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ICT Use and Importance in a Higher Education Institution in the city of Belém do Pará by Coordinators, Teachers and Students

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Abstract**—** *The aim of this study is to analyze the educational community, the CESUPA (IES) and the students, education professionals, teachers and coordinators, as the insertion of information and communication technologies (ICT) can influence in the learning and teaching process. The study focused on the perceptions about the limits and possibilities of teachers' performance in the face-to-face higher education modality offered by an HEI and seeks to identify aspects that can determine the teacher's performance associated with the use and exploitation of digital media in higher education and as these can contribute to the formation of an Educational Methodology for face-to-face higher education. For this purpose, a field survey was conducted in four physical units of the CESUPA academic community. The elements that form the sample are related to the characteristics established in the objective of the study, taking non-probabilistic samples of the intentional type or rational selection. The research chose to use the questionnaire with the education professionals (teachers and coordinators) of the academic community of CESUPA (IES). It is raised in this context as a requirement that the school intends to develop in its students an active and critical thinking. This leads to a cooperation between teacher and students so that an intellectual growth of this relationship can be triggered, with the teacher taking into account the difficulties of each student. In addition, the use of electronic games as a pedagogical tool in several disciplines in the HEIs is identified because they are fun, entertaining, yet educational experiences with the potential to reduce the gap between the theoretical and practical knowledge of the trainees and help the insertion of more professionals prepared for the labor market. The study also made it possible to verify that ICT is already part of CESUPA's routine, whether through electronic games, online questionnaires, TV, research, among other strategies, with professors affirming their constant search for inclusion in the teaching and learning process of digital media. However, it was evidenced the need for continuous training for teachers, who still do not feel prepared to deepen the use of ICT in order to promote meaningful learning, a factor also perceived by managers and students. This study contribution is the proposal of a an approach to take advantage of ICT in higher education, involving professors, students and management in order to produce incremental improvements in the teaching and learning processes.*

Keywords**— *Information and Communication Technologies, Higher Education Institutions, higher education, face-to-face teaching, CESUPA.***

I. INTRODUCTION

This is the civilization of knowledge and information, where the mode of production becomes that of knowledge, no longer that of goods, and the labor force passes from the arms to the head. If organizations are not aware of this paradigm shift now, there will be no future for them, they will all be fatally doomed to failure (ARAÚJO; GOUVEIA, 2018).

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Education in general also suffers the effects of these paradigmatic changes (KUHN, 1975). This research aims to understand the impact of the use of Information and Communication Technologies in face-to-face higher education, enabling diagnosis in a Higher Education Institution (HEI). This assessment is carried out through the perception of the actors involved, namely coordinators, teachers and students, in the context of higher education and the use of information and communication technologies to support the teaching and learning process. It is believed that it is a precondition for the use and exploration of information and communication technologies (ICT) in teaching and learning activities, the perception that its actors have about them (ARAÚJO; GOUVEIA, 2018b).

II. INFORMATION AND COMMUNICATION TECHNOLOGIES APPLIED TO TEACHING

The study assumes that we are under the strong influence of an information and knowledge society (SIC), in which the role of technology is central, as a mediator of value interactions in our society and also in the acquisition of knowledge (ARAÚJO; GOUVEIA, 2018c). It was thus argued that in this society, the fact that the subject is able to acquire and process information is valued, giving it a new meaning so that it can be transformed into information and knowledge and for society to achieve this true CIS status - placing the individual's ability to deal information, digital and ICT, at the center of the action (ARAÚJO; GOUVEIA, 2018c).

In addition, it is exposed that the human being started to expand his channels of expression, from rudimentary language to cybernetic language. While this whole process would serve to explain that political systems would not be born out of nowhere, since they would need a means of preparation so that they could promote themselves in an ideological, physical and social way (ARAÚJO; GOUVEIA, 2018). In this context of SIC, this concept of culture has also been attributed a new meaning, adapted precisely to this technological environment. This digital culture can be understood, not as a simple technology, but as a whole system of values, symbols, practices and attitudes that involve the technological universe (ARAÚJO; GOUVEIA, 2018c).

The historical path of SIC followed the evolution of technologies at the same time. This provided individuals with a perception that the more access to information there was, the more they believed they had knowledge about all things. However, it is important to mention that the study positions itself stating that it was not technologies that shaped and transformed society, this is because society is the one who shapes technology according to its own needs, priority values and the interest of individuals who use technologies. Thus, what the proposed approach seeks to bring is the use of technologies by society as a way of accessing information and, consequently, developing knowledge to operate at SIC (ARAÚJO; GOUVEIA, 2017).

The study also includes the position that access to information that was previously restricted to the adult universe, now also reaches children and adolescents. In this context, childhood is faced with a new reality, distinct from films and children's characters. The formation of identity and the building of knowledge of this generation are consolidated regardless of the will and administration of parents and institutions, such as the school. Children informed and encouraged by what they do especially on the Internet, which gives them greater autonomy. As a result, they face the digital world in a natural way that causes the astonishment and administration of the elderly (BENTO; GARCIA; GRAÇA, 2010).

The young person may not be “owner” of his own life, of his own room, but he considers himself sovereign in his virtual spaces and activities. This feeling may have some kind of relationship with a new form of self-education that challenges the school and, consequently, the entire field of education, knowledge production and teacher training (DEMO, 2008). In this way, information becomes the core and the medium for production and consumption goods in the global market and generates interpersonal and knowledge relationships quite different from the traditional forms established and expected in the school context.

In this sense, education becomes a fundamental element for the formation and acquisition of these skills prioritized by this society. This is because the subjects who are devoid of them, are not valued in the SIC and run the risk of being excluded. Therefore, education must pay attention to new spaces and technologies aimed at teaching and learning, enabling the production of knowledge through these information and communication technologies, in disruption with the traditional stages as defined by Piaget (1986).

III. ON-SITE HIGHER EDUCATION IN BRAZIL AND THE STATE OF PARÁ

Taking into account higher education in Brazil and Pará, its evolution and considering public policies for evaluation and financing, it appears that the panorama in

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the State of Pará indicates that higher education needs more attention (ARAÚJO; GOUVEIA, 2018c).

Considering that Higher Education comprises teaching, research and its demanding extension of applied work, it makes the issue addressed here and associated with the use and importance of ICT for the teaching and learning process, just one of the components to take into account in the higher education context. For example, in medical schools and dental schools, the complementarity between teaching and learning, extension, projects and research, translates into a complexity quite different from the same concerns, for example, in Social Sciences. However, considering the object of this study, the perception of the use and importance of ICT, for teaching and learning, these differences do not arise.

Thus, in the field of teaching, which includes the undergraduate level and the postgraduate level, including the Masters, Doctorate and Full Teaching levels, they are also referred to as postgraduate teaching has a common context that allows for their joint study , with regard to teaching and learning practices using ICT. The general part of the academic education of higher education institutions includes the main theoretical and abstract elements, as well as the applied aspects associated with the specific knowledge of each area. Isaia and Bolzan (2001) argue that teacher training is a continuous learning process. Thus, the authors defend the relevance of the study carried out as a way of assessing the level of predisposition for practices associated with the use and exploitation of ICT in the teaching and learning processes.

In addition, Higher Education that takes place at Universities generally focuses on practical applications through the application of specific theories. In the current scenario of Higher Education in Brazil, there is an increase in the student population, also due to the government financing, through the Student Financing Program (FIES), a greater number of students in private higher education institutions. A larger, more diverse population also increased dropout rates. In this context, Gessinger et al (2016) propose the pedagogical use of technological resources as a strategy to qualify teaching and contribute to reducing evasion in higher education, making the use of ICT even more relevant, also due to the need for practical support combating evasion.

Regarding Education, the State of Pará has numerous educational institutions, the most reputable ones are located in the Metropolitan Region of Belém and in other medium-sized cities. Education in the State is positioned, in the Brazilian context, as being the twenty-sixth when compared to that of the other Brazilian states. Among the higher education institutions in the state, six are public academic institutions: Universidade Federal do Pará (UFPA); Federal University of Western Pará (UFOPA); Federal University of the South and Southeast of Pará (UNIFESSPA); Federal Rural University of the Amazon (UFRA); Pará State University (UEPA): and Federal Institute of Pará (IFPA).

Among the main private higher education institutions in Pará, the following stand out: the University of the Amazon (UNAMA); the Pará University Center (CESUPA); the Integrated Faculty Brazil Amazon (FIBRA); the Lutheran Institute of Higher Education of Santarém; the Pará Higher Education Center; and the Integrated Colleges of Tapajó.

The Map of Higher Education in Brazil (SEMESP, 2015, p. 168) describes that the State of Pará has 34 higher education institutions and 2% of enrollments are in classroom courses. The city of Belém has the highest number of enrollments, 85 thousand enrollments, corresponding to 68% of the students. The publication also narrates that in 2013 there was a 0.3% drop in enrollments in the private network of 56 thousand enrolled students dropped to 55.8 thousand enrollments. In the public school system, the opposite occurred, an increase of 9.6%, going from 63.5 thousand students enrolled to 69.6 thousand enrollments in 2013. Another relevant data regarding the face-to-face higher education of the State of Pará and that the In 2013, the number of students enrolled in face-to-face courses decreased by 2.4%, from 23 thousand students in 2012 to 22 thousand in 2013. In the public system, the fall was 4.9%, from 17 thousand in 2012. 2012 to 16 thousand in 2013.

IV. MATERIAL AND METHODS

The research comprised a case study with subjects as managers, students and teachers of a private Higher Education Institution in the city of Belém do Pará. It was an exploratory study, using a questionnaire for data collection. Marconi and Lakatos (1996) narrate that the choice of the method and technique used, depends on the objective of the research, the available financial resources, the team and elements in the field of investigation (ARAÚJO; GOUVEIA, 2018c).

Subjects from three different HEI areas were interviewed: Biological and Health Sciences, Exact Sciences and Technology and Applied Social Sciences, in the four physical units of CESUPA. The research chose to use the questionnaire, and non-probabilistic samples of the intentional or rational selection type were considered, with a total of 27 teachers interviewed, all 09 members of the

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pedagogical team, 19 students and all 13 course coordinators. The objective of the research was to raise the perception of the use and importance of ICT for teaching and learning practices in the context of higher education (ARAÚJO; GOUVEIA, 2018).

V. RESULTS AND DISCUSSION

TEACHERS' PERCEPTIONS

The first part of the survey maps the profile of teachers, identifying that the composition of masters is equivalent to 59% of the total, followed by doctors with 26% of the teaching staff, followed by 11% of specialists and only 4% of post-doctors. , with 56% of the total teaching exclusively at the HEI. This profile is in line with other Brazilian higher education institutions and also demonstrates a potential for growth in teacher training. On the other hand, it appears that the majority of teachers are in exclusivity, which translates into a significant work potential (FRY, KETTERIDGE; MARSHALL, 2009).

Half of the participants replied that they work Partially, that is, 12 hours or more during the week at the IES, the hourly workers, who work per class hour make up a total of 38% and the smallest part work full time, 12% of the total. total working 40 hours a week. It was found that 32% of the research participants work between 10 and 15 years at the institution, 24% work between 5 and 10 years, 16% between 1 and 5 years and with the same percentage of teachers over 15 years at the institution. In this context, we can say that the faculty has experience, with the majority having 5 or more years. On the other hand, there is a potential for overload for teachers to claim to be with 12 hours or more per week of teaching load. These values are also in line with those reported in the context of SEMESP (2015).

We can thus observe that in relation to the years that work in general in higher education, that is, whatever the institutions that work or have worked including the HEI itself, 63% has been working for more than 10 years in HEIs, 18% between 5 and 10 years, 15% between 1 and 3 years and 4% less than 1 year. It is noticed, therefore, that the teaching staff has relative experience with higher teaching - soon able to reflect on the use of ICT in the classroom and possess a personal experience that supports their perception (FRY; KETTERIDGE; MARSHALL, 2009).

The second part of the questionnaire addresses the identification of practices used by the traditional teaching methodology. The answers largely reflect the reality of HEI classrooms, expository classes, group activities, use of datashow and computer. These practices were mentioned a number of times in the questionnaire, which shows a low level of innovation in the way of transmitting knowledge. However, some research participants talked about interesting practices that should be disseminated in the faculty - there is a smaller set of teachers who undertake alternative teaching experiences in the classroom context (FRY; KETTERIDGE; MARSHALL, 2009).

Among the pedagogical practices mentioned are: the use of applications such as Kahoot and Plickers, which are question and answer applications that allow interaction between a group of students on their respective cell phones, Socrative, an application that follows more or less the line from Kahoot, allowing interaction between users, Padlet, which is a kind of community mural where students can create murals on different subjects, is a sheet of paper online. In this context, there are numerous practices that are being developed, as is the example of Martins e Gouveia (2019), using inverted classroom strategies; or using Facebook (MARTINS; GOUVEIA, 2019a) or WhatsApp (MARTINS; GOUVEIA, 2019b), for classroom support.

The second block of subjective research questions deals with the identification of the results of the practices adopted by the Traditional Teaching Methodology. The research participants agree that yes, the practices adopted generate learning, however some considerations were made, among them: the caveat that the use of conventional classes alone does not generate learning if there is no motivating element. This observation is in line with recent studies that propose new strategies to involve students and promote new teaching strategies in the classroom (WIEGEL, 2020).

The third block aims to identify the main factors that lead students to failure in school and the questions ask about what are the main learning difficulties of students in relation to teaching and learning.

Teachers were asked what are the main factors that lead students to poor school performance (not school achievement). In addition to the lack of interest, immaturity, comfort zone, gaps in prior knowledge, among other motivators referred to the lack of academic achievement, the need was identified for the student to learn to study and not just be led by the school, through assessment , certain subjects in certain situations. This was the most relevant contribution as an aspect that, in addition to the traditional references (FRY; KETTERIDGE; MARSHALL, 2009), which was pointed out for the non-realization of knowledge.

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Most of the research participants use technological resources in the classroom to solve the learning difficulties, most of them use computers and cell phones to access research on electronic sites. These practices are also in line with those described in (MARTINS; GOUVEIA, 2019a; MARTINS; GOUVEIAb).

In this context, it is important to highlight that the teacher, like any other professional, needs to maintain a continuous education, always aiming to follow the new demands of society, thus enabling the construction, socialization and confrontation of knowledge (WIEGEL, 2020).

Regarding the technologies that teachers would like to have in the classroom, tablets, computers, cell phones, new programs, mannequins, Internet connection were mentioned, among others. It is important to emphasize that even those who do not use technology in the classroom would like to use it. Thus, it is believed that, with incentive, its use can be enhanced, because at least apparently there is this desire on the part of teachers.

As for the actions that should be taken for the use of ICT in the classroom, aiming at improving the teaching and learning process, it is clear to the interviewees which actions to take - improvement and training. However, what has been demonstrated is the teachers' lack of attitude towards applying what they have learned, in order to incorporate new processes into their classroom practices. It is worth noting that the lack of continuing education and, also, the lack of disciplines in undergraduate courses focused on the use of ICT that still prevail in many educational institutions, make it difficult for teachers to use and explore them. . This difficulty ranges from the simple use of a computer to the design of a class and / or content to use in the teaching and learning processes.

On what are the actions that should be taken to overcome learning difficulties through the use of information and communication technologies, the most relevant are proposed: the Internet of good speed in the HEI for the use of applications; the teaching qualification for the use of ICT; multimedia equipment in classrooms and form forums on social networks to generate learning.

Finally, we sought to know what teachers would like to add because they consider it important in the context of the use of ICT in higher education. These, reaffirmed the importance of ICT in a context of globalization, allowing us to connect people to the world. They again defended that teacher training for the use and exploitation of ICT is fundamental, especially tools. cHowever, it was also stated that there are barriers to the use of certain tools (cell phones, access to Facebook, just to mention two examples). In this context, it is necessary to understand the obstacles to the use of ICT and promote the training of teachers so that the use is profitable and a context that enables their use, whether in operation, or in rules and modes of use in the classroom. An in-depth discussion of these conditions is developed in Wiegel (2020).

PERCEPTIONS OF STUDENTS

As for the gender of the research participants, it was well divided, 53% of the students according to the survey are male and 47% are female. Obtaining a sample in which the gender equality is patent.

The second question refers to the age range of the participating students. The result shows that most of the students participating in the research are between 20 and 25 years old, making up a percentage of 63% of the total, then both with 16% are those who are under 20 years old and those over 30 years old , while those between 26 and 30 years old occupy the smallest slice with only 5% of the amount. These values are in line with the age group considered to be the most common of the traditional higher education population (SEMESP, 2015).

At the end of the block of objective questions that outline the profile of the participating students, the academic semester of the interviewed student was identified: 32% of the students attend the 2nd semester, followed by the students who attend the 4th and 8th semesters with 16%, with 11% those in the 10th semester, in the 6th and 9th semesters have 10% of the students each and in the 7th semester 5% of the students.

The second part of the research is composed of subjective questions divided into 4 blocks. The first question in the first block asks the research participants whether they consider the way the classes are taught, the pedagogical practices used by the teachers in the classroom, and whether they are appropriate to the content exposed. Among the survey participants, 58% say they know the reason for the use of such pedagogical practices by teachers and 42% say they do not know why. There is thus an almost equal division between those who understand the methods used and those who do not understand why these methods are adopted in the classroom.

The positive points mentioned are associated with the teacher's mastery of the subject. The connection between the content seen in the classroom and everyday life was also listed as a positive factor. The negative points

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listed are associated with the way of teaching by some of the teachers who are considered very traditional: students argue that the classes merely expository generate discomfort and demotivation. They also emphasize the reading of articles in full in the form of a monologue without proper interaction with students. In practice, these aspects are pointed out by the literature and are recurrent, as already discussed in (FRY; KETTERIDGE; MARSHALL, 2009).

The second block of the research deals with questions about the identification in the students' view of the results of the practices adopted by the Methodologies associated with Traditional Teaching.

It is noticed with the result of 84% of the students affirm that the pedagogical practices adopted by the teachers make it possible for the students to learn that, in general, the teaching performance in the classroom is positive. This does not prevent 16% of students from pondering their responses with considerations and conditioning for the possibility of learning. It is worth noting that no student explicitly denied that the practice adopted by teachers is successful in learning, in addition, those who did not fully agree only made considerations and cited that there are in practice specific techniques for each course and discipline that justify certain approaches.

In the third block of the survey, participants answered their main learning difficulties. It is noticed that a good part of the research participants attribute the difficulties to the teaching and learning process and to tertiary factors, such as: the way the teacher “passes” content, little time available for reading, “heavy” content, many subjects at once, among other less common justifications. It is noteworthy that few students responded in such a way as to assume and bring responsibility for learning difficulties. It is observed in some speeches that the greatest difficulty when it is attributed to the student, are issues such as: lack of initiative for studies, laziness, and some disorders such as attention deficit and anxiety. Also at this point, the observations are in line with the literature and recent studies on the classroom (WIEGER, 2020).

Concluding the third block of research questions, the students participating in the research mentioned among the main factors that lead them to have learning difficulties in a content: monotony in class, lack of time for reading, lack of interest and accumulation of activities.

The last block identifies the changes that should occur in the Traditional Teaching Methodology with the use of information and communication technologies, with 89% saying that they use technological resources to try to overcome learning difficulties and only 11% do not. It is perceived that the use of technology is already part of the students' daily routine and that it is already a tool to elucidate questions of doubts and difficulties, and its use should be improved, both for students and teachers.

Therefore, it must be clear who does and what does, in a successful teaching and learning process, as students who do not even have clear procedures and practices that can help them assimilate the contents, will certainly have more difficulties. The teacher must, together with the student, lead the involvement of the parties and the motivation in learning.

PERCEPTIONS OF COURSE COORDINATORS

The initial questions were aimed at identifying a profile of the coordinators. The data collected show that the training time of the coordinators ranged from 8 to 34 years, an overall average of 20.5 years of training time, which can be considered high, and it is observed that 68% of education professionals have between 11 and 30 years of professional training and can then be considered experienced professionals.

Their specializations were also raised, taking into account postgraduate, Master and Doctorate qualifications. It was found that 46% of the coordinators have a specialization course, 68% of them have completed the Master's course, and that 38% have a PhD course. There is considerable potential for qualification here, considered to be higher education.

Analyzing the training time, it appears that 61% of the coordinators have more than 10 years of training time. It should be noted that the training of professionals in each area contributes to the improvement of their area of expertise. For example, the training of good education professionals, who master diverse teaching methodologies, provide an improvement in the teaching and learning relationship.

As for the time of experience as a coordinator at Cesupa, 54% of the coordinators have less than 5 years of experience in their activities. Even expanding the sample's scope a little more, it turns out that 73% have less than 10 years of experience as coordinators. Thus, 23% can be considered experienced professionals, as they have more than 10 years in the job.

With regard to acting in the classroom, directly with students, all Cesupa coordinators (100%) teach. In this context, having to do more at the same time prevails, thus modifying the coordinators' ways of thinking, feeling

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and acting, but also guaranteeing their connection to the field and being in direct contact with the students.

Still in the analysis of the context of the activities of Cesupa coordinators, we sought to know how many professionals performed activities in other HEIs. Thus, 15% of the coordinators are active in other HEIs. Highlight for the time that coordinators work in more than one HEI: one of them for 12 years, another for 23 years and another one who had worked for more than 5 years.

The second part, composed of subjective questions initially considers the identification of the role to be played by teachers in the current moment, with a limited view of the question, at the personal limit, but with a complementation between the answers that partially portray the reality experienced . Some clarified more what would be the role to be played by teachers in the current moment, being a tutor, someone who presents options and discusses them with the student, because the content is available to anyone, but the experience, the exchange is that enhances learning.

We also sought to know what the student's understanding of a good experience would be in the course. From the answers given, the coordinators understand that taking advantage of all learning opportunities to consolidate theoretical and practical knowledge, and especially the practical one. Additionally, it is also important to generate enthusiasm / motivation to learn; support reasoning and the scientific method; forming solid knowledge and being able to make practical applications. Finally, the monitoring, in addition to continuing; to foster student participation effectively in its transformation or development, making it an active and involved element.

It appears that the role of technologies in the teaching and learning process would be to assist the student of this generation, who has difficulty concentrating in dialogued expository classes; facilitate the development of knowledge, humanism, critical sense and ethical sense, in the student; facilitate the relationship between the teacher and the student; and to allow the development of new skills and competences.

As for the question that investigates what experiences involving students and ICT that they could share in this study, many projects were reported. Countless teachers developed experiences using cell phones, chats, video classes in their subjects; gamification platforms, among others.

The final question showed that Cesupa coordinators consider it important in the context of the use of ICT in higher education. They reported that teachers should try to find out more about the subject, as well as invest in training. In turn, HEIs must propose to students, rules and methods of using them, so that the learning process is not distorted through ICT. In addition, they must use the tools to enhance their development.

From the students' point of view, it was also possible to observe that teachers during the semesters tend to increase pedagogical practices, perhaps in order to hold attention and motivate students through adaptations of previously used practices.

PERCEPTIONS OF THE PEDAGOGICAL TEAM

The questions addressed for the interview were the same as those used with the course coordinators, since the pedagogical team (called COGRAD) is also considered as Manager, in the IES organizational structure.

Regarding the professional training of the team, it was found that 100% are graduated, covering the areas of Administration (01), Pedagogy (04) and Psychology (04). The training of team members is, therefore, aligned with the sector's mission and purpose.

Regarding the time of professional training, it is observed that 78% of education professionals have between 11 and 20 years of professional training and can then be considered as experienced professionals. This condition is evaluated as positive, since the experience comes from the pedagogical practice.

Then, the team's specialization began to be investigated, mostly composed of Masters and Doctors (56% and 22% respectively), with two people (22%) having a specialization course. Regarding training time, teachers have a variation of time ranging from 1 year to 17 years, with an average of about 10 years of training in general.

As for the length of experience, 5 respondents have up to 5 years of experience and 4 have worked between 6 and 10 years. Only two professionals have worked for less than a year, as CESUPA's manager and the others have experience in the function. Six of the nine respondents have more than five years of experience. Research participants were asked whether they also work as professors at CESUPA, three of whom responded positively and five are not professors at CESUPA and only one is a graduate professor - Specialization.

Still in the analysis of the context of COGRAD's activities, it was sought to know how many professionals performed activities in other HEIs, the interviewees answered that 100% work exclusively at CESUPA. This is

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due to the HEI's own policy in this case study, which does not allow managers to teach in other private HEIs.

The second part of the interview sought to understand the strategies for the use of information and communication technologies, in the context of CESUPA's teaching / student support team. In particular, what would be, in your opinion, the role to be played by teachers in view of the current moment. Due to the responses, it was observed that the role as a facilitator is well highlighted in the speeches, where the role of the teacher is to provoke knowledge and that the student is also an author in the teaching and learning process.

Another question, related to what is considered to be a good student experience in the course, the responses of the research participants revolve around the students' learning for application in professional life, as well as in methodologies used by teachers in the teaching and learning process .

Then, we sought to know the role of technologies in the teaching and learning process. The vision of a tool that makes it different in the teaching and learning process was mentioned, making it more dynamic, decentralized from the figure of the teacher as to the acquisition of knowledge, where he becomes the mediator and facilitator and no longer the figure central part of the process.

The next question investigated which experiences involving students and ICT could be shared in this study. Only one teacher had experience to share that it was the monitoring of the use of the Moodle platform by teachers, which leaves a lot to be desired in this regard, given that the use of ICT was mentioned as an important tool for the teaching and learning process. Contradicting them, they still don't use ICT in their classes.

The answers provided in this qualitative stage confirm the answers obtained in the first stage of the interview, when the majority of the team answered that they do not teach (do not work in the classroom). This can be harmful in a way, because as the team does not have experience in the classroom at the HEI, it is unable to visualize the practice of the HEI professors, and may suggest or give examples when teachers question. Additionally, students and the challenges posed by their profiles in particular do not experience first hand.

In presenting the teachers' view as a pedagogical team, it is important to highlight that several difficulties were identified: many of the teachers have years of training and did not have a pedagogical or continuing education, being unaware of information and communication technologies, their use and exploration in class. In addition, they reject their use or even feel afraid to use ICT. Teachers with more recent training suffer from the fact that many colleges still do not include in their curriculum subjects for use of ICT in the classroom. Thus, they feel lost to include them in their pedagogical practice. Others just reject the use, believing it to be unnecessary and that in no way contribute to learning, not making an effort to learn ICT.

VI. CONCLUSION

The research provided the analysis and discussion of the data collected from the questionnaires that allowed to form the individual perception of the interviewees and to confront this, with the view of the Pedagogical Team - Coordination of Graduation (COGRAD). It was possible to verify that their perceptions about the limits and possibilities of performance of teachers who work in the face-to-face higher education modality allow us to identify that they perceive that teacher training for the use of ICT is fundamental for their exploration in the context of teaching and learning. Teachers showing awareness of the importance of ICT as tools, however it was also found that there is an impediment to their practice, in addition to the need for training with them - creating barriers to change and the need to establish good practices and to stimulate them in the context of teaching practice. In this context, the obstacles to the use of ICT were perceived, believing that it is necessary to promote the training of teachers so that the use is profitable - creating strategies that must take into account not only ICT and its teaching, but an awareness prior to its importance and to concrete contexts of its application by teachers in processes, also concrete, of teaching and learning.

As for the view of the Student Body, that is, of students from the CESUPA community, the study allows students to believe that the way teachers work in the classroom in general, in fact generates learning, however presenting some areas to improve (use of large and dull texts, very traditional strategies, traditionalism, among other criticisms presented). It is important to note that some students mention the responsibility and the important role of the student, that the teacher exposes the content, but the student must deepen and seek knowledge himself - becoming more active.O estudo está alinhado com outros estudos da literatura ao apontar a necessidade de um aprofundamento das práticas de uso e exploraãop de meios digitais por parte de docentes e discentes. No caso dos professores, colocam-se barreiras associadas com a literacia tecnológica e o investimento de mudar as suas práticas, num esforço que tem de ser acompanhado. No caso dos alunos, uma consciência que os métodos em sala

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de aula, embora aceitáveis, necessitam de atualização e de considerar um papel mais ativo dos alunos.

The study made it possible to deepen the existing situation in order to constitute a subsidy to know the needs of the use of digital media in the process of educating educators, with the awareness that technologies permeate everyday life and their use in education has been increasingly most requested. Also allow us to realize that although there is a perception of the importance of ICT in the teaching and learning process, its real use is still subject to difficulties of understanding and on the part, in most or lesser degree, of all the groups studied.

REFERENCES

[1] ABRAMOWICZ, A. Além do fracasso escolar. São Paulo: Papirus, 2010.

[2] ARAÚJO, A. C. M.; GOUVEIA, L. B. O digital nas instituições de ensino superior: um diagnóstico sobre a percepção docente em uma instituição de ensino superior em Belém do Pará (Brasil). Braz. J. of Develop., v. 6, n. 7, p. 42551-42555, 2020

[3] ARAÚJO, A. C. M.; GOUVEIA, L. B. O digital nas instituições de ensino superior: Justificação para o diagnóstico sobre a percepção de gestores, professores e alunos. In GADI (coord). Gabinete de Relações Internacionais e Apoio ao Desenvolvimento Institucional. Universidade Fernando Pessoa. . Atas dos Dias da Investigação na UFP 2017. Porto. 861p.

[4] ARAÚJO, A. C. M.; GOUVEIA, L. B. O Digital nas instituições de ensino superior: Um diagnóstico sobre a percepção da comunidade acadêmica de uma instituição de ensino superior em Belém do Pará (Brasil). Revista Estação Científica, v. 2018, n.19, p. 1-26, janeiro-julho. 2018c.

[5] ARAÚJO, A. C. M.; GOUVEIA, L.B. O digital nas instituições de ensino superior: Um diagnóstico sobre a percepção docente em uma instituição de ensino superior em Belém do Pará. In: Congresso Nacional de Educação, 2, 2018, Poço de Caldas. Anais, Poços de Caldas, 2018.

[6] ARAÚJO, A. C. M.; GOUVEIA, L.B. Tecnologias de Informação e Educação aplicada ao Ensino Superior: Percepções em uma IES em Belém do Pará. In: Seminário do ForTEC. Tecnologias Digitais, Redes e Educação, 4, 2018, Anais. São Salvador, 2018b. p.1056-1066.

[7] BENTO, J.; GARCIA, R.; GRAÇA, A. Contextos da Pedagogia. Lisboa: Livros Horizonte, 2009. 264p.

[8] BERNARDI, S. T. Utilização de softwares educacionais nos processos de alfabetização, de ensino e aprendizagem com uma visão psicopedagógica. Revista REI, v.5, n. 10, p.1-15, 2010.

[9] DEMO, P. O Poder do aprendizado na era da educação. São Paulo, Editora Paz e Terra, 2008. 196p.

[10] FRY, H.; KETTERIDGE, S. and MARSHALL, S. (2009). A Handbook for Teaching and Learning in Higher Education. Enhancing Academic Practice. New York: Routledge. 544p.

[11] GESSINGER, R.; MORAES, M. C.; LOPES LEITE, L.; VALDEREZ LIMA, M. do R. O uso pedagógico de recursos tecnológicos como estratégia para qualificar o ensino e contribuir para a redução da evasão na educação superior. In: Conferência Latino Americana sobre el abandono em la Educacion Superior, 3, 2016. Anais. México, 2016.

[12] ISAIA, S. M. de A.; BOLZAN, D. P. V. Formação do professor do Ensino superior: Um processo que se aprende? Revista do Centro de Educação UFSM, v.29, n.2 , p.121-133, 2001.

[13] KUHN, T. A estrutura das revoluções científicas. São Paulo: Perspectiva, 1975. 257p.

[14] MARCONI, M. A. de; LAKATOS, E. M. Fundamentos de Metodologia Científica. São Paulo: Atlas, 2017.

[15] MARTINS, E. ; GOUVEIA, L.. Desenvolvimento do Aplicativo ML-SAI para Android com Uso do App Inventor. Artigo Completo. In: X Escola Regional de Informática de Mato Grosso, 2019, Cuiabá-MT, v. 10. p. 49-54. 2019. ISSN: 2447-5386.

[16] MARTINS, E.; GOUVEIA, L.. Facebook como Ferramenta de Apoio ao Ensino. Artigo Curto. In: X Escola Regional de Informática de Mato Grosso, 2019, Cuiabá-MT, v. 10. p. 148-150. 2019 a. ISSN: 2447-5386.

[17] MARTINS, E.; GOUVEIA, L. Sala de Aula Invertida com Auxílio do WhatsApp. Artigo Curto. In: X Escola Regional de Informática de Mato Grosso, 2019, Cuiabá-MT, v. 10. p. 169-171, 2019 b. ISSN: 2447-5386.

[18] PIAGET, J. A Linguagem e o Pensamento da Criança. São Paulo: Martins Fontes, 1986. 212p.

[19] SEMESP. Mapa do Ensino Superior no Brasil. 5ªEdição. SEMESP, Sindicato de mantenedoras de ensino superior. 2015. 212p.

[20] WIEGEL, V. (2020). Lean in the Classroom, the Powerful Strategy for Improving Student Performance and Developing Efficient Processes. New York: Routledge. 215p.