CHALLENGES IN BUILDING A VIRTUAL COMMUNITY OF LEARNING AND PRACTICE IN PSYCHOLOGY IN TIMES OF PANDEMIC

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Abstract— **The study reports an experience of a project of development of a Virtual Community of Learning and Practice in Psychology (CVAP-Psi) at the University of Brasília (UnB). CVAP-Psi aims to develop a set of educational practices for online teaching to support the absence of face-to-face interaction during coronavirus pandemic social isolation. The Project aims to keep the interest and the commitment of the academic community in order to offer good teaching practices and rich moments of effective interaction and communication. One of the challenges is to assist a heterogeneous target audience, requiring the use of several strategies to obtain participation, engagement and a sense of belonging to build group identity in the community.**

Keywords— **Community of Practitioners, Context of COVID Crisis, Information and Communication Technology, Learning Community, University**

1. INTRODUCTION

At the beginning of the COVID-19 pandemic, the universities in Brazil faced the disruption of their daily actions with the restrictions of social isolation recommended by the World Health Organization (WHO) and the Brazilian Ministry of Health. This situation

caused an unprecedented impact that required change from classroom teaching to online teaching.

In Brazil, federal public universities suspended classes at the first half of 2020. During this period (March to July 2020), several emergency actions were taken to prepare professors to return to their academic activities in a remote system. Online education benefits the student by allowing flexibility in terms of the place of learning and study hours; however, this methodology needs a series of plans and strategies not only to overcome the distance of professor from the learner, but that it can truly provide creative and meaningful activities that promote human and professional development. This article reports the experience of the extension project named Virtual Community of Learning and Practice in Psychology (CVAP-Psi) and shows the results of the first evaluation research on the challenges that professors and students faced in 2020. The project is an initiative from the Direction of the Institute of Psychology and the Department of School Psychology and Development at the University of Brasília (UnB) with head office in the capital of Brazil. The Project aims to create a virtual community of professors and students that search educational solutions to support the planning and provision of online teaching programs. The Project is expected to open channels of communication and knowledge sharing to face the problems and consequences derived from the current crisis and the post-crisis processes of COVID-19 in the teaching and learning community of the Psychology Institute at UnB.

2. LITERATURE REVIEW

2.1. VIRTUAL COMMUNITIES OF LEARNING AND PRACTICE

2.1.1. CONCEPTS AND CHARACTERISTICS OF THE COMMUNITIES:
Virtual communities of learning and practices (CVAP) are constituted, in essence, by interactional dynamics that result in social learning among the participants. Technological development from the 1980s enabled the emergence of communities of learning connected via the internet, since distance was no longer an obstacle [1]. This movement towards adherence to virtual learning environments led to the proliferation of the formation of virtual communities for different purposes and contexts [2-4].

CVAPs are not defined only as a set of collaborative actions, but are based on theories that support collaborative learning [5]. They are composed of a group of people who meet voluntarily and, therefore, there should be no hierarchy, but they require an effective participation of the people involved. These communities are also a pedagogical strategy supported by analog and digital collaborative tools, mediating the learning processes.

Specifically, the community of practice (CoP) has characteristics that differ from that of a simple community. The concept of CoP developed by Etienne Wenger [6] comprises a group of people with common interests collaborating with each other, building and sharing knowledge, constituting values as a community, in order to learn collectively. One of its characteristics is the interaction between members, promoting constant discussions about common practices [7]. Collective learning or social learning is the result of joint actions developed in the midst of social relations among members of the community that, therefore, are called communities of practice [8].

Learning communities are also based on collaborative learning. However, they do not have a focus on common practice, as in communities of practice that are based on the relationship between learning and personal and social life [1]. The objective of a learning community is to use collaboration among participants to build knowledge, in which each is responsible for their own learning and for the others [1], [5]. When established in the virtual environment, that is, constituting a virtual learning community (CVA), these organizations rely on technological mediation for the interactive process of social involvement, requiring a virtual learning environment and other media resources designed specifically to enhance collaborative learning [5].

Learning in communities, the result of social and community construction, transcends the individual and sets in motion psychological processes that go beyond cognitive, operative, involving aspects of socialization, sharing of practice and identity from an anthropological, psychological and pedagogical perspective [1]; [9].

And finally, we highlight the emerging strategies recommended by UNESCO [10], the OECD [11] and by the authors Azorín [12] and Heller [13], who reinforce the importance of work that values and prioritizes collaboration, collective work, peer learning and strengthening communities of practice and learning in times of pandemic. These actions are in line with CVAPsi's practices, as detailed in the next section.

2.1.2. VIRTUAL COMMUNITIES OF PRACTICE (COP): Since the last 25 years, the CoP's creation resources and the possible contexts of partnerships of these typically social and human forms of organization have transcended the physical territories for the space-time of social networks and media. Communities of practices arise in formal or informal institutional contexts, consisting of groups of people who interact regularly [14]. These communities can present themselves in different ways, whether large or small, homogeneous or heterogeneous, spontaneous or intentional [14], located and distributed on social networks and media, the possibilities for interaction are numerous.

Reference [8] shows that social learning is a vital and inevitable element of human nature in its essence, as a social process located in a historical and cultural context. According to reference [6], the ability (and need) to belong to a group is inherent to the human being. The idea of participating in something plays a central role in this theory, considering participation as a comprehensive process of being active in different social practices and in building an identity in relation to these communities. Joining a club, for example, is both a physical action and a form of belonging. The conceptual framework of Wenger's social learning theory [6] consists of four concepts: meaning (learning as experience), practice (learning by doing), community (learning how to belong) and identity (learning how to become). For this author, identity is a constant construction that defines who we are from the way we participate, our association with the community and our learning trajectory (where we are and where we are going to), grouping the participation of individuals in different communities in the same identity. Thus, identity and practice are presented as a mirror of one other, influencing each other, so identity is defined by the practices that individuals engage (participation) and by which they do not engage (non-participation). The concept of communities of practices is rooted in the notions of engaged participation and the creation of identity through practice.

For a community to be able to act effectively, so that community members can act together, sharing leadership roles among themselves, some initial measures become essential such as: a working structure with a website or other form of access to the community, communication tools and schedule of events and processes [15]. Although analog or digital tools or technologies are necessary for the creation of communities, they also need the human factor of communication, interaction, participation and involvement that are promoters of collaborative learning [5]. In a relational perspective, the creation of a community of practice requires a story of joint learning, a common domain of interest and a continuity that enables the formation of a common repertoire and relationships of trust [6].

Within a functioning CoP, there are several possible roles and participations. Reference [14] points out the presence of diverse members in the communities, being able to be apprentices with different levels of experience, from novices to masters, each with specific points of view contributing to a richer learning and relationships that are more interesting. This division of roles requires autonomy and personal determination, while it needs to be balanced with the needs of the group [15].

For Wender, McDermott & Snyder [7], a CVAP is built through a social learning structure that encourages interactions and relationships based on the respect and trust of

everyone in everyone, allowing a listening with attention to the exposure of misinformation and problems arising from practices and even the proposition of difficult questions to answer, expressing the mutual trust that generates feelings of belonging to the community and identity processes, not only valuing the production of scientific knowledge typical of university institutions.

In the next section, we explain how we articulate the concepts presented to constitute a Virtual Community of Learning and Practices involved in professor training and educational support to students.

2.2. CONSTRUCTION AND IMPLEMENTATION OF CVAP-PSI

The implementation of CVAP-Psi at the University of Brasília began on July 30th, 2020, through actions coordinated by a management team composed of six undergraduate students in Psychology, one graduate student in School Psychology and Development, a manager and four professors of the Institute of Psychology. The target audience of the Project foresees the participation of 240 (two hundred and forty) professors and students from the Institute of Psychology at the University of Brasília.

The CVAP-Psi management team has differentiated roles of general coordination, vice-coordination and collaborating professors from three departments, which expands the understanding of the different teaching and learning processes underway in the provision of non-classroom teaching. The team's function is to monitor the movements and relational dynamics in two directions: the demands of students and those of professors. Students involved in managing followed their peers in order to identify needs and issues that are relevant to be treated and addressed at CVAP-Psi. The collaborating professors, the manager and the coordinators dialogued with their peers to raise the difficulties, the advances, the inflection and inquiring points regarding the good practices of online teaching and learning.

At CVAP-Psi, the nature of the participation of professors and students is spontaneous, autonomous and collaborative, each one can join and participate in activities that are interesting to them, without impositions. And due to social isolation, a flexible structure was built to serve the community of the Psychology Institute of UnB, based on the virtual learning environment of Moodle and on social networks and media, such as Instagram, Youtube, WhatsApp. Figure 1 presents numerical data about the university community at UnB and, specifically, the Institute of Psychology, in addition to representing how social networks and media are used.

Fig. 1   CVA-Psi in the Context of UNB. Source: Own Authorship (2020)

Online communication and collaborative work in virtual environments have been essential for the conformation of the community, which also works as a theoretical and

motivational support for participants in favor of the development of new pedagogical practices and new learning practices.

In the period from August, 17, 2020 to October 16, 2020, CVAP-Psi developed different activities described in this section. Several formats of meetings and activities were designed to reduce the physical distance, increasing the psychological presence, between UnB professors and their students. CVAP-Psi aims to constitute a social group committed to discussing and continuously improving online teaching and learning practices, as described below.

2.2.1. COMMUNITY CREATION IN MOODLE: CVAP-Psi started activities in the Moodle environment through asynchronous activities, such as thematic forums, and expanded asynchronous activities to online workshops, lives, lectures, discussion groups and chat-like moments to clarify doubts. The Modular Object-Oriented Dynamic Learning Environment (Moodle) is an open source software that allows the creation of personalized Virtual Learning Environments (AVA). The creation of the learning community in Moodle aimed to provide exchange of experiences, collaborative learning, problem solving and dissemination of good practices. For synchronous meetings, we have used Microsoft Teams and Moodle's BigBlueButtom (BBB). All professors at the Psychology Institute received a password to access the environment.

In the Moodle learning environment, the CVAP-Psi management team aimed to promote a more relaxed exchange space, with spaces for discussing pandemic learning and the "Coffee with Poetry", fostering creativity, welcoming and interacting beyond technical questions. The environment was configured in three access spaces differentiated by the role-played: teaching community, student community and a space for interaction between the two groups, as shown in Figure 2.
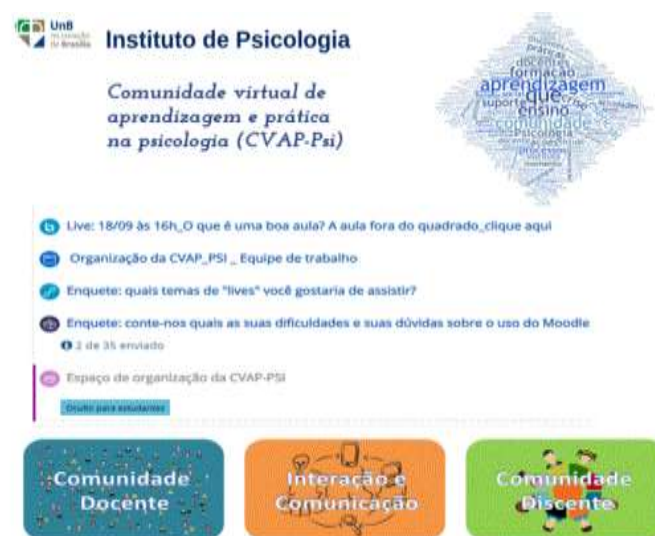

Fig. 2   CVAP-Psi's Moodle Home Page. Source: Own Authorship (2020)

The environment was opened to professors of the Psychology course on August 3rd, one week before the formal reopening of the semester in a non-presential format. Two weeks after that date it could be accessed by students.

With regard to access and participation data, the community has 61 professors and 96 registered students. In the teaching space, according to the Moodle report so far, 1,422 hits were registered in the forum for questions and good practices. The participation of the professors in charge of the courses occurred more frequently in the first six weeks. The anxiety of organizing the disciplines in a virtual environment that many of them had no experience with, showed itself clearly in the forums created to clarify doubts.

Ninety-six students participated in the student space. This space was enriched with tutorials, forums and teaching resources to facilitate learning, the organization of disciplines and other learning strategies. Student participation has been a weak point of the Project: in its absolute majority, the ninety-six registered students accessed CVAP-Psi only once and did not access the forums. Several hypotheses were raised to explain this phenomenon: questions related to students' representations, which associate Moodle as a virtual environment for formal learning and not for informal interaction; the number of classes and activities they are carrying out and the challenges they face in monitoring classes, delivering work and accomplishing academic deadlines. Therefore, in the discussions during the meetings of the CVAP-Psi management team, the theoretical and practical reflection on the difficulty of engaging the students in the Moodle environment led to the decision to expand the community to some other social media and networks.

Initially, professors sought for individual guidance through WhatsApp, as it is an environment with less exposure that provides immediate response. Therefore, an intervention was necessary, directing the members of the teaching community to use Moodle and to participate in the available synchronous and asynchronous communication spaces.

The management team developed other strategies to energize the community that included eight lives, addressing issues related to the use of technologies and student engagement (see Figure 3).
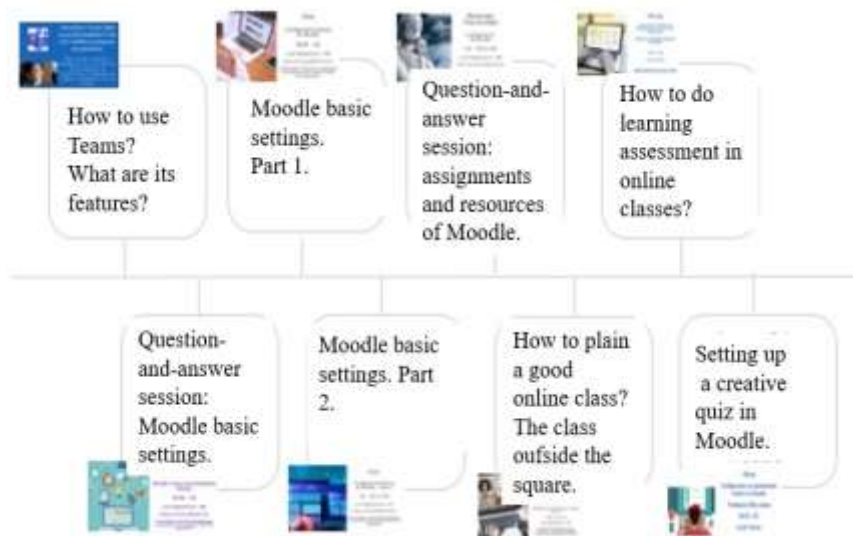

Fig. 3 Lives Transmitted by CVAPsi. Source: Own Authorship (2020)

Thematic lives and workshops were recorded and made available to the community in a folder on Moodle.

2.2.2. ACTIVE WHATSAPP COMMUNITY: Approximately two weeks before the school semester started, two groups were created with the members of the CVAP-Psi management team on WhatsApp: (G1) coordination and students; (G2) coordinators and collaborating professors. Due to the nature of instant communication of the WhatsApp, the groups function as the means of communication and decision-making between the members of the coordination team, despite the different functions and institutional status, it helped to establish a horizontal communication dynamic, in which everyone could criticize and freely expose their points of view without considering formal hierarchies.

The two groups discussed changes and proposed activities for the Community. In WhatsApp G1, demands were identified, tasks were delegated, the community results were

presented, folders for the dissemination of events and the contents of multimedia resources were approved, such as videos, polls, etc. In WhatsApp G2 the space is used for institutional issues debates that involve the functioning of the Psychology Institute and the demands of peers, as well as the definition of themes for the lives, workshops and other CVAP-Psi events, among other activities. However, on the initiative of the six graduate students of the CVAP-Psi organization team, a third group (G3) was created, where students, in an authentically horizontal relationship, discuss aspects of the functioning of the CVAP-Psi, raise problems that are referred to the other groups, discuss possible strategies to increase the engagement and involvement of the community that does not access Moodle, as well it served to define the content of posts on the Instagram, among other activities.

The participants of the CVAP-Psi management team demonstrated an integration and respect among its members, resulting in healthful relationships, both at the interpersonal as well as in the functional level (distribution of activities, definition of priorities, emerging actions and others).

2.2.3. INSTAGRAM COMMUNITY: Due to the low participation of the students in the Moodle environment and considering the actual context, where social media has an essential role in interpersonal relationships and public debates, an Instagram profile for CVAP-Psi was created, as a way to expand the virtual community.

On this profile, most publications were directed to the student groups of university, specially focusing on psychology students. The posts vary from tutorials about the new institutional platforms of UnB; study and organization tips; bulletins from the professors or the psychology course coordination; tips and reflections about self-care and mental health. As expected, in this new platform there was a better engagement from the students via commentaries, sharing, and direct messages. Currently, the profile has 116 followers.

2.2.4. YOUTUBE COMMUNITY: AUTHORIAL PRODUCTION OF VIDEOS: In August, the students from CVAP-Psi management created a YouTube channel to publish the videos produced in an open environment for other communities. These students have produced short videos organized in three categories, identified by their function: 1) tutorials; 2) mobilizers of emotions from CVAP-Psi; and 3) reports on experiences from students and professors.

In the first category, two tutorial videos were created teaching how to access and personalize the configurations from Moodle. The videos consisted of screen recording with guided narration in the background.

In the second category, the videos were created to generate reflections about the online learning process in a more relaxed manner. In the scripting phase, the content was developed, and after being approved by the professors it was transformed into a narrated text combined with images and gifs from digital pop culture references. The theme shared in the first video was concerning the importance of the responsibility in sharing of the information discussed from synchronous classes, with an emphasis on image rights and protection of the participants. The second video was about what the students consider to be an online learning process, and how to participate actively in a remote environment.

In the third category, eight videos were created from the reports of the on-line learning experience of students and professors, showing both difficulties and positive aspects. These videos were planned as communication vehicles shared in an online presentation table that happened at UnB University Week, entitled "New Institutional Connections in Pandemic Times". After the event, the videos became available in the YouTube channel for public access and were also emailed from the Psychology course coordination or from the WhatsApp group of department chiefs, for general access. The YouTube channel currently has 12 videos with 2 to 5 minutes of duration, and a total of 213 views (data collected on October, 10th ,2020).

2.2.5. EVENTS PERFORMED FROM CVAP-PSI TEAM: EXTERNAL AND INTERNAL COMMUNITIES: From the academic actions performed from CVAP-Psi, three are highlighted: the Conference, the Extended Meetings with the Psychology Institute Board, and the theoretical-practical meetings with the management team.

The "Online Conference: New Institutional Connections" was part of the program of the University Week of the University of Brasília (UnB), an annual event in which several meetings, workshops, debates, and interdisciplinary classes are held, and due to the context of the pandemic, it took place entirely in virtual environments in 2020. In this event, professors from UnB itself were invited, as well as professors from higher education institutions in other Brazilian states, such as Goiás, São Paulo, Pernambuco, and Rio Grande do Sul, totaling eight exhibitors. The topic of discussion was the challenges and possibilities found in different university contexts since the implementation of emergency remote education in March 2020, when the situation of the COVID-19 pandemic in Brazil worsened. The live video got 278 views and was considered a success both by the guests and by the academic community that was able to watch it.

The two Extended Meetings of the Board of the Institute of Psychology played an important role in creating the CVAP-Psi. The first meeting, held in July 2020, inaugurated a set of training and information actions on the creation of the Community. The main topics discussed by the professors were related to the elaboration of teaching plans that included the organizational and mediational forms of non-classroom teaching. This video was seen by almost 80 professors. The questions brought the importance of having a space for creating collaborative practices to face problems and unexpected situations. The second meeting was held in September 2020 and aimed to discuss the challenges and best practices carried out by professors in the exercise of online teaching. Fourteen professors participated in this event, creating a space for sharing difficulties and successes.

Meetings to discuss theory and practice were held weekly with students and professors from the CVAP-Psi management team, in a synchronous meeting through the Teams platform.

All these actions made it possible to achieve several benefits, among which we highlight: the strengthening of partnerships between professors from different departments; qualification of the teaching action for the use of Information and Communication Technologies in times of pandemic; dialogical approach in the relationship between students and professors; knowledge sharing and visibility of the use of technologies for innovation in the teaching and learning process.

Finally, it is worth mentioning some actions that still need to be implemented as strategies to expand and qualify the participation of the community, such as internal partnerships with other university organizations, such as the Academic Center for Psychology (CAPSI) and the Central Directory of Students (DCE); production of quality indicators and accountability to CVAP-Psi, with the preparation and dissemination of documents with quality parameters on the learning system based on ICT; and academic research on the integrated use of ICT in the teaching and learning process, in order to analyze what are the potential and new horizons that arise from these practices.

3. METHODOLOGY

3.1. INSTITUTIONAL RESEARCH ON THE CHALLENGES OF TEACHING IN REMOTE EDUCATION IN THE CONTEXT OF CVAP-PSI

To increase accountability to the community about the results of CVAP-Psi's performance, the management of CVAP-Psi and the graduate coordination of the Institute of Psychology built and applied a research instrument that could support the planning of actions for the year 2021, considering that CVAP-PSi was not an isolated action, some other resources and activities affected the teaching work.

The results found were constructed from the analysis of the open questions of the online questionnaire answered by the professors who were analyzed by the software IRAMUTEQ (Interface of R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires) [16]. This computer program is free and anchored in software R and allows different forms of statistical analysis on the textual corpus and tables of individuals by words.

Answer the research questionnaire 67 professors, 37 (55.2%) of whom were awarded public exams, and 24 (35.8%) of graduate students in teaching positions. Most participants are aged between 31 to 40 years (31.3%) and 41 to 50 years (23.8%) and are female (76.1%). It was also found that 91% of the participants (n = 61) teach at the undergraduate level, while only 47.8% (n = 32) teach classes for graduate studies in the psychology course. In order to ensure confidentiality, all participants were identified with the letter "P" followed by a number (from 1 to 67).

3.2. INSTRUMENT AND DATA COLLECTION

The survey applied to an online questionnaire that was available for 2 weeks on the GoogleForms platform. The instrument was adapted from two questionnaires that had similar objectives, although different audiences in the case of the first study, namely: Survey authored by the group of researchers under the coordination of prof. Dr. Ron Avi Astor MSW, Ph.D., Professor and Marjorie Crump Chair in Social Welfare Luskin School of Public Affairs Graduate School of Education and Information Sciences University of California, Los Angeles (UCLA) and the research group's authoring instrument prof. Dr. Melchor Sánchez Mendiola, Coordinator of Universidad Abierta, Innovación Educativa y Educación a Distancia - Universidad Nacional Autónoma de México. Both research groups formally authorized the use and adaptation of the instruments.

The online questionnaire had 29 closed questions and 7 open questions. It addressed the topics related to teaching challenges in times of pandemic, the experiences lived by professors, the best teaching practices, and the points of concern of professors in the period of the pandemic. The questionnaire was applied virtually through the GoogleForms platform. The Free and Informed Consent Term was applied and, therefore, only the respondents who gave the acceptance were able to complete the questionnaire.

For this report, only an analysis of the open-ended questions in the questionnaire was made using the data analysis software IRAMUTEQ (Interface of R pour les Analyzes Multidimensionnelles de Textes et de Questionnaires). This program allows the text data to be statistically propagating, building qualitative and quantitative information.

In this study, the Descending Hierarchical Classification (CHD) analyzes and the Factorial Analysis by Correspondence were used.

The descending hierarchical classification, CHD, also known as Reinert's method, correlates text segments, STs, in a hierarchical scheme, allowing the researcher to insert the content of the corpus, in order to properly name the class and understand the groups of speeches / ideas. According to reference [14], "the CHD classifies text segments according to their respective vocabularies, and the set of them is divided based on the frequency of the reduced forms (words already stemmed)".

This analysis aims to obtain classes of Elementary Context Units (UCE), by identifying the number of words, average frequency and number of hapax (words often one); it also searches vocabulary and reduces words based on their roots (stemming); creates reduced form dictionary, identifies active and supplementary forms) that, at the same time, present vocabulary similar to each other, and vocabulary different from the ECUs of the other classes [14].

Related to CHD, IRAMUTEQ also produces other forms of complementary analysis, factorial analysis by correspondence made from CHD.

Factor analysis represents on a Cartesian plane the different words and variables associated with each of the CHD classes. The interface makes it possible to recover, in the original corpus, the text segments associated with each class, at which point the context of

the statistically significant words is obtained, enabling a more qualitative analysis of the data". [14]

The general Corpus of analysis was composed of 64 texts (3 participants did not answer open questions). The texts were divided into 274 text segments (STs), with the use of 197 STs (71.9% of the total corpus). 9,704 occurrences (words, forms or words) emerged, with 2,047 distinct words and 1,184 with a single occurrence. The words most frequently used in the speech were "activity", "student" and "asynchronous", as shown in the word cloud below (Fig. 4).

Fig. 4   Word Cloud

As reported, data analysis was performed using the descending hierarchical classification tool (CHD) and confirmatory factor analysis (AFC), respectively.

4. FINDINGS

4.1. ANALYSIS BY DESCENDING HIERARCHICAL CLASSIFICATION - CHD AND FINDINGS

From the descending hierarchical classification, CHD, the content was categorized into 5 classes. The classes are presented by a central theme and by colors (See Table I), allowing graphic visualization and interpretation through Factor Analysis. See Table below.

Table I. Class, Theme and TSs

Class (C) and color	Theme	Texts Segments (TSs)
C1 - red	Study activities, evaluation activities and deadlines.	49 TSs (21.32%)
C2 - gray	Synchronous and asynchronous classes	34 TSs (17.26%)
C3 - green	Challenges of remote teaching work	38 TSs (19.29%)
C4 - blue	professor-student and student-student interaction	43 TSs (21.83%)
C5 - purple	Adaptation of the teaching plan and the quality of the offer	40 TSs (20.3%)

The C1 class called "Study activities, evaluative activities and deadlines" discusses how professors organized the discipline's learning activities. The question of the deadline for the delivery of activities and participation was a central theme, as reported by the professors: "(...) to achieve greater participation by students, the deadline for the delivery of activities is 2 weeks" (P16) The analysis of this the class revealed that professors perceived better involvement and accomplishment on the part of students when activities have a longer delivery time and when they participate in decisions related to assessments, assigning a pedagogical sense and a learning objective in their university education. In this sense, some professors have made adjustments in the planning to obtain greater participation: "I have been looking for feedbacks throughout the semester and trying to make adjustments over the period, I have already identified difficulties on the part of the students to meet deadlines and due to that I adopted flexible delivery dates" (P31).

The C2 class called "Synchronous and asynchronous classes" concerns the way professors have balanced the synchronous and asynchronous moments in their online classes. In this item, according to the professors' report, there is a mixture of synchronous and asynchronous moments. Synchronous classes have a massive presence of students, but only a small group of students participate in the discussions (and often, they are always the same) and asynchronous activities have a greater presence when counting points for the student's grade. professors recognize that asynchronous activities allow greater autonomy for students, but work better in balance with synchronous activities, which ensure a type of social presence, as described by P16: "(...) students see more prepared for the synchronous class after completing asynchronous activities, I consider synchronous classes essential for strengthening the bond among professors and students".

The C3 class named "Challenges of remote teaching work" expresses the way professors are experiencing this moment of disruption with the face-to-face teaching model, which brought challenges, demands, problems and difficulties to the teaching work, requiring the use of technologies in a short period of time, as stated by P20: "we need more time to handle everything, we are not robots to respond with quality and efficiency in such a short period". professors claim an overload of teaching work, with little time for learning and participating in continuous training to improve their use of technologies and also claim a lot of psychological pressure that goes beyond the limit of the teaching function because it is constituted in other social spaces, such as public health policies, global and national scenario of economic crisis, the deaths and illnesses of family members, which arises weariness, stress, difficulty to concentrate and to limit working time at home, producing excessive hours in front of the computer, which according to P20 "(...) we are not living in a period of normality and as a result, everyone's mental health does not allow us to respond with the same speed as before.

As for the suggestions requested from IP and CVAPSi, P30 argues that "there is a limit in this challenge, between what can be expected of us, and what can be done by the Institute of Psychology. But I notice that, in general, the demands have increased, because it takes more work, requires more time, a lot more presence in front of the computer, and exhausts much more to do remotely everything that was expected. Was it emotional? Exhaustion from being in front of the screen all day? Everything mediated by a single channel? I don't know what to suggest".

Professors were also concerned with the mental health of the community and with people's lives. Another theme that emerged was the concern with the proposal to reduce the number of semester days in the year 2021, maintaining the same credits of the subjects, making the teaching work even more intense. There was recognition of the importance of the activities offered by CVAP-Psi, although they claimed that they would like to have greater participation, but the scarce time and fatigue resulting from their essential teaching activities, made them impossible as highlighted by P41: "I just thank you for the competence readiness and generosity. I am happy to have this environment that supports the UnB of which CVAP-Psi is part of".

P33 made an interesting suggestion for CVAP-Psi: CVAP was a wonderful initiative and helped a lot, it is necessary to recognize the positive impact of this resource on our teaching practice. But if it were possible to "dream big", it would be very good to have a mentoring program that "matched" a novice professor (or less experienced in the use of technologies) with a more experienced one so that we could exchange ideas and have more individualized support. As well as the presence of a tutor with experience in remote teaching for each subject.

Understanding that C3 covers the other classes, it is noted that issues related to the challenges of carrying out activities other than teaching work in online teaching, are also converging with concern for students and the teaching and learning process. Questions also arose related to what is expected from UnB: "... there are many ways to learn how to use these tools, the biggest concern of UnB should be to consistently establish its proposal for remote work taking into account the contingencies of each one in the face of the COVID-19 pandemic scenario" (P44) and "we need funding to improve working conditions, in terms of updating equipment, buying applications and resources that improve the production of video lessons" (P19).

The C4 class called "professor-student and student-student interaction" shows how professors have perceived the new social and relational dynamics of remote education. In this class, professors report a great decrease in the level of social interaction with students and students among themselves. Although they perceive that synchronous classes are the moments that allow interaction in real time, through videoconference (Teams, Meet, Zoom etc), they report that many students remain with the camera and microphone closed, making interaction between colleagues and the professor difficult. According to P08 in short, we are producing much less spaces for effective exchange in debates, students are less placed and participate less. And for P49: synchronous activities allow interaction with students but some remain only as listeners.

Professors perceived that asynchronous activities give the student more freedom to choose study times, but there are few forms of psychological approach to students: "in asynchronous activities, depending on the types of activities, student participation is very distant with few possibilities for interaction with the professor and colleagues, who could greatly enrich their experience" (P46).

Some Professors used synchronous moments in order to enable dialogue and clarify doubts with the class, even recognizing the problems of participation by the majority.

The last class, the C5 named "Adaptation of the teaching plan and the quality of the offer" shows the professors' perception of the planning of the subjects. The professors considered that the school semester had a good performance, despite the restrictive conditions. This analysis is supported by P48's report: even with all the challenges and news, students are participating and carrying out activities, in addition to giving good feedback after changes, the teaching plan was consistent with the moment and with the objectives of the discipline.

Some professors made adaptations to the teaching plan for remote teaching mediated by the web resources, according to P53: I believe that we are managing to make good use of the discipline, the students are interested and participative, the teaching plan was adapted in order to have material accessible to students as well as classes are being recorded and made available afterwards. Other professors discourse:

> "The course was planned so that the deliveries and participations covered all the objectives of the course. The teaching plan is very flexible in relation to internet access and the activities are diverse". (P03).

> "The discipline already had practical activities and case studies that were quickly adapted to the remote so synchronous discussions became more dynamic and students were able to learn more autonomously without loss of quality". (P57).

4.2. FACTORIAL ANALYSIS BY CORRESPONDENCE AND FINDINGS

As mentioned, to understand the strategies used and the challenges faced by professors in Emergency Remote Education (ERE), we also used Factorial Analysis by Correspondence. This analysis is performed through the association of words with the speech, considering the significant frequency ($x^2 > 3.8$; $p < 0.05$) of joint incidence of words within the Classes. It enables the creation of a representation of the words in quadrants in a Cartesian plane (Figure 5), making it possible to understand how the set of classes is presented and complemented. The most frequent classes were: Adaptation of the teaching plan and quality of offer (C5) and Study activities and evaluative activities and deadlines, with theme 1 at the center of all quadrants (C1).
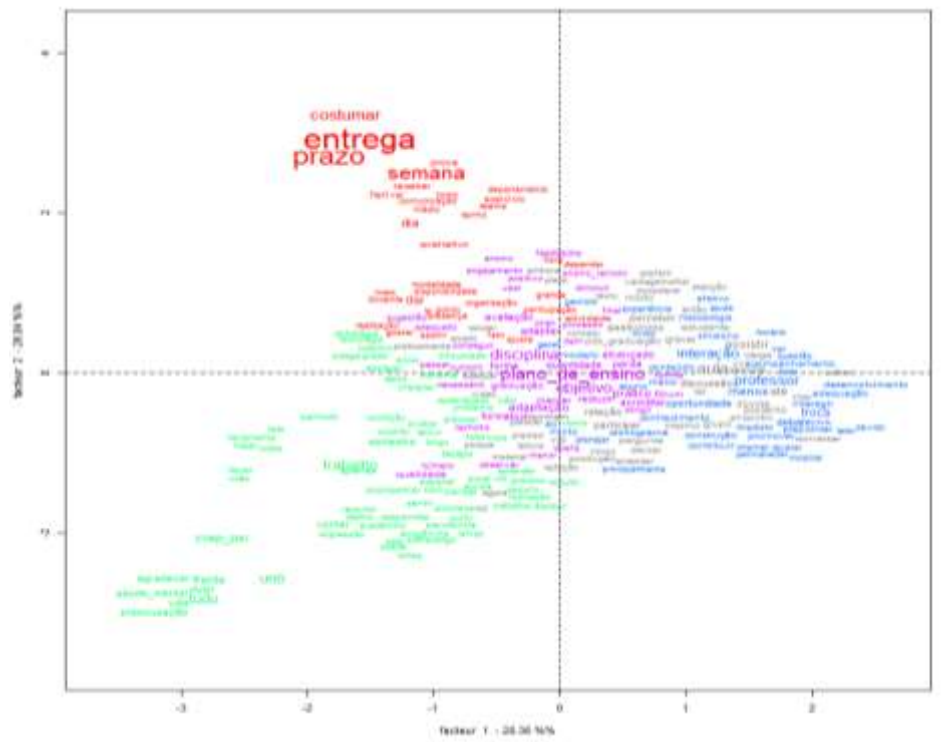

Fig. 5 Factorial Analysis by Correspondence

Legend C1- Study activities, evaluative activities and deadlines (red); C 2 - Synchronous and asynchronous classes (gray); C 3 - Challenges of remote work (green); C4 professor-student and student-student interaction (blue); C5 Adaptation of the teaching plan and the quality of the offer (purple).

In the analysis of Figure 5, it is noted that C2, Synchronous and asynchronous classes (gray), is distributed among the other classes, mainly between C5 (Adaptation of the teaching plan and the quality of the offer) and C4 (professor interaction student and student-student). It can be inferred that this fact highlights how much the decision for synchronous and asynchronous classes is influenced by the academic decisions related to the adaptations of the remote teaching plan and the perceptions about the quality of the professor-student and student-student interaction during the semester.

There are two classes that distance themselves the most from the central point of the C5 word set (Adaptation of the teaching plan and the quality of the offer): C1 class (Study activities, assessment activities and deadlines) and C3 class (Adaptation to remote work). Thus, a set of C3 terms that is more distant from the other classes draws attention: to thank, mental health, everything, concern, living and life. In Fig. 5 the correspondent words in

Portuguese (green) are: agradecer; saúde-mental; Tudo; preocução; viver; vida. The concerns related to the context of pandemics and remote work that involve mental health and life changes are related to the other points such as the teaching plan and classes, however, they also seem to constitute a particular concern.

In addition, it is noted that the words "CVAP-Psi" and "unb" are a little further apart, and weren't articulated with the rest of the speech. The questions on the questionnaire related to CVAP-Psi, had thank you responses for the support and recognition for the work done, as pointed out by P33: "CVAP was a wonderful initiative and helped a lot, it is necessary to recognize the positive impact of this resource on our teaching practice. But if it were possible to "dream big", it would be very good to have a mentoring program that "matched" a novice professor (or less experienced in the use of technologies) with a more experienced one so that we could exchange ideas and have more individualized support. As well as the presence of a tutor with experience in remote teaching for each discipline".

In other suggestions from the professors, it was also registered the importance of improving the communication process, promoting a more horizontal communication and allowing colleagues from all departments to exchange their experiences. The various aspects mentioned in the research results supported the elaboration of the CVAP-Psi's Action and Intervention Plan for the next semester, as described below.

5. DISCUSSION OF THE RESULTS

5.1. CVAP-PSI'S PLAN FOR THE YEAR 2021 BASED ON THE SURVEY FINDINGS

The results of the research on the challenges of teaching in Emergency Remote Education brought several subsidies for planning the future actions of CVAP-Psi. The analysis showed that remote education in a time of pandemic, due to contextual, socioeconomic, public health and governmental issues, also brings weariness and psychological pressure that impact the teaching work. Such issues focus on a concern with the mental health of the teaching and student community, as well as with the planning and organization of the teaching and learning process.

Thus, CVAP-Psi's planning includes a set of activities and interventions that aim to enlarge not only the means of communication, but also the proximity between professors, horizontal dialogue and socioemotional closeness between professors and students; articulating their actions with further institutional instances, who played as service providers and important support resources to professors and students.

Among the strategic and emergency actions, we highlight the following: a) Promote expanded meetings with an agenda about possible solutions for the points related to the tiredness of virtual teaching work; b) Offer continuing education courses for the field of digital technologies applied to teaching; c) Produce a collaborative set of didactic and pedagogical guidelines as qualitative parameters on the most controversial topics found in the research, such as: longer and/or flexible evaluation deadlines for the subjects; effective ways to build asynchronous classes that provide some level of interaction and engagement (feedbacks, more interactive forums); active online methodologies for carrying out activities that also encourage participation in synchronous (questions, games, debates) and asynchronous classes; definition of the format and number of synchronous and asynchronous moments; strategies on how to measure presence in online activities. And finally, share and discuss teaching experiences and practices within the community in order to expand the possibilities of combining multimedia resources and teaching strategies, in synchronous and asynchronous moments, emphasizing the sense and meaning of learning for students. Specifically, it is expected to promote greater participation in the activities proposed through the use of other resources (booklets, short videos, podcasts, meetings and others).

6. CONCLUSION

The article aimed to describe the report of experiences lived in the implementation of the Extension Project Virtual Community of Learning and Practice in Psychology (CVAP-Psi), as well as to present the results of evaluation of the challenges of teaching in remote education in order to provide subsidies for the planning of actions for 2021. The CVA-Psi experience has shown that technologies become potential resources for social interaction, with the potential to sow open and spontaneous relationships for the development and learning in new social formats.

Regarding the institutional research that was carried out in the Institute of Psychology community, we highlight the relevance of articulating the field of empiricism and the theoretical field of CVA in the use of ICT in higher education to mitigate the effects of the pandemic in higher education. The research made it possible to analyze the complexity of the nature of professional practices and the disruptive teaching practice scenario that is expressed in making professors in remote education, totally online, in times of pandemic. It also revealed a restricted participation of professors and students that challenges CVAP-Psi's management to plan and build communication channels to generate greater participation. It can also be seen that the micro social scenario of research at the University is limited to the national and global scenario of the pandemic, in which the high levels of contamination and deaths in the country and in other countries are causing social and emotional instability, generating effects for the teaching work. In this way, several actions were recommended for CVAP-Psi to facilitate dialogue and integration of community actions with other services of the Institute and the University, strengthening the sense of community project.

In the scope of the research, other theoretical issues were imposed to the CVAP-Psi agenda: how to develop a practical learning community composed of professors and students, with horizontal discussions about their own practices in a university community used to vertical and hierarchical relationships? How to transform a bureaucratic and institutional space like Moodle into a community of practices, distancing itself from academic productivity and valuing empirical and subjective experiences?

Nevertheless, when looking critically at the unprecedented context of disruption of face-to-face education for online teaching, we understand that CVAP-Psi, in addition to its broad learning functions, has also been configured as a support network and a welcoming channel for professors and students. The support services provided by CVAP-Psi provided a sense of belonging and essential social support in the contexts of a pandemic crisis. Therefore, even without a direct participation in activities, the existence of the community itself was able to mobilize feelings that served to keep the feeling of security within the university community. An unprecedented fact in the community that was not initially foreseen was that managers have become reference sources and facilitators of learning, even being outside the Psychology community.

Other issues that have emerged refer to the apparent difficulty of professors to work as a team and to share practices and experiences with their peers. While most students are 7.used to working in small groups, precisely because it is a methodology highly encouraged by professors, the condition of a professor seems to hinder spontaneous, collective participation, which is precisely one of the epistemic bases of the learning and practice in remote communities [6].

Finally, we recognize that the challenges faced in the crisis also generate opportunities to rethink the way in which higher education is offered in the long term and prepare universities to deal with current and future crises, optimizing partnership and collaboration and recognizing experience and practices generated in this period.

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