

The extent of the electronic payment systems contribution to the promotion of informatics services at Al-Hussein Bin Talal University

Research – English Summary

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Abstract

This study aimed to evaluate the contribution of the electronic payment system in enhancing information services at Al-Hussein Bin Talal University, with a focus on analyzing the system's impact on improving the quality of services provided to students. The study adopted a descriptive-analytical approach, collecting data from a sample of 827 male and female students using an electronic questionnaire and semi-structured interviews.

The results revealed an effective contribution of the electronic payment system in enhancing information services, with 86% of students preferring this system over traditional methods. The analysis showed that the system significantly improved the quality of information services (average 3.69), particularly in areas of financial transparency, transaction processing speed, and time savings. However, some challenges were identified in enhancing information services, including technical difficulties (50.3%), refund difficulties (52.2%), and additional costs (57.3%).

The study also highlighted statistically significant differences in the extent of benefiting from enhanced information services attributed to gender and educational level variables, with male and undergraduate students benefiting more from these services. Correlation analysis showed a positive relationship (0.347) between system usage and the degree of information service enhancement.

The study recommends several measures to maximize the system's contribution to enhancing information services, including user interface development, technical infrastructure improvement, simplifying refund procedures, and implementing student training programs. The results also confirm the effectiveness of the Technology Acceptance Model and the Information Systems Success Model in explaining the role of electronic payment systems in enhancing university information services.

Keywords

Electronic payment system, information services, service quality, user satisfaction, academic libraries, Jordan

1. Institutional Context and System Overview

Al-Hussein Bin Talal University serves as a regional model for digital transformation in higher education within the Hashemite Kingdom of Jordan.

- **System Implementation:** In 2019, the university adopted the "eFAWATEERcom" electronic payment gateway.
- **Strategic Alignment:** The system was developed by the Central Bank of Jordan in cooperation with MadfootCom, aligning with Jordan's 2025 vision for a cashless society.
- **Regional Benchmarking:** While 59% of universities in developed nations have integrated e-payment, only 45% of Arab universities have achieved full integration between electronic payment and informatics services. AHU's adoption places it at the forefront of the regional digital shift.

2. Research Methodology

The study employed a descriptive-analytical approach to assess the system's contribution to informatics services.

- **Sample Demographics:** 827 students participated (82.7% response rate from a target of 1,000) from a total student population of 12,201 for the 2023/2024 academic year.
- **Data Collection Tools:**
 - **Electronic Questionnaire:** 35 items covering demographics, usage levels, informatics services, and pros/cons.
 - **Qualitative Interviews:** 15 semi-structured interviews with university officials and staff.
- **Statistical Validity:** The tools demonstrated high reliability, with Cronbach's Alpha coefficients ranging between 0.82 and 0.91.

3. Analysis of System Usage and Impact

The study measured the system's performance across several key dimensions, revealing high levels of adoption but varying levels of satisfaction regarding specific informatics features.

3.1. Usage Levels and Student Preferences

The general trend toward system usage is highly positive, with a weighted mean of 4.23.

Key Usage Indicator	Mean Score	Percentage/Status
Preference for e-payment over traditional cash	4.47	Very High
Usage for tuition and university fees	4.31	94.7% of students
Knowledge of e-payment applications	4.25	92.8% of students
Support for activating student ID as a payment method	4.28	91.7% support

3.2. Contribution to Information Services

The system provides a suite of informatics services that facilitate student administration, yielding a weighted mean of 3.69.

- **Service Quality Enhancement:** Students believe the system improves the overall quality of information services (Mean: 4.14).
- **Data Access:** The system provides personalized student information (Mean: 3.86) and details on due, paid, and late fees (Mean: 3.65).
- **Transparency:** 73.6% of students noted higher transparency in financial information compared to traditional systems.
- **Efficiency:** The system significantly saves time and effort (Mean: 4.29). Regional data suggests transaction times dropped from an average of 45 minutes to 7 minutes.

4. Demographic Variations in System Adoption

Statistically significant differences were observed in how different student groups perceive and utilize the system.

- **Gender:** Male students demonstrate higher levels of usage (Mean: 4.29) and more positive evaluations of the system's informatics services (Mean: 4.19) compared to female students (Means: 4.17 and 3.28 respectively).
- **Academic Level:** Bachelor's degree students are more reliant on the system and rate its benefits more highly (Mean: 4.26) than graduate students (Mean: 3.59). Graduate students often require more complex financial transactions, which may explain the disparity.
- **Correlation:** There is a weak positive correlation (0.347) between the level of system usage and the degree of informatics service enhancement, suggesting that usage is driven more by necessity and ease of use than by the depth of the information services provided.

5. Critical Challenges and System Weaknesses

Despite high usage, students identified several "moderate" level negative factors (General weighted mean of 2.53) that hinder the user experience.

Challenge	Impact Percentage	Mean Score
Additional Costs: Fees associated with using e-payment services.	57.3%	2.64
Refund Difficulties: Struggles in reclaiming funds after payment errors.	52.2%	2.71
Technical Issues: Website access barriers or technical obstacles.	50.3%	2.55
Digital Divide: The gap between tech-savvy students and others.	44.1%	2.37
Procedural Clarity: Difficulty in understanding payment steps.	43.8%	2.38

6. Strategic Recommendations

To maximize the system's contribution to informatics services, the study proposes the following actions:

6.1. Technical and Operational Improvements

- **Infrastructure:** Improve technical infrastructure to ensure site stability and reduce downtime.
- **Refund Automation:** Develop a simplified, automated mechanism for fund recovery in the event of transaction errors.
- **UI/UX Development:** Enhance the user interface with interactive guides, videos, and infographics to clarify payment steps.

6.2. Policy and Support Enhancements

- **Fee Review:** Re-evaluate the service fee structure to make the system more equitable for all students.
- **Support Centers:** Establish dedicated technical assistance centers within university libraries and departments to help students with low digital literacy.
- **System Integration:** Fully integrate the payment gateway with other university systems, such as registration, academic records, and the university library.

6.3. Training and Culture

- **Informatics Training:** Implement intensive training programs for new students on electronic financial systems.
- **Continuous Feedback:** Form a student-faculty advisory council to monitor system performance and propose ongoing improvements based on regular satisfaction surveys.