attracts the child to interact positively.

Response	Frequency (f)	Percentage (%)
Strongly Agree	105	26.78%
Agree	143	36.47%
Neutral	99	25.25%
Disagree	31	7.90%
Strongly Disagree	14	3.57%
Total	392	100%

Most respondents (**36.47%**) **Agree** that the design attracts children and helps them enjoy their lessons. **26.78%** strongly agree, **25.25%** are neutral, **7.90%** disagree, and **3.57%** strongly disagree.

13. Interaction with Platform Interfaces

Table (16): The child interacts positively with the platform's windows/interfaces.

Response	Frequency (f)	Percentage (%)
Strongly Agree	113	28.82%
Agree	187	47.70%
Neutral	67	17.09%
Disagree	21	5.35%
Strongly Disagree	4	1.02%
Total	392	100%

47.70% of parents **Agree** that their children interact positively with platform interfaces. **28.82%** strongly agree, while **17.09%** remain neutral. Disagreement was low, with only **5.35%** disagreeing and **1.02%** strongly disagreeing.

14. Role of the Teacher

Table (17): The child's teacher played a fundamental and clear role in delivering information and follow-up.

Response	Frequency (f)	Percentage (%)
Strongly Agree	226	57.65%
Agree	128	32.65%
Neutral	29	7.39%
Disagree	6	1.5%
Strongly Disagree	3	0.76%
Total	392	100%

A significant majority (**57.65%**) **Strongly Agree** that the teacher's role was essential in delivery and follow-up. **32.65%** agree, **7.39%** are neutral, and less than **3%** combined disagree or strongly disagree.

15. Variety of Tools and Achievement

Table (18): The e-learning platform provides various tools that help the child in their academic achievement.

Response	Frequency (f)	Percentage (%)
Strongly Agree	127	32.4%
Agree	162	41.32%
Neutral	68	17.34%

Response	Frequency (f)	Percentage (%)
Disagree	25	6.4%
Strongly Disagree	10	2.5%
Total	392	100%

41.32% Agree and **32.4% Strongly Agree** that the platform provides diverse tools helpful for achievement. Neutrality stood at **17.34%**, while those who disagree or strongly disagree were a minority at **6.4%** and **2.5%**.

16. Communication of Difficulties

Table (19): The child always informs you of the difficulties they face in their studies.

Data shows **46.93% Agree** and **31.4% Strongly Agree** that their children communicate their academic struggles. **14.54%** are neutral. Only **5.61%** disagree (implying the material may be suitable for their abilities), and **1.5%** strongly disagree.

17. Impact of Activities and Assignments

Table (20): The activities and assignments provided help the child improve academic achievement.

Response	Frequency (f)	Percentage (%)
Strongly Agree	134	34.18%
Agree	170	43.36%
Neutral	47	11.98%
Disagree	30	7.65%
Strongly Disagree	11	2.80%
Total	392	100%

43.36% Agree and **34.18% Strongly Agree** that assignments improve achievement, showing a commitment to completing them. **11.98%** are neutral, while **7.65%** disagree and **2.80%** strongly disagree (reflecting potential neglect of tasks).

18. Improvement in Achievement Levels

Table (21): The child's academic achievement level rose with the use of the e-learning platform.

Response	Frequency (f)	Percentage (%)
Strongly Agree	113	28.8%
Agree	122	31.12%
Neutral	83	21.17%
Disagree	46	11.73%
Strongly Disagree	28	7.14%
Total	392	100%

31.12% Agree and **28.8% Strongly Agree** that achievement levels rose, indicating the success of these platforms. However, **11.73%** reported a decline compared to in-person schooling, and **7.14%** strongly disagreed, suggesting a need for enrichment activities and parent-teacher consultations for this group.

Results

- **Platform Duration Suitability:** The percentage of mothers who found the daily duration of the **Madrasati** platform suitable for their children reached **78.3%**. This indicates that the current instructional time aligns well with the students' attention spans and capabilities from a parental perspective.
- **Ease of Use vs. Accessibility:** Approximately **32.39%** of mothers expressed disagreement regarding any difficulty in using the platform mechanics. This correlates closely with the **48.46%** of mothers who agreed that the **Madrasati** platform is characterized by seamless and easy access to virtual classrooms, suggesting a generally user-friendly interface.
- **The Teacher's Role:** A majority of **57.65%** of mothers agreed that the teacher played a clear, effective, and fundamental role in delivering information and consistently following up with the students, highlighting the human element's continued importance in digital spaces.
- **Impact on Academic Achievement:** Regarding the primary objective, **32.12%** of mothers agreed that there was a noticeable rise in academic achievement after the implementation of e-learning platforms, while **28.8%** strongly agreed.

- **Enriched Analysis:** Collectively, over **60%** of the sample reported a positive shift in achievement. This suggests that the integration of diverse digital tools (such as screen sharing, interactive whiteboards, and recorded sessions) has successfully bridged the gap created by the absence of traditional classrooms, fostering a more self-reliant learning environment for primary-grade students.

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