The Impact of Knowledge Sharing on Organizations and How to Overcome It During the COVID-19: A Systematic Literature Review

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Article Information	ABSTRACT
	Many of the challenges that organizations face during the COVID-19 pandemic are how to effectively share, and manage access, acquisition, and storage of knowledge in their individuals, teams, and the organization as a whole. It is important for organizations to respond to new global risks and catastrophic extra-organizational events and crises such as the current COVID-19 pandemic by leveraging knowledge management and innovation created through technology-based knowledge sharing. The purpose of this study is to collect, summarize, analyze systematically and synthesize information about knowledge sharing impact in organization during pandemic era and what techniques the company uses to deal with those impacts by providing systematic literature review that have been done by researchers previously. The results of this study explain the most impact of knowledge sharing that occurs on the organization during pandemic era and there some techniques to use for examining the impact of knowledge sharing in the organization.
Keywords	

INTRODUCTION

For the first time in history, the World Health Organization (WHO) has finally established the status of Corona Virus Disease 2019 (COVID-19) as a Pandemic which was officially declared on January 30, 2020 (Sakusic et al., 2021). Unexpectedly the COVID-19 virus spread quickly to America and Europe from its initial outbreak in Asia (Sakusic et al., 2021). Many of the challenges that organizations face during the COVID-19 pandemic are how to effectively share, and manage access, acquisition, and storage of knowledge in their individuals, teams, and the organization as a whole. The COVID-19 pandemic forces employees to WFH (Work From Home) avoiding face-to-face interactions to prevent the spread of COVID-19 (Sakusic et al., 2021).

As a result, it is important for organizations to respond to new global risks and catastrophic extra-organizational events and crises such as the current COVID-19 pandemic by leveraging knowledge management and innovation created through technology-based knowledge sharing (Montani & Staglianò, 2022). According to a recent survey by KMWorld, remote workers now make up 51% to 75% of the workforce of various companies. According to a survey, about 50% of companies were reasonably agile when migrating remotely (Simone, 2020).

Research on knowledge sharing has already been done by many researchers. Surveys are conducted by each organization and are conducted using a variety of techniques / methods. Therefore, the author attempts systematic research for two purposes. The first goal is to collect, summarize, analyze systematically and synthesize information about knowledge sharing impact in organization during pandemic era from 2020 to 2022. The second goal is to comprehensively report holistic, empirical findings from existing studies in this domain. To achieve this goal, the following research questions (RQ) have been raised:

RQ1: What impact from knowledge sharing in organization during COVID-19?

RQ2: What technique to use for examine impact from knowledge sharing in organization during COVID-19?

To answer these questions, a systematic literature review (SLR) needs to perform. This is the result of research from 2020 to 2022 collected from five databases such as Scopus, ScienceDirect, ACM, Emerald

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Insight, and Google Scholar. This paper consists of 6 parts. Part 2 describes the methodology used in this study. The third part describes the results of SLR. Part 4 provides a sequence of reports on the results of the survey questions. Part 5 discusses validation and conclusions. Finally, the sixth part discusses future work and limitation.

METHODS

Kitchenham described a systematic literature review (SLR) as a method answer some research questions by comprehensively summarizing previous related research. SLRs are a means of aggregating knowledge about a software engineering topic or research question. An SLR was performed to get the current insights into related research areas. Planning, implementation, and reporting are three processes in SLR method.

A. SLR Planning

In SLR, the first step is SLR planning. In SLR Planning, the first step is to set goals and research questions. To keep the review focused, define the research questions (RQ) used. Then there are search methods, related study filters, and inclusion and exclusion criteria (Rajabion & Kheirabadi, 2011).
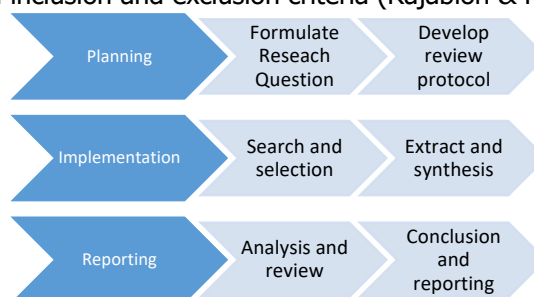
Fig 1. SLR METHOD

B. Determine Inclusion and Exclusion Criteria

The researchers determine inclusion and exclusion criteria. In this step aims to classify types of publications to be searched in databases. Here are explains points of inclusion and exclusion criteria.

Table I
Criteria Filtering Literature

Stages	*Inclusion* Criteria	*Exclusion* Criteria
Initiation Stage	• Boolean search • 2020-2022 • English	• Not using Boolean search • Before 2020 • Not In English
Stage 1 (Title and abstract Selection)	• There is an impact felt by the organization. • Occurred during the pandemic	• There is no impact • Occurred during the pandemic
Stage 2 (Full-Text Selection)	• In accordance with Research Questions 1 and 2	• Not in accordance with research questions 1 and 2

From the point of table, the criteria type divide into 2 categories. The first category is inclusion, there are 6 point inclusion. Other category is exclusion, there are 6 point exclusion. The application of these criteria will be explain in next chapter.

C. Reviewing Strategy

The systematic literature review widely known as the standard determining evidenced, is increasingly used to guide good decision for the future research. Search of systematic review must have greater validity than other types of reviews because this method used seek to minimize bias and increase rigor in identifying, comparing and synthesizing to get best output (Chow & Chan, 2008).

These are the steps required to developing a comprehensive search strategy in this study:

1) The first step is determine databases. In this study will be from five databases such as Scopus, ScienceDirect, ACM, Emerald Insight, and Google Scholar. Define the keywords for the search strategy in databases. The search strategy was design to find the following keywords. It was defined as ("Knowledge Sharing" AND "impact" AND "organization" AND ("covid-19" OR "pandemic")). The results searches from all databases will be unified.

2) The document has been downloaded from the databases, in this step is filter duplicated documents from each database.

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3) Next step is filtering based on relating between research question and titles also abstracts, this filtering can be used with software such as Mendeley.
4) After that, any criteria have been determined can be implemented as a rule to selecting document.
5) The final step, document selected based on the document quality.

D. SLR Implementation

The second step is SLR implementation, it is to select relevant publications used as literature in this study was carried out according to the keywords planned in the first step. The databases used for searching literature are Scopus, ScienceDirect, ACM, Emerald Insight, and Google Scholar. The review system become initiated with the aid of using acting searches in decided on databases the use of the described key phrases withinside the title, abstract, and key phrases.
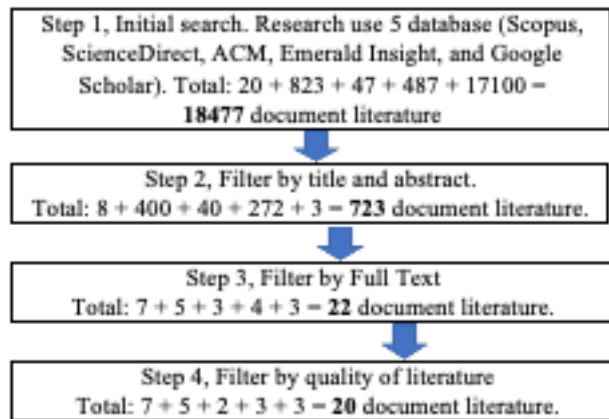
Step 1, Initial search. Research use 5 database (Scopus, ScienceDirect, ACM, Emerald Insight, and Google Scholar). Total: 20 + 823 + 47 + 487 + 17100 = **18477** document literature

Step 2, Filter by title and abstract.
Total: 8 + 400 + 40 + 272 + 3 = **723** document literature.

Step 3, Filter by Full Text
Total: 7 + 5 + 3 + 4 + 3 = **22** document literature.

Step 4, Filter by quality of literature
Total: 7 + 5 + 2 + 3 + 3 = **20** document literature.

Fig 2. SLR PROCESS

E. SLR Reporting

The final step in SLR is SLR Reporting, which provides a comprehensive analysis of selected publications as a reference to find approaches that organizations can use. There are 20 documents selected divide 7 documents from Scopus, 5 documents from ScienceDirect, 2 documents from ACM, 7 documents from Emerald Insight and 3 documents from Google Scholar. From 20 documents selected, there are some categories model impact and technique about knowledge sharing will be explain in chapter result.

RESULTS

After the documents selected, in this chapter will be discuss about answer research question. There are 2 research question.

A. What impact from knowledge sharing in organization during pandemic era?

The exchange of knowledge (information, skills, or expertise) among family, co-workers, communities, friends, or within or between organizations constitutes knowledge sharing (Serban & Luan, 2002). It can become a bridge between individual and organizational knowledge and enhance innovation absorption capacity which leads to sustainable competitive advantage of individuals and companies (Kitchenham, 2004). In this section, it will be answer Research Question (RQ) in table below. The Research Question is What impact from knowledge sharing in organization during pandemic era?

Table Ii
Impact On Organization

Impact	Related Studies
Organization performance	(Tønnessen et al., 2021), (Montani & Staglianò, 2022).
Knowledge-sharing behavior	(Valk & Planojevic, 2021).
Academic strategies	(Kazemian & Grant, 2022).
Academic performance	(Alsulami & Abduljabbar, 2022).
Academic Staff Productivity	(Alsulami & Abduljabbar, 2022).
Business Performance	(Christa & Kristinae, 2021).
Decision-making organization	(Dwivedi et al., 2022).
Risk Mitigation	(Duan et al., 2021).
Team performance	(Hargreaves et al., 2022).

Trust-in-leaders organization	(Novitasari et al., 2021).
Work group efficiency	(Jackowska & Lauring, 2021).
Knowledge-sharing process	(Singh et al., 2021).

Based on above tables, explain impact from knowledge sharing used in document selected. Organizational performance is having most impact during pandemic era.

1) Organizational Performance

Outcome The impact of the COVID-19 pandemic and the resulting social distancing requirements have caused enormous disruption and change in the world of work. This has a significant impact on organizational performance, one of which is by implementing forced and large-scale work from home (WFH) (Tønnessen et al., 2021). It is important for organizations to respond to new global risks and catastrophic extra-organizational events and crises such as the current COVID-19 pandemic by leveraging KM (Knowledge Management) and innovation created through technology-based knowledge sharing (Montani & Staglianò, 2022). Many organizations are trying to overcome the challenges posed by this pandemic by taking advantage of the opportunities that arise for scholars and practitioners to explore new things so that newly acquired knowledge can be shared, then engaged in creative work.

2) Knowledge Sharing Behaviour

The impact of knowledge sharing behavior shows that the motivation, intention, attitude, and knowledge sharing behavior of employees to share and jointly create knowledge is strengthened by a supportive environment, especially a conducive climate and knowledge sharing culture (Valk & Planojevic, 2021).

3) Academic Strategies

The impact of academic strategies to increase the use of academic staff in higher education indicates that the barriers, motivators, and outcomes towards knowledge sharing in the Corporate Social Network (ESN) and strategies that should be adopted (Kazemian & Grant, 2022).

4) Academic Performance

The impact of knowledge sharing also has a positive impact on Iraqi universities that implement or aim to use Web 2.0 technology in the knowledge sharing process, proving that the process of sharing knowledge through Web 2.0 technology (KSWT 2.0) can positively maximize academic achievement (Alsulami & Abduljabbar, 2022).

5) Academic Staff Productivity

In another study showed that the positive and significant impact of Knowledge Sharing among academic staff in Iraqi state universities was influenced by ICT and ICT infrastructure. The findings show that Knowledge Sharing is greatly influenced by ICT infrastructure in increasing the productivity of academic staff during COVID-19 (Alsulami & Abduljabbar, 2022).

6) Business Performance

Customer orientation, competitor orientation and coordination interface in improving business performance are influenced by PMO's role in encouraging highly effective knowledge sharing. Proactive reference to market orientation obtained positive results that significantly boosted the mediation role of knowledge sharing by 51% and innovation by 63% on business performance (Christa & Kristinae, 2021).

7) Decision-Making Organization

The increase in organizational operational and social performance During COVID-19 in Bangladesh was influenced by the use of ESM (Enterprise Social Media) indirectly which ultimately influenced the effectiveness of decision making. ESM infrastructure and organizational agility are strong mediators of the relationship between ESM use and decision-making effectiveness (Dwivedi et al., 2022).

8) Risk Mitigation

During the post-COVID-19 era in China, the government used knowledge sharing that could facilitate rural inclusion financial risk control. To be able to encourage financial inclusion risk control in a rural area from the individual-organizational level to the level of multi-organizational collaboration chain, the Chinese government has built various platforms for sharing knowledge, (Duan et al., 2021).

9) Team Performance

The findings suggest that working in a foreign environment without the benefits of supporting face-to-face contact with colleagues in terms of incidental knowledge sharing and health and well-being can be enhanced through Microsoft Teams to have a positive impact on teams performance in times of increased clinical stress (Hargreaves et al., 2022).

10) Trust-in-leaders organization

The results of the study state that knowledge sharing has a positive and significant effect on employee innovation. Likewise, trust-in leader has a positive and significant effect on knowledge sharing and employee innovation. Therefore, the results of the study indicate that knowledge sharing has a partial mediating impact on the relationship between leader trust and employee innovation (Novitasari et al., 2021).

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11) Workgroup efficiency

Working away from the workplace e.g. at home, on the other hand, makes one view the efficiency of a coworker negatively. However, working virtually using available technology but being physically present at work has a positive impact on perceptions of the efficiency of a co-worker (Jackowska & Lauring, 2021).

12) Knowledge Sharing Process

Conceptual research argues that the IGL Intergenerational learning framework is a new way to see the process of sharing knowledge that involves all parties, regardless of ethnicity, gender, age, or position in an organization, contributing and gaining a lot (Singh et al., 2021).

B. What technique to use for examine impact from knowledge sharing in organization during pandemic era?

In this section, it will be answer Research Question (RQ) in table below. The Research Question is What technique to use for examine impact from knowledge sharing in organization during pandemic era?

TABLE II
TECHNIQUES TO DEAL WITH THE IMPACT

Technique	Related Studies
Debate Clubs	(Valk & Planojevic, 2021).
Communities of Practice (CoPs)	(Valk & Planojevic, 2021).
Mentor– Mentee Programme	(Valk & Planojevic, 2021).
Knowledge Sharing Circles	(Valk & Planojevic, 2021).
Knowledge Sharing Communities Web 2.0	(Montani & Staglianò, 2022).
Digital Knowledge Sharing Practice (Virtual Meeting)	(Simone, 2020), (Lin & Hwang, 2021).
Enterprise Social Media	(Dwivedi et al., 2022).
Intergenerational Learning (IGL)	(Singh et al., 2021).

Based on above table, knowledge sharing technique that many discussed.

1) Debate clubs, Communities of Practice (CoPs), Mentor– mentee programme

Things that are done such as preparing a formal framework for sharing knowledge and social learning in organizations, namely mentor-mentee programs, Debate clubs, Knowledge Sharing Circles, Community Practices (CoP) can play an active role in promoting knowledge sharing and social learning as well as strengthening organizational culture and climate (Valk & Planojevic, 2021; Osathanunkul & Keawngamdee, 2003).

2) Knowledge Sharing Communities Web 2.0

Nowadays knowledge sharing can be done online without having to meet face to face. the ease of sharing knowledge is felt by developers around the world who can exchange information on how to collect data, analyze data, visualize data, and store data related to pandemics through Knowledge sharing communities, such as Stack Overflow (Montani & Staglianò, 2022; Probst & Borzillo, 2008).

3) Digital Knowledge Sharing Practice

Many studies argue that fostering Digital Knowledge Sharing during COVID-19 is very valuable for companies (Simone, 2020). Activities in which employees share knowledge digitally with actors inside or outside their organization constitute digital knowledge sharing. The results of an online cross-sectional survey conducted among workers based in Norway show that digital knowledge sharing internally and externally is a significant predictor of creative performance in the context of working from home during the COVID-19 pandemic (De Long, 1997; Lin & Hwang, 2021).

4) Enterprise Social Media

Social media has become an effective alternative channel for Disaster Management Organizations (DMOs) to interact and connect with the community due to the increasing public interest in social media. In particular, the benefits of social media features such as virality, engagement, and utilization for efficiently disseminating information to large populations accrue to DMOs in emergency situations. The use of Enterprise Social Media indirectly affects the effectiveness of decision making, which ultimately improves the operational and social performance of the organization during COVID-19 (Dwivedi et al., 2022).

5) Integrational Learning

To address the challenges of knowledge sharing in New Ways of Work, Intergenerational Learning (IGL) is a useful intervention. IGL is an effective knowledge sharing intervention in uncertain times, namely the COVID-19 pandemic by promoting knowledge sharing through the use of a multi-generational workforce diversity (Singh et al., 2021).

CONCLUSION

Based on the results, this paper has conclusion that the most knowledge sharing impact on organization during pandemic are Organization performance and Knowledge-sharing behavior. It also affect to Academic Sector such as Academic strategies, Academic performance,Academic Staff Productivity. There some positive impact to organization such as Business Performance, Decision-making organization, Risk Mitigation, Team performance, Trust-in-leaders organization, Work group efficiency, knowledge-sharing process. The technique that they used to get some impacts are Mentor– Mentee Programme, Debate Clubs, Knowledge Sharing Circles, Communities of Practice (CoPs), Knowledge Sharing Communities Web 2.0, Digital Knowledge Sharing Practice (Virtual Meeting), Enterprise Social Media, Sharing of Resources and Capabilities, Community in Co-Working Space and Intergenerational Learning (IGL). Future work will make it possible to map the positive or negative impacts of knowledge sharing and what techniques and technologies are used to address that on organizations in each sector in Post-Covid era.

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