

Information Service Innovation through Knowledge Sharing: A Review of Theoretical Viewpoint

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Abstract

This review study was motivated by the earlier relevance article as well as the theoretical concepts of Knowledge Sharing (KS) and Information Service Innovation (ISI). Because the use of appropriate theory enables the KS to move forward ISI and to be improve information professionals' quality. This study followed a literature review approach where secondary information is used for research. Based on the existing reliable literature, this review study values that the identification and application of the most theoretical approach's are highly significant in achieving the common goal, which ultimately outcomes in the KS and ISI relevant.

Keywords: Knowledge Sharing; Absorptive Capacity; Information Service Innovation; Information and Communication Technology; Social Networking Sites.

INTRODUCTION

Nowadays the issue of Information Service Innovation (ISI) has become a matter of great concern among the scholars all over the world¹ (Wan *et al.* 2022). In this digital era ISI is also an important concern among the information professionals of Bangladesh² (Islam, Agarwal, &

Ikeda, 2015). Therefore, it is significant to conduct an investigation on ISI among the information professionals of Bangladesh. Thus, this study focuses on ISI through Knowledge Sharing with the support of a theoretical point of view.

In addition, Information Service Innovation (ISI) is associated with knowledge sharing (KS), which is ultimately mitigated by Knowledge Donating (KD) and Knowledge Collecting (KC). Further ISI is the accumulation of Information Technology Infrastructure (ITI), Employee's Ability (EA), and Employee's Motivation (EM) that provides the storage, computing, distribution, and communication of information required by all or a portion of an enterprise³ (Li *et al.*, 2013). Similarly, Information Service Innovation (ISI) is the process by which each institution or information center strives to provide its services to information professionals effectively and efficiently by leveraging advanced services and technologies. Sharing

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knowledge is a vital resource for KD, KC, and initiating new situations.⁴ (Molose & Ezeuduji, 2015).

Therefore, it is crucial to assess a firm's propensity to innovate by measuring the institution's innovative capacity in order to gain a more comprehensive understanding of innovation.⁵ (Ofori, 2015). The ability to innovate is also referred to as having the knowledge and abilities required to realize, master, and create all improved and new technologies.⁶ (Lall, 1992). In the opinion of Lawson and Samson⁷ (2001), Innovation ability may be directly related to knowledge, as it is the capacity to continuously transform concepts and knowledge sharing into novel goods, procedures, and platforms for the organization's users' benefit. Additionally, KS touch ISI. This ISI describes innovation as the creation and execution of fresh concepts over time by those who participate in institutional transactions with others.

In order to develop competitive advantages, such as EA and EM, Knowledge sharing may facilitate knowledge transfer and invention within an organization. Moreover, since knowledge is essential to attaining continuous innovation, innovation and knowledge are closely linked⁸ (Hendriks, 1999). The importance of exchanging knowledge to ensure that practices and policies are founded on solid evidence is growing. To achieve this, gaps in policy, practice, and research must be closed. Knowledge sharing is a tool that can be utilized to encourage effective practice and decision-making, as well as exchange of information between academics, politicians, and those who provide services.⁹ (Tsai, 2002). This Knowledge Standard consists of two essential components: information communication (IC) and information and communication technology (ICT). The researcher employed this method to examine KS's impact on ISI. The researcher manages theoretical justification for this issue. The researcher used the Technology Acceptance Model, also known as TAM, theory to establish these perspectives on the effects of KS on ISI.

METHODOLOGY

The primary goal of this review article is to discover the relevance of different knowledge sharing approaches in the context of ISI with the support of a theoretical outlook. This theoretical view point is Technological Adaptation Model (TAM). This study used literature review approach where secondary research information from previously published documents, journals, articles,

and dissertations were integrated and interpreted to determine the best KS approach to accomplishing the shared objective and ultimately the outcomes of the ISI.

LITERATURE REVIEW

A review of the relevant literature enhances comprehension of the closely related issue. In library services, information service innovation (ISI) through knowledge sharing (KS) in information centers that increases user satisfaction is regarded as crucial. Earlier researchers have conceptualized service innovation and knowledge sharing attachment in various ways.^{10,11} (Thakur & Hale, 2013; Quarnberg, 2011).

Knowledge Sharing

Knowledge sharing is a two-way process (giving and receiving knowledge) between knowledge giver (s) and knowledge receiver (s) who as participants of knowledge sharing exchange the knowledge found in their minds or the knowledge found in electronic or paper documents, and knowledge sharing can take place simultaneously when the participants are present or at different times when they make their knowledge explicit.¹² (Antonova *et al.* 2011). According to Bartol and Srivastava's¹³ (2002) methodology, information is a part of knowledge sharing and is the process through which employees communicate pertinent information throughout the organization. Knowledge sharing is defined by Moller and Svahn¹⁴ (2004:220) as "sharing not only codified information, such as production and product specifications, delivery and logistic information, but also management beliefs, images, experiences, and contextualize practices such as business-process development." Ipe¹⁵ (2003) argues that the sharing of knowledge between persons is a procedure whereby knowledge is distorted into a form that can be comprehended, fascinated, and utilized by other persons. From a different perspective, In order to help others and promote collaboration in order to come up with new ideas, solve problems, or adopt procedures or policies, knowledge sharing is described as the dissemination of expertise and assigned information.^{16,17} (Cummings, 2004; Pulakos *et al.*, 2003).

Knowledge Sharing among Library Professionals

In order to improve library operations, Jantz¹⁸ (2001, p. 35) observed that there is frequently no

systematic method for organizing the enterprise's knowledge and making it accessible to other librarians and personnel. The motivation of library personnel to share their knowledge is viewed as a further challenge in the library's KM implementation. The willingness of librarians to share their knowledge should be increased by human resource administrators.¹⁹ (Martin, *et.al.* 2006). The achievement and continued development of firms, including libraries as well as information services, will be influenced by how education and knowledge sharing are prioritized in organizational culture.²⁰ (Madge, 2012). According to Wen²¹ (2005), the management of knowledge and sharing should be considered in the yearly performance reviews of employees or the librarian's profile for permanence or advancement. According to a study conducted by Yaacob *et al.*²² (2010), mid and senior managers of big libraries in Malaysia perceive a lack of leadership and IT skills as the primary weakness among Malaysian librarians. This short coming is believed to have a positive impact on the organization's knowledge sharing initiatives.²² (Yaacob, Jamaluddin, & Jusoff, 2010).

Innovation

It has been assumed that innovation is a tangible, challenging activity that forces an institution to make use of its assets to achieve a certain objective.²³ Innovation has been regarded as a realistic and challenging practice that requires an organization to utilize its resources to achieve a particular objective (Yeşil & Hırlak, 2013). According to some experts, innovation is the integration of a new set of essential elements into the process of production²⁴ (Cheng *et. al.* 2009). The application of findings and initiatives in the form of goods, systems, or processes is another definition of innovation²⁵ (Gloet and Terziovski, 2004). All of these definitions share the core idea that innovation is a way of creating something new by altering the way something is normally done²⁶ (Assefa, 2010). The significance of these definitions lies in their ability to differentiate innovation from other concepts within the realm of organizations. By explicitly characterizing innovation as the deliberate act of introducing and implementing novel and enhanced methods of conducting activities, these definitions establish a clear and distinct understanding of the term²⁷ (Andriessen, 2006).

The concept of innovation encompasses the development of novel items as well as the implementation of fresh techniques for pre-existing products. There exists an underlying assumption

that both outcomes yield discernible social and economic consequences for growth and employees. However, the enhancement of existing product processes through innovation is commonly perceived as a means to achieve more efficiency²⁸ (Aulawi *et. al.* 2009). It is crucial to distinguish between product and process innovations since each demands different organizational capabilities and resources, according to Damanpour and Gopalakrishnan²⁹ (2001).

THEORETICAL PERSPECTIVE

This research's theoretical framework specifies the scope and objectives of the variables employed. The contribution of libraries and information centers to the innovation of information services has been the subject of a number of differing theoretical explanations over time Fernando³⁰ (2013) illustrates the theoretical stance of information service innovation through the lenses of "learning organizational theory" and "social exchange theory". This research utilizes an integrated theory of social and political theory to designate a pluralistic theoretical framework. The purpose of this study is to build up a theoretical framework, with particular emphasis on the Technological Acceptance Model (TAM) hypothesis. The following section discusses the TAM theory and why it has been considered a foundational theory, as well as the learning organization, social exchange, intellectual capital, knowledge sharing behavior scale, valence, and social capital theories.

Technology Acceptance Model (TAM)

Computer systems cannot enhance the performance of an organization if they are not utilized. Unfortunately, pervasive resistance to end-user systems exists among managers and professionals. To better predict, explain, and increase user acceptance, we must better comprehend why individuals accept or reject computers³¹ (Davis *et al.*, 1989, p. 982). Davis³¹ (1989) is given credit for inventing TAM. He developed a framework for TAM based on the effect of system characteristics on user acceptance of computer based information systems. Before discussing the TAM, the researcher must elucidate technology, ICT, and their relationship to this study. The term "technology" encompasses all information and communication technologies (ICTs) utilized to disseminate information and knowledge. This includes the implementation of information and knowledge management systems within various

organizations and institutions. According to Alavi and Leidner³² (2001), these systems are designed to aid in locating, retrieving, processing, retaining, disseminating, and utilizing information and knowledge.

The application of information and communication technologies (ICTs) in information science research is highly pertinent to the Technology Acceptance Model (TAM)^{33,34,35} (Orlikowski & Robey 1991, DeSanctis & Poole 1994, Salisbury *et al.* 2002). ICTs are now essential organizational resources. Utilizing ICTs facilitates the remote and real-time sharing and transfer of knowledge and information. ICTs utilize network and knowledge integration to surmount numerous communication barriers. Technology facilitates the acquisition and exchange of information and knowledge by making information and knowledge sources more accessible and by equipping people with the means to surmount temporal and physical barriers with one another⁸ (Hendriks, 1999).

The Technology Acceptance Model investigates how technology interacts with daily tasks, interpersonal relationships, and social interactions between members of a group or society. The model is especially concerned with how individuals perceive, implement, and use ICTs in their daily lives³⁶ (Fari, 2015). The TAM accentuates the value and applicability of modern technological

instruments for the efficient completion of job related tasks and places a high value on ICTs for the total achievement of a person's or an organization's goals. Although the significance of current technologies cannot be overstated, the approach ignores the usage of these technologies by individuals and the necessity of an encouraging atmosphere for their acceptance and utilization³⁶ (Fari, 2015). Consequently, the theory is deemed useful in this study's endeavor to comprehend how academics embrace and employ contemporary technologies to achieve their goal of knowledge sharing⁸ (Hendriks, 1999).

The Theory of Reasoned Action (TRA), which Fishbein and Ajzen developed in 1975, served as the basis for the adoption of the TAM paradigm. Davis argued that TAM used PU and PEOU to evaluate the intention to use and actual usage behavior, whereas TRA used PU and PEOU to investigate beliefs, influences, attitudes, and behaviors, as depicted in Fig. 2.2. In TAM, intentional behavior is dependent predominantly on PU and their views toward system use, whereas actual system usage is directly related to behavioral intention. PU and PEOU influence the perception of the system. In addition, Davis was concerned that IT types, situational constraints, individual abilities, and other external factors all had an effect on PU and PEOU.

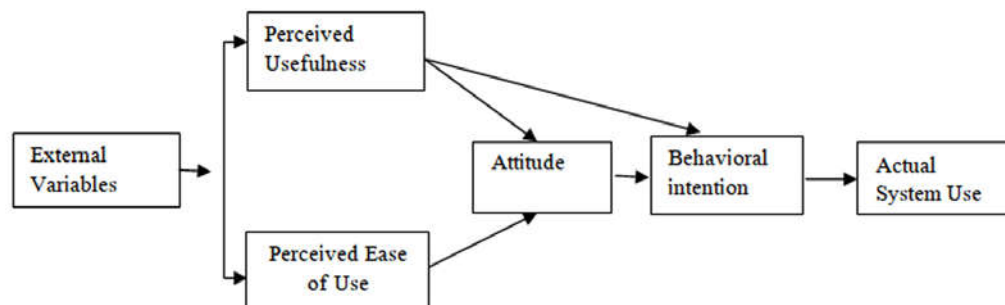


Fig. 1: The TAM model is proposed by Davis, 1989

Nonetheless, some research on PEOU suggests that it has a direct effect on both PU and actual system usage^{31,37} (Davis, F. D., Bagazzi, and Warshaw, 1989; Gefen, D., and Straub, 2000). In addition, a specific study in the disciplines of information technology and information systems has identified several external variables. In addition, some research indicates that organizational structure, user characteristics, system compatibility and credibility, cultural adaptations, implementation processes, and political and social influences can have an impact on TAM^{38,39,40,41} (Ajzen & Fishbein 1980; Kaba, N'Da & Mbarika 2008; Li, Qi & Shu

2008; Singh *et al.* 2006).

Knowledge Sharing, ISI and TAM

Sharing knowledge is one factor that promotes innovation. The occurrence of innovation is improbable in the absence of knowledge exchange⁴² (Kremer, Villamor, & Aguinis, 2019). Collaboration has been demonstrated to be an efficient and effective method for acquiring the knowledge and skills necessary for successful invention⁴³ (Adams, Day, & Dougherty, 1998). Knowledge sharing in the field of innovation is the transfer of

knowledge to develop or improve valuable goods and services. The capacity for creating products is supported by the sharing of knowledge⁴⁴ (Hoopes & Postrel, 1999). Mesmer-Magnus and DeChurch⁴⁵ (2009) discovered, based on a meta-analysis, that knowledge sharing can predict team performance. Lack of knowledge is the primary obstacle to innovation⁴⁶ (Storey & Kelly, 2002). According to Darroch and McNaughton⁴⁷ (2002), an organization that facilitates the exchange of information is more inclined to foster the generation of novel ideas and encourage innovative skills. Belso and Diez⁴⁸ (2018) discovered that businesses with increased participation in knowledge networks have a greater capacity for innovation.

Although some studies have looked at the connection between information sharing and innovation, none have up to now taken into account the historical stages of development of both ideas, which is the main goal of this study. Numerous authors have emphasized the value of investigating innovation and knowledge sharing in tandem. According to research conducted in 2003 by Cavusgil, Calantone, and Zhao,⁴⁹ the amount of shared tacit knowledge boosts a company's ability for innovation. Sharing tacit knowledge is necessary for innovation because it is challenging for others to do the same. Both implicit and explicit knowledge are required for innovation, and sharing knowledge is a way to transform the two.

Camelo, Garca, Sousa, and Valle⁵⁰ (2011) discovered during a study of Spanish organizations that sharing of knowledge had a positive effect on organizational innovation. Similar to Podrug, Filipovic, and Kovac (2017), Podrug, Filipovic, and Kovac⁵¹ (2017) found that knowledge sharing increased creativity in Croatian enterprises. Informal knowledge sharing, according to Taminiau, Smit, and Langer⁵² (2009), is the greatest path to innovation. As Mura, Lettieri, Radaelli, and Spiller⁵³ (2013) discussed, knowledge sharing and creativity are linked. According to the authors of this paper, behaviors associated with knowledge sharing have a positive effect on the innovativeness of information sharers in relation to their tendency and ability to encourage and apply new ideas. According to Wang and Hu⁵⁴ (2018), knowledge sharing connects teamwork, innovation, and managerial effectiveness. Additionally, it serves as a bridge between individual innovation and happiness⁵⁵ (Wang, Yang, & Xue, 2017). In addition, there is proof that the sharing of information between businesses in clusters can foster innovation⁵⁶ (Connell, Kriz, & Thorpe, 2014).

According to Kamasak and Bulutlar⁵⁷ (2010), knowledge exchange within the group influences exploitative innovation.

One of the most important aspects of knowledge sharing is the interaction, transmission, and distribution of knowledge among people, groups, and/or countries. Intentions, characteristics, the environment, benefits, and, most importantly, modern technologies, also known as ICTs, which substantially facilitate the rapid and remote transfer of information and knowledge, are what determine the efficacy and viability of such interactions. This study examines a variety of academic works pertaining to the application of the Technology Acceptance Model (TAM) to demonstrate their applicability and relevance to research on information and knowledge sharing.

This study selected and analyzed the Technology Acceptance Model (TAM) to elucidate the importance of Information and Communication Technologies (ICTs) in the context of information and knowledge sharing, as sharing activities exhibit numerous significant characteristics of people's behavior, comprehension, and intentions in relation to these tools. The TAM evaluates the adoption, utilization, and application of technology with respect to the following factors:

TAM can be used to comprehend the variables influencing individual adoption and use of IT introduced to aid organizations. Among the significant factors that have been discussed in KS literature are trust, a shared vision, and social connections. They are regarded as essential components for promoting KS, which is necessary for KS activities.

Absorptive Capacity and ISI and TAM

Cohen and Levinthal⁵⁸ (1990) defined absorptive capacity as the ability to recognize the value of new information, assimilate it, and utilize it for commercial purposes.

Because incremental innovations rely heavily on an organization's extant knowledge base, absorptive capacity increases the speed and frequency of incremental innovation⁵⁹ (Kim and Kogut, 1996).

According to Cohen and Levinthal (1990) and Zahra and George⁶⁰ (2002), an organization's adaptability in assimilating diverse categories of information from external sources is a critical factor in its innovative potential. A large information absorption capacity encourages an organization to utilize new knowledge from other entities, whether they are internal or external to the company, and

this knowledge will foster innovation. Due to its absorptive capacity, an organization can learn something novel and distinct⁶¹ (Lane *et al.*, 2006).

Zahra and George⁶⁰ (2002) argue that absorptive capacity can be divided into two distinct components: "realized" absorptive capacity, which encompasses the processes of transformation and exploitation, and "potential" absorptive capacity, which involves acquisition and absorption. According to them, the fundamental elements of the organization's absorptive capacity are the employees' aptitude and motivation. According to an empirical study by Minbaeva *et al.*⁶² (2003), certain human resources management practices are advantageous to the development of absorptive capacity. According to Lenox and King's⁶³ (2004) exploratory study on the development of absorptive capacity, managers can directly influence an organization's absorptive capacity by informing the organization's potential adopters.

This research quantifies absorptive capacity using Minbaeva *et al.*⁶² (2003)'s definitions. They argue that absorptive capacity consists of two components: prior knowledge (workers' aptitude) and effort intensity (workers' motivation). The term "prior knowledge base" refers to the extant discrete knowledge units that are accessible within an organization. Thus, a person's educational heritage defines their ability, and acquired job related skills may be a representation of prior related knowledge that an organization must assimilate and apply. The first concept of absorptive capacity in this study is the employees' capability, which includes their potential and skill. In contrast, in addition to prior pertinent knowledge, the innovation activities of an organization must also demonstrate the existence of an organizational objective⁵⁸ (Cohen and Levinthal, 1990).

In this investigation, Samson's conception of innovation was investigated. Samson⁶⁴ (1991) divides innovation into three categories: product innovation, process innovation, and management and system innovation. Tasi *et al.*⁶⁵ (Tsai, Huang, and Kao, 2001) characterize a company's innovation capability as including product innovation, process innovation, and managerial innovation, based on Samson's concept of innovation categories.

This study proposes that the technical and management components are complementary in order to determine whether the ability to absorb information and share it can increase innovation potential and result in an edge over competitors. Using the measurement instruments developed by Tasi *et al.*⁶⁵ (2001), we classify innovation as product,

method, and management innovations. We then combine this information with recommendations from actual companies to create a multidimensional representation of an organization's innovation capacity.

The Technology Acceptance Model (TAM) was devised⁶⁶ (Moon & Kim, 2001) to describe and predict how well an individual will adopt information technology. Users embrace the technology based on their use of it intentionally. Using TAM as the underlying theory, the purpose of this investigation is to determine whether the variables are supported by the conceptual theory. According to the study, both cognitive instrumental processes and social influence processes had a significant impact on user acceptance⁶⁷ (Venkatesh & Davis, 2000). The TAM model employs measurements to determine an information system's actual utilization. These metrics consist of perceived utility and supposed usability. The extent to which a person thinks using a system would improve their performance is known as perceived utility. Perceived ease of use (PEU) is the degree to which a person believes a system to be simple to use.

The aim of employing individual absorptive ability as a mediator is to assess its predictive accuracy in determining the practical use of a system. The value of absorptive ability in information technology utilization is able to boost the possibility of advancement in technology⁶⁸ (Ince, Imsoglu, & Turkcan, 2016). Other studies^{69,70,71} (Chang *et al.*, 2018; Mayeh, Ramayah, & Popa, 2014; Wang *et al.*, 2014) have utilized the absorptive ability to evaluate the authentic utilization of information systems.

Expertise in Technology, ISI and TAM

The world in which we currently exist is wholly dependent on technology. Because all consumers and educators have extensive exposure to technology in all aspects of their lives, organizations and libraries should anticipate that all library professionals will be able to perform their internal duties⁷² (McCoy, 2010).

Information technology (IT) is now widely acknowledged as a crucial instrument for enhancing a country's economic competitiveness. Everyone acknowledges that information technology (IT) exerts a significant influence on the efficiency of educational institutions. These effects will not be felt until widespread adoption and utilization of IT. Understanding the factors that impact IT adoption is essential⁷³ (Oliveira and Martins, 2011).

Today, technological expertise is regarded as one of the most essential factors for knowledge sharing and information service innovation. Here are some statements about technology expertise (divided into four sections: information technology infrastructure, strategic alignment, organizational structure, and individual learning).

ICT, SNS and TAM

The use of information and communication technology, or ICT, can encourage knowledge exchange by minimizing the spatial and temporal gaps between knowledge workers and by making materials relevant to knowledge more accessible⁸ (Hendriks, 1999).

Access to, storage of, and dissemination of information has changed substantially due to the rapid development of ICT in recent years.^{74,75} (Howell, 2016; Kripanont, 2007) Businesses in the twenty-first century must heavily integrate combinations of innovative technology solutions in order to maintain sustainability and obtain a competitive advantage. Keeping records on one or more SNS has become one of the most well liked and rapidly growing internet pastimes⁷⁶ (Alarcon-del-Amo *et al.*, 2014). SNS is one of the cutting edge technologies that have attracted millions of people's attention. SNS is defined as "a group of Internet based applications that build on the theoretical and technological foundations of Web 2.0, and that enable the creation and exchange of user generated content"⁷⁷ (Kaplan and Haenlein, 2010, p. 61).

Due to the growing availability of cutting edge products and services, ICT ecosystems are enduring rapid change at present. According to Kim *et al.*⁷⁸ (2012), one of the most vital components of the ICT ecosystem is social networking sites. Platforms for social interaction have completely altered how decisions were made and the lifestyle processes of persons and those who once ingested private information are now the creators. As a consequence of this phenomenon, a plethora of new services and service models have emerged. Organizations are significantly impacted by changes in these people. The exchange of information and expertise within the organization through enterprise SNS is growing drastically as a result of the remarkable expansion of personal SNS. According to Sena, social networks are "crucial communication tools that enable users to share information or media with specific people, with groups of people who share similar interests, with an entire network of users, etc." In addition, social networks enable users to collaborate in order to plan and develop new information services⁷⁹

(Sena and Sena, 2008).

According to widespread observation^{80,81} (Kankanhalli *et al.*, 2005; Yoo *et al.*, 2012), users will be more motivated to offer knowledge if knowledge contributors (KC) and knowledge seekers (KS) feel comfortable exchanging knowledge in a cordial setting. It might be difficult for clients to have expectations when they first start using the latest technology. If the consumers have any antecedent usage history during this early stage of use, it will serve as a significant predictor of expectations⁸² (Vroom, 1964). According to Archambault and Grudin⁸³ (2012) and Tan and Md. Noor⁸⁴ (2013), when users use tools for non-work related activities, their skills improve and they acquire new perspectives on the capabilities of the tools. Utilizing social media frequently and persistently, even for purposes unrelated to information transmission, would be advantageous for gaining experience. The experience Linzalone *et al.*⁸⁵ (2020) had utilizing SNS would influence the utilization of this technology for knowledge transfer and ISI.

ISI and TAM

Today, organizations view innovation as a crucial component of their success and competitive advantage. Innovative organizations have the ability to improve individual and organizational performance as well as resolve problems by introducing change and creating new opportunities⁶⁵ (Tsai, 2001). According to Daft⁸⁶ (1978), innovation is the incorporation of novel ideas, products, procedures, systems, policies, and programs by a business. According to Tidd and Bessant⁸⁷ (2011), both product and process innovation is feasible. According to them, these two types of innovation are crucial for businesses because they allow them to resolve problems, provide value, and increase productivity while developing new services.

According to Schumpeter⁸⁸ (2013), services innovation relies on technology service innovation to administer and preserve accomplishments.⁸⁹ (Menor *et al.*, 2002)⁸⁹ Technology development is the primary focus of information service innovation, which additionally discusses the tactical consequences of delivering latest information and services. In contrast to technological innovation, value co-creation provides a more compelling perspective on service innovation⁹⁰ (Martin *et al.*, 2016). S-D logic defines service innovation as a collection of activities used by service providers to increase the service's value to customers⁹¹ (Vargo and Lusch, 2004). Today, service innovation can also be defined as the rebinding of diverse resources

to create novel resources that benefit certain actors (such as the customer) in a particular background.

This research employed categories to analyze service innovation⁹² (Snyder *et al.*, 2016). The most common criterion for categorizing service innovations is the offering's level of change (radical versus incremental). As said by Snyder *et al.* (2016), there is a significant link between "degree of change" and "newness" (*i.e.*, if a librarian is new versus if a library is new). In order to construct the information service innovation, we used Avlonitis *et al.*'s⁹³ (2001) dimensions of newness (*i.e.*, new to library services, new to corporate services, new delivery procedures, service modifications, service line extensions, and service repositionings).

The TAM and network externalities discuss the adoption of novel technologies. This analysis expanded the TAM by including ISI externalities. The original TAM discusses PU and PEOU in relation to technological acceptability. According to Wang, Lo, and Fang⁹⁴ (2008), these two concepts

influence the intention to utilize technology.

In this research work, SEM was utilized for model analysis and evaluation. Using the original TAM model for ISI, the correlations between the constructs and the goodness of fit were initially investigated.

The TAM and network externalities discuss the implementation of innovative technologies. This study broadened the TAM by incorporating ISI externalities. The original TAM discusses the relationship between PU and PEOU and technological acceptability. According to Wang, Lo, and Fang⁹⁴ (2008), these two notions affect the intent to use technology.

In this investigation, the model was analyzed and evaluated using SEM. The correlations between the constructs and the goodness of fit were initially investigated using the original TAM model for ISI.

Fig. 2: Relation of TAM theory and independent variable on ISI. Adapted by the Author.

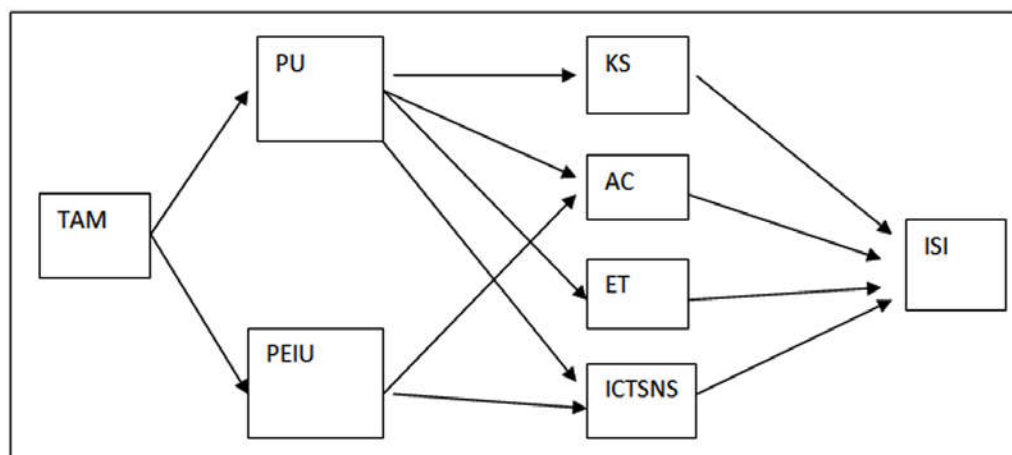


Fig. 2: Relation among TAM theory and variables of the questionnaire.

The above table shows the theoretical relationship between two terms TAM and ISI which is very positive and all subsections are also positively effects on ISI.

CONCLUSION

The study indicates that libraries in Bangladesh must comprehend and recognize the importance of knowledge sharing practices in increasing information service innovation by information professionals. In the context of Bangladesh, it is essential for the libraries to provide a suitable knowledge sharing environment and

IT infrastructure in return for the contribution of information service innovation. Furthermore, libraries in Bangladesh need to determine the required knowledge sharing practices by the administration as organizational support indicates the caring practices of professionals. To conclude, this study also serves as proof of the belief that knowledge sharing, absorptive capacity, expertise in technology are fundamental constituents that can increase information service innovation through knowledge sharing practices from the organization and increased ability which will ultimately determine competitiveness, success, and position of the libraries in Bangladesh. By doing so, the study integrates technology acceptance theory

for the conceptual justification of the study.

REFERENCES

1. Wan, X., He, R., Zhang, G., & Zhou, J. (2022). Employee engagement and open service innovation: The roles of creative self-efficacy and employee innovative behaviour. *Frontiers in Psychology*, 13, 921687.
2. Islam, M. A., Agarwal, N. K. K., & Ikeda, M. (2015). "Knowledge management for service innovation in academic libraries: A qualitative study. *Library Management*", 36(1/2), 40-57.
3. Li, Q., Wang, Z. Y., Li, W. H., Li, J., Wang, C., & Du, R. Y. (2013). Applications integration in a hybrid cloud computing environment: Modelling and platform. *Enterprise Information Systems*, 7(3), 237-271.
4. Molose, T., & Ezeuduji, I. O. (2015). Knowledge sharing, team culture, and service innovation in the hospitality sector: the case of South Africa. *African Journal of Hospitality, Tourism and Leisure*, 4(1), 1-16.
5. Ofori, D., Osei, A., Mensah, S. A., & Affum, E. K. (2015). Innovation and knowledge sharing: a new competitive advantage in the mobile telecommunication industry in Ghana. *Science Journal of Business and Management*, 3(5), 157-163.
6. Lall, S. (1992). Technological capabilities and industrialization. *World development*, 20(2), 165-186.
7. Lawson, B., & Samson, D. (2001). Developing innovation capability in organisations: a dynamic capabilities approach. *International journal of innovation management*, 5(03), 377-400.
8. Hendriks, P. (1999). Why share knowledge? The influence of ICT on motivation for knowledge sharing, *Knowledge and Process Management* 6. pp 91-100.
9. Tsai, W. (2002). "Social structure of 'competition' within a multiunit organization: coordination, competition, and intra organizational knowledge sharing", *Organization Science*, Vol.13 No. 2, pp. 179-90.
10. Thakur, R., & Hale, D. (2013). Service innovation: A comparative study of US and Indian service firms. *Journal of Business Research*, 66(8), 1108-1123.
11. Quarnberg, T. M. (2011). Community satisfaction, community attachment, community experience, internet use and internet access in rural Utah communities. Brigham Young University.
12. Antonova, A., Csepregi, A., & Marchev Jr, A. (2011). How to extend the ICT used at organizations for transferring and sharing knowledge. *IUP Journal of Knowledge Management*, 9(1), 37.
13. Bartol, K. M., & Srivastava, A. (2002). Encouraging knowledge sharing: The role of organizational reward systems. *Journal of leadership & organizational studies*, 9(1), 64-76.
14. Möller, K., & Svahn, S. (2004). Crossing East-West boundaries: Knowledge sharing in intercultural business networks. *Industrial Marketing Management*, 33(3), 219-228.
15. Ipe, M. (2003). Knowledge sharing in organizations: A conceptual framework. *Human resource development review*, 2(4), 337-359.
16. Cummings, J. N. (2004). Work groups, structural diversity, and knowledge sharing in a global organization. *Management science*, 50(3), 352-364.
17. Pulakos, E. D., Dorsey, D. W., & Borman, W. C. (2003). Hiring for knowledge-based competition. In S. E. Jackson, M. A. Hitt & A.S. Denisi (Eds.), *Managing knowledge for sustained competitive advantage: Designing strategies for effective human resource management* (pp. 155-176). San Francisco: Jossey-Bass.
18. Jantz, R. (2001). Knowledge management in academic libraries: special tools and processes to support information professionals. *Reference Services Review*, 29(1), 33-39.
19. Martin, B., Hazeri, A., & Sarrafzadeh, M. (2006). Knowledge management and the LIS professions: investigating the implications for practice and for educational provision. *The Australian Library Journal*, 55(1), 12-29.
20. Madge, O. L. P. (2012). Creating a culture of learning and knowledge sharing in libraries and information services. *New research on knowledge management models and methods*, 245-268.
21. Wen, S. (2005). Implementing knowledge management in academic libraries: a pragmatic approach. *Ann Arbor*, 1001(2005), 48109-1205.
22. Yaacob, R. A., Jamaluddin, A., & Jusoff, K. (2010). Knowledge management and challenging roles of academic librarians. *Management Science and Engineering*, 4(4), 14.
23. Yeşil, S., & Hırlak, B. (2013). An empirical investigation into the influence of knowledge sharing barriers on knowledge sharing and individual innovation behaviour. *International Journal of Knowledge Management (IJKM)*, 9(2), 38-61.
24. Cheng, M. Y., Ho, J. S. Y., & Lau, P. M. (2009). Knowledge sharing in academic institutions: A study of Multimedia University Malaysia. *Electronic Journal of knowledge management*, 7(3).
25. Gloet, M. and Terziovski, M. (2004), "Exploring the relationship between knowledge management practices and innovation performance", *Journal of Manufacturing Technology Management*, Vol. 15 No. 5, pp. 402-409.
26. Assefa, T. (2010, November). Enabling knowledge sharing to promote innovative organizations in

- Africa. In A paper to be presented at Expert Group Meeting on Harnessing Knowledge to Achieve MDGs, Addis Ababa, Ethiopia.
27. Andriessen, J. E. (2006). To share or not to share, that is the question. Conditions for the willingness to share knowledge. IS-2006-02 Delft Innovation System Papers.
 28. Aulawi, H., Sudirman, I., Suryadi, K., & Govindaraju, R. (2009). Knowledge sharing behavior, antecedent and their impact on the individual innovation capability. *Journal of Applied Sciences Research*, 5(12), 2238-2246.
 29. Damanpour and Gopalakrishnan, (2001). "The role of knowledge management in innovation", *Journal of knowledge management*, 11(4).
 30. Fernando, Y. (2013). Service innovation along the chain of service process in airline business. In *Outsourcing Management for Supply Chain Operations and Logistics Service* (pp. 185-201). IGI Global.
 31. Davis, FD, Bagazzi, RP & Warshaw, PR 1989, 'User acceptance of computer technology: A comparison of two theoretical model', *management science*, vol. 35, pp. 982- 1003.
 32. Alavi, M., & Leidner, D. E. (2001). Knowledge management and knowledge management systems: Conceptual foundations and research issues. *MIS quarterly*, 107-136.
 33. Orlikowski, W. J., & Robey, D. (1991). Information technology and the structuring of organizations. *Information systems research*, 2(2), 143-169.
 34. DeSanctis, G., & Poole, M. S. (1994). Capturing the complexity in advanced technology use: Adaptive structuration theory. *Organization science*, 5(2), 121-147.
 35. Salisbury, W. D. *et al.* 2002. Research report: better theory through measurement in developing a scale to capture consensus on appropriation, *Information System Research*, 13(1), 91-103.
 36. Fari, S. A. (2015). Applying social capital theory and the technology acceptance model in information and knowledge sharing research. *Inkanyiso: Journal of Humanities and Social Sciences*, 7(1), 19-28.
 37. Gefen, D., Straub, D., & Boudreau, M. C. (2000). Structural equation modeling and regression: Guidelines for research practice. *Communications of the association for information systems*, 4(1), 7.
 38. Ajzen, I & Fishbein, M 1980, *Understanding attitudes and predicting social behavior*, Prentice-Hall, NJ.
 39. Kaba, B, N'Da, K & Mbarika, V 2008, 'Understanding the Factors Influencing the Attitude Toward and the Use of Mobile Technology in Developing Countries: A Model of Cellular Phone Use in Guinea', in *Hawaii International Conference on System Sciences*, Proceedings of the 41st Annual, pp. 127.
 40. Li, Y, Qi, J & Shu, H 2008, 'A Review on the Relationship Between New Variables and Classical TAM Structure', in *Research and Practical Issues of Enterprise Information Systems II Volume 1*, pp. 53-63.
 41. Singh, N, Fassott, G, Chao, MCH & Hoffmann, JA 2006, 'Understanding international web site usage', *International Marketing Review*, vol. 23, no. 1, pp. 83-97.
 42. Kremer, H., Villamor, I., & Aguinis, H. (2019). Innovation leadership: Best-practice recommendations for promoting employee creativity, voice, and knowledge sharing. *Business Horizons*, 62(1), 65-74.
 43. Adams, M. E., Day, G. S., & Dougherty, D. (1998). Enhancing new product development performance: an organizational learning perspective. *Journal of Product Innovation Management: An International Publication of the Product Development & Management Association*, 15(5), 403-422.
 44. Hoopes, D., & Postrel, S. (1999). Shared knowledge "glitches" and product development performance. *Strategic Management Journal*, 20(9), 837-865.
 45. Mesmer-Magnus, J., & DeChurch, L. (2009). Information sharing and team performance: A meta analysis. *Journal of Applied Psychology*, 94(2), 535-546.
 46. Storey, C., & Kelly, D. (2002). Innovation in services: The need for knowledge management. *Australasian Marketing Journal*, 10(1), 59-70.
 47. Darroch, J., & McNaughton, R. (2002). Examining the link between knowledge management practices and type of innovation. *Journal of Intellectual Capital*, 3(3), 210-222.
 48. Belso, J., & Diez, I. (2018). Firm's strategic choices and network knowledge dynamics: How do they affect innovation? *Journal of Knowledge Management*, 22(1), 1-20.
 49. Cavusgil, S., Calantone, R., & Zhao, Y. (2003). Tacit knowledge transfer and firm innovation capability. *Journal of Business & Industrial Marketing*, 18 (1), 6-21.
 50. Camelo, C., García, J., Sousa, E., & Valle, R. (2011). The influence of human resource management on knowledge sharing and innovation in Spain: The mediating role of affective commitment. *International Journal of Human Resource Management*, 22(7), 1442-1463.
 51. Podrug, N., Filipovic, D., & Kovac, M. (2017). Knowledge sharing and firm innovation capability in Croatian ICT companies. *International Journal of Manpower*, 38(4), 632-644.
 52. Taminiau, I., Smit, W., & Lange, A. (2009). Innovation in management consulting firms through informal knowledge sharing. *Journal of Knowledge Management*, 13(1), 42-55.
 53. Mura, M., Lettieri, E., Radaelli, G., & Spiller, N. (2013). Promoting professionals' innovative behavior

- through knowledge sharing: The moderating role of social capital. *Journal of Knowledge Management*, 17(4), 527-544.
54. Wang, C., & Hu, Q. (2018). Knowledge sharing in supply chain networks: Effects of collaborative innovation activities and capability on innovation performance. *Technovation*, 70.-. <https://www.sciencedirect.com/science/article/pii/S0166497217308994>.
55. Wang, J., Yang, J., & Xue, Y. (2017). Subjective well-being, knowledge sharing and individual innovation behavior. *Leadership and Organization Development Journal*, 38(8), 1110-1127.
56. Connell, J., Kriz, A., & Thorpe, M. (2014). Industry clusters: An antidote for knowledge sharing and collaborative innovation. *Journal of Knowledge Management*, 18(1), 137-151.
57. Kamasak, R., & Bulutlar, F. (2010). The influence of knowledge sharing on innovation. *European Business Review*, 22(3), 306-317.
58. Cohen W.M., Levinthal D.A., 1990, Absorptive Capacity: A New Perspective on Learning and Innovation, "Administrative Science Quarterly", 35(1).
59. Kim, D.J. and Kogut, B. (1996), "Technological platforms and diversification", *Organization Science*, Vol. 7 No. 3, pp. 283-301.
60. Zahra S.A., George G., 2002, Absorptive Capacity: A Review, Reconceptualization, and Extension, "The Academy of Management Review", 27(2).
61. Lane P.J., Koka B.R., Pathak S., 2006, The Reification of Absorptive Capacity: A Critical Review and Rejuvenation of the Construct, "The Academy of Management Review", 31(4).
62. Minbaeva, D., Pedersen, T., Björkman, I., Fey, C. F., & Park, H. J. (2003). MNC knowledge transfer, subsidiary absorptive capacity, and HRM. *Journal of international business studies*, 34, 586-599.
63. Lenox, M., & King, A. (2004). Prospects for developing absorptive capacity through internal information provision. *Strategic management journal*, 25(4), 331-345.
64. Samson, D. (1991). *Manufacturing and operations strategy*. Prentice Hall.
65. Tsai, W. (2001). Knowledge transfer in intraorganizational networks: Effects of network position and absorptive capacity on business unit innovation and performance. *Academy of Management Journal*, 44, 996-1004.
66. Moon, J. W., & Kim, Y. G. (2001). Extending the TAM for a World-Wide-Web context. *Information & Management* 38. 217-230.
67. Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science*, 46 (2), pp. 186-204.
68. Ince, H., Imamoglu, S. Z., & Turkcan, H. (2016). *Social and Behavioral Sciences*. 764-770.
69. Chang, Y., Wong, S. F., Eze, U., & Lee, H. (2018). The Effect of IT Ambidexterity and Cloud Computing Absorptive Capacity on Competitive Advantage. *Industrial Management & Data Systems*. Vol. 119, No.3.
70. Mayeh, M., Ramayah, T., & Popa, S. (2014). The Role of Absorptive Capacity in the Usage of a Complex Information System: The Case of the Enterprise Information System. *Journal of Universal Computer Science*. Vol 20, No.6.
71. Wang, W., Liu, L., Feng, Y., & Wang, T. (2014). Innovation with IS Usage: Individual Absorptive Capacity as a Mediator. *Industrial Management & Data System*. Vol. 114, No. 8.
72. McCoy, C. (2010). Perceived self-efficacy and technology proficiency in undergraduate college students. *Computers & Education*, 55(4), 1614-1617.
73. Oliveira, T., & Martins, M. F. (2011). Literature review of information technology adoption models at firm level. *Electronic journal of information systems evaluation*, 14(1), pp110-121.
74. Howell, D.W. (2016), "Social media site use and the technology acceptance model: social media sites and organization success", Doctoral dissertation, available at: www.proquest.com.
75. Kripanont, N. (2007), "Examining a technology acceptance model of internet usage by academics within Thai business schools", Doctoral dissertation, available at: <http://vuir.vu.edu.au/1512/1/Kripanont.pdf>.
76. Alarcon-del-Amo, M., Lorenzo-Romero, C. and Del Chiappa, G. (2014), "Adoption of social networking sites by Italian", *Information Systems and E-Business Management*, Vol. 12 No. 2, pp. 165-187.
77. Kaplan, A.M. and Haenlein, M. (2010), "Users of the world, unite! The challenges and opportunities of social media", *Business Horizons*, Vol. 53 No. 1, pp. 59-68.
78. Kim, H., Choi, H., Han, J., & So, H. J. (2012). Enhancing teachers' ICT capacity for the 21st century learning environment: Three cases of teacher education in Korea. *Australasian Journal of Educational Technology*, 28(6).
79. Sena, J. and M. Sena (2008). "Corporate Social Networking." *Issues in Information*.
80. Kankanhalli, A., Tan, B.C.Y. and Wei, K.K. (2005), "Contributing knowledge to electronic repositories: an empirical investigation", *MIS Quarterly*, Vol. 29 No. 1, pp. 113-143, doi: 10.2307/25148670.
81. Yoo, S.J., Han, S. and Huang, W. (2012), "The roles of intrinsic motivators and extrinsic motivators in promoting e-learning in the workplace: a case from South Korea", *Computers in Human Behavior*, Vol. 28 No. 3, pp. 942-950, doi: 10.1016/j.chb.2011.12.015.

82. Vroom, V.H. (1964), *Work and Motivation*, Wiley, New York, NY, available at: <http://garfield.library.upenn.edu/classics1985/A1985AKX9100001.pdf>.
83. Archambault, A. and Grudin, J. (2012), "A longitudinal study of Facebook, LinkedIn, & Twitter use", *Proceedings CHI*. pp. 2741-2750, doi: 10.1145/2207676.2208671.
84. Tan, C.N.-L. and Md. Noor, S. (2013), "Knowledge management enablers, knowledge sharing and research collaboration: a study of knowledge management at research universities in Malaysia", *Asian Journal of Technology Innovation*, Vol. 21 No. 2, pp. 251-276, doi: 10.1080/19761597.2013.866314.
85. Linzalone, R., Schiuma, G. and Ammirato, S. (2020), "Connecting universities with entrepreneurship through digital learning platform: functional requirements and education-based knowledge exchange activities", *International Journal of Entrepreneurial Behavior & Research*, Early cite, doi: 10.1108/IJEBR07-2019-0434.
86. Daft, R. (1978). A dual-core model of organizational innovation. *Academy of Management Journal*, 21, 193-210.
87. Tidd, J., & Bessant, J. (2011). *Managing innovation: Integrating, technological, market & organizational change* (4th ed.). London: Wiley.
88. Schumpeter, J.A. (2013), *Capitalism, Socialism and Democracy*, Routledge.
89. Menor, L.J., Tatikonda, M.V. and Sampson, S.E. (2002), "New service development: areas for exploitation and exploration", *Journal of Operations Management*, Vol. 20 No. 2, pp. 135-157.
90. Martin, D., Gustafsson, A. and Choi, S. (2016), "Service innovation, renewal, and adoption/rejection in dynamic global contexts", *Journal of Business Research*, Vol. 69 No. 7, pp. 2397-2400.
91. Vargo, S.L. and Lusch, R.F. (2004), "Evolving to a new dominant logic for marketing", *Journal of Marketing*, Vol. 68 No. 1, pp. 1-17.
92. Snyder, H., Witell, L., Gustafsson, A., Fombelle, P. and Kristensson, P. (2016), "Identifying categories of service innovation: a review and synthesis of the literature", *Journal of Business Research*, Vol. 69 No. 7, pp. 2401-2408.
93. Avlonitis, G.J., Papastathopoulou, P.G. and Gounaris, S.P. (2001), "An empirically-based typology of product innovativeness for new financial services: success and failure scenarios", *Journal of Product Innovation Management*, Vol. 18 No. 5, pp. 324-342.
94. Wang, C. C., Lo, S. K., & Fang, W. (2008). Extending the technology acceptance model to mobile telecommunication innovation: The existence of network externalities. *Journal of Consumer Behaviour: An International Research Review*, 7(2), 101-110.

