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¿Qué comparten los académicos de un grupo de investigación? Un caso de estudio crítico

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Resumen

El propósito de este estudio es investigar el contenido del intercambio de conocimiento entre los académicos. Se pretende realizar una contribución empírica a un aspecto prácticamente inédito en el contexto nacional (español) e internacional. Para ello se planteó un análisis exploratorio basado en un caso de estudio crítico. Se realizaron 16 entrevistas a miembros de un grupo de investigación de una universidad pública española. Los resultados revelan que los académicos intercambian elementos de carácter explícito, tácito y apoyo emocional relacionados con la docencia, la investigación y la transferencia de conocimiento. Se ha constatado que el intercambio se refiere preferentemente al ámbito de la investigación y que existen diferencias entre los investigadores senior y junior en cuanto al tipo de conocimiento y al apoyo emocional que dan y reciben. Este estudio demuestra que el carácter tácito del conocimiento puede dificultar su transferencia y que el apoyo emocional, como parte del apoyo social, puede favorecer las prácticas de intercambio entre los académicos.

Palabras clave

Intercambio de conocimiento; conocimiento tácito/explicito; apoyo emocional; Educación Superior.

What do academics share in a research group? A critical case study

Abstract

The purpose of this study is to investigate the content of knowledge sharing among academics. The aim is to make an empirical contribution to a practically unresearched topic in the national (Spanish) and international context. To this purpose, an exploratory analysis based on a critical case study was proposed. Sixteen interviews were conducted with members of a research group at a Spanish public university. The results reveal that academics share elements of explicit, tacit and emotional support related to teaching, research and knowledge transfer. It has been found that the exchange refers preferentially to the field of research and that there are differences between senior and junior researchers in terms of the type of knowledge and emotional support they give and receive. This study shows that the tacit nature of knowledge can hinder its transfer and that emotional support, as part of social support, can favor knowledge sharing practices among academics.

Key words

Knowledge sharing; tacit/explicit knowledge; emotional support; higher education.

1. Introduction

The importance of knowledge is a commonly accepted fact in the literature of the last decades. According to Akosile (2020), exchange processes in universities are fundamental to ensure that academics have the necessary knowledge for the performance of their functions (teaching and research). However, the analysis of some institutional actions suggests that there is a certain degree of lack of interest in promoting the necessary exchange among its professionals (Rowley, 2000) and that academics are reluctant to share their knowledge with their colleagues (Charband & Navimipour, 2018; Fullwood, et al., 2013). Thus, there are a limited number of studies on knowledge sharing among academics who are otherwise based in the Asian (Cheng et al., 2009; Fauzi et al., 2019a, b) and African continents (Akosile, 2020; Fari & Ocholla, 2015), which hinders their applicability to the European context (see, for example, Al-Kurdi, 2020; Fullwood et al., 2018). Additionally, previous studies tend to focus on the factors that influence such an exchange, but there is a lack of empirical research on the content of the exchange itself, i.e., on the aspects that are the subject of the exchange by scholars (see, e.g., Fari & Ocholla, 2015). Therefore, this study aims to contribute to deepen the analysis of an aspect that remains practically unpublished in the European context and, in particular, in the Spanish university. Our purpose has been to analyze the content of knowledge sharing among academics in a research group. To this end, the following research questions were posed:

- What types of knowledge do scholars share within a research group?
- What elements do scholars share in the exchange process?
- How does the status of senior or junior researcher influence the type of knowledge and aspects they share?

This paper consists of a review of previous literature on the concept and types of knowledge in an institutional context, the exchange process and the emotional support involved. This is followed by an explanation of the methodology used and the results of the research. Finally, the discussion and conclusions of the study are addressed, from which some recommendations on knowledge sharing processes in the university are derived.

1.1 Exchange of tacit/explicit knowledge and emotional support in the university context

Knowledge in an institutional context includes elements of different nature such as "information combined with experience, context, interpretation, reflection, intuition and creativity" (Gottschalk, 2008:131). Therefore, previous literature distinguishes two types of knowledge: tacit and explicit (Nonaka & Takeuchi, 1995). Tacit knowledge refers to aspects such as the person's experience and skills, perspectives, interpretations, visions, beliefs, intuitions or values (Howell & Annansingh, 2013). According to Ramayah et al. (2014) it is an intangible resource, subjective in nature, which emerges from individual experience and, consequently, is difficult to systematize and transfer. Explicit knowledge is tangible and embedded in documentary formats and corporate repositories, which facilitates transfer processes (Al-Husseini et al., 2019; Ipe, 2003). For Nonaka & Takeuchi (1995) knowledge is generated through the combination of tacit and explicit components in contexts of interaction and socialization.

Knowledge in the academy is both the antecedent and the result of the institutional activity itself (Ku, 2019). According to Saad & Haron (2013) academics can share three types of knowledge -institutional, social, and codified. Institutional knowledge refers to the knowledge that academics have about the functioning of the university, including its policies and procedures. Social knowledge has to do with the culture, beliefs, values, ethics, and uses and customs commonly assumed by its members. Codified knowledge includes such processed information as academics share through different media and channels. Therefore, knowledge in university institutions can also be tacit or explicit.

In addition to explicit and tacit knowledge, this research analyses emotional support as a third component in exchange practices among academics. According to Pyhältö et al. (2017), emotional support is part of the construct known as social support (which would also include informational and instrumental support). Emotional support comprises affective aspects such as empathy, trust, concern for listening and caring for others and attending to their needs. Informational support refers to cognitive aspects such as providing information, ideas, feedback, advice or suggestions that facilitate the resolution of daily work problems. And finally, instrumental support involves being available (dedicating time), helping in an effective way and facilitating material conditions that help others in daily tasks.

2. Methodology

Due to the limited maturity of previous literature, a qualitative study of an exploratory nature has been conducted to try to identify the types of knowledge and the elements that are part of the exchange between academics (Creswell, 2014). Thus, the research has focused on an instrumental case study selected for its usefulness in gaining an in-depth understanding of this phenomenon (Stake, 1995; Yin, 2009). In this inquiry, a research group from a Spanish university with a long history of transdisciplinary work (technology and education) was selected as a case study. It is a critical case (Patton, 2002; Yin, 2009) selected for its ability to exemplify the dynamics of participation, communication, and knowledge sharing among academics.

The semi-structured interview format was chosen because it provides flexibility for the researcher to guide the conversation on the basis of each participant's responses (Bryman & Bell 2015). Participants who could provide more appropriate information about the goals of the research were purposively chosen (Teddie & Yu 2007), although self-selection was also allowed. Sixteen interviews were conducted in which questions were asked about the topics and aspects commonly shared in the group.

Data collection continued until the saturation point was reached (Sandelowski, 1995; Saunders et al., 2018), at which point participants stopped contributing novel information or viewpoints not included in the preceding responses. The sample composition included 5 women and 11 men and represented the branches of knowledge Arts and Humanities (n=1), Social and Legal Sciences (n=4), and Engineering and Architecture (n=11).

Responses were transcribed to text and coded and analyzed using Atlas.ti 8 for Mac. Inductive coding (Miles et al., 2018:74) was performed based on the codes that were emerging from the data collected, resulting in the category structure on knowledge sharing among academics.

3. Results

In the presentation of the results, the research questions on the types of knowledge shared by academics (RQ1) and the content of such sharing (RQ2) are answered sequentially. In addition, the influence of senior or junior researcher status on the type of knowledge and aspects they share (RQ3) is analyzed.

3.1. Types of knowledge shared by academics

In response to the first research question, the results reveal that participants share explicit, tacit knowledge and emotional support. As shown in Table 1, all participants refer to the sharing of explicit and tacit knowledge, while 68.75% (11 out of 16) allude to emotional support.

Table 1.

Types of knowledge shared by academics

Type of Knowledge	Total (n=16)	Senior (n=10)	Junior (n=6)
Explicit	16/83	10/56	6/27
Tacit	16/100	10/59	6/41
Emotional support	11/56	8/45	3/11

Note. persons/quotes.

The results indicate that the aspect most emphasized by the members of the research group is the exchange of tacit knowledge, which accumulates 100 quotes, while explicit knowledge and emotional support contribute 83 and 56 quotes respectively. However, while in the senior researchers (SR) there is a balance between mentions of explicit and tacit knowledge (56 and 59 respectively), the junior researchers (JR) contribute 41 quotes on tacit and 27 on explicit elements.

Likewise, there are differences between the perception of emotional support in both sub-groups. Thus, emotional support is mentioned by 80% of the SRs (8 out of 10) and only by 50% of the JRs (3 out of 6).

The responses indicate that there is a greater need to receive help from the JRs for the development of daily tasks, so that they tend to emphasize the value of the knowledge and experience they receive from the other members to improve their performance. However, the job stability of the SRs, their greater autonomy to face academic challenges and their deeper awareness of the complexity of the academic career, make them emphasize in their responses their own role in attending to the emotional needs of others.

"If I have any problems in terms of pedagogical foundations [...] I will ask P011, P010, P015, [...]. Because they have the most experience (P005; JR).

"I already have a life, so what can I do here? Well, help a little bit. You help with your experience, with your empathy" (P009; SR).

Regarding the sharing of explicit knowledge, it is considered a routine aspect and to some extent consubstantial to academic work: "Sharing articles is self-evident" (P006; SR). One of the participants makes the following reflection:

"What we do is manage knowledge, generating knowledge and the exchange of information is vital at all levels: from basic knowledge of books, articles and so on, to knowledge of calls [for papers], conferences, special issues of journals, etc." (P001; SR)

Beyond the exchange of explicit elements, the following quote includes other elements compatible with tacit knowledge, indicating that they are shared in the group:

"Experiences, difficulties, ideas, suggestions, ways to move forward or twists and turns [...] I have been moving forward along this line, but maybe turning around or going in a parallel way" (P005; JR).

In addition, the findings reveal the provision of emotional support as an important part of the exchange between group members:

"Another thing that is given and received in this group [...] is psychological support, because research [...] is a hard business at times and in that sense the group also plays an important role" (P012; SR).

The findings indicate that senior researchers establish a hierarchy between the complexity and effort involved in contributing their personal knowledge (the result of their academic experience) and the mere sharing of information or resources from third parties. Thus, sharing "processed information" (P006; SR) or giving feedback, advice or informed opinions to a colleague, involves greater commitment and dedication for the knowledge provider, but brings more value for the recipient.

"When you provide a comment on something or make an assessment, it takes more time, but it has more value [than just sharing information from other sources]" (P001; SR).

For this reason, the tacit nature of knowledge can become a barrier to the exchange itself:

"That's why some people don't do it [...] For me to put something in a repository for you to see is something technical, it doesn't require anything else. But the exchange, the collaboration, the construction of projects from each other's perspectives and from our experience is more difficult" (P006; SR).

Regarding emotional support, the results indicate that there is a greater awareness on the part of the SRs of the importance of attending to the emotional needs of the other members of the group, especially the JRs. According to the following participant, emotional support can be considered as part of the professional competencies or attributes of the more experienced members with a more stable work situation:

" You could even think it's part of the job. The human part of the job. And the older you get, the more responsibility you have in that sense. To care a little bit about people who maybe are in a much more precarious, much weaker situation than yours" (P009; SR).

3.2. Aspects shared by academics

The analysis of the interviews associated with the second research question -What elements do academics share in the exchange process? - has made it possible to identify the aspects that are part of the exchange of explicit knowledge, tacit knowledge and emotional support among academics.

3.2.1. Explicit knowledge exchange

According to Table 2, academics share a wide variety of explicit elements of a public nature. The sharing of documentary and bibliographic resources (books, articles or references) and general resources is mentioned in 34 of the 65 quotes about published information, making it the most prominent aspect. Next, spaces for publishing research results (journals or conferences) account for 19 of the quotes in the category.

"We mainly share resources: articles, documentation, videos of experts on the subject, we have passed links and data to work with" (P012; SR).

"[we share] things that may have to do with attending conferences or with special calls [for papers] on a particular topic" (P010; SR).

Table 2.

Aspects of knowledge sharing among academics

Quotes	Total	Senior	Junior
Explicit knowledge			
Published information			
Books, articles and references	13/28	8/20	5/8
General resources (documentation, links, videos, software)	3/6	1/2	2/4
Journals and calls for papers	3/7	3/7	0/0
Symposia, conferences and courses	6/12	3/7	3/5
Regulations, scholarships, positions	2/6	1/4	1/2
News and current events (timetables, subjects, assignments, projects)	3/6	3/6	0/0
Unpublished information			
Unpublished articles	3/4	1/1	2/3
Group documents and personal work	6/14	3/9	3/5
Total	83	56	27
Tacit knowledge			
Experience and know-how			
Disciplinary and methodological knowledge and experience	16/89	10/53	6/36
Sources to solve a problem			
Where to look, who can help me, contacts	6/11	4/6	2/5
Total	100	59	41

Emotional support			
Addressing emotional needs and providing support	10/60	8/49	2/11
Total	60	49	11
Total	243	164	79

Note. persons/quotes.

Finally, workplace matters (regulations or professional opportunities) and the exchange of news and current events about ongoing teaching or research are mentioned on 12 occasions. In addition, unpublished information such as articles in progress (4 quotes) and personal documents such as reports or teaching material (14 quotes) are shared in the group.

"We also spread topics that have to do with work proposals or upcoming academic positions" (P014; JR).

"we talk about work stuff, like did you check out the schedule?, or hey, how do you manage this or that course when such or such happens, or I have a research visit with such or such project" (P009; SR).

3.2.2. Exchange of tacit knowledge

Regarding tacit knowledge, most of the quotes (89 out of 100) refer to the exchange of experience and know-how, while only 11 mention sources for solving a problem. This prevalence of experience and know-how in the exchange of tacit knowledge is corroborated by the SRs and JRs.

The findings indicate that the exchange of experience and know-how encompasses not only the academics' theoretical mastery of their disciplinary area, but also their methodologies and research paradigms. In this sense, the results suggest that exchange practices between researchers coming from different areas of knowledge can generate challenges at the theoretical and operational levels: "They think differently, they express themselves differently" (P015; JR). At the theoretical level, the participants mention the exchange of scientific-disciplinary knowledge, methodological knowledge and knowledge associated with the paradigms that underlie the researchers' visions.

"There is a part that is knowledge, technical, hard, specialized. Then there is an exchange of views on the philosophy of the disciplines and on the ways of working, the paradigm. In order to understand, for example, why mixed methods are important and why we believe in them, a very long process is needed: one which strongly influences your take on reality" (P006; SR).

Thus, the results suggest that the exchange of tacit knowledge between members of different disciplines can promote changes, not only at the methodological level, but also in their philosophical approach and, therefore, in their vision of what knowledge is and how it is constructed.

From the operational point of view, senior researchers also share their research and project management experience and their general knowledge of the disciplinary area in order to guide the work of researchers with less academic background and try to avoid mistakes they have already made.

"If you start a new project [...] there are also your peers there to support you and there are people who have more experience than you, who have already been through it and so they guide you and tell you: well, look at this, I see it this way. They give you their support, their advice" (P010; SR).

In addition, group members (whether SRs or JRs) emphasize the positive impact of sharing tacit knowledge in daily work and its usefulness in obtaining help in teaching, research or academic careers in general:

"That [learning from a colleague how to use the R application] has been super useful to me, both when doing my dissertation analysis and in my future work" (P003; JR).

The findings reveal that the reception of knowledge and experience is especially valued at critical moments in the professional career, for example, in the postdoctoral period when researchers begin to assume new responsibilities or face key milestones in their academic career.

"Now that we have doctoral students in our care, in a certain way we are novices. And [...] you can learn from the way others have managed this kind of situation before you; so that feeling of being able to share... well, what was your experience like? how did you manage that?" (P002; SR).

Finally, the exchange of tacit knowledge refers to the sources that allow access to knowledge itself and the contacts that can help solve a problem. Thus, the results show that group members share information about relevant people in the scientific community on a given topic.

"When you start working in a particular domain [...] it is very important that you can ask someone who knows about it" (P001; SR).

Likewise, members also share their contacts with members of other groups with related research interests or topics. The idea is to be able to "connect with people from other groups as well" (P013; JR).

3.2.3. Exchange of emotional support

In terms of the content of emotional support, senior researchers, especially those with more seniority in the group, show a special sensitivity to the emotional needs of other members:

"For me psychological-emotional support is a fundamental element" (P006; SR).

The results indicate that emotional support is essential for coping with a highly competitive and complex environment such as teaching and research at the university. This is especially important in times of work overload or emotional crisis, and even in the face of critical academic career decisions.

"In general, the university is a hostile environment where survive thanks to the support of many people" (P010; SR).

In addition, emotional support would serve to compensate for the professional demands of a highly competitive group and reinforce the feeling of belonging to the community:

"They were meetings where there was everything, there was hard-core discussion of content, but at the same time there was cognitive-behavioral and personal therapy as well. In the end what you experienced was a very, very strong support system. In other words, you felt part of a family, basically" (P016; SR).

Another highly valued aspect is the possibility of sharing aspects of personal life with the members of the group, which helps to create satisfactory and fruitful working relationships.

"Perceiving a certain empathy from the people you work with, about problems that are not work-related, that's gold, that's wonderful. [...] that is fundamental for everything else to work well" (P009; SR).

4. Discussion and conclusions

The results of this research provide a deeper understanding, based on empirical evidence, about the exchange practices among academics. First, this process has been empirically found to include elements of explicit and tacit nature (Ku, 2019) as well as emotional support (Nokkala et al., 2022). Furthermore, our results corroborate the preference of academics towards sharing aspects related to research, rather than about teaching (Fullwood et al., 2019).

In the framework of explicit sharing, our results partially coincide with those of Fari & Ocholla (2015). Thus, academics share information about learning and knowledge dissemination activities (seminars, workshops, conferences or journals), about work-related aspects (e.g., grants or positions) or about daily academic activity (ongoing or planned research and teaching matters). Additionally, our study reveals that there is also an exchange of documentary sources and resources from third parties and self-developed materials, which requires greater commitment and trust among participants. Our findings suggest that the sharing of explicit knowledge is consubstantial to the academic profession and, therefore, is a type of content that academics should share as part of their daily work. This is a type of knowledge that is easier to share and requires less effort on the part of the sender, but more superficial and of less value to the receiver (Fauzi et al., 2019a). Participants emphasize that this type of exchange is more valuable to JR, perhaps because of their greater need to receive it to improve their daily performance.

Regarding tacit knowledge sharing, results indicate that the transfer process is negatively affected by its intrinsic complexity (Fauzi et al., 2019a) due to its subjective, intangible and unstructured nature (Asrar-ul-Haq & Anwar, 2016). Therefore, it requires more time and effort for the sender to develop and share it and for the receiver to assimilate and apply it to their daily practice (Charband & Navimipour, 2018). However, it is a more valuable asset (Al-Kurdi et al., 2020), which allows coping with academic tasks more efficiently (Ramayah et al., 2014). Contrary to Ku (2019), in this research knowledge has not been mentioned as a source of power and knowledge sharing is not considered to involve losing its exclusivity or ownership (Phung et al., 2019). Consequently, the knowledge hoarding behaviors of academics revealed by other previous research (Cheng et al., 2009; Fullwood & Rowley, 2017) have not been found.

In this sense, the results emphasize the importance of sharing idiosyncratic elements such as the personal visions, experience and know-how of the senders -usually more experienced academics- because of their impact on the daily performance of the receivers -usually novice researchers- (Wang & Noe, 2010). Thus, the tacit exchange related to scientific-disciplinary knowledge and its application through different research paradigms is essential in the professional career of academics. In this way, the results suggest that paradigmatic differences may hinder exchange processes which, in turn, could promote an evolution concerning how reality is perceived (ontological level), what is the nature of knowledge (epistemological level) and how it is implemented and what are the values that guide the research process (methodological and axiological level) (Author, 2021; Lincoln et al., 2011).

The results place emotional support as a key component in the exchange processes among academics. Other research has highlighted its importance for doctoral and postdoctoral students (Nokkala et al., 2022; Pyhältö et al., 2017). However, our findings go much further and reveal that group members give and receive emotional support regardless of their role as senior or junior. Furthermore, Vekkaila et al. (2018) found that the affective dimension of social support is provided horizontally among doctoral students and supports motivation and satisfaction with daily tasks. However, SRs would be more focused on providing instrumental

support to help fulfill professional responsibilities. On the contrary, our study reveals an explicit awareness by SRs of the importance of attending to the emotional needs of all group members, perhaps because of their heightened awareness of the complexity and competitiveness of the academic career. The findings underscore the incremental responsibility SRs have to provide emotional support associated with their experience and seniority in the group. Thus, our results indicate that the support provided by senior members is critical both instrumentally (by making themselves available and spending time effectively) and affectively (e.g., in times of work oversaturation or key career decisions).

This study reveals, on the one hand, that there is a clear connection between the provision of emotional support and the feeling of belonging to the group. Thus, emotional support, as part of social support, favors personal relationships of closeness and trust, which reinforces members' identification with the group. According to Bergami & Bagozzi (2000), identification reinforces commitment to others and behaviors in favor of the community. The relevance of this finding lies in the fact that the feeling of belonging acts as an antecedent of knowledge sharing among scholars (Al-Kurdi et al., 2020; Ramayah et al., 2013). On the other hand, it was found that the personal relationship established by attending to emotional needs favors more rewarding and productive professional relationships and boosts knowledge flow among academics (Fauzi et al., 2019a, 2019b).

Therefore, due to the incidence of explicit knowledge, tacit knowledge and emotional support in the professional careers of academics, research groups and their leaders should take into account that these three elements are more efficient in achieving their results. Likewise, universities should promote spaces and opportunities that facilitate exchange and collaboration. Thus, the use of collaborative contexts such as Communities of Practice (Jeon et al., 2011b), face-to-face contacts and informal relationship opportunities (Ramayah et al., 2014), could help boost the exchange of tacit knowledge. Fullwood et al. (2019) even suggest that the very physical structure of university centers, with open spaces and common areas may favor informal face-to-face contacts that, in turn, can facilitate knowledge sharing. Therefore, university managers should act on the design of workspaces and boost informal relationship opportunities and social ties to facilitate explicit and tacit knowledge transfer and emotional support among academics.

This is especially important in interdisciplinary contexts, characterized by the diversity of worldviews and perspectives on the theoretical bases and procedures for developing research and conducting academic careers.

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