THE TEACHING WORK AND THE PERCEPTION OF THE INSTRUCTORS OF OPEN COURSES ABOUT KNOWLEDGE SHARING DURING THE COVID-19 PANDEMIC

EL TRABAJO DOCENTE E LA PERCEPCIÓN DE LOS INSTRUCTORES DE CURSO GRATUITOS SOBRE EL INTERCAMBIO DE CONOCIMIENTOS DURANTE LA PANDEMIA DE COVID-19

O TRABALHO DOCENTE E A PERCEPÇÃO DOS/AS INSTRUTORES/AS DE CURSOS LIVRES SOBRE O COMPARTILHAMENTO DO CONHECIMENTO DURANTE A PANDEMIA DE COVID-19

Tiago Carvalho Sabatino [1]
Maria Ligia Ganacim Granado Rodrigues Elias [2]
Angela Mara de Barros Lara [3]

Abstract
This paper is the result of a qualitative research, carried out through semi-structured interviews with instructors of open courses, whose objective was to identify the perception of these professionals about sharing knowledge with students during the covid-19 pandemic, in the city of Maringá, Paraná state, Brazil. Thus, it recovers notions of Knowledge Management, especially knowledge sharing, and contextualizes open courses, a legally supported teaching modality, but without connection with the Ministry of Education. The interviews were analyzed thematically and lexically, with the help of the IRaMuTeQ software. As a result of them, several problems related to knowledge sharing in the context of the pandemic were identified, as well as structural problems related to the precariousness of the work of these professionals.

Keywords: Knowledge Management; Working conditions; Faculty; Courses; Technology.

1 Master in Knowledge Management in Organizations by Cesumar University. Professor at Cesumar University.
ORCID: https://orcid.org/0000-0001-9165-6862 Contact: tiago.14sabatino@gmail.com
2 Doctorate in Political Science from the University of São Paulo. Professor at the Postgraduate Program in Knowledge Management in Organizations at Cesumar University. Member of the Education and Knowledge Research Group. Productivity researcher at the Cesumar Institute of Science, Technology and Innovation.
ORCID: https://orcid.org/0000-0003-3645-9131 Contact: maria.el@unicesumar.edu.br
3 Doctorate in Education from the Paulista State University Júlio de Mesquita Filho. Professor at the Postgraduate Program in Knowledge Management in Organizations at Cesumar University. Member of the Education and Knowledge Research Group. Productivity researcher at the Cesumar Institute of Science, Technology and Innovation.
ORCID: https://orcid.org/0000-0001-8799-8413 Contact: angela.lara@unicesumar.edu.br

Resumen

Este artículo es el resultado de una investigación cualitativa, realizada a través de entrevistas semiestructuradas con instructores de cursos libres, cuyo objetivo fue identificar la percepción de estos profesionales sobre el intercambio de conocimientos con los alumnos durante la pandemia del covid-19, en la ciudad de Maringá, Paraná. Para ello, se recuperan nociones de gestión del conocimiento, especialmente del intercambio de conocimientos, y se contextualizan los cursos libres, una modalidad de enseñanza legalmente apoyada, pero sin vinculación con el Ministerio de Educación. Las entrevistas fueron analizadas temática y léxicamente, con ayuda del software IRaMuTeQ. Como resultados, se identificaron varios problemas relacionados con el intercambio de conocimientos en el contexto de la pandemia, así como problemas estructurales relacionados con la precariedad del trabajo de estos profesionales.

Palabras clave: Gestión del conocimiento; Condiciones de trabajo; Profesor; Cursos; Tecnología.

Resumo

Este artigo é fruto de uma pesquisa qualitativa, realizada por meio de entrevistas semiestruturadas com instrutores/as de cursos livres, cujo objetivo foi identificar a percepção desses profissionais sobre o compartilhamento do conhecimento com estudantes durante a pandemia de covid-19, na cidade de Maringá, Paraná. Para isso, recupera noções de Gestão do Conhecimento, especialmente de compartilhamento do conhecimento, e contextualiza os cursos livres, uma modalidade de ensino amparada legalmente, mas sem vínculo com o Ministério da Educação. As entrevistas foram analisadas temática e lexicamente, com o auxílio do *software* IRaMuTeQ. Como resultados, foram identificados diversos problemas relativos ao compartilhamento do conhecimento no contexto da pandemia, assim como problemas estruturais relacionados à precarização do trabalho desses/as profissionais.

Palavras-chave: Gestão do Conhecimento; Condições de trabalho; Docente; Cursos; Tecnologia.

Introduction

People, in any society, deal with the production, the exchange of information and the symbolic content. The storage and distribution of these elements have been fundamental in social life. These processes, however, have undergone significant changes, since the development of the means of communication restructures the way individuals relate to each other and to knowledge (THOMPSON, 2001). According to Castells, the Information Technology Revolution establishes a new technological paradigm, as Information and Communication Technologies (ICT), particularly the Internet, create new forms of production, consumption, communication and social relations. It is, therefore, a new way of producing, relating and living that penetrates all domains of human activity (CASTELLS, 2020).

In the context of social transformations resulting from the new technological and communicational paradigm, the field of Knowledge Management (KM) is developed, which refers to the development of methods, tools, techniques and organizations values that promote the flow of knowledge between individuals and the recovery, transformation and the use of this knowledge in improvement and innovation activities (YANG, 2010). In short, KM can be understood as a way of creating routines to stop the sharing of knowledge within the most diverse environments and between people (DALKIR, 2011). It is an interdisciplinary field, which has expanded since the 1990s, in which the relevance of economic development is verified through the focus on the "acquisition, application and transfer of knowledge" (RAMY et al., 2018, p. 1).

In the area of education, KM has been used to support school administration (ÖZAN; ERTEN, 2008), since there are different kinds of knowledge that need to be managed in this environment, such as, for example, information about student's performance. In addition to the administrative management of the school, authors such as Chu, Wang and Yuen (2011) also place the teacher as the end user of the KM implementation and propose to think about which problems need to be faced in order of it to happen. Tachizawa and Andrade (2002) consider the teacher to be one of the main actors in the KM, especially in the sharing of knowledge, both with the school administration and with the students.

Therefore, the knowledge is understood as a good, a fundamental asset, and can be defined as a set of cognitions and skills that people employ in problem solving, including theory and practice, day-to-day rules and ways of acting (PROBST; RAUB; ROMHARDT, 2002). Knowledge sharing, on the other hand, consists of a process through which one unit is affected by the experience of another; a unit can be an individual, a group or an organization (ARGOTE; INGRAM, 2000). In other words, knowledge sharing is the behavior of a person making her/his knowledge available to other people who are part of their work team, while he/she receives the knowledge they hold (TONET; PAZ, 2006).

Thus, the objective of this paper is to identify the perception of instructors of open courses about sharing knowledge with students during the covid-19 pandemic, in the city of Maringá, Paraná state, Brazil. It should be noted that, in this paper, professor is equivalent to instructor, proper denomination for open courses. The development of this paper took place as it follows: characterization of open courses; methodology; interview results about knowledge sharing, impacts of the pandemic, environmental and institutional barriers to knowledge sharing; followed by the systematization of the main problems and obstacles reported by the interviewees. In the final considerations, individual difficulties related to knowledge sharing are pointed out, as well as structural problems linked to the precariousness of the instructors' work.

Characterization of open courses

The area of Brazilian education presents one of its contemporary milestones in the 1990s, with the reform of the State, which was based on Great Britain and was proclaimed as the New Public Management. In this context, a public management administration is defended through a reform in the administrative structure. The arguments defended by Bresser-Pereira (1999, p. 33), Minister of State Reform at the time, were to decentralize, delegate authority. It is a managerial mentality (Managerialism), whose guiding values are management itself, the objective of constantly increasing productivity and consumer orientation (OLIVEIRA, 2015, p. 629).

The reforms that took place in the 1990s, despite being guided by a neoliberal perspective of the State, were contradictorily justified as a result of demands from social movements of greater participation in political life. Movements that traditionally defended the expansion of the right to public and free, democratic and quality education were harshly critical of the rigid, bureaucratic and centralized structure of educational management. Thus, the expansion of rights was accompanied by a change in the forms of organization and management of education, justified by governments at different scopes (municipal, state and federal) by the need to modernize public administration as a response to demands for greater transparency, more democratic

and flexible structures and greater efficiency (DRAIBE, 2005 apud OLIVEIRA, 2015, p. 631-632).

The managerial perspective is focused on results, leading to initiatives such as the Open Courses. According to the Law n. 9394/96, the Decree n. 5.154/04 and CEE Deliberation n. 14/97 (CEE Indication n. 14/97), the open courses are a legal teaching modality and valid throughout the national territory, but without connection to the Ministry of Education (MEC). These courses are non-formal, they offer courses aimed at the labor market and they can be offered by private companies, both in person and remotely, that is why they are considered very accessible to the general public. It should be noted that the open courses should not be confused with professional courses or S system courses (Sesc, Senai, Senac, etc.).

As these are open courses, there is no single curriculum and, therefore, the contents may vary according to the institution. And, in the case of franchised schools, they must follow the franchise rules. Namely, in summary, franchising is a practice in which the owner (franchisor) of a brand, product, patent or service to be assigned, upon payment, to an investor (franchisee), who is interested in opening a company in a location other than the head office (DAMIANI; LOBATO, 2019).

The main franchises focused on education in open courses in Brazil, according to 2018 data from the Franchising portal, in number of units across the country, add up to twenty big names. Of these, Prepara and Cebrac schools work in the city of Maringá. The latter has 86 units throughout Brazil, with around 2 million students graduated from its courses; and Prepara course has approximately 400 schools in different parts of the country and around 1 million graduated students. For this research, instructors from these two franchised schools and instructors from local schools (without franchises) were interviewed: MicroBrasil, Cecapi and Maringá[4] courses, which offer open courses in the administrative area and also in other professional training.

---

[4] Sources: (Cebrac) https://www.cebrac.com.br/maringa; (Prepara); https://www.preparacursosmaringa.com.br/; (MicroBrasil) https://www.microbrasilmaringa.com.br/. Accessed on: Jan 16, 2022.

The instructor plays a fundamental role in this professional training, as he/she is responsible for awakening the interest of young people for what is taught and qualifying them with the content of courses aimed at the job market. However, as they are not regulated by the MEC, there is no requirement that their instructors have academic training, such as a degree, to work. In this context, there are two types of professionals: those who had experience in the job market in terms of what they teach and those graduated in courses correlated to the teaching area (SOUZA, 2013).

In the field of KM, Dixon (2000) explains two meanings for the term sharing, namely: giving a part of something and having a common shared belief system. Van den Hooff and Ridder (2004) state that knowledge sharing consists of bringing knowledge to others and obtaining it from others. This mutual exchange generates new knowledge. Jahani, Ramayah and Effendi (2010) establish the knowledge sharing as a practice of disseminating and transferring knowledge between individuals, social groups or organizations.

The fact that open courses are not linked to any official curriculum base – its content is created and adapted by each school – and that academic training is not required from instructors were the reasons that led us to investigate the sharing processes of knowledge in the perception of these professionals, seeking to understand their daily practices. However, the arrival of the covid-19 pandemic gave an extra tone to the investigation.

Since 2020, the covid-19 pandemic has impacted everyone's lives worldwide. In Brazil, the first case of the disease was diagnosed on February 26, 2020; in Maringá, the first case was registered on March 18, 2020 (Observatory Covid-19 Maringá, n.d.). Also in March, through Decree n. 436/2020, the mayor of Maringá publicized measures to combat and prevent the disease. The article 3 of that decree listed the following measures to combat the pandemic: isolation; quarantine; medical exams; laboratory tests; collection of clinical samples; vaccination and other prophylactic measures; specific medical treatments; epidemiological study or investigation. The article 6 also suspended, for 30 days, classes in public and private schools (MARINGÁ, 2020). That

decree was followed by others that extended the suspension of in person classes, thus leading schools to look for different alternatives to maintain their teaching activities.

The research that originated this paper aimed to understand, qualitatively, through interviews, the experience of the open courses instructors, which were held in the second half of 2021. Therefore, questions related to the changes imposed by the pandemic gained centrality in the search results.

Metodology

In order to collect qualitative data about the perception of the open courses instructors about the knowledge sharing during the pandemic, semi-structured interviews were carried out. According to Sampieri, Collado and Lucio (2013), the interviewer follows a script of subjects or questions that guide the interview, with space for the interviewer to ask questions he considers relevant to the development of the dialogue and of the research.

For recruiting the interviewees, the non-probabilistic "snowball" method was used (VINUTO, 2014). In the research in question, the researcher already had personal contact with an instructor, who, according to the "snowball" method, is characterized as a "seed"; after his interview, the "seed" indicates a new instructor to be interviewed, which is repeated at each interview, generating a "snowball" effect. Between August and October 2021, after obtaining a favorable feedback from the University's Ethics Committee, ten instructors of the open courses were interviewed, remotely and mediated by Google Meet, all those working or who worked in the city of Maringá in open courses aimed at the administrative area of companies, generally called "administrative assistant".

Each interview was transcribed and analyzed thematically, taking into account the following thematic axes: 1. Difficulties in relation to knowledge sharing; 2. Positive aspects regarding knowledge sharing; 3. Daily knowledge sharing practices. It should be noted that these three axes only served as an initial guide for analyzing the interviews. According to Boyatzis (quoted by BRAUN and CLARKE, 2006, p. 6), thematic analysis

involves reading the analyzed data set to find repeated patterns of meaning, varying, however, the exact form and the product of the thematic analyzes.

In addition, the transcripts of the ten interviews were formatted into a textual corpus and lexically analyzed in the free software IRaMuTeQ, anchored in the statistical environment of the R software, which produces textual analyzes and provides statistical data about the corpus, enabling different types of text analysis, such as word frequency calculation, which makes the vocabulary used by the interviewees easily visualized in word clouds, similarity analysis, offering descending hierarchical classification, which correlates text segments, forming a hierarchical segment of groups (CAMARGO et al., 2013).

Chart 1 shows the descriptive data of the interviewees: date of the interview, gender (being F for female and M for male), age, education, time in which he/she works or worked as an instructor, if he/she was working at the moment of the interview and the disciplines he/she teaches or has taught as an instructor of the open courses.

Chart 1. Data from the interviewees.

Interviewee	Gender	Age	Formation	Performance	He/she works at the moment	Subjects taught
Interview 1 (10/9/2021)	F	29	Pedagogy	6 years	Yes	Secretariat; Accounting; Personal department.
Interview 2 (15/9/2021)	M	30	Administration	8 years	Yes	Financial; Stock; Invoicing; Marketing; Oratory.
Interview 3 (24/9/2021)	M	21	History (Graduation)	7 months	Yes	Secretariat; Accounting; Personal department.
Interview 4 (29/9/2021)	M	31	Administration	7 years	Yes	Financial and Basic Mathematics; Human Resources.
Interview 5 (11/10/2021)	F	47	Bilingual executive secretary	7 years	Yes	Team work; sales; Personal development.
Interview 6 (25/10/2021)	F	34	Law	2 years	No	Labor Calculation; Sales.
Interview 7 (5/11/2021)	M	35	Administration	8 years	No	Personal development; Marketing.
Interview 8 (12/11/2021)	M	37	Administration	6 years	No	Human Resources; Consultancy; Entrepreneurship.

| Interview 9 (15/11/2021)	F	42	Law	10 years	Yes	Inventory control; Logistics; Personal department.
Interview 10 17/11/2021	F	29	Administration	5 years	Yes	Secretariat; Customer service; Telemarketing.

Source: Prepared by the authors (2022).

Results

The interviews revealed that eight of the ten interviewees worked in the administrative area before starting to teach in open courses; only two started their careers in the field of education, and six of them were already interested in working in the field of education. The age of the instructors varies between 21 and 49 years, and most of them work or worked for a period of 5 to 10 years in the area. All the instructors who participated in the interviews have completed graduation: 5 are graduated in Administration; 1 in Pedagogy; 1 in History; 2 in Law; and 1 in bilingual Executive Secretariat.

In order to systematize the data and the main findings in the interviews, we present, after this, a dendrogram constructed in Iramuteq (Picture 1). For this purpose, the software performed a hierarchical classification, in which segments of texts and vocabularies were related to form a hierarchical scheme. The classes are formed by text segments that have similar vocabulary and different vocabulary from segments of other classes. This facilitates the understanding of contents and their division into discursive groups.

In the picture 1, it is possible to identify two groups and, within one of them, two subgroups. The first group is composed of class 5, with 22% of text segments, and the second group is composed of the other classes (class 3, class 1, class 2, class 4). This second group, on the other hand, is divided into two subgroups: one that groups class 4 (with 16.1% of texts segments), class 2 (with 17%), class 1 (with 24.4 %) and class 3 (with 21.5%). The second subgroup is composed of classes 1 and 2.

Picture 1. Descending hierarchical classification dendrogram
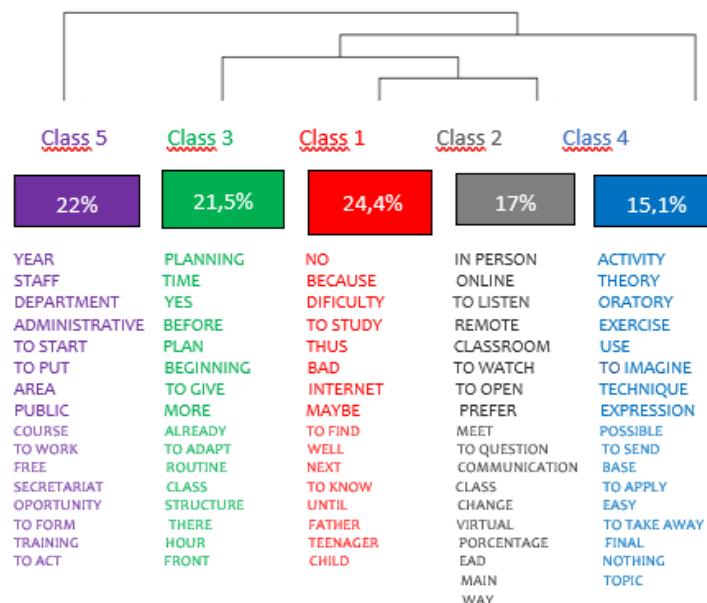
Source: Elaborated by the authors from the interviews (2022).

The dendrogram is the result of a lexical analysis that groups texts segments. For this research, the different classes make it possible to observe, through statistical data, the vocabularies used by the interviewees, thus, facilitating the visualization of the main topics addressed.

The mentioned classes reinforce the perception that one of the most discussed points in the interviews is the difficulties experienced by the instructors – something present in class 1, which corresponds to the largest class of lexical segments – and they are related to the in person teaching; and, in class 2, to the remote teaching. In addition, in the vocabulary of the other classes, contents about planning, remote teaching, age range of students, among others, is identified.

Next, the interviews were analyzed based on three thematic axes: 1) interviewees' perception about knowledge sharing; 2) impact of the pandemic on the work of instructors; 3) environmental and institutional barriers perceived by instructors. The themes were separated just to facilitate the analysis of each one of them, because, in practice and in the perception of the instructors, they are interrelated. Subsequently, a systematization about the main problems related to the knowledge sharing identified in the interviews was carried out.

- Knowledge sharing

In view of the objective of understanding how knowledge sharing is experienced by instructors, this topic seeks to aggregate responses that explicitly deal with steps related to instructors' perception about knowledge sharing.

Thus, some questions raised in the interviews and their answers are highlighted. The first question analyzed is: "In general, how do you make knowledge explicit to students?". In response, several techniques were presented by the interviewees: oratory, playfulness, dynamics and examples from everyday life. There is a consensus among the instructors about illustrating classes with everyday examples.

Planning is an important tool in knowledge sharing and, for this reason, we seek to identify whether or not instructors use a lesson plan, as well as what is their view regarding the use of such a tool. In response to these questions, all instructors, without exception, indicated that they understand lesson planning as a crucial factor; however, we noticed that none of the instructors structure a complete planning of their classes, they only use simple planning models and work within basic points, such as beginning, middle and end. They also try to elaborate a plan B, based on some difficulties that may arise, whether due to a technological problem with a device or due to some greater difficulty for the class in terms of understanding the content taught in class.

The instructors justify this practice by relating it to the repetition of content and explain that, when they started working in the area, they planned the classes in detail, but, as there is this repetition of content in many classes, they end up internalizing that knowledge and, for this reason, they only plan a little more carefully for new classes or when they feel the need to do so.

Another question related to the topic of knowledge sharing asked the instructors about how they manage to identify whether students are appropriating knowledge. Among the ten interviews carried out, nine indicate as mechanisms the assessments or the activities and the students participation. Only one instructor pointed out as a

mechanism her observation of the students' body language in the in person mode and the physiognomy in the remote mode.

Still on this question, some negative points related to the pandemic began to emerge. According to the instructors, the difficulties referred to keeping the students' attention. In order to face this difficulty, an instructor revealed that she even sought to reward students with grades so that they would open their cameras and participate more effectively in the class.

Considering the fact that the interviews were conducted in the second half of 2021, it was relevant to understand whether the instructors interviewed had experience before and after the pandemic, as well as during this period. In the case of those with experience, they could mention the main changes they felt as a result of the pandemic. Of the total of ten respondents, 7 worked before the pandemic and also during it, being able to compare and list the changes resulting from remote teaching, since the schools offering open courses opted for the model of recorded and/or live classes transmitted by some platform.

- Impacts of the covid-19 pandemic

The instructors were encouraged to compare, according to their perception, the working conditions before the pandemic and during this period. Most of them reported that they had more difficulties than facilities/benefits during the pandemic period. They expressed the unwillingness or complacency of the students to study remotely, a behavior considered one of the obstacles to the assimilation of the knowledge transmitted by the instructors. They also reported barriers to evaluate the students. Another difficulty reflected in their statements refers to the communication, mainly affected by the lack of technological resources, students' ability to deal with the new instruments (Google Meet, Google Forms and Google Classroom) and adequate equipment for instructors; Possibly there was also a lack of training in teaching to better mediate the teaching-learning process. After all, even for a teacher with a degree, trained, therefore, to work in the teaching environment, it is already difficult to deal with the large amount of activities and tests that need to be prepared and corrected,

although these tasks are known to them and predetermined in lesson plans. In contrast, most instructors do not have academic training with a degree and are charged by managers of open courses to perform functions that they are unaware of and/or go beyond what is foreseen in their hiring.

Therefore, the pandemic caused more confusion in these relationships: there was an increase in the demand to assist students to answer questions or to correct activities and to fulfill with the demands of managers. The stress generated by pressure from all sides ended up affecting directly – for the worse – the quality of life of this professional, also because the need to stay at home during the pandemic mixed the personal environment with the professional one. If this professional's work was already precarious, the pandemic only increased and made it even more difficult to overcome this barrier; in addition, there was a cancellation of student enrollments and a decrease in the number of classes and class hours, resulting in a reduction in the salaries of instructors, as their work is governed by the CLT/hourly contract.

The instructors mentioned other difficulties arising from the new model of remote teaching, such as the interference of noise from the external environment, which, according to the instructors, disturbed the students when they should be paying attention to the classes. It should be noted that the in person classroom allows some control in this regard.

As a positive point, the instructors highlighted that the remote teaching makes it easier for students to attend classes. For many, staying at home is so much more comfortable that they choose, even after the loosening of the decrees regarding social isolation, to continue their courses in the online format, although there are students without this option because they do not have access to the internet, computer or mobile device.

Regarding the question "How did you adapt to the changes that the pandemic brought?", only one instructor did not list the lack of technological resources for the application of classes in remote mode as a necessary change; six of them claimed lack of some resource – adequate computer, camera, microphones and headphones – and the need to change or buy equipment. Another point mentioned was the insufficient internet signal; both instructors and students often lost connection, which forced many

of them to incur expenses to change their internet plans in order to increase and maintain the connectivity.

The interviews also revealed different profiles of the instructors, since some see the use of technological resources as something interesting and had already used them; while others see the use of so many new resources as a problem to be overcome. Most instructors mentioned some difficulty with the use of technology, or attachment to old resources, such as the whiteboard, which directly interfered with their relationship with the new ways of working, as it was only as a result of the pandemic that they sought to know about the resources and learned how to use them.

To return to the initial idea, about the profiles of the instructors, it is highlighted that some of them consider the need to gesture and walk around the classroom as a barrier to be overcome, as they had to work sitting down, transmitting the classes from their homes.

One interviewee made it very clear that she did not adapt to the changes brought by the pandemic; on the other hand, one of the instructors stated that her quality of life improved after the remote classes, as she spent a lot of time moving between the institutions where she worked.

Regarding the difficulties caused by the pandemic related to knowledge sharing, some common points were identified in the answers. The first of them concerns to the lack of structure (in the technological sense) of instructors and students, since, without the necessary technological resources, knowledge sharing is directly affected.

As for the instructors' unpreparedness to deal with the remote situation, some expressed a feeling of doubt, especially with regard to teenage students, whether or not they would be attending classes; this is due to the fact that, in general, they keep the camera and audio closed. In addition, the difficulty of keeping students' attention in this environment was pointed out, since it is not possible to call attention to those who would be uninterested.

Regarding the evaluation, for the instructors, there was complexity in carrying out this type of activity, since, basically, they tried to keep the written evaluation, whose operationalization generated difficulties for them, mainly due to the enormous amount of activities to be corrected.

Problems related to the difficulties in the evaluation reaffirm the unpreparedness of the instructors to work in the new model and insinuate similar unpreparedness of the management of the institutions. The issue is not exactly about the technological tool to be used, but how to organize its use and how to deliver it to the target audience. The instructors had to deal with these issues without prior preparation and without guidance from managers.

Regarding to the positive points that the pandemic provided, two stood out in the answers to the interviews. One of them refers to saving time by not having to travel to work. In the view of the instructors, this fact favored even the students, who saved financial resources with bus fares, since they did not need to travel to attend classes. Another positive point was precisely the use of technological resources, which, according to some instructors, promoted a certain democratization of teaching thanks to the ease of following new contents on the internet and the number of free courses offered by many institutions during the pandemic.

On the other hand, a point that appears in other responses is that students' learning during the pandemic was directly proportional to their interest. According to this reasoning, students with a higher level of autonomy adapted better than others, that is, depending on the student's profile, the pandemic was positive or not in relation to knowledge sharing.

The instructors were provoked to talk about whether the pandemic brought about any change and improvement in knowledge sharing within the scope of open courses. With the exception of one answer that completely disagrees that the pandemic provided something, the others revealed several points, the most common is the opinion that the pandemic took people out of their comfort zone and made them look for new opportunities, new courses, new knowledge, as well as learning to use new technological resources. Among the instructors, one highlighted that he/she had to rethink his way of teaching based on this adverse situation.

To mention the aggravating factors brought by the pandemic, the most cited in the answers was the financial difficulty, which affected directly the demand for open courses. Another point highlighted in the responses was the high rate of enrollment cancellations, which became a major problem, both for the instructors, who lost many

classes, and for people who held a management position within the company. This is because, in addition to being instructors, three of the interviewees held some position within the company's management, mainly in the pedagogical area, and thus they ended up receiving more demands.

Another aggravating factor related to the financial issue is the fact that some students did not have access to the classes due to the lack of a computer, cell phone or internet. Finally, the lack of socialization and the practical contact were also listed as factors that affected the knowledge sharing within open courses. In general, only one interviewee does not believe that there was a worsening in knowledge sharing during the pandemic; for him/her, the in person students continued to study remotely, and those who were not studying continued not studying. The others, without exception, pointed out a worsening in knowledge sharing, taking into account at least one of the following topics: lack of socialization, lack of supervision (because most of the students are teenagers) and difficulty to maintain their attention in remote classes.

Thus, in this section, some of the points that the instructors listed in the semi-structured interviews about their perceptions of knowledge sharing were discussed.

- Environmental and institutional barriers

The interviews also showed that the instructors who did not work during the pandemic in open courses do not think that the institutions where they worked had a large deficit of equipment and technological tools. This position demonstrates how new problems have emerged with the changes imposed by the covid-19 pandemic.

When they were questioned about difficulties or environmental and institutional barriers, five of the ten interviewees answered that they had never felt/perceived any barrier in relation to the institution where they worked; however, one of these people commented that some colleagues had difficulties in following the didactic material faithfully. However, in her/his point of view, this in itself would not be a negative point,

but something "more advantageous", since, following the material, the instructor would know what the institutional expectations are regarding the content of his classes.

Another five people cited many obstacles, such as the financial issue of students in relation to not being able to keep up with the monthly payment – although the amount is considered low by the interviewees. Other negative aspects were highlighted: limit of the informal socialization within the study environment between students and instructor; contractor who signals a lack of credibility in the instructor's work; handout course understood as limiting of the development of the classes, since the content is previously established and there is no possibility of passing another one, or staying longer in the same content, if necessary; and, finally, unpreparedness of the institution's management in relation to the practice in the classroom, which required changes considered unnecessary by the instructor.

Regarding the question "What are the biggest difficulties observed in knowledge sharing in open courses?", the instructors addressed a common point: the school base with which the young students arrive at these courses. According to them, many have difficulty with basic contents, which they should already know through schooling; another aspect that an instructor raised is that, when the public is very young, most of the time, it is not able to learn certain contents, for not having studied basic contents in school.

The issue of the variety and range of age groups of open course students is reported as a difficulty in working with content in the classroom, and this would be a barrier to knowledge sharing, according to the interviewees.

Such discrepant age groups within the same teaching environment is a problem, as the grouping of students is related to maturity, purposes and language used by each age group, experiences and different moments of life. That way, it is impossible for an instructor to handle the demand of students of all ages and achieve an excellent knowledge sharing with everyone, because even the examples used in class for an audience may not make sense to another of such a different age group.

One of the interviewees pointed out that the heterogeneity of the groups in the open courses hinders even the administration of the material, making it without personality and not directed to a specific public.

In some answers, the issue was made clear that the didactic material is generally outdated and brings obstacles to the development of the class. That is because there is a charge, by the institution, which insists that it is necessary to use that material, since it was sold to the students.

- Systematizing the main problems

Taking into account the general content of the interviews, the main problems related to knowledge sharing are: necessity for a suitable environment for the transmission of remote classes; necessity to improve the connection (internet, student and instructor); lack of adequate technological equipment (student and instructor), outdated teaching material; lack of target audience, which leads to overly plural rooms; necessity for basic knowledge for students; lack of knowledge about technological instruments; lack of preparation of instructors to teach remotely; difficulty in evaluating students remotely; lack of pedagogical knowledge; difficulty in keeping the student's attention; difficulty of the instructor to adapt himself/herself to new resources; difficulty for the instructor to overcome distractions from the outside world in remote classes; and difficulty in socialization.

Final Considerations

We can infer, from the interviews regarding the instructors' perception of knowledge sharing, that this was impacted negatively by the changes imposed by the covid-19 pandemic, since the main difficulties reported, in some way, are related to work experience during this period. However, it can be considered that, although the pandemic has required new forms of relationship between instructor and student, especially requiring a technological mediation of the sharing relationship, some of the

difficulties could be mitigated by institutional support, whether in offering material or, still, in the support for the management of the instructor's work. Thus, the pandemic exposes issues that go beyond this specific moment we are going through, revealing precarious working conditions, with emphasis on low payment.

Research carried out by Placco et al. (2022) points out that the lack of resources and effective improvements in resources contribute to a teacher discomfort, "[...] which may cause, in the medium term, an inhibited and constrained performance by the teacher" (PLACCO et al., 2022, s. p.). This research converges to points raised in this article, especially with regard to environmental and social factors, which generate a heavy workload, highlighting elements such as "[...] the location of the school; the socioeconomic situation of the students; the employment relationship of teachers and the diversity of tasks that go beyond teaching" (PLACCO et al., 2022, s. p.).

In this article, it was possible to identify several problems related to the technological resources needed to teach a class, especially in a context whose difficulties were magnified by the advent of the covid-19 pandemic. We also found that these problems affected both the instructors and the students. In addition, open course instructors share structural situations that go beyond low payment, involving social and environmental elements that impact the development of their work.

As a contribution, this article sheds light on the daily life of instructors of courses that are distributed throughout the national territory, but which, because they are an open modality and have no link with the Ministry of Education, they do not undergo a systematic evaluation by the government. This is a type of course that targets people who are looking for a qualification for the job market and who, therefore, have a heterogeneous student profile, which is one of the limitations exposed by the instructors in this study that also focused their perceptions on the knowledge sharing, the schools' structure and the demands of the activities imposed on the instructors. We understand that the focus on students is a future step towards for a deeper look at open courses.

References

ARGOTE, L.; INGRAM, P. Transferência de conhecimento: uma base para a vantagem competitiva nas empresas. **Comportamento organizacional e processos de decisão humana**, v.82, n.1, p.150-169, 2000.

BRASIL. Lei no 9.394, de 20 de dezembro de 1996. **Estabelece as diretrizes e bases da educação nacional.** Brasília: Presidência da República, 1996. Disponível em: http://www.planalto.gov.br/ccivil_03/leis/l9394.htm. Acesso em: 1 set. 2021.

BRASIL. Decreto no 5.154, de 23 de julho de 2004. **Regulamenta o §2 do art. 36 e os arts. 39 a 41 da Lei n. 9.394, de 20 de dezembro de 1996, que estabelece as diretrizes e bases da educação nacional, e dá outras providências.** Brasília: Presidência da República, 1996. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2004-2006/2004/decreto/d5154.htm. Acesso em: 1 set. 2021.

BRASIL. Lei no 13.868, de 3 de setembro de 2019. **Altera as Leis n. 4.024, de 20 de dezembro de 1961, e n. 9.394, de 20 de dezembro de 1996, para incluir disposições relativas às universidades comunitárias.** Brasília: Presidência da República, 2019. Disponível em: http://www.planalto.gov.br/ccivil_03/_ato2019-2022/2019/lei/L13868.htm. Acesso em: 1 set. 2021

BRAUN, V.; CLARKE, V. Using thematic analysis in psychology. **Qualitative research in psychology,** v.3, n.2, p.77-101, 2006.

CAMARGO, B. V.; JUSTO, A. M. IRAMUTEQ: um software gratuito para análise de dados textuais. **Temas em psicologia**, v.21, n.2, p.513-518, 2013.

CASTELLS, M. **A sociedade em rede**. 22 ed. São Paulo: Paz e terra, 2020.

CHU, K. W.; WANG, M.; YUEN, A. H. K. Implementing knowledge management in school environment: teachers' perception. **Knowledge Management and E-Learning,** v.3, n.2, p.139-152, 2011.

DALKIR, K. **Knowledge management in theory and practice.** 2 ed. Burlington: Elsevier, 2011.

DAMIANI, L. C. L.; LOBATO, V. S. Análise da Viabilidade do Sistema de Franquias. **Ab Origine – Cesut em Revista,** v.1, n.28, p.325–348, 2019.

DIXON, N. M. **Common knowledge:** how the companies thrive by sharing what they know. Boston: Harvard Business School Press, 2000.

GOMES, L. **Trabalho multifacetado de professores/as:** a saúde entre limites. 2002. 117f. Dissertação (Mestrado) – Escola Nacional de Saúde Pública, Fundação Oswaldo Cruz, Rio de Janeiro, 2002.

JAHANI, S.; RAMAYAH, T.; EFFENDI, A. A. **Reward system and leadership role as key factors influencing knowledge sharing behavior among academicians in Iran:** an empirical study. In: The International Conference Knowledge Management– Project, Systems and Technologies, 5., 2010, Bucharest, Romania. Anais..., 2010. p. 509-514.

KLANT, L. M. M.; DOS SANTOS, V. S. O uso do software IRAMUTEQ na análise de conteúdo-estudo comparativo entre os trabalhos de conclusão de curso do ProfEPT e os referenciais do programa. **Research, Society and Development**, v.10, n.4, p e8210413786-e8210413786, 2021.

MARINGÁ. Decreto n° 436, de 16 de março de 2020. **Dispõe sobre as medidas transitórias de Emergência de Saúde Pública, para combate e prevenção ao COVID-19 (novo Coronavírus), e dá outras providências.** Maringá: Câmara Municipal, 2020. Disponível em: https://leismunicipais.com.br/a/pr/m/maringa/decreto/2020/43/436/decreto-n-436-2020-dispoe-sobre-as-medidas-transitorias-de-emergencia-de-saude-publica-para-combate-e-prevencao-ao-covid-19-novo-coronavirus-e-da-outras-providencias. Acesso em: 26 mar. 2022.

OBSERVATÓRIO COVID 19 MARINGÁ. Disponível em: http://complex.pfi.uem.br/covid/ . Acesso em: 23 dez. 2021.

OLIVEIRA, D. A. Nova gestão pública e governos democrático-populares: contradições entre a busca da eficiência e a ampliação do direito à educação. Educação e Sociedade, v.36, n.132, p.625-646, 2015.

ÖZAN, M. B.; ERTEN, P. Opiniões dos professores sobre as habilidades de gerenciamento de informações de administradores de escolas (exemplo da província de Elazig). **GAU Journal of Social & Applied Sciences**, v.3, n.6, p.67-81, 2008.

PLACCO, V. M. N. S. et al. Condições de trabalho docente na escola da atualidade: demandas e desafios, na percepção de educadores da rede pública estadual paulista. **Educação**, v.47, n.1., p. e06/ 1–20, 2022.

PROBST, G.; RAUB, S.; ROMHARDT, K. **Gestão do conhecimento: os elementos construtivos do sucesso.** Porto Alegre: Bookman, 2002.

RAMY, A. et al. A scientometric analysis of Knowledge Management research and practice literature: 2003-2015. **Knowledge Management Research & Practice**, v.16, n.1, p.66-77, 2018.

SAMPIERI, C.; COLLADO, C. F. L. Metodología de la Investigación, v. 4, 2013.

SOUZA, C. F. Representações do exercício docente em cursos livres de idiomas: reflexões acerca de relações dicotômicas no ensino de língua inglesa. **Vértices**, v.15, n.1, p.31-45, 2013.

SAIBA quais são as 20 maiores franquias de educação no Brasil. Disponível em: https://www.portaldofranchising.com.br/franquias/maiores-franquias-de-educacao/. Acesso em: 6 jan. 2022.

TACHIZAWA, T.; ANDRADE, R. O. B. **Gestão de instituições de ensino**. Rio de Janeiro: FGV, 2002.

THOMPSON, J. B. **A mídia e a modernidade**. Petrópolis: Vozes, 1998.

TONET, H. C.; PAZ, M. G. T. Um modelo para o compartilhamento de conhecimento no trabalho. **Revista de Administração Contemporânea**, v.10, n.2, p.75-94, 2006. Disponível em: https://www.scielo.br/j/rac/a/9TxQfBDscJR6Md9rHqKwKhh/?lang=pt. Acesso em: 4 jan. 2022.

VAN DEN HOOFF, B.; RIDDER, J. A. Knowledge sharing in context: the influence of organizational commitment, communication climate and CMC use on knowledge sharing**. Journal of Knowledge Management**, v.8, n.6, p.117-130, 2004.

VINUTO, J. A amostragem em bola de neve na pesquisa qualitativa: um debate em aberto. **Temáticas**, v.22, n.44, p.203-220, 2014.

YANG, J. The knowledge management strategy and its effect on firm performance: a contingence analysis. **International Journal of Production Economics**, v.125, n.2, p.215-223, 2010. Disponível em: http://dx.doi.org/10.1016/j.ijpe.2010.03.012. Acesso em: 10 jun. 2021.