International Journal of Knowledge Management and Practices
12 (2) 2024, 01-13
http://publishingindia.com/ijkmp/

IMPACT OF SYSTEM AND USER FACTORS IN STIMULATING KNOWLEDGE ACQUISITION, KNOWLEDGE SHARING AND USER SATISFACTION IN MOOC DURING COVID-19

Karishma Trivedi*, Kailash B. L. Srivastava**

**PhD Scholar, Department of Humanities and Social Science, IIT Kharagpur, West Bengal, India.*
Email: trivedikarishma.palwal@gmail.com
***Professor, Department of Humanities and Social Science, IIT Kharagpur, West Bengal, India.*

Abstract *Considering technical and social factors influencing the e-learning mode is relevant for its effectiveness. This study examines the impact of system factors- System Quality, Information Quality, Service Quality, and user factors- User Trust, Web Self-efficacy and User Expectation on three outcomes- Knowledge sharing, Knowledge acquisition and User satisfaction in Massive Open Online Courses (MOOCs). We administered a survey drawn on the DeLone and McLean information system success model among the learners of a MOOC on 'knowledge management' offered on Study Webs for Active Learning for Young Aspiring Minds (SWAYAM), a free online courses portal by the Government of India. Data was collected during the third wave of COVID-19 in 2021. Data from 486 learners is collected and analysed among AMOS 26. Results show that system information quality, service quality and user expectation contribute to user satisfaction. System information quality and user expectation enhance learners' knowledge acquisition behaviour. Web self-efficacy helps knowledge sharing. These findings suggest that improving system information quality, providing support services and meeting high user expectations can encourage learners to use the system effectively and maximise user satisfaction. Furthermore, better system quality enables easy and quick acquisition of knowledge and the user's web self-efficacy helps in improved knowledge sharing. Moreover, high expectation motivates the learners to use and explore the e-learning system. This study focuses on knowledge sharing, knowledge acquisition and user satisfaction as net benefits of MOOCs. Future studies can assess the impact of the given framework on advanced KM (Knowledge Management) processes- knowledge application and creation, particularly for skill-based MOOCs. Also, the influence of organisational factors can be assessed.*

Keywords: *MOOCs, Learner Satisfaction, Information System, Knowledge Management, E-Learning*

Introduction

The COVID-19 pandemic crisis restricted physical classroom learning and interaction. Consequently, e-learning became a logical solution to cater to learners in higher education and industry worldwide (Pachauri, 2021; Ghosh et al., 2023; Ho et al., 2020; Raccanello et al., 2022; James et al., 2022; Singh & Sharma, 2021; Cheng, 2022). During COVID-19, learning using Massive Open Online Courses (MOOCs) became a vital source of effective e-learning for students of higher education institutes in India (Mohan & Mahapatra, 2018; Ho et al., 2020; Raja & Kallarakal, 2021; Rokhman et al., 2022, Singh & Sharma, 2021; Amit et al., 2022; Singh et al., 2020). Learners from academia and industry resort to MOOCs , a popular e-learning system (ELS), for leveraging individual and job-related knowledge for learning and development in the pandemic crisis (Raja & Kallarakal, 2021; Singh & Sharma, 2021; Cheng, 2022; Veeravalli et al., 2020; Gupta, 2019; Dwivedi et al., 2019).

MOOCs have enabled knowledge management (KM) in online learning, catering to the knowledge and learning demands of students and professionals in an affordable and accessible manner (Babu & Chouhan, 2023; Chopra et al., 2019; Singh et al., 2020). During pandemic times, knowledge management becomes more crucial, enabling sharing and acquiring knowledge to facilitate remote communication and collaboration (Lathabhavan & VM, 2023). Designing an ELS to provide knowledge facilitates the learning process and satisfaction of individual users (Wild et al., 2002; Sammour et al., 2008; Anitha, 2010; 2014; Veeravalli et al., 2019; Chopra et al., 2019; Dwivedi et al., 2019; Ho et al., 2020). ELS resembles a knowledge management system (KMS), as both facilitate the process of disseminating, acquiring and sharing knowledge among users using information communication technology and a user interface (Wild et al., 2002; Sammour et al., 2008; Anitha, 2010; Dukić et al., 2012; Veeravalli et al., 2019). Although existing theoretical connections exist, studies in the context of MOOCs from the KM perspective are sparse,

particularly in India (Dukić et al., 2012; Ratna & Mehra, 2015; Chopra & Madan, 2021).

From the socio-technological perspective of e-learning, research needs to assess the effectiveness of technological and social factors for enhancing knowledge management and user satisfaction while using ELS of MOOC (Ratna & Mehra, 2015; Varol et al., 2010; Dwivedi et al., 2019; Singh & Sharma, 2021, Cheng, 2022; Al-Emran & Teo, 2020; Rokhman et al., 2022). In India, SWAYAM- Study Webs of Active Learning for Young Aspiring Minds' (formerly NPTEL) is a government of India initiative providing accessible, affordable and quality education through MOOCs (Dwivedi et al., 2019; Gupta, 2019; Singh et al., 2020). During the coronavirus-induced lockdown, the usage of the SWAYAM portal increased by 2.15 lakh times. It depicts the extensive participation of learners in e-learning scenarios in India.

In today's knowledge economy, individuals must foster knowledge and learn to manage the rapid pace of change and sustain global competition. Studies highlight MOOCs' socio-economic implications for students in higher educational institutes in India (Singh & Sharma, 2021; Gupta, 2019; Ratna & Mehra, 2015). MOOCs contribute to economic growth by spreading knowledge and enhancing the nation's quality of human capital. MOOCs have socio-economic repercussions as they promote inclusive learning, help society learn cheaply and create a knowledge economy (Hu & Wei, 2009; 2014; Ratna & Mehra, 2015; Raja & Kallarakal, 2021). Research on knowledge management processes in e-learning is still nascent (Anitha, 2010; Ratna & Mehra, 2015; Al-Emran & Teo, 2020). Despite these socio-economic and managerial implications, studies have yet to examine the factors contributing to the success of MOOCs from a knowledge-based perspective. To address these knowledge gaps, we explore the following research questions:

Research Questions

Q1) What are the system-related factors that foster knowledge management through an e-learning system?

Q2) What are the user-related factors that foster knowledge management through an e-learning system?

Adopting the seminal DeLone and McLean information system success model, this study assesses the effectiveness of MOOC's ELS from a knowledge-based perspective. This model comprises six dimensions- Delone and Mclean (2003) propose that a high-quality system, information and service will be associated with more use, more user satisfaction, more intent to use the system and positive net benefits. MOOCs are the most preferred means of e-learning by students in India for knowledge acquisition and sharing (Raja & Kallarakal, 2021; Ratna & Mehra, 2015). Therefore, we represent net benefits as knowledge sharing and knowledge acquisition processes. Previous studies show that technological factors- system quality, service quality and information quality of e-learning system contributes to user satisfaction and net benefits (Ratna & Mehra, 2015; Chopra et al., 2019; Dwivedi et al., 2019; Cham et al., 2016; Cheng, 2022). Among the social factors, a critical review of the literature suggested web self-efficacy, user trust and user expectation as significant contributors to ELS success (Chopra & Madan, 2021; Ho et al., 2020; Al Muzaffar & Al Share, 2015; Aldholay et al., 2018; Thatcher et al., 2007; He & Wei, 2009). Given this background, this study aims to examine the impact of system (system, service, information quality) and individual factors (web self-efficacy, user trust, user expectation) on user satisfaction and its net benefits (knowledge acquisition and sharing) in the context of SWAYAM MOOCs during COVID-19.

This study contributes to the information system success literature by integrating knowledge sharing and acquisition as the net benefits of e-learning systems. This article has practical implications for the developers and administrators of e-learning systems to enhance MOOCs' effectiveness. Moreover, it has socio-economic consequences for India, where 10 million users create a market of 700-800 million US dollars (Amit et al., 2022). This study adopts a cross-sectional and correlation design. We collected data from 'SWAYAM' MOOC learners through an online survey and analysed it statistically by applying structural equation modelling. Further, we present literature explaining each factor's role in the theoretical model and hypotheses. Next, we offer the methodology, results and discussions, implications and conclusion with limitations and suggestions for future research.

Literature Review and Hypotheses Development

SWAYAM (formerly NPTEL) is a government of India initiative providing accessible, affordable and quality education through MOOCs. It recently celebrated the 19th anniversary of delivering MOOCs in varied domains like engineering and science, humanities and social sciences, health sciences, law, management and commerce and teacher education. It offers over 7000 courses in two cycles, from January-December. Along with imparting knowledge through video lectures, coded assignments and high-quality study materials, it conducts term-end exams, LIVE interactions and lab workshops for an immersive learning experience. Since January 2022, this portal has registered 2.72 crore students in India for online studies. 40% of these students earn credits for their graduate and post-graduate degrees, and 11.13 lakh certificates were issued via the portal.

Even with these accomplishments, only some studies have explored the effectiveness of SWAYAM's ELS in improving MOOCs' user satisfaction and knowledge generation. The study attempts to fill this research gap.

We adopted the DeLone and McLean Model (2003) to represent the e-learning system as a knowledge management system. This model has proven helpful in evaluating the success of knowledge management systems in many contexts like e-learning, library, banking, ERP, mobile technology and E-commerce. This model encompasses the technological and user dimensions and their influence on user usage satisfaction and net benefits. For this study, the system factors dimension essential for ELS success is system quality (SYSQ), information quality (INFQ) and service quality. The individual/user success factors are web self-efficacy (WSE), user trust (UT) and user expectation (UEX). There are three outcomes as net benefits- knowledge sharing (KS) and knowledge acquisition (KA) and the third consequence is the user satisfaction dimension (USD), which represents the usage of the system and user satisfaction.

System Factors

System Quality

The system quality regards feasibility, functionality, reliability, data quality, portability, integration and interest (DeLone & McLean, 2003). The information system is easy to use as functions are based on the user's needs and is reliable, flexible and trusted. According to Cham (2015), system quality, in terms of ease of use, speed and integrated functions, enables codification, storage and retrieval of knowledge, encouraging people to share knowledge with the system. System quality impacts the effectiveness of the ELS when students consider an e-learning website as easy to use, containing necessary features and functions and well organised in terms of layout and navigation, which help them learn quickly through a website (Chopra et al., 2019; Ratna & Mehra, 2015; Varol et al., 2010). A study by Cheng (2022) found that students perceived system quality of MOOCs positively affected their confirmation, personal use and learning engagement in MOOCs, which resulted in their satisfaction with MOOCs. Subsequently, it led to their intention to use MOOCs continuously.

Service Quality

Service quality refers to how well the subject-matter experts and knowledge management system managers support the KM system activities (Jennex & Olfman, 2003). We conceptualise service quality by providing guidance and training to the users on how to query, capture knowledge and use and reuse knowledge (Cham et al., 2016). For MOOCs, service quality refers to service, assistance and interaction provided by the instructors, teaching assistants and the program team (Ratna & Mehra, 2015; Ghosh et al., 2023). Higher service quality regarding online assistance, technical and non-technical guidance and the inclusion of 'frequently asked questions 'Help' enhances user satisfaction and encourages learners to share their learning and insights. Concurrently, it helps in facilitating knowledge acquisition (Romero-Rodríguez et al., 2020; Cham et al., 2016; Ratna & Mehra, 2015).

Information Quality

Information quality relates to the accuracy, timeliness, comprehension, relevance and consistency of information in a communication system (DeLone & McLean, 2003). Halawi (2007) claimed that the richness of knowledge quality is essential to encourage knowledge sharing among users and directly enhance knowledge utilisation among the users in an organisation. When users expect more benefits, such as quality knowledge from KMS, they are more likely to be satisfied with it (Jenn3ex & Olfman, 2003; Halawi et al., 2007; Veeravalli et al., 2019). Browsing and finding beneficial knowledge is one of the effective measures of ELS success (Cheng, 2022). High-quality information in interactive videos, audio, PDF format, discussion threads, quizzes and assignments influence learner's interest and engagement in the course, thus enhancing their satisfaction (Dwivedi et al., 2019). Therefore, information quality helps improve KM processes of sharing and acquisition and user satisfaction.

User-Related Factors

User Expectation

MOOC learners who expect to receive relevant knowledge have a positive system use experience (He & Wei, 2009; Al-Emran & Teo, 2020). These expectations arise from the involvement of eminent faculty from leading institutions and advanced e-learning system infrastructure. Meeting users' expectations gives them a positive learning experience and engagement while using the ELS, increasing users' satisfaction and intent to continue using the ELS (Ghosh et al., 2023; Cheng, 2022). The more the users feel their expectations around electronically contributing knowledge are confirmed, the more satisfied they are (He & Wei, 2009). Aldholay et al. (2018) found that overall quality helps to meet user expectations. It indicates that the higher the quality of an online learning system in terms of easiness, flexibility, up-to-date, accuracy, relevance, comprehensiveness, responsiveness, functionality and interactivity, the more students perceive it as meeting their expectations and feel satisfied.

Web Self-Efficacy

In the context of learning, e-learners' efficacy in using the computer and web system for pursuing the course is known as web self-efficacy (Babu & Chouhan, 2023; Chopra & Madan, 2021; Ho et al., 2020; Gupta, 2019; Aldholay et al., 2018). On the contrary, the inability to use technology causes technostress, negatively affecting the user's satisfaction and knowledge-related behaviours (Pachauri, 2021; Lathabhavan & VM, 2023). Chen and Hung (2010) defined knowledge-sharing self-efficacy as a member's confidence and self-evaluation in their web-specific technical skills and capabilities in responding to online questions posted by other members and participating by sharing beneficial and valuable knowledge. Therefore, a higher web self-efficacy would lead to higher knowledge sharing in an e-learning environment (Al-Muzzafar & Al-Share, 2015). Higher web self-efficacy leads to a positive experience for the e-learners as they perceive the system as easy to use and beneficial (Raccanello et al., 2022; Chopra & Madan, 2021; Gupta, 2019; Ratna & Mehra, 2015), except in situations where we impose MOOCs on learners (Singh & Sharma, 2021). In the prevalent online learning environment of the pandemic, students with high experience with online learning technologies can be equipped to derive more satisfaction and reduce frustration in online learning (James et al., 2022). The more confident students are in searching the web, using e-mail and downloading files, the more they utilise online learning, the greater their satisfaction with it (Aldholay et al., 2018; Ho et al., 2020) Therefore, we posit that web self-efficacy enhances user satisfaction, knowledge sharing and acquisition in ELS.

User Trust

According to Thatcher et al. (2007), trust in the context of information technology refers to trusting beliefs for a particular system. Regarding MOOCs, trust in an e-learning system is similar to the trust that can impact user satisfaction and enable knowledge-seeking and providing behaviours (He & Wei, 2009; Veeravalli et al., 2019). Trust in an online environment lets users perceive the system as applicable and motivates them to use it frequently (Ratna & Mehra, 2015; Tam et al., 2019). This user trust in the system facilitates knowledge exchange and directly influences user satisfaction (Cham et al., 2016). When users trust ELS, they will use the ELS more and derive more satisfaction while gaining relevant knowledge and learning experience (Cheng, 2022).

Net Benefits

Knowledge Management - Knowledge Sharing and Knowledge Acquisition

Chou and Liu (2005) described net benefits as the degree to which the learner can achieve the end goals (knowledge and desired skills). Online learning improves learner's knowledge acquisition by providing them with new knowledge and skills, developing innovative ideas and assisting in education (Pachauri, 2021; Anitha, 2010; Aldholay et al., 2018; Romero-Rodríguez et al., 2020; Mohan & Mahapatra, 2018). E-learning acts as a tool for knowledge management. The knowledge content, presentation and e-learning implementation disseminate the required knowledge to learners and bridge the knowledge gap (Ghosh et al., 2023; Dukić et al., 2012; Anitha, 2010; Wild et al., 2002). For knowledge acquisition to happen, we need to update the knowledge system with timely, relevant and accurate knowledge with the help of technology that enables indexing and filtering knowledge. The quality of available knowledge remains a concern and needs attention (Kankanhalli, 2005). Knowledge sharing is a set of behaviours by organisational members who voluntarily share and exchange knowledge and information that results in helping others (Al Muzzafar & Al Share, 2015). MOOCs disseminate relevant knowledge to learners, thus enabling learners to acquire knowledge and grow personally and professionally (Babu & Chouhan, 2023; Ghosh et al., 2021; Raja & Kallarakal, 2021). They can act as a tool for creating a learning organisation ready to involve experimentation and knowledge sharing (Anitha, 2010; Dukić et al., 2012; Raja & Kallarakal, 2021). In ELS, reviewing online learning materials allows them to expand their knowledge (James et al., 2022). Participating on discussion boards, communicating with classmates and collaborating on coursework allow students to demonstrate their understanding (James et al., 2022). Thus, knowledge acquisition and sharing are enabled using discussion forums, video lectures, material repositories, assignment submissions and live lectures. Previous research has found that knowledge, system and service quality are significantly associated with KM processes and user satisfaction (Cham et al., 2016; Al-Emran & Teo, 2015; Veeravalli et al., 2019). The benefits that are associated with the success of KMS include efficiency in managing and storing knowledge, helping users acquire new knowledge, the ability to accomplish users' tasks, improving the decision-making process and improvement in users' quality of working life (Halawi et al., 2007; Jennex & Olfman, 2003). Therefore, we infer knowledge sharing and acquisition as net benefits derived from the e-learning system. Previous researchers have found

that knowledge, system and service quality are significantly associated with KM processes and user satisfaction (Cham et al., 2016; Al-Emran & Teo, 2020; Veeravalli et al., 2019; Romero-Rodríguez et al., 2020).

User Satisfaction

Several studies found that the success of ELS depends upon user satisfaction arising from continuous system usage by learners (He & Wei, 2009; Ratna & Mehra, 2015; Cham et al., 2016; Ho et al., 2020; Cheng, 2022). Therefore, it is crucial to find the antecedents that enhance the ELS's satisfaction, usefulness and system usage (Cheng, 2022; Rokhman et al., 2022; Gupta, 2019; Varol et al., 2010; Ghosh et al., 2023). Among the technological factors**,** several researchers identify that user satisfaction depends on improving the system's quality, quality of information and service quality. System quality positively influences user satisfaction, usefulness and usage as system quality provides ease of use, a function based on learners' needs, and is reliable, flexible and trusted (DeLone & McLean, 2003). Information quality positively impacts the user by providing accurate, timely, complete, relevant and consistent information (DeLone & McLean, 2003). Service quality attributes include tangibles, reliability, responsiveness, assurance, functionality, interactivity and empathy (DeLone & Mclean, 2003). It significantly influences user satisfaction (Aldholay et al., 2018; Ho et al., 2020). We identified web self-efficacy and user expectation as social factors that impact user satisfaction from the current literature. The more a person's self-efficacy is to use technology, the more they are comfortable using the system in the present and the future. Consequently, the user derives more satisfaction from online learning (Aldholay et al., 2018; Gupta, 2019; Ho et al., 2020; James et al., 2022).

Fig. 1 below depicts the conceptual model followed by research hypotheses.

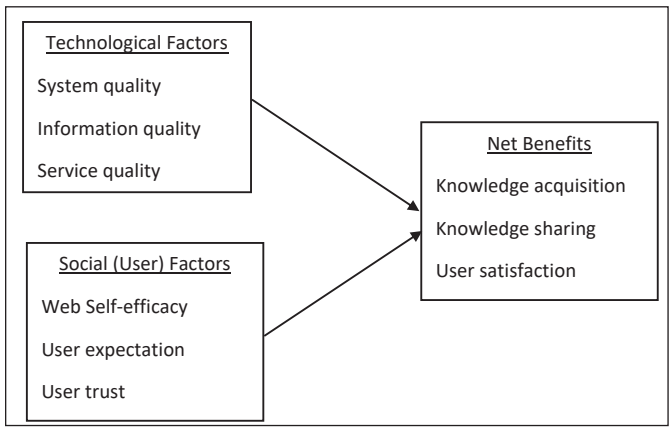

Fig. 1: Conceptual Model

Hypotheses

H1a- System quality positively predicts knowledge sharing in the e-learning system.

H1b- System quality positively predicts knowledge acquisition in the e-learning system.

H1c- System quality positively predicts user satisfaction in the e-learning system.

H2a- Service quality positively predicts knowledge sharing in the e-learning system.

H2b- Service quality positively predicts knowledge acquisition in the e-learning system.

H2c- Service quality positively predicts user satisfaction in the e-learning system.

H3a- Information quality positively predicts knowledge sharing in the e-learning system.

H3b- Information quality positively predicts knowledge acquisition in the e-learning system.

H3c- Information quality positively predicts user satisfaction in the e-learning system.

H4a- Web self-efficacy positively predicts knowledge sharing in the e-learning system.

H4b- Web self-efficacy positively predicts knowledge acquisition in the e-learning system.

H4c- Web self-efficacy positively predicts user satisfaction in the e-learning system.

H5a- User expectation positively predicts knowledge sharing in the e-learning system.

H5b- User expectation positively predicts knowledge acquisition in the e-learning system.

H5c- User expectation positively predicts user satisfaction in the e-learning system.

H6a- User trust positively predicts knowledge sharing in the e-learning system.

H6b- User trust in online learning positively predicts knowledge acquisition in the e-learning system.

H6c- User trust positively predicts user satisfaction in the e-learning system.

Research Design

Sampling, Measures and Data Collection

The sample includes e-learners from MOOC on Knowledge Management offered on SWAYAM by the faculty of IIT

Kharagpur from July-September 2021. During this period, India was experiencing the third wave of the COVID-19 Pandemic. We collected data from September 2021 to December 2021 by posting an online form consisting of the survey in the course's discussion forum. We invited e-learners to participate voluntarily in the survey. There were 1838 e-learners enrolled in the course, of which 494 responded to our survey. After removing missing and disengaged responses, the final data set consisted of 486. The response rate was 26.44%.

The questionnaire of the study consisted of scales adapted from DeLone and McLean (2003) for measuring the ELS technological dimension: System Quality (7 items), Service Quality (5 items), Information Quality (6 items) and user dimension- User expectation (6 items) adapted from DeLone and McLean (2003); For user factors- User trust (3 items) was adapted from Nattapol et al. (2010) and Chen and Hung (2010), Web self-Efficacy (4 items) was adapted from Kankanhalli (2005). For net benefits, Knowledge sharing (4 items) was adapted from Chen and Hung (2010), knowledge acquisition (5 items) was adapted from Al-Emran et al. (2020), and User satisfaction (6 items) was adapted from DeLone and McLean (2003).

The sample consisted of 272 males and 214 females. The age composition of the respondents was- Under 20- 77, 21-30- 248; 31-40- 86; 41-50- 52; 51-60- 19; 61 and above- 4. Educational qualification-wise, there were 91 matriculates, 160 Graduates, 184 Post-graduates and 51 PhDs. The occupational roles of the respondents were 292 students; 97 were faculties; 73 were employed in services/ manufacturing; the remaining 24 were among others, including entrepreneurs, retired, freelancers, library interns, casual workers, job seekers, trainees and unemployed.

This study collected data using a self-administered and cross-sectional survey. Therefore, we sought remedial measures to check for common method bias (Podsakoff et al., 2012). Harmann's single-factor test revealed that the total variance explained by the single factor was 42.131%, less than 50%, ruling out the adverse impact of common method bias (Podsakoff et al., 2012). As a rule of thumb, we calculated that the variance inflation factor was less than 3, much below the cut-off point 10 (Hair, 2009). These results indicate no common method bias present in the data. Levene's homogeneity test revealed no significant difference between the early and late respondent groups; thus, we ruled out the possibility of sampling bias because of late or early responses.

Reliability and Validity

The data collected had high reliability as each measure's Cronbach's Alpha value is higher than the minimum recommended value r>0.7, as indicated in Table 1 (Nunnally, 1978; Hair, 2009).

Table 1: Reliability of Scales

Construct	Cronbach's Alpha	No. of Items
ELSD	0.943	18
UT	0.792	3
WSE	0.83	4
UEX	0.924	7
KSA	0.827	8
ELSD is the system, service, information quality, and user satisfaction combined; user trust; WSE=web self-efficacy; UEX= user expectation; KSA=knowledge sharing and acquisition.		

Source: Prepared by authors.

Table 2 shows the results of exploratory factor analysis (EFA) and Confirmatory factor analysis (CFA) to check the data reliability and validity. We used the KMO–Bartlett test of sphericity values for sample adequacy for all scales, and it was acceptable for all the measures, where the rule of thumb recommends a value of at least 0.6. Extracted Communalities of all the variables are above 0.3, indicating sample adequacy and discriminant validity (Kline, 1998; Hair et al., 2009).

We conducted EFA opting for the maximum likelihood extraction method with Promax rotation, suppressing coefficient of less than 0.3, and Eigen values greater than 1EFA reduced the technology dimension into two constructs (Gaskin, 2014). EFA reduced the technology dimension into two factors: System Quality- 5 items and Information Quality loaded on a single factor with three items from IQ- IQ4, IQ5, IQ6; and five items from System Quality- SYSQ1-SYSQ5. Thus, for this study, we infer that information quality got absorbed within system quality as the primary function of system quality is to provide accurate, consistent and reliable information. Items SYSQ5, SYSQ6, IQ1, IQ2 and IQ3 got deleted due to poor loadings, less than 0.50 (Fornell & Larcker, 1981; Hair, 2009). EFA extracted User trust with three items: Web-self efficacy (4 items), user expectation (7 items), knowledge sharing (3 items), Knowledge acquisition (5 items) and User dimension (6 items).

The total variance explained for all the constructs is much higher than the recommended criteria of a minimum of 50%, depicting convergent validity (Fornell & Larcker, 1981). All the remaining items are above 0.5, displaying convergent validity, with the average above 0.7 (Fornell & Larcker, 1981; Hair, 2009). No strong cross-loadings indicate discriminant validity among the factors. Also, the factor correlation matrix displayed that none of the correlations is above 0.7 (Hair, 2009), indicating discriminant validity.

After that, we conducted CFA with 41 items, where all the constructs show high composite reliability, where values above 0.7 are acceptable, above 0.80 is good and above 0.9 are excellent (Hair et al., 2017). The average variance extracted (AVE) for all the constructs is above 0.5, indicating convergent validity (Hair et al., 2017). The measurement model had acceptable thresholds, indicating a good model fit. CMIN/DF = 2.906, acceptable 1–4 (Hu & Bentler, 1999); GFI = 0.801, acceptable > 0.80 (Baumgartner & Homburg, 1996), TLI = 0.873, acceptable >0.80; CFI = 0.884, acceptable > 0.80; RMSEA = 0.06, acceptable < 0.07 (Hu & Bentler, 1999).

Table 2: EFA and CFA Results

	EFA Results			CFA Results		
Items	**Factor Loadings**	**KMO**	**TVE**	**Factor Loadings**	**CR**	**AVE**
SYSQ1	0.654	0.922	57.285	0.775	0.864	0.559
SYSQ2	0.953			0.674		
SYSQ3	0.857			0.687		
SYSQ4	0.537			0.674		
SYSQ7	0.536			0.767		
INFQ4	0.567			0.764		
INFQ5	0.550			0.766		
INFQ6	0.636			0.785		
SRVQ1	0.706			0.748	0.907	0.550
SRVQ2	0.875			0.696		
SRVQ3	0.830			0.666		
SRVQ4	0.819			0.721		
SRVQ5	0.611			0.724		
UT1	0.689	0.7	56.396	0.735	0.794	0.562
UT2	0.816			0.782		
UT3	0.742			0.733		
WSE1	0.712	0.785	55.66	0.781	0.832	0.554
WSE2	0.823			0.803		
WSE3	0.720			0.658		
WSE4	0.724			0.676		
UEX1	0.728	0.923	63.551	0.748	0.924	0.636
UEX2	0.790			0.798		
UEX3	0.795			0.786		
UEX4	0.870			0.865		
UEX5	0.808			0.801		
UEX6	0.780			0.774		
UEX7	0.803			0.805		
KS1	0.799	0.847	53.151	0.731	0.764	0.520
KS2	0.591			0.741		
KS3	0.759			0.668		
KA1	0.633			0.703	0.848	0.528
KA2	0.735			0.727		
KA3	0.779			771		
KA4	0.788			0.744		

	EFA Results			CFA Results		
Items	Factor Loadings	KMO	TVE	Factor Loadings	CR	AVE
KA5	0.654			0.68		
USD1	0.607	0.855	55.238	0.632	0.880	0.555
USD2	0.544			0.558		
USD3	0.836			0.808		
USD4	0.852			0.82		
USD5	0.779			0.764		
USD6	0.785			0.762		

Source: Prepared by authors.

Notes for Table 2: SYSQ - system quality; INFQ = information quality; SERVQ = service quality; UT = user trust; WSE = web self-efficacy; UEX = user expectation; KS = knowledge sharing; KA = knowledge acquisition; USD = user satisfaction dimension.

Table 3: Descriptives

	SYSQ	SRVQ	UT	WSE	UEX	KS	KA	USD
SYSQ	1							
SRVQ	.649**	1						
UT	.531**	.539**	1					
WSE	.551**	.631**	.574**	1				
UEX	.602**	.686**	.673**	.731**	1			
KS	.325**	.392**	.338**	.420**	.392**	1		
KA	.685**	.606**	.533**	.566**	.693**	.435**	1	
USD	.644**	.725**	.589**	.625**	.753**	.364**	.695**	1
Mean	5.8127	5.5703	5.4689	5.5363	5.6515	5.1875	5.8527	5.6736
SD	0.91220	0.89220	1.04520	0.88020	0.90500	1.18170	0.82580	0.91400
**. Correlation is significant at the 0.01 level (2-tailed). SD = standard deviation.								

Source: Prepared by authors.

Table III shows the descriptive statistics- correlation among all constructs, mean and standard deviation. It reveals that all system success factors- system and service quality, and individual factors- user trust, web self-efficacy and user expectation have positive and significant relationships with knowledge sharing, knowledge acquisition and user satisfaction dimensions. Among all the antecedents, web-self efficacy has the strongest co-relation with knowledge sharing (r=0.420, p<0/01). User expectation (r=0.693, p<0.01) and system quality (r=0.685, p<0.01) have a strong and significant correlation with knowledge acquisition. Higher user satisfaction has a significant and most robust positive correlation with user expectation (r=0.753, p<0.01) and service quality (r=0.725, p<0.01).

Table 4: Regression Results

Relationships			Estimate	SE.	CR.	P
Knowledge Sharing	<---	System Quality	0.179	0.127	1.408	0.159
Knowledge Acquisition	<---	System Quality	0.608	0.079	7.697	***
Use Dimension	<---	System Quality	0.223	0.053	4.196	***
Knowledge Sharing	<---	Service Quality	0.067	0.151	0.442	0.659

Relationships			Estimate	SE.	CR.	P
Knowledge Acquisition	<---	Service Quality	-0.102	0.08	-1.268	0.205
Use Dimension	<---	Service Quality	0.247	0.063	3.945	***
Knowledge Sharing	<---	Web Self-Efficacy	0.494	0.192	2.576	0.01
Knowledge Acquisition	<---	Web Self-Efficacy	0.023	0.096	0.235	0.814
Use Dimension	<---	Web Self-Efficacy	-0.012	0.075	-0.166	0.868
Use Dimension	<---	User Expectation	0.392	0.08	4.89	***
Knowledge Acquisition	<---	User Expectation	0.445	0.101	4.414	***
Knowledge Sharing	<---	User Expectation	-0.058	0.189	-0.307	0.759
Use Dimension	<---	Elearning Trust	0.026	0.053	0.492	0.623
Knowledge Acquisition	<---	Elearning Trust	-0.076	0.069	-1.103	0.27
Knowledge Sharing	<---	Elearning Trust	0.085	0.132	0.64	0.522

Source: Prepared by authors.

Discussion

H1a is not supported as system-info quality did not predict knowledge sharing, contradicting the findings of the previous studies by Chopra et al. (2019), Cham et al. (2016) and Cheng (2022). It implies that we need to focus on the system quality to ensure knowledge sharing. Social factors are critical for leveraging knowledge sharing (Babu & Chouhan, 2023). System- Info quality has a significant predictive capacity for knowledge acquisition and user satisfaction, supporting H1b and H1c. This result implies that system developers and managers must provide a system and information quality to enhance the satisfaction of MOOC learners and promote their knowledge acquisition behaviour. A higher system and information support e-learners to obtain knowledge using the system through easy and quick access to the knowledge repository of the e-learning system.

Furthermore, as system-info quality furnishes user-friendliness and smooth navigation; learners are prompted to seek knowledge via posting questions in the discussion forums and LIVE interactions with the faculty. These findings corroborate previous studies by (Dukić et al., 2012; Al-Emran & Teo, 2020).

H2a and H2b are unsupported as no significant relationship existed between service quality and knowledge sharing and acquisition. H2c was supported as service quality positively and significantly predicts user satisfaction. These recommendations are consistent with Ghosh et al., 2023, Singh and Sharma (2021), Ratna and Mehra (2015) and Anitha (2010). They advocated support and guidance services for interaction in discussion forums with subject experts, upgrading MOOCs based on feedback from learners and experts, training and doubt-clearing sessions, workshops and counselling sessions for maintaining schedules.

H3a is supported as web self-efficacy had a significant and positive predictive capability towards knowledge sharing. At the same time, H3b and H3c did not get support, thus not accepted. E-learners' web self-efficacy has a positive relationship with knowledge sharing in MOOCs; this finding is in line with the study by Ghosh et al., 2023, Raccanello et al. (2022) and Chopra and Madan (2021), suggesting that enhancement in the technological capabilities of the learners leads to positive affective outcomes. To enhance knowledge sharing in MOOCs, we need to develop e-learners' technical capacity represented by web self-efficacy. To develop e-learners' web self-efficacy, the course team should make efforts in the form of short 'how-to videos and handy directions regarding web portal usage. Thus, web self-efficacy can enable knowledge sharing by facilitating the sharing of the course material between the students themselves and their instructors. Further, the students can collaborate and communicate with each other by sending messages and sharing questions and posts regarding the course (Dukić et al., 2012; Gupta, 2019; Al-Emran & Teo, 2020). Also, instructors and teaching assistants can provide quality service, extending support in guiding the e-learners to share their learning, insights and other codified knowledge via discussion forums and LIVE interactions.

While H4a was not supported as the relationship between user expectation and knowledge sharing was insignificant, this could happen as users expect to acquire and update their knowledge from the system instead of sharing it. Thus, they perceive knowledge sharing in MOOCs as less valuable (Arbaci et al., 2020) and therefore need to exhibit knowledge sharing. H4b and H4c are supported, showing a significant positive impact of user expectation on knowledge acquisition and user satisfaction. Learners expect to enhance their knowledge and skills. Therefore, they engage in knowledge acquisition behaviour (Arbaci et al., 2020; Raja & Kallarakal, 2021; Singh & Sharma, 2021; Cheng, 2022; Veeravalli et al., 2019; Romero-Rodríguez et al., 2020). These results suggest that when we meet users' expectations regarding its usefulness, usage and learning, their satisfaction derived from e-learning increases (Gupta, 2019; Aldholay et al., 2018; Al-Emran & Teo, 2020; Varol et al., 2010).

H5a, b and c were not supported and rejected. Contrary to past research (He & Wei, 2009; Cham et al., 2016; Tam et al., 2019), we found that user trust is not impacting user satisfaction, knowledge sharing and acquisition in the pandemic environment. It proves that learners in the pandemic resorted to MOOCs out of compulsion (Singh & Sharma, 2021), and they still perceive traditional learning as more trustworthy than e-learning (Ho et al., 2020; Singh et al., 2020).

Implications for Theory

This study contributes to the KM and E-learning literature by integrating two closely related but parallelly existing concepts- e-learning and knowledge management. Based on the seminal model of IS given by DeLone and McLean (2003), this advances the theoretical work of Wild et al. (2002) by providing empirical evidence on the impact of e-learning systems and user characteristics on knowledge management processes of acquisition and sharing, and user's overall satisfaction. This study contributes to information system success and knowledge management literature by integrating knowledge acquisition and sharing as a net benefit of using the information system. This study provides evidence regarding those factors that can lead to a successful e-learning system of MOOCs during a pandemic-like crisis.

Implications for Practice

Training and learning processes can improve with better knowledge acquisition through MOOCs. It provides insights to the creators, administrators and teaching assistants of management MOOCs, pointing out areas that need focus for maximising learners' satisfaction and knowledge building. During the COVID-19 Pandemic, e-learning via MOOCs became a prominent source of learning for students and training and developing employees in organisations (Pachauri, 2021). This study suggests ways to improve MOOC learners' output and meet their learning needs in times of crisis. The study imparts practical lessons for MOOC creators, instructors and assistants to enhance the effectiveness of the e-learning system. Users have high expectations from e-learning systems. Sound technological infrastructure, live interactive sessions and social support services can better facilitate knowledge acquisition and user satisfaction. MOOC designers can utilise the study's findings to effectively deliver MOOCs, helping reduce drop-out rates and engage learners.

The government of India invests substantial financial, human and infrastructural capital for free online learning through MOOCs to meet the training and learning needs of students/ professionals (Dwivedi et al., 2019). This study highlights the measures to improve MOOCs to build knowledge and skills in the country's human resources (Raja & Kallarakal, 2021; Singh et al., 2020). Industrial enterprises need to foster their human resources knowledge and skills to gain a competitive advantage in the knowledge economy. E-learning through MOOCs can act as a source to enrich their expertise and knowledge and facilitate learning at an individual's own pace (Singh & Sharma, 2021; Singh et al., 2020; Veeravalli et al., 2019; Dukić et al., 2012). This study suggests factors enhancing MOOC systems' net benefits, leading to optimum knowledge gain and user satisfaction. It helps the educational system impart optimum knowledge to learners and businesses to upgrade the skills and knowledge of their workforce (Kankanhalli, 2005; Romero-Rodríguez et al., 2020; Mohan & Mahapatra, 2018). It provides valuable evidence for e-learning creators, where e-learning has a broader reach.

Limitations of the Study and Future Research Directions

This study focuses on knowledge sharing and acquisition as net benefits of MOOCs in management. Future studies can assess the impact of the given framework on advanced KM processes- knowledge application and creation, particularly in skill-based MOOCs (Arpaci et al., 2021; Al-Emran & Teo, 2020; Romero-Rodríguez et al., 2020). It would help examine the fitment of ELS in imparting practical and skill-based education, which is crucial for human resource development. As per the updated DeLone and McLean model, future studies can be conducted in an organisational context, extending the current model. Organisational benefits such as employee innovative work behaviour and work engagement can be a net benefit as employees engage in KM-related processes when they try to innovate and perceive innovation as their job outcome (Ghosh et al., 2023; Trivedi & Srivastava, 2021, 2023). Also, HR practices of training and incentives, top management support and a learning culture can be taken as antecedents of innovative work behaviour as these functions drive learning and knowledge in an organisation (Ghosh et al., 2023; Veeravalli et al., 2019; Trivedi & Srivastava, 2021, 2023). Further studies can use longitudinal analysis for more accurate causal relationships.

Conclusion

This study examines the impact of system factors (System Quality, Information Quality and Service quality) and user factors (User Trust, Web Self-efficacy and User Expectation) on knowledge sharing, acquisition and user satisfaction in MOOCs during the COVID-19 lockdown. Data from 486 learners on SWAYAM, a free online courses portal,

was collected. Results showed that system information quality, service quality and user expectation contribute to user satisfaction. Improved system quality facilitates easy knowledge acquisition, while user trust and web self-efficacy facilitate knowledge sharing. The study suggests measures for course instructors and designers to enhance knowledge-related outcomes and overall satisfaction in MOOCs. This study contributes theoretically by extending the seminal Information Success Model in depicting its usability for knowledge management in the e-learning domain. Practically, this study suggests measures to be carried out by course instructors and designers to enhance knowledge-related outcomes of students beneficial for learning and overall satisfaction of MOOCs.

References

Al Muzaffar, A. Y., & Alshare, K. A. (2015). Determinants of knowledge sharing in virtual network communities in organizational context. *Journal of Information and Knowledge Management*, *14*(2), p. 1550003. doi:https://doi.org/10.1142/S0219649215500033

Aldholay, A., Isaac, O., Abdullah, Z., Abdulsalam, R., & Al-Shibami, A. H. (2018). An extension of Delone and McLean IS success model with self-efficacy: Online learning usage in Yemen. *International Journal of Information and Learning Technology*, *35*(4), 285-304. doi:https://doi.org/10.1108/IJILT-11-2017-0116

Al-Emran, M., & Teo, T. (2020). Do knowledge acquisition and knowledge sharing affect e-learning adoption? An empirical study. *Education and Information Technology*, *25,* 1983-1998. doi:https://doi.org/10.1007/s10639-019-10062-w

Amit, S., Karim, R., & Kafy, A., (2022). Mapping emerging massive open online course (MOOC) markets before and after COVID 19: A comparative perspective from Bangladesh and India. *Spatial Information Research, 30,* 655-663. doi:https://doi.org/10.1007/s41324-022-00463-4

Anand Shankar Raja, M., & Kallarakal, T. K. (2021). COVID-19 and students perception about MOOCs - A case of Indian higher educational institutions. *Interactive Technology and Smart Education*, *18*(3), 450-474. doi:https://doi.org/10.1108/ITSE-07-2020-0106

Anitha, D. (2010). Proposing a knowledge management solution for e-learning. *International Journal of Management in Education*, *4*(3), 316-332.

Babu, M. S., & Chouhan, B. S. (2023). Digital literacy among the faculties of Nar Bahadur Bhandari government college, Tadong Sikkim: A study. *International Journal of Knowledge Management & Practices*, *11*(2).

Baumgartner, H., & Homburg, C., (1996). Applications of structural equation modeling in marketing and consumer research: A review. *International Journal of Research in Marketing*, *13*(2), 139-161. doi:https://doi.org/10.1016/0167-8116(95)00038-0

Cham, T. H., Lim, Y. M., Cheng, B. L., & Lee, T. H. (2016). Determinants of knowledge management systems success in the banking industry. *VINE Journal of Information and Knowledge Management Systems*, 46, 2-20. doi:https://doi.org/10.1108/VJIKMS-03-2014-0021

Chen, C. J., & Hung, S. W. (2010). To give or to receive? Factors influencing members' knowledge sharing and community promotion in professional virtual communities. *Information & Management*, *47*(4), 226-236. doi:https://doi.org/10.1016/j.im.2010.03.001

Cheng, Y.-M. (2022). Which quality determinants cause MOOCs continuance intention? A hybrid extending the expectation-confirmation model with learning engagement and information systems success. *Library Hi Tech*, ahead-of-print. doi:https://doi.org/10.1108/LHT-11-2021-0391

Chopra, G., Madan, P., Jaisingh, P., & Bhaskar, P. (2019). Effectiveness of e-learning portal from students' perspective: A structural equation model (SEM) approach. *Interactive Technology and Smart Education*, *16*(2), 94-116. doi:https://doi.org/10.1108/ITSE-05-2018-0027

Chopra, G., & Madan, P. (2021). Role of 'potential self-efficacy' on e-learning effectiveness: A gender-specific moderated mediation model. *International Journal of Learning and Change*, *13*(2), 190-217.

Chou, S. W., & Liu, C. H. (2005). Learning effectiveness in a Web-based virtual learning environment: A learner control perspective. *Journal of Computer-Assisted Learning*, *21*(1), 65-76. doi:https://doi.org/10.1111/j.1365-2729.2005.00114.x

DeLone, W. H., & McLean, E. R. (2003). The DeLone and McLean model of information systems success: A ten-year update. *Journal of Management Information Systems*, *19*(4), 9-30. doi:https://doi.org/10.1080/07421222.2003.11045748

Dukić, D., Dukić, G., & Penny, K. I. (2012). Knowledge management and e-learning in higher education: A research study based on students' perceptions. *International Journal of Knowledge and Learning*, 8(3/4), 313-327.

Dwivedi, A., Dwivedi, P., Bobek, S., & Sternad Zabukovšek, S. (2019). Factors affecting students' engagement with online content in blended learning. *Kybernetes*, *48*(7), 1500-1515. doi:https://doi.org/10.1108/K-10-2018-0559

Ghosh, V., Bharadwaja, M., & Mukherjee, H. (2023). Examining online learning platform characteristics

and employee engagement relationship during COVID-19. *VINE Journal of Information and Knowledge Management Systems*, 53(2), 335-357. doi:https://doi.org/10.1108/VJIKMS-05-2022-0154

Hair, J. F. (2009). *Multivariate data analysis.*

Hair Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis*, *1*(2), 107-123.

Ho, N. T. T., Sivapalan, S., Pham, H. H., Nguyen, L. T. M., Pham, A. T. V., & Dinh, H. V. (2021). Students' adoption of e-learning in emergency: The case of a Vietnamese university during COVID-19. *Interactive Technology and Smart Education*, *18*(2), 246-269. doi:https://doi.org/10.1108/ITSE-08-2020-0164

Hu, L. T., & Bentler, P. M., (1999). Cut-off criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, *6*(1), 1-55. doi:https://doi.org/10.1080/10705519909540118

Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, *18*(1), 39-50. doi:https://doi.org/10.1177/002224378101800104

Gaskin, J. E. (2014). Statwiki. Retrieved June 1, 2022, from http://statwiki.kolobkreations.com/wiki/Main_Page

Gupta, K. P. (2020). Investigating the adoption of MOOCs in a developing country: Application of technology-user-environment framework and self-determination theory. *Interactive Technology and Smart Education*, *17*(4), 355-375. doi:https://doi.org/10.1108/ITSE-06-2019-0033

Halawi, L. A., McCarthy, R. V., & Aronson, J. E. (2007). An empirical investigation of knowledge management systems' success. *Journal of Computer Information Systems*, *48*(2), 121-135. doi:https://doi.org/10.1080/08874417.2008.11646014.

He, W., & Wei, K.-K. (2009). What drives continued knowledge sharing? An investigation of knowledge-contribution and -seeking beliefs. *Decision Support Systems, 46*, 826-838. doi:https://doi.org/10.1016/j.dss.2008.11.007

James, T. L., Zhang, J., Li, H., Ziegelmayer, J. L., & Villacis-Calderon, E. D. (2022). The moderating effect of technology overload on the ability of online learning to meet students' basic psychological needs. *Information Technology and People*, 35, 1364-1382. doi:https://doi.org/10.1108/ITP-03-2021-0225

Jennex, M., & Olfman, L. (2003). A knowledge management success model: An extension of DeLone and McLean's IS success model. *Ninth Americas Conference on Information Systems in August, Tampa*, p. 330. Retrieved from http://aisel.aisnet.org/amcis2003/330

Kankanhalli, A., Tan, B. C., & Wei, K. K. (2005). Contributing knowledge to electronic knowledge repositories: An empirical investigation. *MIS Quarterly*, *29*(1), 113-143. doi:https://doi.org/10.2307/25148670

Kline, R. B. (1998). *Structural equation modelling*. New York: Guilford.

Lathabhavan, R., & Moovendhan, V. (2023). Knowledge diffusion - Application association during the COVID-19 pandemic: Investigating the role of technology intervention. *VINE Journal of Information and Knowledge Management Systems*, *53*(2), 232-247. doi:https://doi.org/10.1108/VJIKMS-04-2022-0136

Mohan, A., & Mahapatra, M. (2018). Managing knowledge in higher educational institutions in the ICT Era: The road ahead. *International Journal of Knowledge Management and Practices*, *6*(2).

Nattapol, N., Peter, R., & Laddawan, K. (2010). An investigation of the determinants of knowledge management systems success in banking industry. *World Academy of Science, Engineering, and Technology*, *71*(1), 588-595.

Nunnally, J. C. (1978). *Psychometric theory.* New York: McGraw Hill.

Pachauri, N. K. (2021). Effectiveness of online resources, teaching-learning techniques, and learning outcomes during COVID-19 pandemic. *International Journal of Knowledge Management and Practices*, *9*(1&2), 32-40.

Podsakoff, P. M., MacKenzie, S. B., & Podsakoff, N. P. (2012). Sources of method bias in social science research and recommendations on how to control it. *Annual Review of Psychology*, *63*(1), 539-569. doi:https://doi.org/10.1146/annurev-psych-120710-100452

Raccanello, D., Balbontín-Alvarado, R., Bezerra, D. da S., Burro, R., Cheraghi, M., Dobrowolska, B.,…Aristovnik, A., (2022). Higher education students' achievement emotions and their antecedents in e-learning amid COVID-19 pandemic: A multi-country survey. *Learning and Instruction, 80,* 101629. doi:https://doi.org/10.1016/j.learninstruc.2022.101629

Ratna, P. A., & Mehra, S. (2015). Exploring the acceptance for e-learning using technology acceptance model among university students in India. *International Journal of Process Management and Benchmarking*, *5*(2), 194-210.

Rokhman, F., Mukhibad, H., Bagas Hapsoro, B., Nurkhin, A. (2022). E-learning evaluation during the COVID-19 pandemic era based on the updated of Delone and McLean information systems success model. *Cogent Education*, *9,* p. 2093490. doi:https://doi.org/10.1080/2331186X.2022.2093490

Romero-Rodríguez, L. M., Ramírez-Montoya, M. S., & Valenzuela González, J. R. (2020). Correlation analysis between expectancy-value and achievement

goals in MOOCs on energy sustainability: Profiles with higher engagement. *Interactive Technology and Smart Education*, *17*(4), 417-434. doi:https://doi.org/10.1108/ITSE-01-2020-0017

Sammour, G., Schreurs, J., Al-Zoubi, A. Y., & Vanhoof, K. (2008). The role of knowledge management and e-learning in professional development. *International Journal of Knowledge and Learning*, *4*(5), 465-477. doi:https://doi.org/10.1007/978-3-540-87783-7_22

Singh, A., Sharma, S., & Paliwal, M. (2021). Adoption intention and effectiveness of digital collaboration platforms for online learning: the Indian students' perspective. *Interactive Technology and Smart Education*, *18*(4), 493-514. doi:https://doi.org/10.1108/ITSE-05-2020-0070

Singh, A., & Sharma, A. (2021). Acceptance of MOOCs as an alternative for internship for management students during COVID-19 pandemic: An Indian perspective. *International Journal of Educational Management*, *35*(6), 1231-1244. doi:https://doi.org/10.1108/IJEM-03-2021-0085

Tam, C., Loureiro, A., & Oliveira, T. (2020). The individual performance outcome behind e-commerce: Integrating information systems success and overall trust. *Internet Research*, *30*(2), 439-462. doi:https://doi.org/10.1108/INTR-06-2018-0262

Thatcher, J. B., Loughry, M. L., Lim, J., & McKnight, D. H. (2007). Internet anxiety: An empirical study of the effects of personality, beliefs, and social support. *Information and Management*, *44*(4), 353-363. doi:https://doi.org/10.1016/j.im.2006.11.007

Thi Minh Ly, P., Tien Thanh, P., Duy, L. T., Nghi, C. N. P., Giao, N. D. P., & Nghi, T. M. (2023). Online knowledge sharing and creativity in the context of working from home during the COVID-19 pandemic. *VINE Journal of Information and Knowledge Management Systems*, *53*(2), 292-314. doi:https://doi.org/10.1108/VJIKMS-03-2022-0078

Trivedi, K., & Srivastava, K. B. L. (2021). A framework for integrating strategic HR and knowledge management for innovation performance. *Strategic HR Review*, *20*(1), 11-16. doi:https://doi.org/10.1108/SHR-08-2020-0076

Trivedi, K., & Srivastava, K. B. L. (2023). The impact of intellectual capital-enhancing HR practices and culture on innovativeness - The mediating role of knowledge management processes. *Journal of Organizational Effectiveness: People and Performance*, ahead-of-print. doi:https://doi.org/10.1108/JOEPP-05-2023-0174

Varol, E. S., Tarcan, E., & Ozmen, I. (2010). The acceptance and use of e-learning systems in Turkey. *Int. J. Innovation and Learning, 8*(1), 90-105.

Veeravalli, S., Venkatraman, V., & Hariharan, M. (2019). Why do people seek knowledge? Tracing factors that affect knowledge seeking intention. *VINE Journal of Information and Knowledge Management*, *50*(2), 271-290. doi:https://doi.org/10.1108/VJIKMS-04-2019-0059

Wild, R. H., Griggs, K. A., & Downing, T. (2002). A framework for e-learning as a tool for knowledge management. *Industrial Management & Data Systems*, *102*(7), 371-380. doi:https://doi.org/10.1108/02635570210439463

Electronic source. Retrieved from https://www.onmanorama.com/career-and-campus/top-news/2022/06/13/2-cr-students-pursuing-higher-education-swayam-portal.html