

# Sharing Knowledge in the Social Media Era: Strengths and Weaknesses for Knowledge Workers

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**Keywords:** Knowledge Sharing, Social Media, Knowledge Workers.

**Abstract:** Sharing knowledge is a very critical process for professional knowledge workers as it enables the creation and accumulation of individual and organizational knowledge. The use of information and communication technologies (ICT) and social media platforms to boost formal and informal knowledge sharing among knowledge workers is inevitable, and the recent COVID-19 pandemic has forced digital transformation. This study aims to examine the strengths and weaknesses of social media platforms for sharing knowledge by assessing its characteristics from knowledge management (KM) and information security perspectives. Hence, the study assesses the capability of social media platforms as a KM platform in terms of reach, depth, richness, aggregation, confidentiality, integrity, and availability. Based on the literature review, the main strengths of social media platforms are reach, richness, and availability, whereas some weaknesses are related to confidentiality and depth. The findings of this research can help researchers in this area, and help organizations and decision-makers set policies for sharing knowledge through social media platforms.

## 1 INTRODUCTION

Knowledge workers are the core resource of the knowledge economy. They are individuals with high levels of creativity, formal education, and learning, and apply their analytical and theoretical knowledge to solving problems in their field of expertise; the productivity of knowledge workers is the most valuable asset in the 21st century (Drucker, 1999). Knowledge has become the key resource and organizations can gain sustainable advances from “what it collectively knows, how efficiently it uses what it knows and how quickly it acquires and uses new knowledge” (Davenport & Prusak, 2008).

Knowledge sharing is a critical yet challenging process in knowledge management because it depends on knowledge workers’ willingness to share their best practices. The knowledge sharing process can enhance an organization’s operational and strategic plans and impact several of its aspects: employees, customers, business processes, products, and finance (Becerra-Fernandez et al., 2014).

Information and communications technologies are critical for knowledge sharing in today’s global and digital society. The COVID-19 pandemic has illustrated that ICT is the only option or the most

preferred option for knowledge workers’ collaboration and knowledge sharing. Social media platforms are a booming technology among knowledge workers. They provide knowledge workers with several functionalities, including email, chat, discussion forum tools, content management, document management, search functionality, and virtual meetings. The use of social platforms for KM facilitates sustainability and allows organizations to manage challenges. The characteristics of social media platforms, such as collaboration, ease of use, convenience, effectiveness, and implementation promote their use for KM for small and medium-sized organizations (Given et al., 2013). Organizations utilize social media platforms for relationship management with customers (Büyükožkan & Ilıcak, 2019) and for e-commerce (Abed et al., 2015). Social media platforms enable knowledge workers to strengthen bonds with their co-workers (Yoganathan et al., 2021), and facilitate employee online learning and education, improved interactivity (Al-Busaidi et al., 2017), and employee agility (Pitafi et al., 2020).

However, there is no technology that is without risk, and according to the literature, social media platforms include several serious potential threats, such as security, privacy, personal identity, information overload, and productivity loss (Al-

Busaidi et al., 2017; Marchegiani et al., 2020), all of which might further disrupt already challenging knowledge sharing in organizations.

To help in outlining the potential opportunities and threats for sharing knowledge through social media platforms, this study aims to answer the research question: what are the strengths and weaknesses of social media platforms for knowledge workers? Consequently, this study aims to examine the characteristics of social media systems (strengths and weaknesses) from knowledge management and information security perspectives. IT researchers adopt SWOT to strategically analyze and understand an organization's current status in any IT deployment (Al-Busaidi, 2014; Phadernrod et al., 2019). SWOT enables organizations to identify a good fit that maximizes a firm's strengths and minimizes its weaknesses, seizes opportunities, and eliminates threats.

From a knowledge management perspective, Becerra-Fernandez et al. (2014) indicated that a knowledge management system should provide reach, depth, richness, and aggregation. From an information security perspective, Anderson (2003) underlined three information system security dimensions: Confidentiality, Integrity, and Availability (CIA). Hence, the study assesses the capability of the social media platform as a KM platform in terms of reach, depth, richness, aggregation, confidentiality, integrity and availability.

## 2 BACKGROUND LITERATURE

### 2.1 Knowledge Workers & Knowledge Sharing

Knowledge workers are the core resource and driving force of the knowledge economy. Knowledge workers are rapidly becoming the largest single group in the workforce of every developed country (Drucker, 1999), and have become an asset for every organization based on their intellectual capital (Al-Busaidi & Olfman, 2017; Nezafati et al., 2021). The term 'knowledge worker' is attributed to Peter Drucker; knowledge workers are individuals with high levels of creativity, formal education, and learning, and apply their analytical and theoretical knowledge to solving problems in their field of expertise to develop new products or services (Drucker, 1999). They allow exercising considerable autonomy and discretion in performing their work (Viñas-Bardolet et al., 2020). Examples of knowledge

workers include professionals such as teachers, lawyers, architects, physicians, nurses, engineers, and scientists (Frick, 2010).

The productivity of knowledge workers is the most valuable asset of the 21st century (Drucker, 1999). Knowledge has become the key resource and organizations can gain sustainable advances from "what it collectively knows, how efficiently it uses what it knows and how quickly it acquires and uses new knowledge" (Davenport & Prusak, 2008). A knowledge worker's productivity is determined by the "extent a knowledge worker delivers outputs or achieves the intended goals of his/her job in a creative, efficient and effective way within a specific time period considering his/her own competencies (knowledge, skills and standard abilities required for the job)" (Butt et al., 2019, pg. 1771).

Knowledge workers may face several challenges. KM engagement of knowledge workers is a crucial challenge for organizations in the twentieth century (Butt et al., 2019). In order for knowledge workers to be creative, they must exist as free individuals who can liberally challenge their knowledge and imagination (Shin et al., 2021). In terms of technology use for knowledge workers, three specific characteristics may "challenge established views on computer support for office work; diversity of output, low dependence on filed information and importance of spatial layout and materials" (Kidd, 1994).

The literature identified several tasks and activities for knowledge workers in terms of traditional KM activities/processes. Gold et al. (2001) KM processes included knowledge acquisition, knowledge conversion, knowledge application, and knowledge protection. Some researchers (Alavi & Leidner, 2001) developed more than one framework for KM processes; one of these included knowledge creation, knowledge storage/ retrieval, knowledge transfer, and knowledge application (Alavi & Leidner, 2001). According to Becerra-Fernandez et al. (2014), KM processes include knowledge discovery, knowledge storage, knowledge sharing, and knowledge application.

Knowledge sharing is a critical and challenging process in knowledge management because it depends on knowledge workers' willingness to share their best practices.

Knowledge sharing plays a major role in creating organizational memory (Davenport & Prusak, 1998; Becerra-Fernandez et al., 2014; Nezafati et al., 2021). Knowledge sharing includes subtasks and sub processes. According to Becerra-Fernandez et al. (2014), Knowledge sharing process includes socialization (sharing tacit knowledge) and exchange

(for sharing explicit knowledge). Information and communication technologies can enhance the effectiveness and efficiency of the knowledge sharing process. Several organizational mechanisms and information and communications technologies (ICT) can be adopted for knowledge sharing. Mechanisms such as brainstorming retreats, cooperative projects, conferences, employee rotation, and technologies such as video-conferencing, electronic discussion groups, and email can be used to share tacit knowledge. Explicit knowledge sharing mechanisms may include memos, manuals, letters, presentations, etc., whereas KM technologies may include team collaboration tools, groupware technologies, and web-based access to databases. Community of practice is the basic building block for knowledge sharing; directories of experts and mapping the flow of knowledge are critical elements for knowledge sharing (Davenport & Prusak, 1998; Dalkir, 2017). Traditional ICT can be used to enhance the knowledge sharing process, such as communication and collaboration tools, groupware, databases, internet technologies, and portals. Current social media tools for knowledge workers include wikis, blogs, chats, discussion forums, and several platforms such as Twitter, Facebook, LinkedIn, WhatsApp, etc. (Al-Busaidi, 2014; Al-Busaidi et al., 2017; Pitafi et al., 2020).

## 2.2 Social Media Platform for Sharing Knowledge

Advanced social media tools have brought about changes in the way people interact, communicate, and share content, and have attracted global attention due to their pervasiveness and social impact (Ahmed et al., 2019). Social media tools include micro blogs, such as Twitter; personal blogs; word-of-mouth forums; social networking services (SNS), such as MySpace and Facebook; and video and picture sharing applications, such as Flickr and YouTube (Kaplan & Haenlein, 2010). Moreover, mobile apps – such as Skype, WhatsApp, Tango, and Viber – are used among groups for knowledge sharing.

These types of social media tools are considered prominent and well-established spaces for creating knowledge sharing channels, where people are able to find other individuals with similar interests and share their thoughts with them (Bilgihan et al., 2016).

The main use of social media among employees is communication. Social media tools contribute directly to horizontal and vertical communication within organizations (Ma et al., 2020). Social media platforms are also used for internal brand building

(Yoganathan et al., 2021), effectively guiding the opinions of employees, and involving them in managerial decision-making processes.

Another use of social media among employees is for learning purposes; empirical findings show that the users of social technologies in workplace learning value the interactivity, peer support, and instant feedback offered by these tools, and that the more the employees use social media at work, the more they learn. In more specific examples, empirical evidence from case studies showed that wikis were efficient as corporate tools in informal learning (Milovanović et al., 2012), mobile Web 2.0 applications were effective aids for informal learning in the workplace (Gu et al., 2014), and virtual social environments were useful in mentoring employees (Hamilton et al., 2010), enabling team learning, and creating collaborative learning atmospheres (Bosch-Sijtsema and Haapamäki, 2014).

## 3 SOCIAL MEDIA PLATFORM CHARACTERISTICS

This study assesses the strengths and weaknesses of using social media platforms for sharing knowledge by examining their characteristics from a KM perspective (reach, depth, richness, and aggregation) based on Becerra-Fernandez et al. (2014); this is also based on an IS security perspective (confidentiality, integrity, and availability), which was created by Anderson (2003). From an IS security perspective, confidentiality, integrity, and availability (CIA) are essential dimensions according to IS security researchers (Anderson, 2003; Samonas & Coss, 2014).

According to the KM researchers, “one possible way of systematically viewing the IT is to consider the capabilities it provides in four important aspects: reach, depth, richness, and aggregation” (Becerra-Fernandez et al., 2014; Daft & Lengel, 1986; Evans & Wurster 1999). Knowledge security and protection are also critical issues for KM platforms (Gold et al., 2001; Jennex & Durcikova, 2014).

### 3.1 Reach of the Social Media Platform

Reach refers to access and connection and the efficiency of such access (Becerra-Fernandez et al., 2014). Reach ideally refers to being able to connect to “anyone, anywhere (Keen, 1991). Reach can also be considered as the distance data must travel for its exchange (Bleeker, 2020).

One strength of social media is that it increases the reach of communication (El Ouiridi et al., 2015). Social media can have a huge impact in reaching global audiences and providing an open portal to events unfolding in real-time (Johns, 2019). Social media facilitates interaction, communication, and building better and wider connections with co-workers (Yoganathan et al., 2021). Organizational members can collaborate and communicate remotely (Zhang et al., 2020).

For instance, Rowan-Kenyon (2016) indicated that the strength of social media in higher education is that it allows professionals to create a community around a common interest despite the distance between them. Bizzi (2019) indicated it allows better communication with customers, traders, social media sources, and stakeholders. Furthermore, Bertoni (2012) noted that social media platforms support young engineers in exploiting the network of connections of the more experienced engineers.

Hence, social media platforms enhance reach by enabling vertical and horizontal communication (Ma et al., 2020) among people within and across organizational boundaries (Kwayu et al., 2021).

### 3.2 Depth of the Social Media Platform

Depth refers to the detail and amount of information that can be effectively communicated over a medium (Becerra-Fernandez et al., 2014). This dimension relates to the aspects of bandwidth and customization (Evans & Wurster, 1999).

In terms of depth of the social media platform for KM, Allan (2019) indicated that the weakness of KM in social media is that it does not really allow detailed knowledge sharing entries. Fernandez (2009) indicated that the weakness of social media in libraries is that some have limitations on the amount of information you can input. In addition, Bertoni (2012) mentioned that social media platforms do not sufficiently store and classify knowledge over long periods of time. In contrast, Al-Busaidi (2014) indicated that one of the strengths of social media is information storage capacity.

### 3.3 Richness of the Social Media Platform

The richness of a medium is based on its ability to: “(a) provide multiple cues (e.g., body language, facial expression, tone of voice) simultaneously; (b) provide quick feedback; (c) personalize messages; and (d) use natural language to convey subtleties (Daft and

Lengel 1986)” (Becerra-Fernandez et al., 2014, pg. 47).

One strength of social media is that it increases the richness of communication (El Ouiridi et al., 2015), and it also offers rich data that facilitate robust analysis (Keppeler & Papenfuß, 2021). One strength of KM through social media is that it enables posting video tutorial walk-throughs of complex tasks on specialized databases (Allan, 2019).

A social media platform is a rich tool for KM. The strength of social media related to KM is the ability to upload documents, images, and content that can be easily stored, recovered, and disseminated (Narazak et al., 2020). Social media also enables the recording and sharing of contextual knowledge (mainly know-why and know-how), and the capturing and structuring of conversational knowledge (Bertoni, 2012). In addition, it facilitates both structured and unstructured knowledge sharing (Grant, 2016).

For instance, in personal branding, Johnson (2017) indicated that social media enables the use and sharing of pictures, videos, and image-oriented illustrations of users and their abilities. In customer relationship management, Büyükoçkan and Ilıcak (2019) noted social enabled engagement with customers via a variety of tools on social media, such as videos, images, and sounds. Furthermore, in competitive intelligence, Kim et al. (2016) indicated that the strength of social media is that it is a significant resource for understanding customer sentiments and satisfaction, as well as the reputation of the products/services

Videos enable the communication of body language and voice tone. Thus, richness is a major strength of social media platforms.

### 3.4 Aggregation of the Social Media Platform

IT has significantly enhanced the ability to store and quickly process information. This enables the aggregation of large volumes of information drawn from multiple sources (Becerra-Fernandez et al., 2014).

One of the main strengths of social media platforms is integration with social media and collaboration tools, and links to mobile applications (Al-Busaidi, 2014). The geographic information system (GIS) information embedded in mobile devices enables the integration of social messages with the GIS information (Xu et al., 2016). Users can share the spatial information in the posted message (Xu et al., 2016). In addition, another integration strength of social media usage in knowledge sharing



and business decision-making in organizations is using tools such as “data visualisation” and the “data dashboard” (Siti-Nabiha et al., 2021).

### 3.5 Confidentiality of the Social Media Platform

Confidentiality means that only authorized users can take advantage of information stored on the computer (Samonas & Coss, 2014). Researchers (Al-Busaidi, 2014; Chi, 2021) indicated a few weaknesses in social media platforms: lack of security, safety, and privacy. Each of these issues underlines the confidentiality issue.

For instance, users can see the interactions between other users (Yang et al., 2021). Knowledge leakage is also a major concern in social media technologies (Bertoni, 2012).

In sharing knowledge in project management, Hysa and Spalek (2019) indicated one major confidentiality concern is the disclosure of project data and confidential information through social media platforms. Thus, social networking sites can result in a vulnerability that criminals can exploit to attack organizations (El Ouiridi et al., 2015).

However, other researchers, such as Chandran (2016), had different perspectives and indicated that ensuring a high level of privacy and confidentiality is a strength of social media platforms. The lack of users' knowledge about social media privacy settings causes the confidentiality breaches and leakage.

### 3.6 Integrity of the Social Media Platform

Integrity means that information accuracy and modification (making changes in the stored information) must be restricted to only authorized people (Samonas & Coss, 2014). It assures the accuracy and consistency of the information (Tausczik & Huang, 2020). Samonas and Coss (2014) also indicated that modification of the data by unauthorized users can be conducted without seeing the information. Research indicated several views on the information integrity of social media. One positive issue is the exchange of relevant, useful, and effective information and knowledge (Fernandez, 2009; Given et al. 2014; Grant, 2016; Hysa & Spalek, 2019; Ma et al., 2020; Yoganathan et al., 2021). One major strength is that social media facilitates the creation, editing, and exchange of web-based content (Kaplan & Haenlein, 2010; Leidner et al., 2018) and user-generated content (Given et al., 2014).

However, researchers (Al-Busaidi, 2014; Razmerita et al., 2016) highlighted the issue of information overload and irrelevance that might impact information integrity. Venkatesh et al. (2013) underlined the validity issue that can occur during data collection and analysis through social media platforms.

### 3.7 Availability of Social Media Platforms

Availability means authorized users should be able to use, refer to, or modify information at any time (Samonas & Coss, 2014). One of the main strengths of social media is that it is freely available (Al-Busaidi, 2014; Fernandez, 2009; Johns, 2019).

For knowledge workers, the accessibility and availability of social media platforms enables employees to better cope with challenging or ambiguous situations (Yoganathan et al., 2021). The prominence of social media communication can enhance knowledge exchange and support work efficiency (Yang et al., 2021). For instance, Chi (2021) indicated that infrastructure (e.g., good internet access and modern computers) makes social media available to facilitate information services between librarians and university library users.

## 4 CONCLUSIONS & FUTURE DIRECTION

### 4.1 Summary

This study aims to examine the capability of social media platforms as a KM platform in terms of reach, depth, richness, aggregation, confidentiality, integrity, and availability. Based on the literature review, the main reported strengths of social media platforms for knowledge sharing are reach, richness and availability, whereas some weaknesses are related to confidentiality and depth. Aggregation was also reported to some extent as a strength. The integrity of social media platforms for knowledge sharing was also mainly reported as a strength; however, some concerns were raised about it. Table 1 illustrates these dimensions of the findings.

Table 1: Social Media Dimensions for Knowledge Sharing

Dimension	Supporting References
REACH	<b>Strength:</b> Bertoni (2012), El Ouiridi et al. (2015), Rowan-Kenyon (2016), Bizzi (2019), Johns (2019), Ma et al. (2020), Zhang et al., (2020), Kwayu et al. (2021). Yoganathan, et al. (2021).
	<i>Weakness: No supporting reference.</i>
DEPTH	<i>Weakness: Fernandez (2009), Bertoni, (2012), Allan (2019).</i>
	<b>Strength: (Al-Busaidi, 2014).</b>
RICHNESS	<b>Strength: (Bertoni,(2012), El Ouiridi et al.(2015), Grant(2016), Kim et al.(2016), Johnson (2017), Allan (2019), Büyükközkán and Ilıcak (2019), Narazak et al. (2020).</b>
	<i>Weakness: No supporting reference.</i>
AGGREGATION	<b>Strength: Al-Busaidi (2014), Xu et al. (2016), Siti-Nabiha et al. (2021).</b>
	<i>Weakness: No supporting reference.</i>
CONFIDENTIALITY	<i>Weakness: Bertoni (2012), El Ouiridi et al. (2015), Hysa (2019), Yang et al. (2021).</i>
	<b>Strength: Chandran (2016)</b>
INTEGRITY	<b>Strength: Fernandez(2009), Kaplan and Haenlein(2010), Given et al.(2014), Grant(2016), Leidner et al.(2018), Hysa(2019), Ma et al., (2020), Yoganathan et al.(2021).</b>
	<i>Weakness: Al-Busaidi(2014), Venkatesh et al. (2013), Razmerita et al.(2016).</i>
AVAILABILITY	<b>Strength: Fernandez(2009), Al-Busaidi(2014), Chi (2021), (Yang et al., 2021), Johns (2019), Yoganathan et al.(2021).</b>
	<i>Weakness: No supporting reference.</i>

## 4.2 Implications

The use of information and communication technologies to build-human resources is a prerequisite for the development of a knowledge-based economy, especially in developing countries.

The COVID-19 pandemic intensified the role of ICT and social media as key collaboration and knowledge-sharing tools among knowledge workers. This study provides implications for researchers by identifying the strengths and weaknesses of social media platforms that might lead to potential opportunities and threats. The literature indicated there are some potential threats to using social media platforms (Al-Busaidi et al., 2017; Marchegiani et al., 2020). Hence, researchers should further investigate each weakness and the related possible threats. The study also provides implications for practitioners by providing insights to help them on setting policies on their organizational use of social media platforms and in helping individuals use social media to enhance their productivity and innovation with manageable threats and risks.

## 4.3 Future Directions

This proposed study aims to integrate qualitative (literature review and interviews) and quantitative (survey) approaches. A questionnaire will be developed and a survey will be conducted to empirically test this proposed framework among knowledge workers with different profiles and in different sectors. In addition, a deep investigation on the different characteristics of different types of social media platforms is critical as some characteristics might be different in different social media platforms, which may impact its utilization for knowledge sharing by knowledge workers. Furthermore, the cross-cultural investigation will enrich the findings.

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