Research article

Developing a success model of a social student relationship management system

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ABSTRACT

Social media's significance in higher education has increased due to its capacity to enhance participation, communication, teamwork, and information sharing. Important notifications, updates, and reminders can be promptly received by all members of the university community, assuring that information is shared with everyone. The objective of this study is to develop a model for a Customer Relationship Management (CRM) system in higher education that is based on social media and intends to increase student satisfaction, loyalty, and profitability. It blends the idea of trust with Delone Mclean success model. Partial Least Squares-Structural Equation Modeling (PLS-SEM) was used to evaluate the data that was gathered from 606 Jordanian private university students via an online survey. The findings demonstrated that user satisfaction affects social media usage and that system quality, information quality, service quality, and trust must all be considered to attain user satisfaction. This study examines how to create a CRM system based on social media in Jordanian universities. The study makes significant contribution to the development criteria for evaluating social media-based CRM systems in higher education institutions, and its broad conceptual model cloud be expanded and tested in future studies. This study is the first to investigate the use of social media to develop a CRM system for Jordanian universities. This is a novel study, and the work significantly create a set of criteria for evaluating social media-driven CRM systems in higher education. The study's expansive the model may serve as the base for more research in this field.

1. Introduction

By establishing solid and fruitful partnerships between students and institutions, the social student relationship management system (SSRM) system is a state-of-the-art technological tool designed to improve the overall student experience. The goal of the social CRM system is to increase student satisfaction, encourage loyalty, and increase revenue by creating, fostering, and maintaining positive relationships with students [1–3] The social CRM system depends on CRM principles to comprehend and change students' conduct to meet their expectations. Based on previous studies, non-traditional students have identical service needs as their counterparts, emphasizing the need for CRM systems in academic institutions.

The researcher uses a comprehensive and flexible method to evaluate social media –based system in higher educational institutions

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in Jordan. This study significantly contributes to the field of student relationship management. The approach of the study examines the educational and technical issues facing universities and suggests practical strategies to meet them. The conclusion of the study provides actionable insights for improving higher education and resolving challenges related to quality.

Previous CRM research has made substantial advances in a variety of industries, including banking, manufacturing, and tele-communications [4–6]. However, research on developing a successful social media-based SSRM is limited. This research is critical for SSRMs and social CRM systems in general because it highlights the lack of a widely agreed success model that institutions may utilize to ensure successful deployment. The investigation's records were also analyzed [7], and educational institutions are not actively adopting it, although they may not face challenges with weak infrastructure when incorporating social media into their learning systems [6]. To fill this knowledge gap, this study will identify the aspects that are critical to the performance of these systems and investigate the relationship between these factors and quality features. The study also assesses the current level of student relationship management systems based on social media in Jordanian universities, as well as the corresponding research in this field, despite the numerous benefits associated with the usage of social media.

In order to develop a successful social student relationship management system, it is crucial to understand the key factors that contribute to its success. This is a widely recognized issue in the field of information systems [6]. The model suggested in this study establishes a fundamental understanding of the factors comprising a social student relationship management system and provides valuable insights into a subject that lacks empirical proof. According to Ref. [2], there are 112 paper published on social CRM, that means there is a few researches on this area, this will help to guide future research on SCRM and to improve our understanding of how to manage SCRM.

To address this knowledge gap, this research sets out to determine the factors that are crucial. The study is divided into two parts to determine this gap.

First of all, the researcher will conduct a review of Jordanian universities' websites to evaluate the presence of the systems. Secondly, the researcher will examine previous literature reviews to assess the present state of research on student relationship management systems grounded in social media systems in higher educational institutions in Jordan. The results show an absence of social media-based student relationship management in universities in Jordan, besides limited research conducted in the field. To fill the gaps, this research is conducted to evaluate the factors that contribute to the success of these systems, explore the link between these factors and quality elements, and give valuable insights for successful models in higher educational institutions.

Many scholars have conducted researches on social media, claiming that it is an interesting topic to be investigated in many fields, especially higher education. Existing literature proves that social media is a valuable learning tool with many benefits.; however, there is a lack of data regarding the way students perceive the integration of social media into their learning experiences and how this integration influences their academic performance.

This assumption is applicable, particularly when considering developing countries such as Jordan. Even though many studies have analyzed the adoption of several educational technologies in Jordan, there has been an inadequate investigation of the factors motivating Jordanian students to utilize social media for educational purposes in higher education. Moreover, there is a limited number of research papers that examine the effects of social media utilization on students' academic achievements [2,3]. This research extends our comprehension of the significance of incorporating quality criteria into the evaluation of social media-based student relationship management systems in higher educational institutions. The research seeks to identify the relationships between many factors and critical quality criteria for the performance of information systems, as well as the instructional and technical issues that institutions may confront when carrying out SSR [4,8]. This study's robust results provide important insights for improving higher education and resolving challenges related to equality [8]. The study's conceptual model is thorough, making it flexible and adjustable for future studies.

2. Literature review

Modern (e−) CRM, which has been impacted by social media, it's widely recognized as either "CRM 2.0″ or "social CRM." Social CRM, also referred to as CRM 2.0, embodies a business approach and philosophy. It's bolstered by technology and a system that aims to engage customers in interactive collaboration, fostering honest business relationships to derive mutual value." Many researchers have adopted this definition [9,10]. Conventional customer-facing practices such as processes, systems, and technology are seamlessly merged with emerging social media applications. This integration intends to engage customers actively in collaborative conversations and improve the quality of customer relationships [11]. Whatever the varying academic perspectives, social CRM differs from conventional CRM in that it focuses on "engaging consumers" rather than "managing customers," and social media is used to help achieve the overall goal of strengthening partnerships between businesses and their customers to build shared interests between the two groups. Re-engineering organizational procedures and systems is essential for social CRM's success.

Higher education institutions have recently changed their programs' attitudes to become even more cooperative because of the rising tide of sustainability challenges and the strong competitive climate. Consequently, the role of the student is transforming from being merely a consumer to that of a participant, collaborator, contributor to value creation, and a partner in knowledge development. This indicates that the student will play a far more important role than they ever have in the past, namely, that of a collaborator. Students become co-creators of education, not just consumers of education [6,11].

Implementing an effective SCRM has many advantages, enabling higher institutions and universities to pursue the greatest educational practices in managing and collaborating [8]. There is a scarcity of studies on clarifying a comprehensive meaning, conceptualizing a widely agreed framework, defining and evaluating key success factors for successful adoption, creating valid scales to analyze and assess, recognizing obstacles, and conducting empirical research on the subject, all of which are necessary for

conceptual richness [5].Although every institution of higher learning claim to be focused on students, few universities take the effort seriously or act holistically. However, in some of these scenarios, SCRM technology is equated with SCRM, although viewing SCRM as a solely technical initiative and lacking other core components is the primary reason for its inability to incorporate [6,7].

According [4,8], there is an impact of social among students and teachers as well as the sharing of the knowledge. Also, this research aims to deepen our comprehension of how higher education students perceive the utilization of social media in their learning experiences [1,10,12], Moreover, collaborative learning facilitated by social media promotes the sharing of knowledge and learning among students, as the diverse range of social media tools effectively fosters this collaborative educational approach [4,8]. The intention of TikTok users to keep engaging with higher educational content is impacted by how they perceive the content's usefulness and how satisfied they are with it [13–15].Table 1 illustrate some research on social relationship management system.

Numerous research endeavors have highlighted key factors pivotal to the triumph of information systems. Notably, DeLone and McLean's information system success model has gained traction among both professionals and scholars due to its fundamental contributions to the field's research. Building upon this model, there's a recognized necessity for adapting the characteristics of social networking applications.

The proposed model is according to the Delone and Mclean model extended with trust. Fig. 1 presents an all-encompassing viewpoint for illustrating the SCRM success model. If the suggested model with its integrated aspects were to become fully integrated, it would ensure the success of the SCRM. Nevertheless, Additional factors from the IS success model were integrated into the conceptual model to enhance comprehension of the core factors that might influence it. the success model of the social student relationship management system. This study was conducted in order to enhance comprehension of the main factors that may influence the success model. The system's quality, the information's quality, and the service's quality. are the elements in question [16]. Trust is also one of the things that should be thought about in the Delone and Mclean model. The study hypotheses are outlined in further detail below.

2.1. System quality

According to Ref. [17], there is a favorable association between the quality of the system and the level of satisfaction experienced by users. The terms "convenience," "reliability," "flexibility," "suitability," and "accessible" are included under the umbrella term "system quality." Therefore, as a component of system quality, system extensibility and flexibility may have a positive relationship with both the pleasure of users and the use of the system, which means they influence how social media is utilized [7,14]. Perceived ease of use, reaction speed, system features, dependability, convenience, and adaptability have all been assessed as aspects of system quality by a significant amount of study [11,18,19]. Therefore, the following is suggested.

H1.   System quality would have a significant positive on user satisfaction.

2.2. Information quality

Information quality refers to the extent to which social customer relationship management (SCRM) data is appropriate, dependable, and accessible at any time and location. The significance of information quality has been extensively investigated and shown to be an important factor in forecasting customer behavior as well as consumer intentions [17,20]. The quality of the information provided is frequently cited as a crucial factor in user satisfaction [14,20]. Many research studies have measured information quality as

Table 1
Related research on social Media relationship management.

| Author (s)	Research objectives	Gap
[5]	What is the impact of CTM on organizational performance. How can organizations implement optimal Social CRM practices to enhance both service quality and leader productivity?	There is a need for more research in this area in Another regions.
[6]	This work aims to provide a complete knowledge of this field by exploring key topics. from Social CRM literature, highlighting influential articles, and identifying research gaps for future exploration.	SCRM studies should consider broadening their scope to assess how SCRM implementation influences relationship quality and important constructs like trust and commitment. Additional research is necessary to enhance the topic of interest is to the concept of customer trust and its relationship with perceived value. of these recommendations.
[3]	This study explores students' perspectives on utilizing social media in higher education and how this usage influences their perception of academic performance.	Future research could reveal more factors influencing social media usage among higher education students.
[7]	This study explores the impact of social network on collaborative learning. Also	DeLone and McLean's model of information system success, widely embraced by practitioners and academics, serves as a cornerstone for information systems research. Based on this model, there is a recognized need to adapt the characteristics of social networking applications.
[14]	The objective of this research is to examine the factors influencing TikTok users' intention to continue using the platform for educational content related to higher education.	Subsequent studies could investigate additional social media platforms and other regions.
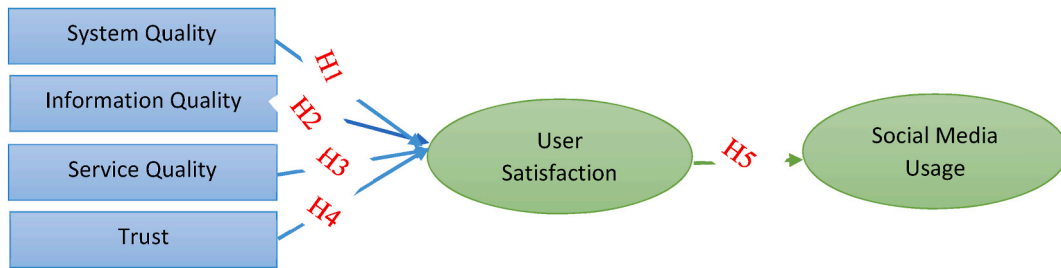
Fig. 1. Proposed Model based on Delone McLean success Model.

availability, completeness, consistency, reliability, timeliness, and usefulness [9,15,17].

H2. Information quality would have a significant positive on user satisfaction.

2.3. Service quality

The world's new market is extremely competitive. By providing outstanding service quality, service providers focus even more on ensuring strong customer loyalty. It explains that service quality should be assessed during delivering service and indicates that it usually occurs while the customer and staff are interacting with the service [1,17]. As a result, service quality is determined by comparing assumptions and preferences about the service provided. At the same time, they found ten interconnected factors that affect service quality [13,14,20]. These are dependability, responsiveness, integrity, courtesy, accessibility, connectivity, and credibility.

H3. Service quality would have a significant positive on user satisfaction.

2.4. Trust

Trust was defined as the desire of the person to rely on belief in ability and integrity [21]. Social media platforms help higher education institutions to strengthen their relationship and trust with students [22]. According to Ref. [23], Trust and user happiness have a positive relationship. The interaction between users and organizations will be enhanced by social CRM. In social and economic relationships where there is uncertainty and reliance, the notion of trust is crucial and has received much research in a variety of social sciences [14,21,24]. Therefore, trust involves two elements: confident expectations of a business's dependability, and positive intentions toward a brand even in the face of unforeseen issues [22]. When creating ties with clients and assessing the quality of successful interactions, trust in service providers is a crucial element.

H4. Trust would have a significant positive on user satisfaction.

2.5. User satisfaction

The use of an information system and its overall success define the satisfaction of users. It is usually regarded as one of the most important success indicators for information systems. User satisfaction has been widely utilized as a metric in the field of IS since it is one of the key indications when evaluating the effectiveness of new system adoption. User satisfaction measures how much a user finds a system to be practical and how likely they are to use it again [23]. Simultaneously, they identified ten interrelated factors that influence use satisfaction, namely: adequacy, efficacy, efficiency, enjoyment, information satisfaction, overall satisfaction, and system satisfaction [2,10,25].

H5. User satisfaction would have a significant positive on social media usage

2.6. Social media usage

Some research focuses on specific facets of students as consumers, and the value of the networking of social media through an intense CRM campaign to attract and retain students. Social media was an important component of student CRM efforts. Studies have shown that university students' exchanged and viewed academic knowledge across social media channels helped shape their view of their institution's ability to live up to their requirements [26,27]. Social CRM capabilities will interface directly with social media technology utilization and customer-centric management systems. Furthermore, enabling factors that reflect how well social media technology usage is integrated and supported across the organization will have an impact on the development and conclusion of this unique skill.

3. Research methodology

The aim of this study was to develop an easily digestible conceptual model that could be used to analyze the acceptability of social

media and the factors that influence it. The conceptualization, validation, and examination of the suggested model and questionnaire were carried out utilizing a testing strategy comprised of many stages. In the beginning, the research used an exploratory approach. Participants tested twenty-nine (29) items that had been used before to gauge social student relationship management systems, and they extracted six constructs to figure out whether or not the usage of social media was acceptable. Second, the data were collected after calculating sample size to validate the proposed research model from 607 students [28], both domestic and international, Participants in this study were selected randomly from students attending private universities in Amman. The questionnaire used in the study contained items derived from assessment information system success models and was evaluated by respondents using a Likert scale with a maximum rating of five points (ISSM). The research methodology employed in this study involved the empirical application of structural equation modeling (SEM). which was given by Ref. [28]to experimentally Test the Social Media Usage conceptual model.

Using an in-depth literature review, a survey instrument was used to confirm research objectives. According to Table 1, there were six constructs with a total of 24 items. Six metrics were developed for the system quality process [22]. It was extended from previous research [22]to include six variables of information quality. In addition, six indices of service quality were introduced [22]. Six trust indicators were derived from past research [29] and used in this study. User satisfaction was measured using three different metrics. Finally, three indices of social media use were adopted from previous studies [26]. Participants' privacy was secured by excluding any information that may be used against them, such as their home, work address, or email address. A systematic questionnaire with many questions was used to develop the survey. A five-point Likert scale was used in the study, ranging from "1 (strongly disagree)" to "5 (strongly agree.") [30]. Also included in the study were questions on the demographics of each respondent and questions about their use of SSRM. Using the results of a validation test conducted by two information systems assistant professors, the survey's items were fine-tuned. With twenty-nine indications remaining, the instrument's dissemination was completed.

An online poll was used to collect the data between March and April 2022. Thus, 606 questions were deemed to be filled out. The SPSS program was used to insert 606 questionnaires. The data was gathered via 606 online surveys (Google Forms). A total of 606 people took part in the survey, using published tables table was used to determine the sample size [28], also the sample size was more than the accurate and calculated one. with 446 (73.6%) men and 160 (26.4%) women. For age, 310 (51.2 percent) and 296 (44.8 percent) were between the ages of 18–23 and 24–31 years old, respectively. The data was analyzed using PLS-SEM methods (partial least square-structural equation modeling). Measuring and structural models were evaluated using the SmartPLS 3.3 tool. When calculating the data, the validity and reliability of the data were evaluated. We used convergent and discriminant validity to analyze the data validity. The Fornell–Larcker criteria, cross-loading, and the heterotrait–monotrait ratio were used to examine convergent validity; the average variance extraction (AVE), whose value should be 0.500, was employed to evaluate discriminant validity (HTMT). There was an internal consistency reliability method done to report the data's dependability while this was taking place. There are two

Table 2
Reflective indicator loadings, internal consistency reliability, and convergent validity.

Construct	Indicator	Load	Alpha	CR	AVE
System Quality	The social student relationship management system provides high availability.	0.786	0.882	0.913	0.677
	The social student relationship management system is user friendly	0.830			
	The social student relationship management system provides interactive features between students and the system.	0.815			
	The social student relationship management system has attractive features to appeal to students.	0.892			
	The social student relationship management system provides high-speed information access.	0.785			
Information Quality	The social student relationship management system provides sufficient information. IQ3	0.737	0.872	0.912	0.723
	The social student relationship management system provides comprehensive information. IQ4	0.946			
	The social student relationship management system provides updated information. IQ5	0.938			
	In general, I believe that the overall quality of information is of high quality IQ6	0.758			
Service Quality	The social student relationship management system provides a proper level of online assistance and explanation. SEQ1	0.881	0.857	0.903	0.701
	The technical support provides high availability for consultation SEQ3	0.901			
	The technical support responds cooperatively to my suggestions SEQ4	0.750			
	In general, when I have a problem with the Social student relationship management system, the staff of technical support shows a sincere interest in solving it SEQ5	0.810			
Trust	I trust the Social student relationship management system TR2	0.970	0.970	0.977	0.895
	I do not doubt the honesty of the Social student relationship management system TR3	0.973			
	I feel assured that legal and technological structures adequately protect me from problems on the Social student relationship management system TR4	0.969			
	Even if not monitored, I would trust the Social student relationship management system to do the job right TR5	0.953			
	The social student relationship management system can fulfill its task. TR6	0.861			
User Satisfaction	Most of the student bring a positive attitude towards the Social student relationship management system. US1	0.990	0.986	0.991	0.972
	I believe that the perceived utility of the Social student relationship management system is high.US2	0.980			
	In general, I am satisfied with the Social student relationship management system of the University. US3	0.987			
Social Media Usage	I use the Social student relationship management system frequently to complete my work. SMU1	0.902	0.854	0.911	0.773
	The Social student relationship management system use is voluntary. SMU2	0.799			
	I depend upon the Social student relationship management system. SMU3	0.932			

ways to measure reliability: Cronbach's alpha and composite reliability (CR) [28]. Both of these values should be higher than 0.700. The path coefficient, t-value, and p-value were used in the assessment model to figure out how important the link was.

The research model is examined through the utilization of PLS-SEM, a technique based on variance analysis. In this study, PLS-SEM is preferred over covariance-based SEM (CB-SEM) for the following reasons: (i) the research is exploratory in nature as it introduces new relationships and measures that haven't been extensively studied; (ii) PLS's variance-focused approach is better suited for predictive models; and (iii) PLS-SEM is adept at managing intricate research models that encompass multiple indicators and constructs [28].

4. Research results

The study was conducted in two phases to evaluate the reliability and validity of the measurement model. while also testing the hypothesis. During the initial stage, an analysis of descriptive statistics related to the measurement items was conducted, with a specific focus on evaluating the measurement model's reliability and validity. In the subsequent stage, the emphasis shifted to scrutinizing the structural model and conducting hypothesis tests.

4.1. Measurement model

Hair et al. [30] recommended four evaluations of measurement models for PLS-SEM, including the evaluation of reflective indicator loadings, internal reliability, convergent validity, and discriminant validity. SEM-achieved loadings of reflective indicators should be more than 0.700 [31]. Every load was more than 0.700 in our calculations. User satisfaction, US1 (0.990), had the greatest load, while information quality, IQ3, had the lowest (0.737). System quality (SQ2, 0.401), information quality (IQ1, 0.191; IQ2, 0.630), trust (TR1, 0.543), and service quality (SQ2, 0.401) were all dropped to obtain acceptable loadings since they had low loadings (SEQ2, 0.595). After getting rid of the indicators that were no longer important for further research (Table 2), only 24 were kept.

The purpose of implementing CR was to assess the degree to which outcomes were consistent across indicators. The Cronbach's alpha and composite reliability (CR) were both reported using the technique that was used here. CR should have values ranging from 0 to 1, inclusive. It is recommended that both the CR and Cronbach's alpha values be higher than 0.700 [31]. The results of the Cronbach's alpha and CR tests are presented in Table 2. Cronbach's alpha and CR values for all of the constructions meet or exceed the requirements for good measurement [32]. System Quality had a Cronbach's alpha of 0.882 and a CR of 0.913, while Information Quality had an alpha of 0.872 and a CR of 0.912. Moreover, service quality obtained an alpha of 0.857 and a CR of 0.903. Trust had an alpha of 0.970 and a CR of 0.977. User Satisfaction possessed an alpha of 0.986 and a CR of 0.991. Finally, Social Media Usage obtained an alpha of 0.854 and a CR of 0.911.

4.1.1. Convergent validity

The concept of convergent validity is connected to the concept of construct validity; convergent validity requires that tests with the same or a comparable construct be closely linked [33]. The computation of the average variance retrieved from the data allows for the reporting of the convergent validity of this investigation (AVE). To determine the AVE, we used the SmartPLS 3.3.3 software package [27]. According to the methodologies, the AVE values should be at least 0.500, which means they should explain more than fifty percent of the variation (Table 2). After the computation, all of the constructs were found to have AVE values that were greater than 0.500, which means that they explained more than fifty percent of the variation. The average value for System Quality was 0.677, the average value for Information Quality was 0.723, the average value for Service Quality was 0.701, the average value for Trust was 0.895, and the average value for User Satisfaction was 0.972, and the average value for Social Media Usage was 0.773.

4.1.2. Discriminant validity

The amount to which a construct can be experimentally distinguished from other constructs is referred to as its discriminant validity. In the current study, the research conducted three main methods to explore the discriminant validity: The Hierarchical Topic Modeling Technique (HTMT), the Fornell-Lacker criteria, and cross-loadings. Based on the Fornell-Lacker criteria, the mean-variance of one concept has to be less than the average variance of the others. Table 3 shows that the values of the shared variances related to each construct are less than the construct on its own. For instance, the value of system quality (0.823) is higher than all of its shared variances, which are as follows: information quality (0.356), service quality (0.800), and social media usage (0.356). (0.560). The Fornell–Larcker criterion was utilized to determine the correctness of the discriminant analysis. In addition, discriminant validity may

Table 3
Fornell-Larcker criterion.

	Information Quality	Service Quality	Social media Usage	System Quality	Trust	User satisfaction
Information Quality	0.851					
Service Quality	0.713	0.837				
Social media Usage	0.576	0.666	0.879			
System Quality	0.356	0.800	0.560	0.823		
Trust	0.520	0.422	0.886	0.245	0.946	
User satisfaction	0.668	0.790	0.911	0.660	0.778	0.986

be established if an indicator's loading on a concept is larger than its cross-loadings [29]. This is the condition under which discriminant validity can be established. Table 4 contains the results of all loadings and cross-loadings performed on the indicators. Each structure's outside loadings, which are shown by the boldface type, were higher than the loadings of the other structures. For instance, when compared to the loadings of its other constructs (such as information quality = 0.635, service quality = 0.751, system quality = 0.659, trust = 0.783, and user satisfaction = 0.969), the indicator USM3 found within the employability construct received the highest loading possible of 0.932. Table 4 contains an exhaustive description of all the calculations involving cross-loading. When the HTMT is greater than 0.900, discriminant validity will also start to become apparent. A lack of discriminant validity is shown when the HTMT is greater than 0.900 [33,34]. The results of the HTMT assessment can be shown in Table 5. All of the HTMTs have a value that is lower than 0.900 and are substantially different from 1. This indicates that the discriminant validity is supported by the HTMT evaluation. On the path between System Quality and Trust (0.263), we find the HTMT value that is the smallest. Yet, the HTMT value that is the highest is found between service quality and system quality (0.885). Utilization of social media and levels of user satisfaction are the two additional HTMT metrics that emerged from the computation (0.866). An expansion and explanation of the HTMT values are presented in Table 5 in greater depth.

4.2. Structural model

The assessment of the structural model primarily relied on its capacity to forecast outcomes. Furthermore, before presenting the structural model, it's important to provide the variance inflation factor (VIF) values. Additionally, predictor variables underwent tests for collinearity, following the methodology outlined in Ref. [31]. In this context, facilities were utilized as predictors for educational processes, practical activities, and scientific investigations. Educational procedures, practical experience, and research efforts served as predictors for both Knowledge, Skills, and Competencies (KSC) and employability. It's worth noting that VIF values should ideally remain below three, as values exceeding this threshold are often indicative of multicollinearity issues.

Based on the examination of the data, all VIFs are less than 3. The VIF value for user satisfaction as a predictor of information quality was (2.029); the VIF value for service quality was (2.684); the VIF value for system quality was (2.756), and the VIF value for trust was (2.029). (1.381). Users' contentment was predicted by their social media use, with a VIF of 1.000. (Table 6). So, collinearity has no bearing on the model used in this research.

An analysis of path coefficients, t-statistics, and p-values determined the importance of each direct impact or hypothesis in the structural model. We used a bootstrapping approach with 5000 resamples to calculate the data. Table 7 and Figs. 2 and 3 indicate that system quality is positively and strongly linked to user satisfaction (=0.273, t = 6.242, p 0.001). According to Hypothesis 1, SSRM adoption has a positive influence on system quality and user happiness with social media use. In addition to this, information quality has a positive and statistically significant relationship with user satisfaction (t = 2.420, p 0.001) (=0.087, t = 0.087). According to Hypothesis 2, SSRM use has a positive influence on information quality and user happiness with social media. Next, the findings showed a link between service quality and user satisfaction (=0.278, t = 4.663, p 0.001). The influence of SSRM use on service quality and customer happiness for social media usage is expected, hence Hypothesis 3 is accepted. Trust was shown to be positively and substantially associated with user pleasure according to the fourth hypothesis (=0.549, t = 20.993, p 0.001). The results of Hypothesis 4 confirm a positive correlation between SSRM use and trust and user happiness with social media. Finally, the findings showed a link

Table 4
Measures for Loading and cross-loading.

	Information Quality	Service Quality	System Quality	Trust	User satisfaction	Social media Usage
IQ_3	0.737	0.490	0.263	0.296	0.390	0.369
IQ_4	0.946	0.714	0.350	0.568	0.695	0.584
IQ_5	0.938	0.648	0.289	0.498	0.670	0.561
IQ_6	0.758	0.543	0.317	0.335	0.428	0.392
SEQ_1	0.475	0.881	0.786	0.312	0.638	0.571
SEQ_3	0.528	0.901	0.854	0.313	0.773	0.593
SEQ_4	0.924	0.750	0.356	0.530	0.674	0.581
SEQ_5	0.428	0.810	0.665	0.238	0.512	0.463
SQ_1	0.383	0.648	0.786	0.222	0.470	0.445
SQ_3	0.007	0.586	0.830	0.000	0.494	0.325
SQ_4	0.390	0.622	0.815	0.294	0.480	0.499
SQ_5	0.534	0.852	0.892	0.347	0.757	0.611
SQ_6	−0.020	0.474	0.785	0.050	0.394	0.342
TR_2	0.529	0.427	0.258	0.970	0.800	0.871
TR_3	0.494	0.410	0.259	0.973	0.764	0.865
TR_4	0.510	0.426	0.276	0.969	0.770	0.864
TR_5	0.485	0.411	0.247	0.953	0.752	0.877
TR_6	0.435	0.306	0.080	0.861	0.562	0.691
US_1	0.656	0.775	0.656	0.773	0.990	0.917
US_2	0.659	0.772	0.637	0.755	0.980	0.882
US_3	0.660	0.789	0.661	0.774	0.987	0.896
USM_1	0.488	0.419	0.254	0.929	0.766	0.902
USM_2	0.343	0.552	0.545	0.610	0.606	0.799
USM_3	0.635	0.751	0.659	0.783	0.969	0.932

Table 5

Heterotrait–monotrait ratio for discriminant validity (HTMT).

	Information Quality	Service Quality	Social media Usage	System Quality	Trust	User satisfaction
Information Quality						
Service Quality	0.807					
Social media Usage	0.629	0.758				
System Quality	0.383	0.885	0.616			
Trust	0.542	0.453	0.862	0.263		
User satisfaction	0.693	0.845	0.866	0.676	0.789	

Table 6

Variance inflation factor (VIF).

	Information Quality	Service Quality	Social media Usage	System Quality	Trust	User satisfaction
Information Quality						2.029
Service Quality						2.684
Social media Usage						
System Quality						2.756
Trust						1.381
User satisfaction			1.000			

Table 7

Path, t-value, and p-value.

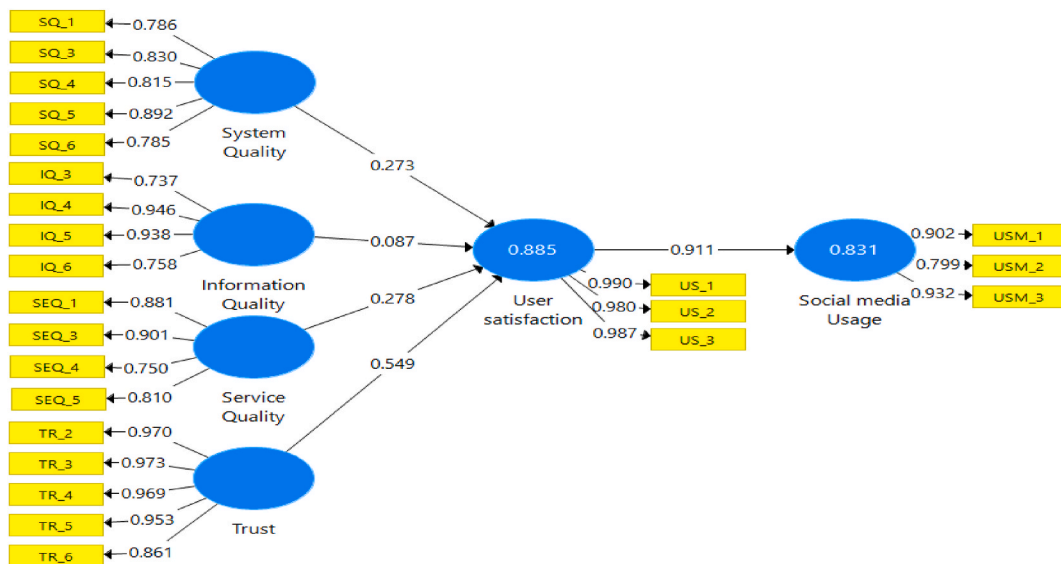| Relationships	Path (β)	t-Value	P Values	Result
System Quality ⟶ User satisfaction	0.273	6.242	0.000	Accept
Information Quality ⟶ User satisfaction	0.087	2.420	0.016	Accept
Service Quality ⟶ User satisfaction	0.278	4.663	0.000	Accept
Trust ⟶ User satisfaction	0.549	20.993	0.000	Accept
User satisfaction ⟶ Social media Usage	0.911	102.491	0.000	Accept

Fig. 2. Path coefficient findings.

between user happiness and social media use (=0.911, t = 102.491, p 0.001). As suggested by Hypothesis 5, the use of SSRM affects how happy users are with their use of social media.

5. Research discussion

Hence, it is reasonable to conclude that the primary reason behind future usage intentions is the effective performance of the SSRM
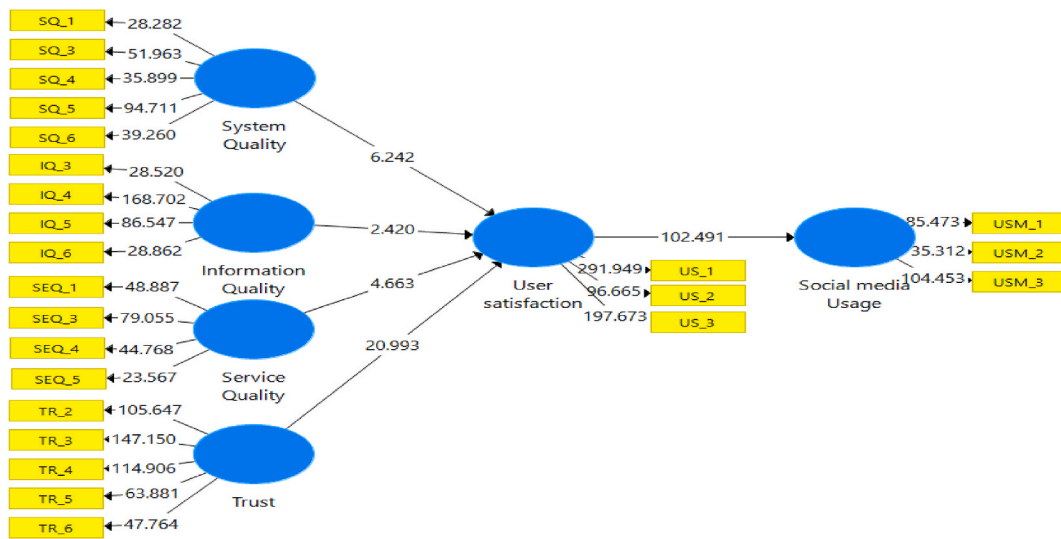
Fig. 3. Findings for path (T-Values).

in meeting students' needs [19]. This aligns with earlier studies that have highlighted the significance of system quality in developing successful technologies, whether in mandatory or voluntary contexts [30]. It's important to note that SSRM is an emerging technology gradually being embraced by universities. SSRM is a new technology that is starting to be adopted by universities.

Similarly, in this regard, we think that the information quality explains the purpose of its use. Universities are beginning to use SSRM, a relatively new technology. Instead of sending an email or contacting the university, these institutions should keep in mind that SSRM needs time to get used to them and the high level of information quality that comes with doing so. The impacts on service quality deserve extended comments. The study revealed that service quality exerts a positive and noteworthy influence on the development of a prosperous SSRM. While performance expectancy remains a primary factor, the favorable impact of hedonism suggests that users not only anticipate functionality from SSRM but also expect an enjoyable experience when using such a system. Users often pose questions to computer-assisted systems that they might hesitate to ask a human, and many SSRMs have been designed to incorporate playfulness and engage in amusing conversations. The findings demonstrate a favorable impact of success factors, including "System Quality," "Information Quality," "Service Quality," "User Satisfaction,"," and Trust, on particularly "System Use (Social Media Usage) concerning educational objectives and perceived knowledge management outcomes for students. These results align with earlier research conducted by [9,14,19].

The study identified a positive and substantial correlation between the quality of the system and user satisfaction, providing support for (H1). This outcome is consistent with findings in Refs. [18,35], underscoring the pivotal role of system quality in shaping user satisfaction. Likewise, the quality of service was found to have a positive and notable association with user satisfaction, supporting (H2). Research from Refs. [32–38] supports this point of view, highlighting the importance of service quality in system utilization. In addition, following references [10,36,37], there is a positive correlation between information quality and user satisfaction, which supports Hypothesis 3 (H3). Furthermore, the results show that trust is positively correlated with user satisfaction, emphasizing the essential function that trust plays in any system. This is consistent with the general belief that users' satisfaction is strongly depend on trust [1,3,34,38,39]. The combined results emphasize how essential it is for system, trust, and information quality, as well as service, to have an effect on user satisfaction. The researcher recommends that decision-makers give serious consideration when developing systems or integrating social media into higher education. In sum, the study highlights how crucial trust, information quality, service quality, and system quality are to user satisfaction. The results, which are confirmed by previous research, emphasize how crucial it is for decision-makers to give these elements their primary concern in order to build systems and incorporate social media into higher education.

6. Research implications

6.1. Theoretical implications

This study shows a recent investigation in higher education and provides suggestions for theoretical insights. The significance of SSRM and its potential have received scholars' attention; nevertheless, no model or framework for its implementation has been developed. This research was conducted as part of an initial set of studies to provide a model of strategic practices that depends on values and principles. The recommended model might contribute to the improvement of innovative research, which is important for building a successful SSRM system. It's also possible that it will act as a reference for decision-makers in systems of higher education as they attempt to carry out an effective SSRM. Moreover, it could support research on enhancing institutional sustainability, a topic that

educational institutions are gradually focusing on. To guarantee that technology use is reliable with approved educational theories and frameworks, researchers, administrators, and educators can better apply and measure the effect of social media networks in higher education by having a better comprehension of these theoretical implications.

6.2. Practical implications

Higher educational institutions should consider service quality, system quality, information quality, and trust when using social media as a tool for communication and collaboration with students. The factors of quality, for example, the system's adaptability and scalability, affect system adoption and user satisfaction. This implies that these elements affect the way people use social media networks. The importance of information quality has been thoroughly investigated and shown to be an important component for actions and forecasting consumer intentions.

It makes it clear that assessing the quality of a service should happen within the actual process of delivering it, emphasizing that this evaluation usually occurs during interactions between customer and the service provider. The idea of trust is important in social and economic relationships that are marked by reliance and uncertainty. It has been thoroughly researched in a number of social science areas. Furthermore, social media adoption as a student relationship system in higher education institutions must consider and use it wisely as a critical performance tool to improve student collaboration and communication. There are several real-world benefits to social media integration in higher education. These useful elements can improve the efficiency with which administrators, teachers, and students use social media platforms for learning. The following are some useful ramifications: improving the cooperation and communication skills of students.

7. Conclusions and future work

In conclusion, this study aimed to investigate the factors contributing to the implementation of SSRM (Student Support and Resource Management) in universities in Jordan. The findings from the quantitative analysis provide a snapshot of the current situation, but further research is needed to fully reconcile the different perspectives and identify barriers to SSRM implementation. Subsequent studies should focus on identifying and analyzing the obstacles to a clearer application of the SSRM concept, as these obstacles make it difficult for practitioners to effectively implement SSRM. The results of this study highlight the need for future research to consolidate the problems found and facilitate the creation of a contemporary SSRM.

The present study did not differentiate between different social media sites and platforms concerning their potential to enhance satisfaction, loyalty, profitability, communication, and collaboration. Notably, students' familiarity, preferences, and experience with various social media platforms can vary significantly [3]. To address this, future research could implement the research model separately on distinct social media platforms to assess if student satisfaction, loyalty, and profitability are influenced more by a particular platform. This approach could aid in pinpointing the social media platform that exerts the greatest impact on students' communication and collaboration. Such insights could guide educators in selecting the most suitable social media platform to enhance students' communication and collaboration effectively. The study has some limitations that provide directions for future studies. Firstly, this research study should collect and apply on the whole universities in Jordan, secondly, comparing the results between public and private universities of the developed research model.

Data availability

Data can be obtained from the corresponding author on request.

CRediT authorship contribution statement

Wasef Mater: Writing – review & editing, Writing – original draft, Methodology, Formal analysis. **Monther Aldwairi:** Software, Funding acquisition. **Nasim Matar:** Validation, Software. **Waleed Mugahed Al-Rahmi:** Formal analysis.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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