Epistemological Approach to Knowledge Sharing Issues at Universities in the COVID-19 Pandemic: Altruism and Social Exchange Theory Context

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Professionals and researchers in the literature widely discuss the concept of knowledge sharing. This article aims to provide a theoretical framework for knowledge sharing from the perspective of selected factors such as altruism and social exchange theory (SET) and also discusses an epistemological approach to knowledge management and knowledge sharing. The main aim of this paper is to theoretically and empirically contribute to knowledge sharing of students as individuals who may expect some recognition for sharing their tacit and explicit knowledge. Data confirm that there is often an altruistic approach among students. If they expect recognition, it is mainly on a group level. Groups of student respondents also gave a unique perspective on the influence of the COVID-19 Pandemic on the attitude toward sharing knowledge.

Keywords: knowledge sharing, altruism, social exchange theory, university students, business

INTRODUCTION

Globalisation, digitalisation and technological development lead to increasing knowledge management and sharing in societies. Preparing university students to recognise the importance of knowledge sharing and transfer it later to their professional careers is the role of universities, programmes and lecturers. However, a key role in knowledge-sharing also plays in individuals. According to Aarons (2006: 305): 'A natural assumption is that individuals have generated knowledge and that only one or more individuals can acquire it.' Variables affecting the knowledge-sharing attitude of individuals can differ, and there are many factors, theories and approaches considered by various authors in the literature. Significant ones include the phenomenon of altruism and social exchange theory, regardless of whether it is a corporate or university setting. The main aim of this paper is to theoretically and empirically contribute to the topic of knowledge sharing in the university and business context. It investigates the levels of influences that stimulate knowledge-sharing behaviour in the university environment. For this purpose, based on the literature review, only some approaches were

selected – the social exchange theory (SET) and a factor of altruism as commonly used in the literature. We use qualitative data from a sample of Czech university students to analyse aspects of the social exchange theory. For students, we used all three dimensions of SET. Data and findings are put in the context of the influence of the COVID-19 period.

The paper is based on the analysis of secondary data from a literature overview mainly related to knowledge-sharing in educational contexts providing the background for the information needed to conduct the interviews. Knowledge-sharing behaviour is studied from the point of view of altruism and willingness to share knowledge. Factors of altruism and social exchange theory are further analysed on qualitative data from a sample of Czech university students.

Based on the secondary data analysis, qualitative data were obtained from semi-structured focus groups on knowledge-sharing behaviour among undergraduate students from the Technical University of Liberec. According to Isaacs (2014: 1), based on Pope and Mays (1995): 'Qualitative research is useful when the research focuses on complex issues such as human behaviour and felt needs. Therefore, the goal of qualitative research is to help us understand social phenomena with the help of all participants' views and experiences.' The university context participants were sampled using a systematic, non-probability sampling method. This sampling strategy identifies specific groups of people who possess the studied characteristics (Isaacs 2014; Pope, Mays 1995).

Respondents from the university were in the total number of 39 students randomly selected from chosen study programmes. Focus groups with semi-structured interviews were conducted online from January to May 2021. The results of the interviews are further analysed in the following chapter.

KNOWLEDGE MANAGEMENT AND KNOWLEDGE SHARING BEHAVIOUR

'The Theaetetus' is arguably Plato's most significant work on epistemology, where three definitions of knowledge are defined. The first definition claims that 'knowledge is perception', the second definition proposes that 'knowledge is true belief' and the third one defines knowledge as 'true belief with an account' (Bostock 1988; Burnyeat 1990). Nonaka (1991) classified knowledge as tacit and explicit, working independently and leading the organisation to success. Explicit knowledge can be easily transferred and coded, while tacit knowledge is rooted deep in the system in the organisation and is highly attached to individuals. The distinction between 'tacit' and 'explicit' knowledge represents what is known as the epistemological dimension of organisational knowledge creation. It promotes an ongoing dialogue between explicit and tacit knowledge, which drives the development of new ideas and concepts (Nonaka 1994). Knowledge management is profoundly indebted to many ideas derived from epistemology (Aarons 2006). Nonaka (1994) explicitly refers to philosophical insights in epistemology as the foundation for much of their pioneering work in knowledge management, adhering to the traditional epistemology definition of knowledge as 'justified and belief'. Philosophers believe that knowledge can be acquired through experience. According to Biggam (2001), if an experiential view of knowledge was adopted in a university context, students could only claim to have acquired knowledge if the courses which they studied contained practical elements. On the other hand, employers and universities may partially support the empiricist argument by placing a high value on student work experience programs. Such experience is frequently regarded as valuable, improving a student's education and possibly reflecting a preference for experiential knowledge over theoretical knowledge (Biggam 2001).

According to Arief et al. (2018), knowledge sharing is a process where individuals disseminate their knowledge to others. According to Arsawan et al. (2022: 4), based on Bari et al. (2020): 'Knowledge sharing is referred to as employees' willingness to share information (in the form of ideas, experiences, facts, processes, formulas) with other individuals in the organisation? Knowledge is highly individualistic and rooted in specific social, cognitive and behavioural contexts; therefore, dyadic cohesion becomes a critical element in the knowledge-sharing process (Anand, Walsh 2019). The authors discussed the epistemological approach to knowledge sharing in the book 'Philosophical Foundations of Knowledge Management' (Spender, Scherer 2007). Other authors propose a simple knowledge-based theory of the firm with the idea of a legal entity that holds the undivided residuals and outputs of teamwork. Thus, individuals can learn and share outcomes with others within the firm, with the firm manifesting as a body of shared and held knowledge. This could mean an epistemological challenge given that knowledge is an archetypal non-rivalrous good, extensible and shared with others without losing oneself. Yet many authors consider knowledge sharing a knowledge management challenge that needs to be addressed. Some authors argue that employee knowledge is not so much an extractable asset as embedded 'knowing'. The epistemological critique occurs when an organisation's knowledge is defined as shared, collective, or an attribute of a community of practice. According to Spender and Scherer (2007: 21): 'Epistemology of practice, unlike the familiar realist or phenomenological epistemologies, cannot spin around defining knowledge in terms of mind. Instead, it must be focused on living or in-dwelling, on our competence as human agents to negotiate our experiences.'

Several theories have been applied to study knowledge-sharing behaviour so far. In the literature, the authors often use the Theory of Reasoned Action (TRA) or the Social Exchange Theory (SET). TRA focuses on the construction of a system of the observation of two groups of variables, which are attitudes defined as a positive or negative feeling concerning the achievement of objective and subjective norms representing the individuals' perception concerning the ability to reach those goals with the product (Demirel, Goc 2013; Fishbein, Ajzen 1975; Rahab, Wahyuni 2013). We selected the SET approach for this paper, introduced in more detail in the following chapters.

Knowledge-sharing among university students is considered an important and exciting area of study in the academic world (Chin Wei et al. 2012). Higher education institutions (HEIs) create and deploy knowledge amid their practices and activities. This knowledge management and innovation in higher education are as crucial as in the corporate sector. In an HEI, knowledge management can be a way to make learning actionable for more people, e.g. for the association overall, in research or innovation (Haqani, Ahlan 2013). Knowledge exists at multiple levels within an organisation: individual, group and organisational (Ipe 2003). Knowledge sharing is essential because it links the individual and the organisation by transferring knowledge that resides with individuals to the organisational level, where it is transformed into the economic and competitive value for the organisation (Hendriks 1999; Ipe 2003). Empirical evidence on the relationship between reciprocity and knowledge-sharing shows that receiving knowledge from others stimulates a reciprocal flow of knowledge towards the sender in organisations, both horizontally and vertically (Schulz 2001). The following chapters describe other factors which could influence the knowledge-sharing of the individual.

ALTRUISM AS AN ASPECT OF KNOWLEDGE-SHARING

Recognising that altruistic individuals are prone to share knowledge willingly, managers can respond by assigning specific roles to altruistic individuals in teams and giving them tasks in which they would collaborate and engage in socialisation with others. Such choices could foster group knowledge-sharing (Obrenovic et al. 2020). Altruism is a stimulating factor in sharing behaviour and positively influences the quantity and quality of shared knowledge (Choi et al. 2020). Research on altruism began to develop in the 1960s. A significant theme from the beginning was whether personality traits could contribute to explaining helping behaviour or whether the situational factors facing potential helpers were of primary importance (Bierhoff et al. 1991). According to Kankanhalli et al. (2005), the benefit of enjoyment in helping others is derived from the concept of altruism. Previous research shows that knowledge contributors gain a satisfactory fraction by demonstrating altruistic behaviour (Wasko, Faraj 2005). People who behave altruistically share information because they want to give something to others, to show concern and care, or to reduce the distress of the other person (Choi et al. 2020; Price et al. 1995). Altruism has been described variously as providing unconditional kindness with no expectation of return, helping and achieving a sense of satisfaction from doing so and helping others without regard to whether they receive anything in return (Ma, Chan 2014; Prusak 2001). Altruism has a direct, significant and substantial effect on online knowledge-sharing behaviour (Ma, Chan 2014). Moreover, altruism helps reduce conflict and promote collaborative processes. According to the Wu et al. (2009) study on the relationship between interpersonal trust and knowledge sharing, along with the impact of individual altruism, employees' altruistic traits make it easier for them to share knowledge in the workplace. Colleague trust has a more significant effect on explaining the act of knowledge sharing for low-altruism employees than for high-altruism employees. For high-altruistic employees, colleague trust is not central to knowledge sharing. Therefore, individual altruism has both direct and moderating effects on knowledge sharing. Chang and Chuang (2011) found out in their research that intrinsic benefits (i.e. altruism) seem to have a more significant influence on online knowledge sharing than extrinsic rewards (i.e. reputation). The results of Choi et al. (2020) study show that altruism is another significant motive for the intention to share knowledge on social media. It indicates that people like to share their knowledge on social media because they expect their knowledge to be helpful to others. According to Brouwer and Jansen (2019), altruism and belonging or identification with the community positively contribute to social exchanges and knowledge sharing for personal benefits. Pee (2017) discusses altruism as an aspect showing the community's need for knowledge sharing in the example in Wikipedia. Table 1 summarises the literature review on the factors influencing knowledge-sharing behaviour.

Author and year of study	Key finding		
Wu et al. (2009)	According to the authors, study on the relationship between interpersonal trust and knowledge sharing, along with the impact of individual altruism, employees' altruistic traits make it easier for them to share knowledge in the workplace and colleague trust has a greater effect on explaining the act of knowledge sharing for low-altruism employees than for high-altruism employees. For high- altruistic employees, colleague trust is not of central importance in knowledge sharing. Therefore, individual altruism has both direct and moderating effects on knowledge sharing.		

Author and year of study	Key finding		
Chang and Chuang (2011)	Results of the study invented those intrinsic benefits (i.e. altruism) that seem to have a greater influence on online knowledge sharing than extrinsic rewards (i.e. reputation).		
Ma and Chan (2014)	Altruism has a direct, significant and strong effect on online knowledge sharing behaviour. Moreover, altruism helps reduce conflict and promote collaborative processes.		
Sedighi et al. (2016)	Their study explored participants' perceived benefits and costs influencing participation in knowledge networks. The results indicated that altruism, reciprocity and reputation are perceived benefits that influence the quality of employee participation.		
Matić et al. (2017)	Based on the data from public and private sectors, factors such as organisational climate, empowering leadership, innovativeness and affiliation, sense of self-worth, and altruism significantly influence individuals' knowledge-sharing attitude.		
Brouwer and Jansen (2019)	According to authors, altruism and belonging or identification with the community positively contribute to social exchanges and, therefore, to knowledge sharing for personal benefits.		
Choi et al. (2020)	The results of their study show that altruism is another significant motive for the intention to share knowledge on social media. It indicates that people like to share their knowledge on social media because they expect their knowledge to be useful to others.		
Fischer (2022)	Fischer developed and validated a scale to measure knowledge-sharing motives of employees at work. The scale was tested on data from the core public and health sectors. The study found that appreciation, growth and altruism are three dimensions of knowledge-sharing motives.		
Jameel et al. (2023)	The authors examined the impact of selected factors on the online knowledge sharing among employees of four private banks. Their results indicated that altruism, reputation, self-efficacy, reciprocity and enjoyment have a positive and significant effect.		

Table 1. (Continued)
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Source: Own processing based on Brouwer and Jansen (2019), Chang and Chuang (2011), Choi et al. (2020), Fischer (2022), Jameel et al. (2023), Ma and Chan (2014), Matić et al. (2017), Sedighi et al. (2016) and Wu et al. (2009).

SOCIAL EXCHANGE THEORY AND WILLINGNESS TO SHARE KNOWLEDGE

Unlike the altruistic view, which posits that people share knowledge to help others without expecting any reward, social exchange theory takes a more egocentric view. It predicts that people only invest in others when they can expect a valuable payoff in the future or seek to return value for resources acquired in the past (Brouwer, Jansen 2019).

Social exchange theory investigates individual behaviour as a rational social phenomenon based on a subjective cost-benefit approach (Sedighi et al. 2016). Social exchange theory assumes that individuals participate in social interactions based on the belief that this will lead to inevitable social rewards such as recognition, status and respect (Blau 1964; Wasko, Faraj 2005). Social exchange theory assumes that people behave in ways that maximise their benefits and minimise their costs (Kankanhalli et al. 2005). According to social exchange theory (SET), the willingness to transfer knowledge is high when mutual benefits are anticipated. The mutual exchange takes place in trusting relationships with co-workers built over time. While this reciprocity appears beneficial to the employee, it also benefits the organisation (Obrenovic et al. 2020). Based on a meta-analysis, Liang et al. (2008) state that social exchange is the most popular theory in explaining knowledge-sharing behaviour. These authors presented a model where individual cognitions, interpersonal interaction and organisational efforts are identified as three aspects influencing individual knowledge-sharing behaviour. These authors discuss in connection with social exchange theory the contribution of personal factors (perceived benefits and organisational commitment), interpersonal (team) factors (such as social interaction and trust) and organisational factors (support and reward system) – see the Figure.

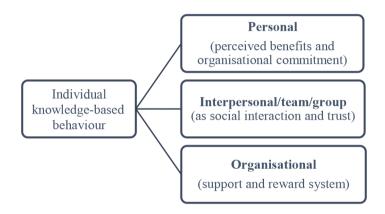


Figure. Factors influencing knowledge-sharing behaviour in the context of social exchange theory

Source: Liang et al. 2008.

Organisational commitment is an individual factor describing the level and type of psychological attachment that an employee or student has with an organisation (Liang et al. 2008; O'Reilly, Chatman 1986). These authors also point out that an individual's commitment can encourage him or her to share knowledge due to the sense of responsibility. This commitment is a strong determinant of individual knowledge sharing (Liang et al. 2008). Individuals often share knowledge not only due to their altruistic attitude but because of perceived benefits.

They expect to benefit from active participation in a social group (both at the university or work), and they can expect that their contribution to knowledge sharing will help them to improve their reputation or social status within a specific group. Employees or students will contribute to sharing knowledge within the organisation relative to their level of organisational commitment (Demirel, Goc 2013; Liang et al. 2008; McMillen 1999).

On the organisational level, from the point of view of social exchange theory and knowledge sharing, suppose that organisations care about employees' well-being and value their contribution. Supportive relationships between an employee and an employer are built on the trade of effort (e.g. in knowledge sharing) and loyalty for benefits such as pay, support and recognition. Organisations can motivate employees to share knowledge through tangible and intangible rewards (Lee et al. 2006; Liang et al. 2008).

COVID-19 PANDEMIC AND ITS EFFECT ON KNOWLEDGE-SHARING

The COVID-19 Pandemic posed a tremendous challenge to universities and organisations worldwide, especially those which were not prepared to switch their way of working significantly from day to day. Organisations that used knowledge management processes before the Pandemic leveraged existing practices but were also compelled to critically relook at the efficacy and effectiveness of those already used KM practices and processes (Apte et al. 2022). According to Tomé et al. (2022: 77): '*The COVID-19 crisis happened as a crisis about knowledge; namely, we assume that a massive knowledge failure was at its core and made the crisis grow; namely, on the one hand, the absence of a vaccine and the cure for COVID-19; the massive problem of "social knowledge" linked with "organisational behaviour", which was solved with "social distancing" set of measures, like working from home whenever it was possible.' According to Jennex and Raman (2011), knowledge-sharing culture plays a crucial role in knowledge management; the tools and processes do not deliver the desired results if such a culture does not exist.*

Teaching underwent a significant change because it was no longer possible to teach face-to-face. As a result, teaching has moved online, which has caused significant problems in terms of digitisation and internal knowledge management processes. Knowledge-sharing activities are essential as knowledge transfer between students helps foster a knowledge-sharing culture at the university (Horáková et al. 2021). The Pandemic has shown that an organisation's effective knowledge management systems and processes are very important for employees. Platforms for sharing, creating and exchanging knowledge were already available to all employees before the Pandemic; however, the awareness and usage of KM systems and practices improved during the Pandemic. This strong and positive outcome highlights that knowledge management is no longer a trend, as the pandemic necessitated practices such as collaborative capture, use, transfer and conversion (Apte et al. 2022).

KNOWLEDGE SHARING AMONG STUDENTS: KEY FINDINGS

Based on the qualitative data analysis, the results presented in this part of the paper show key similarities between students' and employees' knowledge-sharing behaviour.

The structure of respondents from the university students is presented in Table 2 below. The students were interviewed between January and May 2021 online via Google Meet. Each semi-structured interview took 2.5 h, and in all discussions students from the Faculty of Economics, Technical University of Liberec, participated.

We interviewed 39 undergraduates from master's and bachelor's programmes. During the interviews, students were enrolled in their studies entirely online and had no chance to meet in person during classes or at dormitories (due to the COVID-19 restrictions). In groups

Focus group No.	1.	2.	3.	4.	5.
Number of respondents	7	11	6	9	6
Description of a group	Business Administration Course	HRM – in English (IM)	Human Resource Management (in Czech) – 3rd-year students	HRM – in English (IM) – 1st- year master	Human Resource Management (in Czech) – 1st-year master students

Table 2. Structure of the conducted focus groups among students

Source: own elaboration.

2–5, students experienced present teaching and courses at the university before the COVID-19 Pandemic. They confirmed that this helped them with knowledge sharing during the online period of taking classes and cooperation. The only group of students who shared the information in person was Group 1 (Bussiness Administration Course), where the students were Erasmus students from different European countries and stayed in dormitories. These factors could also influence the attitude of students toward knowledge sharing. Table 3 shows the main findings regarding the aspect of altruism among the interviewed groups, social exchange theory.

Group of Altruism students		University environ	Effect of		
		Individual	Group/class	University	COVID-19
1.	Overall willingness to share, not expected return for sharing. Sharing based on the request	No significant influence of SET, in general, benefits for individuals in this group are not expected	No explicit statement that they expect to improve their reputation or social status in their study group	No direct link to the expectation of the value of their contribution	Students preferred the option to meet in person in dorms. Did not use technologies for often sharing because they could meet personally
2.	No return for sharing is expected	Mutual help in sharing	Sharing in the whole study group – some appreciation (intangible) expected	No valuation of their contribution at the faculty level	More support in KS during COVID-19 (easier to share as everything is digital
3.	Not explicitly expressed that they expect reciprocity in sharing – altruistic attitude	Mutual help in sharing – reputation aspect is an expectation of gaining something back in case they share	Building mutual relationships by sharing	Culture at the university campus, library and dormitories are adapted to meet and socialise (student well- being)	Sharing is much more frequent in online learning and faster
4.	For some students, the altruistic approach was confirmed	Not explicitly expressed any specific. However, they are supported to share on the individual level that they feel the stronger group belongingness in this group	Openness to share without expecting any contribution, but not in the international context	No valuation of their contribution at the faculty level	The online environment is more supportive of knowledge sharing
5.	For some students, the altruistic approach was confirmed elaboration			No valuation of their contribution at the faculty level	More frequent sharing in online learning (during remote classes)

Table 3. Selected factors on knowledge-sharing among Czech University students

Source: own elaboration.

Overall, students see as an essential environment for sharing in the campus, classes and dormitories. They share knowledge mainly in smaller groups and intensified online sharing a lot during the online period. None of the groups declared a reason for sharing the financial reward (e.g. that the students pay each other for getting information or any tangible support on a university level for KS). However, they stated (based on the approach of social exchange theory) the organisational commitment on the individual and group level, and it means that it encourages them to share knowledge due to the sense of responsibility. In all groups, some students expressed an altruistic approach to sharing (consciously, they did not expect any profit or reward).

DISCUSSION AND RESEARCH LIMITATIONS

Based on the literature review and for this paper, the authors discuss the theoretical philosophical approach to knowledge management and knowledge sharing. Further we selected the social exchange theory and altruism as factors to be analysed both in the literature review and primary qualitative data. Our paper brings findings of this theory from a group of university students of this theory on a sample of qualitative data. Data were collected during the COVID-19 period in the Czech Republic based on five interviews with various groups of university students. The authors found out that for students at all three levels, factors in SET defined by Lin et al. (2008) are usable for the collected data. The findings show an overall willingness to share knowledge with individuals, which most respondents pointed out. Students stated that it is even more intensive and, in most cases, happens mainly online. The context with altruistic behaviour was quite significant. The influence of factors of SET on the group level was also seen in most of the interviewed groups. Students were aware of their reputation or social status within a specific group where they cooperated with and believed that it might increase if they participated in knowledge sharing at this level.

In the context of the organisation (a faculty or a university), none of the aspects of SET as loyalty for benefits, such as pay, support and recognition, were identified. In none of the groups were students rewarded tangibly or intangibly by the organisation.

Limitations of these findings are in the sample size, as the results come only from 39 Czech university students in five focus groups. Therefore, it is not possible to generalise these findings. The focus groups of students were only from one faculty at the Czech university. Also, only some factors and theories (altruism and social exchange theory) are used in this paper in the literature review and qualitative data analysis. However, the results cover a top-ic not profoundly described in the literature and also bring very topical findings related to the COVID-19 Pandemic.

CONCLUSIONS AND FUTURE WORK

There are many theories, factors and approaches to analyse the environment of knowledge sharing of employees in organisations. Also, philosophical and epistemological issues are discussed in the literature. Not so many authors pay attention to the context of university students, especially if we search for authors and data in the European context. As Lin et al. (2007) point out, many papers have reported findings about factors that affect knowledge-sharing intention and behaviour based on several theories, such as the Theory of Reasoned Action or the Social Exchange Theory. The social exchange has been the most popular in explaining knowledge sharing (Rahab, Wahyuni 2013). The authors of this paper used SET to analyse the knowledge-sharing aspects of the qualitative data of Czech university students. They thus

bring a view of a very current topic in the context of the impact of the COVID-19 pandemic on the approach of individuals to sharing knowledge in the environment of universities. Moreover, the topicality of the issue and the possibility of expanding quantitative data collection and investigating other factors and approaches give the authors room for further research, including international comparisons.

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Epistemologinis požiūris į dalijimosi žiniomis problemas universitetuose COVID-19 pandemijos metu: altruizmas ir socialinių mainų teorijos kontekstas

Santrauka

Literatūros specialistai ir mokslininkai plačiai diskutuoja apie dalijimosi žiniomis sampratą. Šiuo straipsniu siekiama pateikti teorinius žinių dalijimosi pagrindus, atsižvelgiant į pasirinktus veiksnius, tokius kaip altruizmas ir socialinių mainų teorija, taip pat aptariamas epistemologinis požiūris į žinių valdymą ir dalijimąsi žiniomis. Pagrindinis šio darbo tikslas – teoriškai ir empiriškai prisidėti prie dalijimosi žiniomis universitete. Straipsnyje taip pat aptariamas altruizmas ir studentų dalijimąsi žiniomis. Studentai vertinami kaip individai, kurie gali tikėtis pripažinimo už dalijimąsi savo tyliomis ir aiškiai išreikštomis žiniomis. Duomenys patvirtina, kad tarp studentų dažnai vyrauja altruistinis požiūris. Jei jie tikisi pripažinimo, tai daugiausia grupės lygmeniu. Studentų respondentų grupės taip pat pateikė išskirtinį požiūrį į COVID-19 pandemijos įtaką dalijantis žiniomis.

Raktažodžiai: dalijimasis žiniomis, altruizmas, socialinių mainų teorija, universitetų studentai, verslas