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**Proceedings of the
22nd European Conference on
Knowledge Management
A Virtual Conference hosted by
Coventry University, UK
2–3 September 2021**



**Edited by
Professor Alexeis Garcia-Perez
Professor Lyndon Simkin**

A conference managed by ACI, UK



**Proceedings of the
22nd European Conference on Knowledge
Management
ECKM 2021**

**Supported By
Coventry University
UK**

1–3 September 2020

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E-Book ISBN: 978-1-914587-07-8

E-Book ISSN: 2048-8971

Book version ISBN: 978-1-914587-06-1

Book Version ISSN: 2048-8963

Published by Academic Conferences International Limited, Reading, UK
www.academic-conferences.org

Knowledge Sharing in the COVID-19 Era of Remote Teaching: What Can Academia Learn from Business?

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DOI: 10.34190/EKM.21.116

Abstract: Purpose: The COVID-19 pandemic outbreak resulted at the university level in a massive transition from traditional ways of teaching to remote forms. This sudden conversion has led to changes in the patterns of knowledge sharing (from teachers to students and among students). The aim of this paper is to investigate how universities may benefit from experiences of businesses that were also forced to use remote forms of business operations. Large companies, operating in the international context may be a valuable source of information on how to improve knowledge sharing processes among university students and between students and teachers. Methodology: The paper uses a qualitative research method (in-depth interviews) to explore the possibilities of knowledge sharing improvements at the university-level teaching, based on the experiences elicited in the business sector. The theoretical sampling was used to find informants familiar with both transition to remote teaching and shift to online business operations forced by the COVID-19 pandemic. Findings: Interviews were conducted with experienced managers participating in an MBA programme. During the outburst of the COVID-19 pandemic the programme has been switched to a remote mode. At the same time, the interviewed managers had to cope with the transition to remote mode at work. Their work-related ordeals were contrasted and compared with their university-related experiences regarding knowledge sharing. Conclusions and recommendations have been formulated on the basis of evidence gathered during the interviews. Research limitations: This paper is of an exploratory character. The triangulation of findings presented here is limited. The sample consists of participants of one MBA programme only, hence the conclusions cannot be generalised. At this stage the paper may serve as a basis for further development. Practical implications: The paper presents possible improvements to be introduced by academia in the remote mode teaching. Business sector and especially large businesses may offer experience-based solutions that allow to boost knowledge sharing processes among students and increase the efficiency of knowledge sharing between teachers and students. Originality/value: The topic of the paper is very up-to-date and of considerable significance. Knowledge sharing processes at the university-level teaching have been significantly distorted by the COVID-19 pandemic outburst. Using experiences from the business sector can be very helpful in this regard.

Keywords: knowledge sharing, COVID-19 crisis, change management

1. Introduction

Knowledge represents the most valuable resource that contemporary businesses possess. Knowledge is the foundation of intangible assets, routines and creative processes that are difficult to imitate (Renzl, 2008), and hence is the source of sustainable comparative advantage. Therefore, knowledge sharing is of utmost importance to organisations, as it allows to increase value and develop competences (Grant, 1996; Matzler et al. 2005). Knowledge sharing is vital for the development of new technologies, products and services. It also facilitates organisational performance improvements, when people exchange information, best practices, insights and experiences (Renzl, 2008). With the increasing complexity of tasks that are handled by employees it is required to rely on interdisciplinary approach more than ever. That makes knowledge sharing even more important and useful for organisations (Cummings, 2004), but it does not make knowledge sharing easy (Argote & Ingram, 2000).

Knowledge sharing is an intentional human behaviour, hence it is often analysed through the lenses of the Theory of Planned Behaviour (TPB), developed by Ajzen (Ajzen, 1991). According to the TPB, the actual knowledge sharing behaviour is preceded by the intention to share knowledge and this, in turn, is dependent of attitude, social norms and perceived behavioural control. However, this relatively simple view on the problem of knowledge sharing is disturbed by the fact that empirical results are mixed and they present a high level of variation (Nguyen, Nham, & Hoang, 2019). Additional antecedents of knowledge sharing include knowledge self-efficacy based on the general concept of self-efficacy developed originally by Bandura (1977), intrinsic motivations to knowledge sharing, factors connected with organizational culture and knowledge sharing rewarding mechanisms (Witherspoon et al. 2013).

The importance of knowledge as a vital resource is not limited to business sector. Knowledge and knowledge management have significant implications for business education (Bratianu, Stanescu, & Mocanu, 2021), as well

as for higher education in general (Govender, Perumal, & Perumal, 2018; Rowley, 2000; Sadeghi et al. 2019). Universities are unquestionably in knowledge business, as they create and disseminate knowledge (Rowley, 2000). Knowledge sharing in the university context is one of the primary knowledge management processes, essential for knowledge management programmes to succeed (Al-Kurdi, El-Haddadeh, & Eldabi, 2018). Successful knowledge sharing among university teaching staff depends on a number of determinants, including inter alia motivations and opportunities to share, staff attitudes, overall working culture and the nature of knowledge to be shared (Sadiq Sohail & Daud, 2009).

The COVID-19 pandemic crisis was initially perceived as mostly public health challenge, but soon it proved to be a global multifaceted problem of a considerable scale (Donthu & Gustafsson, 2020). It has affected many aspects important for knowledge sharing, such as trust and compliance, social norms, culture, social isolation, and threat perception (van Bavel et al., 2020). The COVID-19 crisis has also changed radically the way universities work. They have massively shifted to emergency remote teaching mode (Krishnamurthy, 2020), which has generated new challenges for successful knowledge sharing.

Taking into account the COVID-19 crisis as an unprecedented disruption in the university-level knowledge sharing, the following research questions may be formulated: What was the impact of the COVID-19 crisis on knowledge sharing in business education? Can universities benefit from knowledge sharing-related experiences of businesses gained during the COVID-19 pandemic? Whereas the impact of the COVID-19 pandemic on knowledge sharing in business education is supposedly negative, the extent to which it actually influenced knowledge sharing remains unknown. Furthermore, as any other disruption, the pandemic may have revealed some opportunities for and some new ways of sharing knowledge in business education. Last, but not least, the applicability of knowledge sharing practices used by businesses in the times of the COVID-19 pandemic to the university-based realm is also unknown to a great extent. That is why the research question posted here are valid and important.

This paper aims at answering those two research questions by the use of semi-structured interviews with experienced business managers participating in MBA programme during the COVID-19 crisis. The paper develops as follows: first, the brief characteristics of knowledge sharing in business and higher education is presented. Second, the impact of the COVID-19 crisis on business and higher education is discussed. Then the methodology of the research and preliminary research findings are presented. Finally, in the concluding part the paper is summarised, both theoretical and practical contributions are briefly listed, along with paper limitations and directions for the future research.

2. Knowledge sharing and its antecedents

Knowledge sharing is the most essential way of increasing its stock. Over centuries people used to share the knowledge they accumulated for year with others by telling them stories. In this way they tried to pass the tacit knowledge embedded in their minds to others. Human mind is the key issue when it comes to knowledge (Ipe, 2003), as 90% of knowledge is embedded and synthesized there (Smith, 2001).

Nowadays, in knowledge-based economy knowledge is perceived as the most valuable resource that a company may have at its disposal (Renzl, 2008). As a result, knowledge sharing in the organisation is indispensable for its high performance. It contributes to high performance, as it leads to new knowledge creation by combining the existing knowledge in a different way or by improving the way of using the existing knowledge (Christensen, 2007). The ability to share and transfer knowledge faster than competitors may be a valuable source of competitive advantage. Sharing knowledge is essential for effective knowledge management (Farooq, 2018) but at the same time it is a multifaceted, complex process (Ipe, 2003). Knowledge sharing affects creativity, learning, performance, as well as team climate, and employees' life satisfaction level (Ahmad & Karim, 2019).

Farooq (2018) proposes that knowledge sharing is a multidimensional construct, listing seven possible dimensions: organisational culture, organisational structure, reward system, motivation, interpersonal trust, management support and ICT. Those dimensions are related to knowledge sharing antecedents, which can be broadly categorised as follows: intentions and attitudes, organisational culture, rewards to knowledge sharing and gender (Witherspoon et al., 2013). The first category encompasses, apart from intention and attitude, also knowledge self-efficacy and intrinsic knowledge sharing motivation. Organisational culture category can be broken into: communication, participation, subjective norms, social trust, organisational commitment, social



network, support for knowledge sharing, shared goals, knowledge sharing resources and technology. Rewards to knowledge sharing may be based on monetary rewards such as pay increase or promotion, on reciprocal relationships between individuals or on improving reputation (Witherspoon et al., 2013) and are found to be effective in encouraging knowledge sharing behaviours (Yang & Wu, 2008).

Universities (and more generally higher learning institutions) are deeply rooted in the knowledge domain. They manage, blend and share knowledge among academics (Sadiq Sohail & Daud, 2009), but also between university staff, students and other external stakeholders. Even though knowledge seems to be of a vital importance for the institutions highly knowledge-dependent (or knowledge-intensive) such as universities, research in the knowledge sharing in the academic context has been limited (Al-Kurdi et al., 2018; Sadiq Sohail & Daud, 2009). Knowledge management in higher education has attracted the attention of a number of researchers. There are, for instance, established benefits of using knowledge management for HRM activities at universities (Govender, Perumal, & Perumal, 2018). In most cases knowledge management is analysed with regard to three related processes: knowledge creation, knowledge sharing and knowledge transfer (Fuller, Beynon, & Pickernell, 2019; Fullwood, Rowley, & Delbridge, 2013; Rowley, 2000; Veer-Ramjeawon & Rowley, 2019).

Universities are usually rather passive when it comes to knowledge management and knowledge sharing, yet it is claimed that academics have positive attitude towards knowledge sharing and they believe knowledge sharing offers reciprocal benefits in the academic environment (Fullwood & Rowley, 2017). Knowledge sharing determinants in the university context seem to differ from those identified in business environment, both on organisational and individual levels. Higher education institutions lack strong corporate culture; they are more oriented towards sub-cultures influenced by various scientific disciplines. Academic leadership is vital for knowledge sharing (Fullwood, Rowley, & Delbridge, 2013), but it differs from business leadership (Al-Kurdi et al., 2018). It is founded on the basis of professional recognition and academic excellence while maintaining relatively high level of autonomy and academic freedom. Organisational structures are decentralised, but academics often work alone in isolation. This individualism is not favourable for knowledge sharing (Fullwood & Rowley, 2017). In academia knowledge is power, hence academics may be reluctant to share it, as losing their advantage may threaten their promotion (Al-Kurdi et al., 2018).

Apart from treating knowledge as a resource, it is also possible to perceive knowledge as a product or output, especially in the context of universities, which are believed to responsible for knowledge production and transmission (Quarchioni, Paternostro, & Trovarelli, 2020). This approach is quite justified when dealing with the usual university-student relation. However, in this paper experienced managers participating in the MBA programme are both students and also they participate in classes with regular students as mentors and teachers, hence their knowledge is more of a resource for the university rather than a product.

3. COVID-19 impact on business and higher education

The COVID-19 pandemic crisis started in Wuhan, China at the end of 2019. Over just three months it caused serious infections in one 114 countries (van Bavel et al., 2020). Being a typical Black Swan, as described by Taleb, this crisis came as a complete surprise with enormous impact on economies and societies, yet *post factum* it seems to be quite explainable and predictable (Bratianu, 2020). As an unexpected, rapid disruption, the COVID-19 crisis transformed the reality by showing that virtually all organisations (from governments, through all size businesses to non-business organisations) had no strategic knowledge necessary to tackle it. They all had to switch to emergent strategies, developed instantly (Bratianu & Bejinaru, 2021) and not tested before. That increases the overall level of uncertainty.

Those emergent strategies bring mixed results. For example, the most restrictive nonpharmaceutical interventions (mandatory stay-at-home and business closures) have no significant impact on epidemic case growth in a number of countries (Bendavid et al., 2021). Yet their use had a clearly negative impact on business performance in many sectors, such as retail, art and entertainment, hospitality and food services. In the USA, at the end of the first quarter of 2020 over 40% of small businesses had been temporarily closed. American small business proved to be financially fragile and dependent on government support (Bartik et al., 2020).

The impact of COVID-19 on higher education was unprecedented in the history. Never before have so many universities turn so swiftly from face-to-face into remote mode of teaching (Zimmerman, 2020). This shift was greatly possible due to two factors: high popularity of stay-at-home preventive measures led to closing down

universities and sent students back home and at the same time the technological resources and scale of ICT adoption among both university staff and students made it possible to run courses in the remote mode (Marinoni, Van't Land, & Jensen, 2020).

The time for the shift was very short, hence all stakeholders faced a lot of difficulties. Fast adaptation of university courses to online delivery must have been problematic and not without risk of their quality deterioration (Marinoni et al., 2020). The students were impacted too, as they often had to face dislocation from campuses or their homes, internship programmes had to be ceased and learning efforts had to be intensified as well, covering not only the content area of courses, but also new technologies used to deliver the courses (Krishnamurthy, 2020). The financial aspects of university operations are also important. The COVID-19 pandemic has significantly decreased revenues from tuition fees as well as from auxiliary revenues such as conferences, bookstores, summer camps, etc. (Burki, 2020). Faced with so many challenges, universities around the world have decided to adopt diverse emergent strategies to respond to the COVID-19 crisis (Crawford et al., 2020).

4. Research methodology

In order to find answers to the research questions presented above, case study methodology was used. This methodology is particularly useful for making observations and gathering information on phenomena that are new (Yin, 2009), and the novelty factor is crucial when analysing the COVID-19 impact on higher education and knowledge sharing. Additionally, the case study approach is valuable for studies focused on descriptive and explanatory aspects (Leedy & Ormrod, 2010).

The study presented here used semi-structured interviews to obtain necessary information. The interviewees were selected using purposive sampling. The sampling was aimed at contacting knowledgeable respondents possessing the following characteristics: people occupying managerial positions (or business owners) who have experienced the transition from “pre-COVID” to “COVID-based” reality of business operations and who at the same time have participated in MBA level programme and experienced the shift from the traditional (classroom-based) delivery mode to the remote one due to the COVID-19 crisis. The interviews were conducted online and lasted 45 minutes on average. They were recorded (both voice and video) and subsequently transcribed carefully. In order to triangulate the findings, the transcriptions of interviews were analysed along with observational notes made on the basis of video and voice recording (Suter, 2011). In total, five semi-structured interviews were conducted at this preliminary phase of the research. The characteristics of case companies and interviewees is presented in Table 1.

Table 1: Characteristics of case companies and respondents’ positions

Company	Area of business	Respondent’s position
A	Knowledge intensive services - business and financial mentoring, and coaching for crowdfunding campaigns	Owner and project manager
B	Shared service sector providing services for retail	Operations manager
C	Rental and sales of construction machinery	CEO
D	Real estate	Senior technical director
E	Plastic production	Manager

The interview has been created on the basis of the seminar publication by Witherspoon (2013). The constructs used for the interviews are rooted in the Theory of Planned Behavior (Ajzen, 1991), because knowledge sharing is an intentional behaviour, as it was previously explained. The interviews allowed to investigate upon attitude towards knowledge sharing, normative beliefs and subjective norms as well as control beliefs and perceived behavioral control. The questions have been modified to match the COVID-19 context.

5. Research findings

In this section the preliminary findings of the study will be presented. Data obtained from the interviewees will be annotated with the letters corresponding to their companies (from A to E). For all the interviewees knowledge sharing is an important activity, even though the collected answer differed with regard to the degree of importance for business operations. It was assessed as “important” for C, “very important” for D, “crucial” for B and E, and “fundamental” for A. They share knowledge with their employees, customers, higher level managers they report to and other stakeholders. All respondents agreed that they like sharing knowledge and the major driver for this activity is the joy they feel when they are engaged in knowledge sharing. Additional motivation

for knowledge sharing included building reputation as knowledgeable and competent person and that was mentioned again by all interviewees. Knowledge sharing may also be related to the creation of reciprocal relationship (as mentioned by A, B, and E) and to standards adopted by the company (D: *“Knowledge sharing is simply natural in our company”*).

The question on how the COVID-19 crisis impacted knowledge sharing in their brought diverse answers. There are some sectors not disrupted by the pandemic in a significant way. C said: *“In my business COVID really did not change much”* and therefore knowledge sharing in the company did not change. The rest of respondents noticed the impact of the COVID-19 crisis on their companies and, consequently, they also pointed out several changes in knowledge sharing in the pandemic times. They mentioned tiredness with online tools for communication (A), more effort needed to keep knowledge sharing intensive enough (B), lack of feedback (A) or feedback being rather brutal and sometimes hostile (E) – these were the factors discouraging from knowledge sharing in their companies.

Regarding knowledge sharing in business education, the respondents formulated their opinions on the basis of their own experience gained during the transition from traditional delivery to remote mode. When interviewed after a year from this transition they all noticed changes to knowledge sharing within the MBA programme they participate in, although the scope of the observed changes and their importance vary between the interviewees.

All five interviewees believe that the intensity of knowledge sharing in the MBA programme decreased due to a few factors. The most popular one, mentioned by everybody, was the fact that a considerable part of knowledge sharing during the MBA programme used to take place during breaks between modules and also during informal meetings at the end of the day, when the session was over. Both during the breaks and during those informal meetings intensive knowledge sharing among MBA students, but also between students and faculty staff, was a very important element of benefits acquired from MBA programme participation. The switch to the remote mode eliminated such opportunities and as B said: *“I do not know how you could possibly substitute for that”*.

The level of engagement is said to be lower (A, D) and some respondents (C, D, E) said that goals are different now: *“We just want to finish this programme now. Just finish it.”* (E); *“We want to survive and finish, we are too far to give it up”*. Tiredness with sitting in front of the computer is also an obstacle to participation in knowledge sharing (A, B). People tend to turn off their cameras during the breaks, but also during classes (A, D). D said also: *“Introverts are less engaged, extraverts find it easier to engage in the remote mode”*, which corresponds with B: *“I enjoy knowledge sharing the same now, but I do it more consciously. In the remote mode you have to force yourself to share, but for some people sharing in the remote mode is easier, they find it easier to speak. That is a paradox.”*. As E complains on the change brought by the remote mode: *“The feedback is now often hard and sometimes brutal, too, both from teachers and colleagues”*.

In order to maintain knowledge sharing among MBA students they have undertaken some actions, but they were not really successful. As B stated: *“Informal meetings started at the first period of COVID to substitute for normal meetings, but then networking gradually went down. There is still some informal communication; we used WhatsApp and Signal to communicate in the informal way.”* A added: *“When we finish classes everybody disappears. We tried to organise “Beer on ZOOM”, but nobody really wanted that.”*

The opinions on how universities could benefit from knowledge sharing-related experiences of business companies from the times of pandemic were diverse. Some respondents could not see any potential here and claimed it was actually business that could learn something from university. As A said: *“The university smoothly switched to online mode. They have nothing to learn from business, it is rather the other way round”*. C confirmed that: *“Teachers are doing fine taking into account the situation”* and mentioned that online experience cannot match the traditional one, when it comes to MBA level education. That led to a suggestion made by C and based on their business experience that universities could benefit from dividing MBA cohorts into smaller groups so that it was possible to return to normal mode of courses delivery while still conforming to sanitary restrictions.

Other respondents were more specific about what are the desired actions that could be taken by universities. Some of them (B, E) called for more extensive use of ITC tools to compensate for the lost possibility of personal contact, suggesting that university staff may still learn how to use the existing ITC solutions in a better, more sophisticated way. There is also clearly a need for more intensive communication between the university and

students. According to B and D, there are several ways in which to achieve that, starting with more informal meetings to check on students well-being and to give them the feeling they still belong to the organisation even if contacts are temporarily switched to the remote mode. University could launch a newsletter for the MBA participants to let them feel they are linked to the university and to the MBA programme even more than before. Generally speaking, most of the suggestions made in response to this question focused on intensification of activities, on broadening the range of ITC tools used within the MBA programme and on greater engagement of university staff.

As E somewhat emotionally said: “If we now have a crisis in business or at university, we have the same crisis, so we should really not give up with the quality. Take the best lecturers, organise everything in the best way, the double best way! Better than ever before. Keep the quality at a higher level than when we could meet at the university”.

It seems that universities can learn from business in these difficult times and the COVID-19 crisis can actually strengthen them, if they decide to benefit from business experience gained in the times of pandemic.

6. Conclusions

The data collected suggest that business managers perceive the impact of the COVID-19 crisis both on business and business education in various ways. The findings from this preliminary study suggest that those managers whose businesses were hardly impacted by the pandemic are also less disturbed by switching from the traditional to the remote mode of delivery in the MBA programme. The most insightful opinions are made by managers whose professional situation has changed significantly due to the COVID-19 crisis. They offer solutions for knowledge sharing improvements successfully tested in their businesses. And these are them who perceive the need to introduce significant changes in how universities tackle the COVID-19 disruption as a very important or even crucial one.

The study presented in this paper has several limitations. First of all, the sample consists of just one MBA programme participants and the at this stage the number of interviews is relatively small. At the time of writing this paper more interviews are being conducted and the data will be collected from three MBA cohorts (including one that started their programme in the remote mode only, without any prior experience in the traditional delivery mode). The triangulation of findings presented here is also limited, which suggests that the findings should be treated with some caution.

This paper offers several research avenues to follow. First, collecting more data up to the point of saturation would increase the quality of results and allow to formulate more precise and reliable recommendations for MBA programme directors. Secondly, even though the COVID-19 hit virtually all countries, its impact differs from one country to another. Therefore, adopting more international scope could offer some more value and contribute to finding more country-specific solutions. Finally, it would be advisable to implement the proposed changes and monitor the results of this implementation. As Paul Romer said: “Crisis is a terrible thing to waste”. We should all learn something from it.

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