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Active Methodologies of Learning and Educational Technologies in Higher Education

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Active Methodologies of Learning and Educational Technologies in Higher Education

Dr. Mario Vásquez Astudillo [α], Dr. Vanessa Dos Santos Nogueira [σ] & Jorge Arturo Ortiz [ρ]

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I. Introduction

The context in which the higher education operates has been experiencing continuous changes that represent opportunities and challenges in terms of strategies to fulfill their role of training, research, and extension. Some of the elements that make up the current and changing context are given by knowledge management; the new student profile that requires training in different spheres, different modes of access; the rapid and permanent development of communication technologies, and the interest of society in the university. Our social organization has been gradually changing, from social relations to the production modes of industry. This globalization environment and internationalization where the university is inserted, have created new opportunities and challenges for the higher education in the world.

Most students in higher education are consumers of technology and digital culture. In this scenario, of a changing society and students immersed in technology, we seek to understand how these students are using the different technologies of the Internet and what are the possibilities of using these technologies to work with active learning methodologies(ALM).

Researchers seek throughout the text to reflect on the ALM in higher education its potential through the use of Information and Communication Technologies (ICT) applied to education. The research was organized based on a data collection with students from the Distance Pedagogy Course at the Federal University of Santa Maria (UFSM), State of Rio Grande do Sul, Brazil.

The article contemplates the theoretical framework, rescuing the thoughts of authors who discuss ALM today and the use of technologies. This one describes the methodology used for the data collection. After the methodology, the analysis and discussion of the data and, in the end, the final considerations are presented.

II. Theoretical References

a) Characterization of active methodologies

We live permeated by technology, which is an integral part of our daily life. It is time to learn how to use and embrace it in our methods of learning. Currently, it becomes important, therefore, that teachers accept, appreciate, and implement new learning methods, such as the intertwining of traditional and technological learning (SADH, 2020). Classical active learning pedagogies can be improved with new technologies, facilitating students' involvement, as well as the best methodologies and practices for the design and delivery of courses distance education.

Schlichting and Heinzle check-in their study of the evolution of traditional perspectives and interaction with methodologies innovated active learning that the latter "articulate principles of different theoretical orientations of different movements that integrate and reflect on active methodologies guidelines learning, (...) that these are not new, but innovative conceptions" (SCHLICHTING; HEINZLE, 2020, p. 17). In the challenge of achieving a theoretical synthesis of ALM, there is a strong dissonance between each pedagogy, theoretical foundations, and implementation realities. This dissonance complicates the differentiation between active learning pedagogies (CATTANEO, 2017).

In the approximations between active methodologies and theoretical currents, Diesel, Baldez, Martins (2017) establish the contributions of several theories: interactionism (Jean Piaget, Lev Vygotsky); learning from experience (Dewey); meaningful learning

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(Ausubel); the Freirian perspective (Freire) in which students are encouraged to think autonomously, seeking to transcend the traditional teaching model, based on mechanical learning and a passive attitude of the student.

An example of this theoretical multiplicity exposes Cancino (2018) in his report on the history of the experience in the use of ALM at the University of Aalborg. The ALM Project-Based Learning (PBL) has its roots in constructivist theories of learning basedon theorists such as Dewey, Piaget, Vygotsky, and Illeris. There are variations in the understanding of these learning theorists, but the understanding of learning as an active process that occurs through social interactions stands out, working well among equals and based on problems in the world of life.

The characterization of ALM from Nonato, Sales, and Sarly is considered:

> A set of activities, actions, practices that unite traditional and innovative teaching perspectives, which allow the student to think, theorize about what he is doing, practicing, that is, interacting in the practical exercise with the knowledge that is being produced, questioning it, testing it, transforming it, actively appropriating it, being constantly guided by the teacher, who acts as supervisor of the learning process (NONATO, SALES; SARLY, 2019, p. 164).

Agrees the prospect of ALM Nonato, Sales, and Sarly (2019), Santiago and Bergmann (2018) that have set into principles of the ALM focused in its purpose: to support the customization, individual learning on a large scale; preparing students for a future that we do not yet know *versus* a past that disappears at full speed; be flexible in the face of major changes that also occur very quickly and develop active learning envisages involving and makes the students owners of their learning.

The thought of Schlitching and Heinzle (2020) points out some principles of how to put into practice the ALM, through activities based on real situations of the professional world, requiring to present answers to problems encountered, linking theories to practical applications. Developing transversal skills, such as time management, people and resources, in addition to knowing how to occupy social roles within the teams. Work based on multi or interdisciplinarity, focus on real issues, more than specifically the contents.

In the same perspective, Diesel et al. (2017), to clarify what is meant by an approach based on ALM, synthesize the essential principles that constitute the learning ALM: the concept of the student as the center of the learning process; the exercise of their autonomy; the problematization of reality and reflection; the teamwork; innovation to transcend the traditional teaching approach; and the teacher as a mediator, facilitator, activator.

In the literature, we identify car a multitude of ALM in correspondence to s purposes and pedagogical principles that have the centrality of the student his objective main. Based on several authors (JABIF, 2007; PIMIENTA, 2012; BACICH and MORAN, 2018; CATTANEO, 2017; MATTAR, 2017; PUJOLÀ, 2019), we try to identify the main ALM and those that the authors agree to identify as ALM. In this synthesis, we bring together ALM into three major groups: ALM with a focus on problem-based learning, projects, questions, discoveries, etc. A second group corresponds to ALM with a focus on the use of some technologies. And the third, ALM with a focus on the learning process and product (Figure 1). This classification is not exhaustive, as it depends on the intent of each teacher how each one is used and how you can make a combination of them.

Figure 1: Active learning methodologies

Focus on learning	Focus on technology	Process and product focus
Problems	ICT-based learning	Design Thinking
Projects	Game-based learning	Case study
Service	Gamification	Peer education
Questions	Blended learning	Research with mentoring
Discoveries	Flipped classroom	Simulation
Teams	Webquest	Study routes
Workshops	Augmented reality	Portfolios

Source: based on Jabif, 2007; Pimienta, 2012; Morán, 2015; Bacich, 2018; Cattaneo, 2017; Fonseca, Mattar, 2017; Pujolà, 2019

b) Mediating participation of the teacher

In universities that have used technologies for a decade, they discover that the figure of the teacher is strengthening, in new roles with new skills, since students present new needs for new tools and methodological strategies. Dahlstrom, Walker, and Dziuban (2015), in the longitudinal study applied since 2004, in which edition of 2013 250 higher education institutions from fourteen countries participated, representing a student population of 1,600,000 students, among the main conclusions highlight that students recognize the value of technology, but still need guidance from the teacher on the best use for academic purposes.

To think of ALM is to reflect on the role of the teacher in the learning processes. Reorganizing the

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"teaching strategies" (ANASTASIOU, 2005), refers to several factors related to teacher training and practice. In this sense, the role of the teacher can be considered broad and complex, in need of constant updating. The teaching performance is now considered as that of a knowledge mediator, a strategist, a knowledge manager. The teacher's role: "is not centered only on transmitting information from a specific area; he is mainly a designer of personalized and group learning scripts and advisor/mentor of students' professional and life projects" (BACICH; MORAN, 2018).

This personalized script modeling refers to the teacher's role and recognition processes. Recognizing and recognizing the other as a subject capable of learning, producing meanings, making relationships between their experiences and the experiences of others involved are decisive actions for the teaching and learning process, both in-person and virtual. In the case of the virtual, this recognition requires, in addition to the socially pre-established standards, a technological fluency that guarantees the subject the necessary skills not only to communicate but also to develop the feeling of belonging in the virtual spaces. Even if the subjects communicate, it is necessary to recognize the other without their physical presence, this happens in the mix of face-to-face and virtual relationships.

> This process depends on the teachers having a consistent knowledge of their area, the way their students learn in a collaborative digital culture, and how they can be helped in this process, which undoubtedly mobilizes movements to reorganize the pedagogical work in the knowledge and teaching activities, starting with teacher training courses, that is, at universities (ROCHA; BOLZAN, 2015, p.145).

To think about the condition assumed by the teacher is to review in memory the meanings that constituted him as someone who masters knowledge. In an attempt to recover the educational models formed throughout the history of education, in which the organization of classrooms is full of classes, chairs, and students, the teacher is personified with the image of the holder of all knowledge to be taught.

Teaching is understood as a complex process, as it involves different knowledge, places, times, and subjects. In this sense, fetch the up at the thought of Cunha, the constitution of teaching to express that:

> The teacher teaches from his experience as a student, inspired by his former teachers. [...] it is based on historically constructed practices, outlining representations of the teaching profession that are established in common sense. It is a process that is very present in university teaching, since the teacher at this level of education, not usually having professional training for teaching, tends to repeat practices naturalized in his culture (CUNHA, 2006, p. 363).

Cunha's thought describes the lack of training for the university professor. In this scenario, the virtual presents a new issue, teaching in virtual spaces/places does not yet have historically constructed practices and does not present itself as a practice naturalized by the culture present in the university scenario today.

It is considered that the virtual is not separate from the face-to-face, the online and offline worlds are part of the lifeworld, thus, "there is an acknowledgment of the complex and nuanced relationship between the online worlds line and offline that produces the normative structures of these two worlds" (MILLER, SLATER 2004, p. 48).

c) Involve the student

Morris and Stommel (2017) explain that digital is not magical. It is not mysterious. It is regular human communication mounted on new media. Student involvement is essential for successful teaching and learning, regardless of the content and format of the content delivery mechanism. However, engaging students presents a particular challenge in environments distance learning environments and blended learning, particularly the Generation Z, born after 1990, "relates to children and young people from seven to eighteen years. The letter Z comes from the english term zapping which translates to take a walk; having a connection with the word appear, switching television channels, accessing the internet, videos, cell phones, among other digital resources" (ANDRADE, 2020, p. 4).

The student's role is crucial to his success, the result of any technology integration is to encourage students to become autonomous learners and involve them as active participants in their learning (DIESEL et al, 2017; LIESER; TAF; MURPHY- HAGAN, 2018). At distance education "he must be able to self-manage and self-govern his training process, exercise within the limits of training, his autonomy in time management, the way of learning, relating, communicating, informing and producing knowledge" (NONATO, SALES; SARLY, 2019, p. 165).

d) Technological tools

Digital technologies have become central in the teaching and learning practices to and education higher. The findings reveal that students value them because they allow immediate and asynchronous access to learning resources. Besides, students have direct, almost real-time opportunities to receive feed back from their teachers and colleagues (KANDAKATLA et al., 2020). Its centrality lies not in "amazing power of their circuits, but in the virtual space of the new human possibilities, it creates. Technological innovation consists of inventing and building the realities that technology enables" (VACAS, 2009, p. 53).

It is important to recognize that, regardless of the tools used, creating an effective distance education course involves careful planning, considerable resources, and commitment of dedicated time, as well as experience and knowledge in teaching and learning. The teaching tools and techniques used in

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the traditional classroom cannot be applied directly to online classes. These tools and techniques must be modified to accommodate the lack of physical proximity experienced in an online course (KHAN et al, 2017).

Consider the virtual as a scenario for the development of ALM is a learning movement teaching constantly. In this sense, the thinking of Bachich and Moran shows us that:

> We learn actively since we were born and throughout life, in open design processes, facing complex challenges, combining flexible and semi-structured trails, in all fields (personal, professional, social) that expand our perception, knowledge, and skills for more liberating choices and fulfilling. Life is an active learning process, facing increasingly complex challenges. " (BACICH; MORAN, 2018).

To understand learning in virtual spaces, we consider that the internet is a potential means of communication. But not only that. The internet system offers resources that allow a feeling of belonging, in which doing things online is part and parcel of everyday life (MILLER, 2015). It is also noteworthy that the experiences in virtual spaces cannot be generalized, they represent a transnationality, but they preserve much of the local culture. According to the thought of anthropologist Miller:

> In internet studies that try to observe how many friends a person has to have on a social network to be considered very popular by others. And then, they extrapolate from that to a general statement about Facebook friendship. But I know that this experiment would give a different result to any other population. *So, almost all recurrent studies on the use of digital technologies fail to show what we know about the use of the internet* (MILLER, 2015, p. 2, emphasis added).

The author raises questions about the results of research in which the internet is described as universal based on specific case studies, without considering that, if they were people from another culture using the same media, the results could be very different. When starting his research focused on the internet, Miller asked himself: "but every time I read something, I kept thinking: but does this remain the same for both Chinese and Brazilians? Is this internet" the same for women and men, older and younger people? (MILLER, 2015, p. 2).

This author's research points to different results, which interest us as they displace the current studies on the use of the internet and consider the virtual as a cultural artifact. He clarifies that "sociological studies imply that the use of the internet has led to a more ego-focused approach to the network, and, at the same time, with increasingly powerful state and super state forces, which constitute the new digital infrastructure" (MILLER, 2015, p. 21).

When mentioning his study on social networks, the author points out that, with the research "we show that caste is central in the way that social network is used, while in studies in Turkey it is more tribal and, in others studies, is more based on the family" (MILLER, 2015, p. 23). The said author also points out the issue of technology and financial resources, saying that the lack of material resources could be a barrier to access:

> But with internet and smartphone packages, the cost has been relegated to the infrastructure. Thus, the decision of which media to use, whether a Facebook message, a webcam call, an email, or a voice call now represents a personal reason, something that must be thought out and decided on. So, the media choice became part of the social interaction itself. Therefore, this implies a re-socialization of the media itself, since the choice of the media is now seen as social and moral action. I think this is true everywhere where the cost is relegated to infrastructure. At present, this is not true for the working class in Brazil, but it is for the middle class (MILLER, 2015, p. 3).

When asked about the use of digital technologies and their contribution to the tensions between global and local culture and how these aspects are culturally and socially articulated, the author reports on the phenomenon of the selfie: "because the selfie seems, at first, to be an extremely clear example of rapid global homogenization" (MILLER, 2015, p. 3). The genre has spread around the world through the internet but has specifics. To illustrate, he quotes his research conducted in England and Trinidad:

> For example, most selfies on our British website are groups of people, while in Trinidad they are individual. In our systematic sample, 557 of Trinidad's samples are individual, while only 138 of English samples have the same format. In contrast, 474 of the English samples are from several people together, while the same is true of only 116 of the Trinidadian samples. Whole selfie genres, such as selfie-without-makeup and fake-lesbian-selfie, are important in England, but nonexistent in Trinidad. So it is not a question of more global or more local, but, as I noted above, our theoretical point about digital technologies is that they simultaneously expand the possibility not only of universality but also of particularity (MILLER, 2015, p. 2).

This dimension of simultaneity between the universal and the particular also refers to the uses that are made of these virtual spaces, social networks, and digital technologies and how these resources can generate access and production of knowledge. In this scenario, it is considered that: "Innovative technologies give us new and exciting opportunities for everyone to learn actively" (ANSELL, 2016, p. 73).

III. Methodology

The data was collected through the Google Forms application, which is part of the Google service package called Google Drive. The sample contains data from 66 students from the UFSM Pedagogy Distance Learning Course, from eight centers Open University of Brazil, where the course is offered.

The questionnaire applied was based on the questionnaire prepared by the GPKosmos Research

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Group in Education in Digital Culture and Training Networks at UFSM. The questionnaire was evaluated and reformed by the group, after being submitted for validation by specialists. The experts' suggestions were evaluated and incorporated into the instrument (ASTUDILLO, VEIGA, BARBIERO, 2019). The instrument's initial proposal was based on the questionnaire translated from English, the annual ECAR Study of Undergraduate Students and Technology (EDUCAUSE, 2016), and the Technological Acceptance Model (TAM)questionnaire(DAVIS, 1989).

IV. Analysis and Discussion of Results

a) Use of social networks

The data analysis presents a mapping of the meanings produced by the students of the Distance Education Course at UFSM concerning the use of digital technologies and social networks in the learning processes. The data collection was attended by 66 students, teachers in training.

Regarding the social networks used by students, Facebook (81.8%) and Instagram (83.3%) predominate, of the networks indicated for choosing the one with the least adherence is LinkedIn. Facebook and Instagram are popular networks for relationships that have an intensity of advertising, broadcasting of news stories, and discussions that sometimes reinforce prejudice and discrimination. LinkedIn is a social network aimed at professionals and institutions, to create collaborative networks to generate new job opportunities (Figure 2).

Figure 2: General use and for study purposes of Social Networks (%)

Social networks	General use	Study purposes
Facebook	83,3	35,4
Instagram	81,8	32,3
Youtube	16,7	73,8
Pinterest	6,1	16,9
Twitter	4,5	3,1
WhatsApp	4,5	3,1
Snapchat	4,0	0
Linkedin	3,0	0
Tumblr	0	1,5

Source: the authors

Faced with the question of which social networks are most used for academic study purposes, YouTube (73.8%) stands out remarkably and, secondly, Facebook (35.4%), with less than half the frequency, for formal learning purposes. This preference is in line with the international trend of some studies, in which it appears that students prefer to use them for personal use (DAHLSTROM, 2015), although compared to the low use of other support tools, especially among students, are valued.

Student 1 (E1): I liked the idea of publicizing works and or reflections on Instagram because I didn't have this social network yet and I had to challenge myself and create a profile for myself.

E2: The use of social networks in the course should be mandatory.

E3: In our class, there is already a group through WhatsApp that share relevant and pertinent subjects to the disciplines. It has helped me a lot.

E4: I'm loving the use of RS!

We are permeated by technology, it is an integral part of our daily life, the students themselves, future teachers, make suggestions for teachers to use social networks, interweaving traditional learning and with technological tools (SADH, 2020).

E5: The use of information in social networks, helps, makes us more informed, being, therefore, useful social networks, since most of us have students.

E6: Share videos of certain content so that we can learn more.

This idea of using YouTube is reinforced in the answers to open questions, in which the most frequent dimensions of suggestions are identified, so that teachers use videos in two ways, on the one hand, to select and suggest existing videos on the Internet. for a better understanding of the content of the subject.

E7: Share videos of certain content so that we can learn more.

E8: Indication of videos and audios explaining the content.

E9: Post videos explaining the content, I have it easier.

The second modality suggested by students to integrate the use of videos is for teachers to publish recordings of their classes and, in turn, to use videoconferences, which can be recorded and made available to students.

E10: Teachers can post video lessons, web classes.

E11: I suggest using YouTube by teachers (in an authorial way).

E12: Video lessons, with discussions and chats; create videos on YouTube.

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E13: Lives on Instagram or Facebook for debates and reviews.

E14: Record more explanatory videos about the subjects.

When asked about the experience they had with social networks to study 51% of the students considered it good, 19% is neutral, 13% says it is regular, 12% believes it is bad and 3% does not know. For this question, it is considered that students have already experienced social media activities in some of the course subjects.

From the perspective of ALM, students want to be more involved, engaged, to be protagonists, a crucial point for their success in the final result, to become autonomous learners (DIESEL et al., 2017; LIESER et al., 2018), to be owners their learning and teamwork (SANTIAGO and BERGMANN, 2018).

E15: That the disciplines are neutral when passing material that tells the story. We are not students who want to be shaped, we want to show our way of understanding.

E16: More group activities.

E17: Form online study groups.

b) Use of virtual environments

About virtual environments, as shown in Figure 3 below, 49,2% of students prefer Moodle to study, 36,9% consider that face-to-face activities are more relevant. According to Galanek et al. (2018), when controlling several factors, the indicator most significant preference for the learning environment has been the experience in the last two semesters in higher education. Student preferences are polarized: those who have never had a completely online experience are significantly more likely to prefer face-to-face courses and vice versa. However, students who have taken at least some of their online courses are significantly more likely to prefer b-learning or hybrid environments and less likely to prefer purely face-to-face courses.

Figure 3: Learning environment in which they learn more

Learning environment	% use
Activities in Moodle	49,2
Face-to-face activities	36,9
Websites	9,2
Virtual libraries	3,1
Social networks	1,6

Source: the authors

E 18: Using Moodle than getting involved with more diversity if you can't master the basics.

E 19: Leave the social networks aside and use the Moodle which is already a good size.

In the end, when asked what their teachers could do to qualify their academic success, the production of videos by teachers, and the application of activities that manage to relate theory to practice were recurrent suggestions.

The suggestions also included the creation of online study groups, the creation of YouTube channels, reports of experiences, courses on social networks, practical activities, and more dialogue.

c) Participation of teachers in the academic experience of students

Regarding academic experience during the last year, students were consulted on how their teachers used the technologies. In terms of support for academic success, only some of the teachers use them (68.2%). The case in which no teacher had provided training in the use of technologies stands out with the highest percentage (Figure 4). Educause's annual longitudinal studies found that students would increase their effectiveness in employing technologies to learn if teachers were more qualified and used it more often in courses (DAHLSTROM et al., 2015).

Students recognize that teachers have the appropriate technological skills (majority: 47.0%, some: 47.0%), expressing the highest value in this dimension. However, only a few used the appropriate technologies (63.6%).

Figure 4: Teachers and technology in students' academic experience (%)

	Majority	Some	None	Total
Support for academic success	16.7	68.2	15.2	100
Provided training in the use of technologies	10.6	48.5	40.9	100
Have the appropriate technological skills	47.0	47.0	6.1	100
Used the right technologies	25.8	63.6	10.6	100
Mean	16.5	37.5	12.0	

Source: the authors

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The variable that expresses that the majority of teachers do not act efficiently, according to the students, and that they did not provide training for the use of the technologies in the discipline, denotes that the need for this training to students, which is seen in the lack of preparation of students. Upon entering the UFSM, 54% of students do not feel prepared to use the technology necessary for the subjects (ASTUDILLO, 2019). Besides, in the principles listed by Santiago and Bergmann (2018), the preparation of students for a future that we do not yet know and flexibility in the face of major changes in our technological environment are highlighted.

E 20: Develop training courses on the proper use of social networks in the learning process. To be applied to teachers and students of the course.

E 21: Survey which social networks the class uses most.

A particularity of this research is that the object of study corresponds to teachers forming teachers, so students analyze a double perspective, as students and as teachers in training, so they demand that teachers adopt ALM, the teacher as a mediator, facilitator, activator (DIESEL et al., 2017).

E 22: In our Pedagogy course, teachers should adopt a more interactive methodology with students.

E 23: Use social networks to answer questions, for very deficient communication. Giving greater support.

E 24: More interaction between teachers and students.

E 25: Create virtual conversation wheels at least once a week, with fixed times to answer questions in real-time.

Currently, we require the acceptance of teachers, for that appreciate and implement new methods of learning in the distance education (SADH, 2020). For teachers in training, their experiences are limited, in general, the use of traditional methods in distance education, essential like them apply innovation to transcend the traditional teaching approach (DIESEL et al., 2017).

E 26: Making summaries or schematics of PDF files, it does not characterize a distance education.

E 27: That teachers use technology more in their classes, not just "touch" a thousand texts, and ask for a review, which is what most people do.

E 28: Because we often receive poorly prepared materials, even illegible.

So, the social networks are useless.

This view of the students is very much in line with Morán's diagnosis (2015, p. 28): "many institutions maintain basic models, in-person and distance education, with a traditional view of teaching and learning. Many courses are predictable, with simplified information, shallow content, and few stimulating activities and in poor, banal virtual environments".

E 29: Involve the content more with the practical application.

E 30: Propose educational activities, lesson plans.

E 31: Practical application of content that is very abstract and distant from reality.

E 32: As future teachers, we have to follow this new era, and seek to learn methods of how to handle the media in favor of education.

From the perspective of ALM, teachers in training request that teachers apply ALM principles such as proposing activities based on real situations in the professional world, in which they need to provide answers to problems encountered, applying the theories (SCHLICHTING; HEINZLE, 2020), dedicating to problematize and reflect on reality (DIESEL et al., 2017).

V. Final Considerations

The results point to the advantages of ALM higher education, coupled with the use of technology, enabling greater engagement of students and qualifications in the learning process. The students' suggestions refer to the work with ALM.

However, it is worth noting that not all available technologies or RS arouse interest or have the potential to qualify their learning processes. Students need of training in the use of the technological tools used in the discipline and create your own Personal Learning Environment strategically integrating diverse technologies and RS available, in addition to typical institutional platforms or Virtual Learning Environment (VLE).

The VLE Moodle is considered by students as the best communication space to study, followed by the moderate use of some social networks. We agree with Galanek et al (2018) that we are mainly using the most basic functions of VLE Moodle. Perhaps VLE Moodle does not need an overhaul but in an innovative way of use. We agree with Morán (2015) that many institutions still maintain a traditional view of teaching and learning in distance education.

It is believed that to move forward in the alignment between student demand and teaching planning, it is necessary to have a sensitive look and listen from students intertwined with the knowledge of the curriculum and social demands, which is why it is necessary and urgent a "understanding and application of innovative methodologies in the pedagogical practice regardless of the modality, whether in person or virtual" (RODRIGUES and LEMOS, 2019, p. 31).

Students want to be protagonists of their learning, to give their opinion "about what is passed on or taught to us is something that many teachers still do not accept" (Student 33). It is necessary to use of active methodologies of learning to give students opportunities to dialogue with teachers, to make suggestions for improving their training process and that of their colleagues (NASCIMENTO; PADILHA, 2020).

In distance education, the creation and selection of relevant and quality content and resources

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are essential. For this reason, the teacher needs to integrate content and resource curation in his performance, in addition to gradually creating videos of his classes for different purposes, whether to expose content, support students' processes, interact with students, mediate work strategies academic autonomous, in the role of manager, mediator, facilitator, and activator of learning.

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