COOPERATIVE COMMUNITY OF NETWORK LEARNING: experiences of remote teaching in the Technical course of Administration, integrated into High School, from the Instituto Federal de Educação, Ciência e Tecnologia Baiano.

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Abstract

The cooperative community of network application corresponds to practices that increase or compromise and involve two students; therefore, we developed, with this study, a methodology for the creation of working groups from two reports of representatives of the investigated groups. In this sense, the methodological procedures adopted were: descriptive and exploratory research, case study, experience report, documentary, and bibliographic research, with the nature of two qualitative data, derived from the survey with the representatives of the classes of the Technical course in Administration, integrated modality year High School, from Instituto Federal de Educação, Ciência e Tecnologia Baiano – IF Baiano, Teixeira de Freitas – Bahia campus, federal public institution, about or development of non-classroom pedagogical activities. From the results obtained, it is accepted that these activities are divided into synchronous and asynchronous rooms, and that is still in the adaptation phase; also through the experience report suggested to improve communication, the increase in feedback from teachers to students of activities and from students to management on the development of APNPs and difficulties encountered, to promote their effective improvement.

Keywords: engagement; work groups; pedagogical activities.

1. Introduction

In teaching and learning processes, active methodologies can be used, among which students can be understood as the central point. In this sense, it is believed that active learning stimulates the interaction between students, favoring knowledge construction. Network learning appears, then, as a disruptive model in which the student is an active actor in the educational process and can be seen as a link that directs educational practices.

With this experience report, we sought to understand how the Non-Presential Pedagogical Activities were

perceived by the students of the Technical Course of Administration at the Instituto Federal de Educação, Ciência e Tecnologia Baiano – IF Baiano, Teixeira de Freitas, Bahia, Brazil. Adopting the following as a research problem: How can a cooperative network learning community is developed based on non-classroom pedagogical activities with the students of the Technical Course of Administration, an integrated modality to High School, from IF Baiano, Teixeira de Freitas campus? It should be noted that this type of education refers to the combination of High School and Technical Vocational Education.

This study is contextualized, based on Law number 9.394, which establishes the National Education Guidelines and Bases and Resolution 6, September 20, 2012, which defines National Curriculum Guidelines for Technical Professional Education Medium Level.

The choice for the research is justified, the fact that, with the Covid-19 pandemic and after the suspensions of the face-to-face classes, by the Ministry of Education Ordinance number 343, of March 17, 2020, which provides on replacing face-to-face courses with classes on digital media while the New Coronavirus - COVID-19 pandemic situation lasts, the Academic Direction of IF Baiano - Teixeira de Freitas campus, together with the pedagogical, technical team, presented the local community with the Project Remote Activities, which focused on the following aspects: systematizing the work routine of teachers who will develop remote activities with students, ensuring development during the period of social isolation; to structure the monitoring routine of the pedagogical work of the technical-pedagogical team; and organize actions according to the demands arising from remote activities, developed during the period of social isolation.

Given the above, there was an interest in understanding how students received these non-classroom pedagogical activities, hence the personal and social relevance, in obtaining the experience report of the 3 (three) representatives of the classes in the Technical Course in Administration, integrated modality, from IF Baiano, Teixeira de Freitas - Bahia campus, on the development of remote activities, so that it was possible to develop a methodology to implement a cooperative network learning community in the researched classes and, consequently, favor learning.

Thus, as a general objective, we sought to understand how a cooperative network learning community can be developed based on the research carried out, with specific goals, the following: exposing the experience report with remote activities by all classes, of the integrated modality to High School, of the Technical course of Administration at IF Baiano, Teixeira de Freitas campus, in the first semester of 2020; identify whether the subjects' learning objectives and expectations have been achieved; develop a methodology for the creation of study and workgroups, promoting the exercise of leadership by several members and the emergence of spontaneous forms of division of activities and responsibilities to promote the involvement of students and expand their performance in the process of building knowledge.

As a theoretical basis, the concepts of active learning methodology proposed by Bacich and Moran (2018) were adopted, in addition to the literature on learning communities and educational networks, including studies by Morin (2001) that deals with the complexity of education, of Castells (2005) when explaining the network society. Thus, this study was structured as follows: this introduction containing the outline of the research, the theoretical framework with the basis of the study, the methodology with the procedures adopted, the analysis of the data including the experience report itself, the final considerations, and references.

2. Literature review

2.1 Cooperative networked learning communities

Education and cooperation as interrelated social practices are presented by Frantz (2001) as enhancing social processes, which can observe through teaching and learning practices. In this sense, it is essential to highlight the importance of using educational technologies to highlight students' cooperation.

Converging with the precepts of Frantz (2001), the author's Lima, Nunes, and Souza (2020) affirm that an interdisciplinary proposal allows the assimilation of the studied concepts, in addition to developing creativity, as students start to: investigate, think, reflect on everyday problems, facilitating effective learning.

It is believed that the development of cooperative learning communities can increase students' commitment and engagement and the association of diverse knowledge and area of knowledge. According to Silva (2020), it is noteworthy that cooperative is due to a common human need and the awareness of jointly overcoming problems to obtain benefits for those who cooperate.

Thus, cooperative networked learning communities can be understood as a cooperative arrangement, in which different actors, for example, students, try at the same time to meet their demands and allow exchanges between members of the community, to propose and develop innovative practices and actions, effectively obtaining learning about certain programmatic content, that is, it corresponds to the division of activities and generalized discussion of individual and collective knowledge, to have a systemic view of everything that is approached within the community.

According to Morin (2001), education's main task is to train people capable of discovering, inventing, and building new knowledge in an educational perspective that reconnects watertight and fragmented knowledge. Therefore, the development of cooperative networked learning communities is associated, in education, with an active learning methodology.

In convergence, the authors Bacich and Moran (2018) affirm that with the reflection on the theory and practice, the teacher's new positioning comes to exist, reflecting in innovative curricular proposals. Both authors also describe that selecting concepts and methodological proposals allows pointing to learning with different meanings, integrating knowledge with a more global perspective with student-centered learning.

Active learning occurs when one advances in more complex levels of knowledge and competence, according to Bacich and Moran (2018). The active learning methodology can be implemented in the teaching and learning process through problem-based learning or in team learning, which focuses on the need for cooperation between team members, in this case, students who are part of a team. In convergence, Utsumi (2020) presents in his research that a favorable environment for teamwork was created by applying the active methodology, stimulating communication, and leadership.

As people are not obliged to integrate into a specific community, it is believed that individual motivation is of paramount importance, according to Corrêa (2004). Therefore, it is necessary to assign meaning to activities that raise cooperation among students. The authors Magalhães e Silva (2020), in their research, present the need for change in the evaluation process to value the students work, giving meaning to their activities, to make the evaluation process continuous, providing greater engagement of students and their performance in a network of learning and cooperation.

Such cooperation is perceived in work on active methodology by Bacich and Moran (2018) through the following statement that when students have any doubts, they initially turn to group colleagues, thus focusing on an essential pillar of the school's methodology, which is also learning by peers. Then, students resort to an educator's guidance, including using the media channels and internet networks.

According to the author Corrêa (2004), the increasing use of networks such as the internet has resulted in creating a new type of social organization, the network society, which allows the formation of virtual communities, human groups constituted by the identification of common interests. Thus, networks allow people to organize themselves for common purposes, forming groups willing to study. Therefore, the use of the internet as a tool to support networks, process virtuality, and turn it into reality, according to Castells (2007), constitutes the network society itself, which can be considered a starting point for developing a cooperative networked learning community.

3. Methodology

The research on cooperative learning communities in the network was descriptive. It aimed to describe the non-classroom pedagogical activities with the Technical Course students in Administration, an integrated modality to High School, from IF Baiano, Teixeira de Freitas campus. In addition to exploratory research that consisted of a study to familiarize researchers with the object that corresponds to the learning communities, the active methodologies, the networked society, and the applicability of technologies in the educational process.

According to Gil (2007), according to the data collection sources and the research instruments, documentary research was carried out with the normative instructions that suspended classes and determined that classes could be held virtually, during the pandemic, bibliographic research was also carried out, a case study with the researched classes, as well as an experience report on remote teaching.

The sample chosen for the research represented 100% of the universe. It was of a non-random and intentional type, as it sought to identify, together with the 03 (three) representatives of the classes of the Technical Administration course surveyed, which correspond to the total of classes in the 2020.1 semesters, in the modality integrated with high school, their perception of the difficulties experienced by the class with the APNPs, in addition to the students' initiatives to cooperate with the class, interpersonal relationships and collaborative study proposals.

It should be noted that the experience report of the representatives surveyed may not represent the total perception of all students in the classes, which can be understood as a limitation of this work. Still, it is believed that, because they are the representatives and because they have contacts with students, their view may reflect, in part, the view of most students.

The qualitative data were tabulated using a dialogical exposition of the experience report and the presentation of a word cloud that included the main words of the said report. At the end of the data analysis, a methodology for the creation of study and workgroups was presented based on a model suggested by Bacich and Moran (2018) in which they used a synchronous and asynchronous class evaluation and self-evaluation form, which was adapted for the best description of the researched reality and, thus, to answer the research problem. The time cut was December 2020 that corresponded to the end of the first phase of

the application of non-classroom teaching activities.

4. Analysis and Discussion of Results

Initially, how remote activities were developed and how the contact with the classes took place is presented through the experience report described by the representatives of each of the 03 (three) groups surveyed, as follows: before the beginning of non-classroom pedagogical activities, IF Baiano, Teixeira de Freitas campus started remote activities by sending texts and questions to students and then held web conferences through some teachers and with students who voluntarily participated.

Soon after, in a Web conference between leaders and campus coordination, he was informed about the remote activities' beginning. This would be the method adopted for the return of the non-classroom classes. Before that, a questionnaire was prepared to determine the students' availability, if they have access to the internet or/an electronic device to develop the activities, highlighting the management's concern with the students' access to classes. The course coordinators also contacted students who did not answer the questionnaire by phone to identify whether they had access to the internet. The timetable for the core subjects was developed by the corresponding teachers and the Teaching Coordination. The technical core timetable was developed by teachers in the specialized area and the course coordinator.

Thus, a model of non-classroom teaching activity was sent from the rectory to the campus. The campus, in turn, organized some meetings between teachers and students to discuss remote teaching. It is worth mentioning that these meetings were communicated between the class leaders and not through individualized contacts with the students, so it is clear that communication was inefficient. Also, the representatives of the surveyed classes suggested that the Teaching Coordination hold meetings with each class to expose their problems and desires, but what happened was the training for the virtual environments and not to discuss the activities.

Initially, the classes had contact with remote education through platforms such as Teams, RNP, Skype, Google Meet, Moodle. The classes were divided into synchronous (the classes in Web conferences, live) and the asynchronous ones (which made available activities or recorded classes, videos, texts). At first, the classes were quite confused, as there was no explanation of what the classes would be like, in terms of frequency, grades, and activities, for example, causing many students to become discouraged due to the lack of communication between students and sectors responsible for the classes. However, in the initial week, there were meetings to show how virtual environments work.

Given the above, it is clear that in all the researched classes, there was poor communication about remote education, but this is also because it is something new, with little time for planning, in which, during the Covid pandemic, management and teachers had to provide online classes, for which, many had no experience and were not adequately prepared to take them. Added to this, the constant emotional instability that many students have experienced and the lack of equipment and internet network and the new teaching modality caused discomfort.

Also, on a positive note, it should be noted that two commissions related to remote education were created: a commission aimed at collecting data on students and accessing them to virtual environments so that they could attend synchronous classes and perform the activities of asynchronous classes; a second commission

aimed at teacher training, with workshops on Zimbra, Moodle, Web conferences and Microsoft Teams. Both commissions are still active. In this sense, it is recommended to hold feedback meetings to listen to students about developing non-classroom teaching activities.

Regarding the organization of time (synchronous and asynchronous classes) and the strategies adopted by the teachers, it is reported that: class schedules were established with the common core subjects, where there was a class schedule in conference (synchronous), and classes that could be viewed in a certain period (asynchronous). In the same way, it happened with non-common core materials. Many teachers used video lessons, slides, classroom activities and reviews, lectures, readings.

It is noteworthy that the Teaching Coordination did a great job with the division of synchronous and asynchronous classes, as they left the asynchronous ones for the first morning shifts so that the students did not need to start the day with online classes, since it is not a routine like it would be in person and thus having an initial time of the day to dedicate to asynchronous activities. Another positive point that the Teaching Coordination established was that teachers could be comfortable with asynchronous classes, providing them with didactic autonomy and, if they wanted to give just one synchronous class per week, it would be possible, because in general, at each 4 (four) weekly classes, 1 (one) was synchronous and 3 (three) asynchronous. However, depending on the class's pace and the class, the teacher had the autonomy to increase the number of synchronous and reduce the number of asynchronous.

It is essential to emphasize that due to the number of subjects, there was a division in them, considering the workload to be carried out in person. That is, the workload of the subjects was divided into two semesters. Some strategies adopted by the teachers were: the recording of explanatory videos on the subject for the development of past activities, provision of links and files, and the chat for questions related to activities.

As for the teachers, each one followed their dynamics. The positive point is that, together with some teachers, it was possible to change the methodology if it was not working. There was this freedom to apply or not asynchronous classes on different days and times. The negative point is that teachers who did not previously communicate the change in synchronous schedules and who even taught classes in other teachers' asynchronous activities made it impossible to develop a specific activity at a given time.

Regarding colleagues' engagement, it is reported that some students were engaged and others were not for various personal reasons. However, this did not hinder or raise the class's level, since everyone had individual tasks and duties, in addition to the fact that the teachers were aware that students were not attending classes and activities. Although, in the beginning, there was a difficulty, mainly about the use of platforms, as the class was not aware of their functionality.

Another difficulty to get involved was that many people in the class, due to this whole pandemic scenario, had to find a job, so they were often unable to follow synchronous classes, which was very difficult and even led to the locking the course by some students. However, it is clear that it is still an adaptation phase with this new teaching method, and many students have had a quick adaptation, causing less harm to their studies. On the other hand, according to some classmates, who are not achieving good development, in terms of learning, there is a lack of greater monitoring, for example, about the activities that are delivered to teachers, in the sense of having a return, because neither all teachers have given feedback, which is possible with the use of technology in an even more creative way.

Given the above, it is reported that the role of technology in the execution of activities remotely is

fundamental, as, through them, access to classes, research, and seminars are held. Therefore, it is impossible to carry out synchronous activities without a computer, cell phone, and the internet. The student cannot access the activities, communicate with colleagues and servers, much less manage to search, without access to the internet. It should be noted that asynchronous materials and activities will be made available to students without access to the network to accompany the school semester. Still, the sending of such materials has not yet started.

According to Bacich and Moran (2018), inserted in a context guided by constant changes, in addition to the incorporation of technologies and the speed of information, education goes through a reflection. In convergence, Federal Law number 9,394 of December 20, 1996, Law of Directives and Bases of National Education, in which distance learning, using technologies, gained status as an integrated modality to the education system.

In continuation of the exposition of the experience report, the representatives of the researched classes also reported something that could be changed in remote classes and, as a suggestion, informed that the change would focus on the fact that the IF Baiano campus Teixeira de Freitas, in the figures from the Student Assistance Coordination, Teaching Coordination. General Directorate should further inspect their execution, in addition to establishing follow-up actions to identify which students are experiencing many difficulties (financial, psychological, learning) and not only those who do not have access to the internet, but those who have access and have not been able to participate in the teaching activities associated with carrying out the activities effectively.

Another suggestion relates to the punctuation that is treated, by some teachers, as a criterion for the presence of students in the synchronous class, considering that there are students without internet, without energy, and without an electronic device. Also, the way activities are presented to students raises further explanations. Some teachers often do not explain what it is to do or even explain the activity's subject (theoretical content). Thus, it is suggested that teachers make the recording of synchronous classes available for those people who could not attend or who want to review the contents by watching the classes more than once. Finally, it would give at least a five-minute break for the student and even teachers to organize themselves between one class and another. It is noteworthy that some teachers already provide videos of synchronous classes, especially those using the Microsoft Teams Platform.

Thus, it was noticeable that one of the greatest difficulties was adapting to the new class routine, because as it was said, many students started to work, some did not have access to the internet or an electronic device, they did not know some platforms, many times some students they did not succeed due to technical problems, or due to individual problems of lack of esteem or other emotional problems that arose mainly with social isolation, and there was no division of tasks in the classes, so it is reported that each one did their jobs and their activities, there was no study or organization together.

In this sense, there was no combination between colleagues to form the virtual study group around a common interest topic to all. Still, some more intimate people met in other existing groups (which has nothing to do with related things about school) to develop some activities. And nobody took the initiative to moderate the group's activities.

Regarding creating a discussion on an internet provider, it is reported that the classes have a group among themselves on WhatsApp, but it has existed since before the pandemic. A few teachers asked to create an

exclusive group for their subject with the class, also on WhatsApp, and it was done, and that group serves to answer questions and even send materials. However, virtual communication did not dynamize all relationships. A Coexistence Agreement or set of proposals and rules of behavior and group relationship was not established. However, it was possible to perceive a sense of cooperation, especially about the working people, as colleagues who were not working helped what was, so that it could deliver on the scheduled date.

4.1 Methodology for creating a study and working groups

Based on the report of experiences with non-classroom teaching activities, and based on suggestions on improving communication and facilitating development, specifically on the role of students, it is presented that the creation of study and workgroups may facilitate the understanding of asynchronous activities and developing knowledge in a macro way, highlighting the syllabus contents of the various disciplines, exposed in synchronous classes. Therefore, it is necessary to perform some procedures, as shown below.

Initially, for the study and workgroup to be created, it is necessary to gather colleagues, proposed to form the virtual study group, to identify preferences for one group or another, based on the interpersonal relationships that already exist and focusing on diversity, personality, connections between members and their respective values. The second procedure relates to the collective establishment of a Coexistence Agreement to promote the involvement of members in the study group activity in a standardized way, that is, establishing the rules of conduct, in addition to identifying the leader of the group of studies and assign to the functions or areas of each one within the group, in a cooperative and solitary way, based on the content or disciplines of the greater affinity of the members.

The roles of each one must be established, which according to Robbins, Judge and Sobral (2010), the role is a set of expected behavioral patterns attributed to someone in a specific position in a social unit and which is related to the view that one has about how whether to act in a given situation. Thus, according to Universia (2020), when discussing a topic, it is essential to define who will be the moderating members, that is, who will be responsible for guiding the discussion by offering more essential topics on a given topic. Still, regarding the roles, it is suggested: the group leader who will be responsible for controlling the activities to verify if what they planned to do was put into practice, or if adjustments will be necessary, ensuring that the group's activities occur in a timely manner, satisfactory form; the member responsible for communication who will control the delivery dates of the activities and make contact with the teachers and the management, representing the group, also, he will be responsible for establishing a rapprochement with the educational institution; also, each member must contribute to the research and reading of the basic and complementary material indicated by the professors of the disciplines who were taking courses at a given moment and must present a report of the content that was under their responsibility (summary, review, fiche) so that all members of the group have access to the content, guaranteeing support and credibility to the asynchronous activities that will be developed, often individually, and to the dialogued discussions in the synchronous classes.

Then, a discussion list and a schedule of activities should be created so that the group's management is participatory to use the decision-making process collectively, including identifying adjustments that need to be made to achieve the general objective that should be to obtain learning in the disciplines. In the end,

external guests' participation will be allowed, who can be invited according to the group's needs, such as teachers and researchers who can contribute to the solution of doubts on a specific subject or the better targeting of study materials.

It is noteworthy that the study group members, over time, may present behavioral deviations in the environment, as many may experience emotional problems, physical or financial implications that suppress them from participating in the group and developing activities, according to schedule. To minimize this situation, all group members must be aware that they need to value the work of their colleagues and put themselves in a position of cooperation and not of competition to create a positive effect, making the members more predisposed to contribute.

Thus, virtual communication should be valued in the planning of the group's activities, to standardize said communication, and to schedule posts of relevant content consistent with the themes chosen for the study, in addition to understanding the learning difficulties, discussing with the professor of the corresponding discipline, to elaborate collaborative study proposals, favoring the relations of cooperation, exchange and exchanges between all members of the research group. Some applications and websites can be used to create study groups, such as Meetup, GoConqr, and Google Groups. To illustrate the methodology, figure 1 is presented the cycle of actions necessary for creating study groups, essential for dynamization with the students, with a focus on the routing of activities.

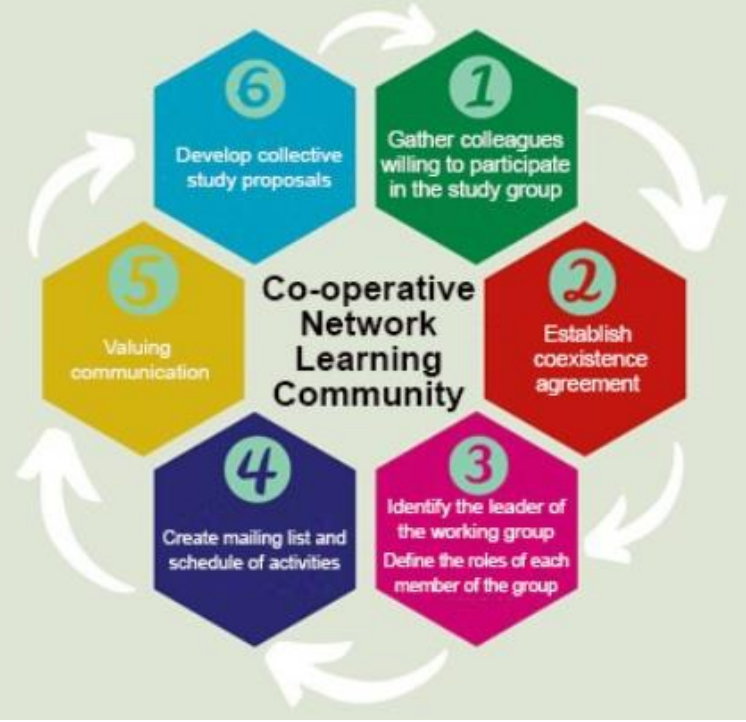

Figure 1. Routing for the development of a cooperative networked learning community.

The preferred methodology for the creation of study groups was established based on the needs of the students and on the perceptions of this experience report on positive and negative points, in addition to conducting research with several Statutes and Internal Regulations of Research Groups, information on research groups, studies, such as Lasid (2021), Geedu (2021), Universia (2020), Justen (2014) and Unyleya

(2021). Such methodology can be made available to students through informative and consultative meetings given by teachers and management in favor of the student's adherence to such a solution, focusing on the development with non-classroom teaching activities more efficiently. Also, it can be used by several teaching or research institutions that want to use active methodologies and peer learning when putting into practice the use of study groups.

5. Conclusion

In this sense, it is believed that it is possible to develop a cooperative network learning community, based on non-classroom pedagogical activities with the students of the Technical Course of Administration, an integrated modality to High School, from IF Baiano, Teixeira de Freitas campus, through study and workgroups, as well as improvements in the dynamics of activities, such as: providing feedback to students about non-classroom teaching activities; improving institutional communication by increasing contact with students through periodic meetings; more excellent supervision of the execution of remote classes, so that the timetable is followed according to the schedule presented by the course coordinator; standardize the sequence of sending activity and return, that is, encouraging the teacher to explain the asynchronous activity before sending it to the students and after receiving and correcting the activities, encouraging the teachers to present the correct and incorrect answers in order to clarify the learning objective; develop a teaching manual on remote teaching aimed at students and teachers.

Thus, in view of the adequacy needs that were identified with this experience report, it is believed that not all the learning objectives and expectations of the disciplines were achieved, as many of the didactic methodologies applied by the teachers did not include innovations, such as: o use of games, use of videos, link to complementary material, recording of classes to watch later, the use of PodCast to expose a more specific subject, influencing, including the reception of students.

It should be noted that the adoption of non-classroom teaching activities was significant for the continuity of the Institute's educational activities, teaching activity, and for the way that many teachers are conducting, which reflects the use of active learning methodologies. In this sense, the negative points highlighted in this experience report correspond to the recommendations for adjustments and adaptations with a focus on improving the development of remote classes and, thus, effectively establishing an innovative didactic practice that promotes learning.

Thus, results show that the study and workgroups can favor communication and reduce the challenges that students have faced. For example, it is possible to develop a methodology for creating research and workgroups, promoting the exercise of leadership by several members, and the emergence of spontaneous forms of division of activities and responsibilities to promote the involvement of students and expand their performance in the process of building knowledge. By devolution, it is intended to develop an event to communicate the suggestions of this work to teachers and managers to encourage students to participate in study groups.

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