

Experiences with hybrid teaching from asynchronous virtual seminars: contributions to a changing scenario

*Viviane Patrícia Pereira Félix*¹

*Ivanderson Pereira da Silva*²

ABSTRACT

The teaching of Health Sciences at a Higher Level still predominantly perceives its apprentices as recipients of information. In view of this scenario, asynchronous virtual seminars on histology were proposed in order to promote the role of students in the 1st year of the Nursing Course at a Public University in Alagoas. The present study had as objectives: to understand the formative demands that are presented in the society in face of the cyberculture context; explore the potential of virtual learning environments for the development of training experiences in the context of Health Education; and to analyze the limits and possibilities of asynchronous virtual seminars for the teaching of Histology. Data collection and analysis took place, respectively, through Focus Group and Content Analysis. It was found that this type of strategy favors student protagonism.

KEYWORDS: Hybrid Teaching. Histology. Online Education. Virtual Seminars.

Experiências com o ensino híbrido a partir de seminários virtuais assíncronos: contribuições para um cenário de mudanças

RESUMO

O Ensino de Ciências da Saúde em nível Superior ainda percebe, de forma predominante, seus aprendizes como receptores de informações. Diante desse cenário, foram propostos seminários virtuais assíncronos

¹ Master's degree in Science and Mathematics Teaching. Universidade Estadual de Ciências da Saúde de Alagoas, Maceió, Alagoas, Brazil. Orcid: <https://orcid.org/0000-0002-0118-373X>. E-mail: vivianeppf.bio@gmail.com.

² PhD in Education, Federal University of Alagoas, Arapiraca, Alagoas, Brazil. Orcid: <https://orcid.org/0000-0001-9565-8785>. E-mail: ivanderson@gmail.com.

de Histologia, a fim de promover o protagonismo dos estudantes do 1º ano do Curso de Enfermagem de uma Universidade Pública de Alagoas. O presente estudo teve por objetivos: compreender as demandas formativas que se apresentam na sociedade em face do contexto da cibercultura; explorar as potencialidades dos ambientes virtuais de aprendizagem para o desenvolvimento de experiências formativas no contexto do Ensino de Saúde; e analisar os limites e possibilidades dos seminários virtuais assíncronos para o ensino de Histologia. A coleta e análise dos dados se deu, respectivamente, por meio de Grupo Focal e Análise de Conteúdo. Constatou-se que esse tipo de estratégia favorece o protagonismo discente.

PALAVRAS-CHAVE: Ensino Híbrido. Histologia. Educação *Online*. Seminários Virtuais.

Experiencias de enseñanza híbrida a partir de seminarios virtuales asincrónicos: aportes a un escenario cambiante

RESUMEN

La enseñanza de las Ciencias de la Salud en un Nivel Superior todavía percibe predominantemente a sus aprendices como receptores de información. Ante este escenario, se propusieron seminarios virtuales asincrónicos sobre Histología con el fin de promover el protagonismo de los estudiantes de 1er año del Curso de Enfermería en una Universidad Pública de Alagoas. El presente estudio tuvo como objetivos: comprender las demandas formativas que se presentan en la sociedad frente al contexto de la cibercultura; explorar el potencial de los entornos virtuales de aprendizaje para el desarrollo de experiencias formativas en el contexto de la Educación para la Salud; y analizar los límites y posibilidades de los seminarios virtuales asincrónicos para la enseñanza de la Histología. La recolección y análisis de datos se llevó a cabo, respectivamente, a través de Focus Group y Content Analysis. Se encontró que este tipo de estrategia favorece el protagonismo de los estudiantes.

PALABRAS CLAVE: Enseñanza híbrida. Histología. Educación en línea. Seminarios virtuales.

* * *

Introduction

Higher Education is still marked, predominantly, by teacher protagonism, and the learners, in the case in question of Teaching Health Sciences, are perceived as receivers of technical-scientific information about diseases and treatments (CECCIM; FEUERWERKER, 2004). However, "the current society suggests that the student is someone who seeks to build his knowledge, someone flexible, who knows how to deal with the needs in a creative way and manifests the will to learn, research and knowledge" (AMEM; NUNES 2006, p. 172).

In face of this reality, we proposed and applied, together with 1st year students of the Nursing course of a Higher Education Institution (HEI), asynchronous virtual seminars of Histology in the Virtual Learning Environment (VLE) Moodle (*Modular Object-Oriented Dynamic Learning Environment*).

We preferred to work with seminars because, besides students being familiar with this strategy of socialized teaching, this type of strategy favors the mobilization of "knowledge to research (studying and reading), then discuss through theoretical and practical basis, building synthesis" (ANASTASIOU; ALVES, 2006, p. 90). In turn, to develop pedagogical work in the virtual environment is to build networks and not routes, since the educator is no longer positioned as the holder of the monopoly of knowledge, but moving on to webs. (SILVA, 2006).

Given this framework, the present study had the following objectives: to understand the formative demands that are presented in society in the context of cyberculture; to explore the potential of virtual learning environments for the development of formative experiences in the context of Health Education; and to analyze the limits and possibilities of asynchronous virtual seminars for the teaching of Histology.

This is a case study of qualitative nature (EISENHARDT, 1989; YIN, 2009; BRANSKI et al, 2010). The results of this research were organized into three more sections that, besides bringing a proposal for flexible curriculum integrated with the use of Digital Information and Communication Technologies (ICT), allow a reflection on the importance of sharing the protagonism of the teaching and learning process with students.

The need for flexible curricular arrangements

In the information age, it is necessary to build new curriculum models, given that the generation *Homo zappiens*, also known as generation Y and Z, or even post-internet, which corresponds to individuals born after the 1980s, sees school more as an environment for meeting with friends than as a place of learning (LÉVY, 2010; VENN; VRAKKING, 2009).

This fact happens because as these individuals have become accustomed to using electronic games, to produce, interact and share information through social networks and use mobile devices, both demand the insertion of digital technologies in their educational practices and, probably, feel the non-presence of them in educational processes (LARA; QUARTIERO, 2009).

Due to these factors, educational institutions, which are constituted as spaces of development of social practices, are inserted in the network and challenged to live with the transformations that technologies and digital media cause in society and culture, since they are brought into the classroom by students, poorly oriented citizens on how to relate educationally with these cultural artifacts that permeate their daily practices (ALMEIDA; SILVA, 2011).

Thus, educational institutions attentive to the changes imposed by cyberculture (relationship developed by contemporary society between digital technologies and social life), are reviewing their curricula, their methodologies, their times and spaces and choosing fundamentally two

paths: 1. Models of progressive changes, considered softer, since they maintain the disciplinary curriculum model, but prioritize the involvement of the student with active methodologies such as, for example, hybrid or blended learning; or 2. Disruptive models, considered innovative and profound changes, as they propose models without disciplines, which redesign the project, physical spaces, methodologies based on activities, challenges, problems, games and where each student learns at his or her own pace, according to his or her needs and with others in groups, with supervision from guiding teachers (MORAN, 2015).

In this case study, we analyzed the application of a progressive change model, which prioritized student involvement with an active methodology: hybrid teaching. This type of approach, is emerging as a sustained innovation in relation to the traditional classroom since its points contributions to improve what already exists (CHRISTENSEN; HORN; STAKER, 2013; HORN et al., 2016)

Blended learning is a concept of education that makes use of various methods to facilitate learning, ensure collaboration among students, and allow for the creation and exchange of knowledge (SPINARDI; BOTH, 2017). Because it is integrated with technology, it promotes the adaptability or customization of teaching and the autonomy of the subjects involved with the teaching process, i.e., it provides co-responsibility, mainly between students and teachers, for the quality of the teaching offered and the learning developed (BARBOSA, 2016).

Indeed, as highlighted by Oliveira, Maciel and Silva (2018), in hybrid education the teacher is essential in the organization and conduct of the whole process, mediating knowledge, valuing the autonomy of their students, given that access to information in the cybercultural society is done quickly, anytime and anywhere. Moreover, the feedback process needs to be the engine of reorientation of the practice of blended learning classes, i.e., all data used to verify learning need to react to the results (RODRIGUES, 2015). Therefore, in this teaching format, assessment

ceases to be a classificatory process, becoming part of the entire teaching-learning process (SPINARDI; BOTH, 2017).

In the next section we present the methodology of intervention/research used.

Case description of an experience with Hybrid Teaching

The hybrid experience succinctly presented in this section (Table 1), that is, the asynchronous virtual seminars of Histology, which corresponds to a cut of a professional master's dissertation in teaching (FELIX, 2020) and that was only applied after the favorable opinion (no. 3.455. 779) of the Ethics Committee, dealt with five Connective Tissue diseases: Dermatomyositis/Polymyositis; Systemic Lupus Erythematosus (SLE); Systemic Sclerosis; Mixed Connective Tissue Disease (MCTD) or Sharp's Syndrome; and Osteogenesis Imperfecta, discussed by the 1st year students of the Nursing course of a university in Alagoas, in the Moodle Forum interface, which became their virtual classroom for five consecutive weeks.

Table 1: Hybrid teaching of histology based on asynchronous virtual seminars

Date / Period	Activity	Modality	Description
02/19/2019 to 06/04/2019	Explanation of the Histology contents	On-site	The Histology contents were taught before the asynchronous virtual seminars as a way of facilitating the students' understanding of the topics they would develop.
5/14/2019	Presentation of the proposal of hybrid teaching of Histology to the university manager	On-site	Presentation of the proposal of hybrid teaching of Histology to the university manager, as well as a request for authorization to carry it out in the 1st year of the nursing course of the institution.
05/15/2019	Request to open the Histology virtual classroom of the 1st year of the Nursing course	On-site	The opening of the Histology virtual classroom of the 1st year of the Nursing course was requested from one of the Moodle administrators at the institution for the implementation of the hybrid teaching proposal in that discipline.
06/25/2019	Survey on the application of a	On-site	We talked to the first-year students of the Nursing course of the institution, before the

	hybrid teaching proposal with the students		explanation of the first subject of the Cellular and Molecular Biology (BCM) block, about the intention of developing a hybrid activity with them, the result of a master's research, as a complement of the bimester's grade of the subject. They suggested that this activity should be worth an extra average score. It was agreed that this counterproposal would be reported to another teacher of the subject.
07/02/2019	Presentation of the hybrid teaching proposal to another Professor of Histology	On-site	Another Histology teacher, who also shares the subject, was informed about the hybrid teaching proposal which was intended to be applied to the 1st year students of the Nursing course of the institution in the 3rd bimester. After that, she was informed of the results of the student survey, that is, the counterproposal. She did not object, as long as the extra score (2.0 points) was only part of the BCM block.
07/02/2019	Announcement of the counter proposal result	On-site	Before the reevaluation test of the subject was applied, the students were told that the hybrid teaching proposal that would be applied to them in the 3rd bimester would be an extra point. Then, the class representative was asked to send via WhatsApp the list of the students distributed in five groups.
07/06/2019	Drawing of asynchronous virtual seminar topics	Long-distance	Due to the academic recess, to be officially started on 07/08/2019, the asynchronous virtual seminar topics were drawn via Smartphone, by video call, with the class representative.
07/15/2019	Invitation to meet the virtual classroom	Long-distance	Students were invited, via e-mail, to visit the virtual classroom, the stage for the virtual seminars.
07/30/2019	Workshop for the asynchronous virtual seminars	On-site	The preparatory workshop for the asynchronous virtual seminars was held in the physical classroom. In this workshop students were explained what they should do before and during the Moodle presentations, i.e. the requirements of online didactic design, online courseware, online assessment and online teaching were discussed by means of examples.
08/02/2019	Distance workshop slides were made available	Long-distance	The workshop slides were made available in the virtual classroom. Students were informed of this via email.
08/05/2019	Availability of tutorial to complement the workshop	Long-distance	A tutorial was made available, via e-mail and in the virtual classroom, since in the practical part of the workshop there were lacked of connectivity.

08/06/2019	Explanation of 3rd bimester's issues and clarification of Group 1's doubts of the seminars	On-site	Explanations on Macromolecular Bases and Synthesis of Macromolecules and at the end of the class clarification of technical and pedagogical doubts of Group 1, which would address Dermatomyositis/Polymyositis.
08/06/2019 to 08/13/2019	Virtual seminar on Polymyositis/ Dermatomyositis	Long-distance	Development of group 1 seminar on Moodle Forum through discussions generated by the materials provided: slides, text, mind map, patient report video, author video (their differential), clinical cases and questionnaire. Exchange of emails between the seminarians and the teacher about suggested interactivity and questions about completing the evaluation rubrics (criteria that guide students to take responsibility for their own learning).
08/12/2019	Clarification of doubts of group 2	On-site	In a vacant room at the university the technical and pedagogical doubts of group 2 were clarified in advance (due to the education stoppage)
08/13/2019	Compliments to group 1 and suggestions to the other seminarians	Long-distance	Due to the education stoppage, an email was sent in the morning to the class congratulating group 1, giving suggestions to the other seminarians and wishing a good seminar to group 2.
08/13/2019 to 08/20/2019	Virtual seminar on Systemic Lupus Erythematosus (SLE)	Long-distance	Development of group 2 seminar in the Moodle Forum through discussions generated by the materials made available: slides, text, author's video, clinical case, twine (its differential) and questionnaire. Exchange of emails between the seminarians and the teacher about the development of the presentations.
08/20/2019	Explanation of subject and considerations about the seminars.	On-site	Explanations about Cell Cycle and Meiosis and at the end of the class congratulations to group 2 and clarification of pedagogical doubts from group 3.
08/20/2019 to 08/27/2019	Virtual seminar on Systemic Sclerosis	Long-distance	Development of group 3's seminar on the Moodle Forum through discussions generated by the available materials: slides, text, mind map, video with patients' reports, clinical case breakdown, polls forum (its differential) and questionnaire.
08/28/2019	Explanation of subject and considerations about the seminars.	On-site	The explanations about Nucleus and Cytoskeleton, due to the municipal holiday, happened on 08/28. At the end of the class, group 3 was congratulated and the technical and pedagogical doubts of group 4, which started its presentation about Sharp's Syndrome, were clarified.

08/28/2019 to 09/04/2019	Virtual seminar on Sharp's Syndrome	Long- distance	Development of group 4's seminar on the Moodle Forum through discussions generated by the materials made available: slides, text, mind map, video with patient's report, clinical case with tool and comic strips, word search and pastime (its differential). Due to problems accessing the virtual room, the group gained another day of online teaching. Exchange of emails between the seminarians and the teacher about suggested interactivity.
0/03/2019	1st Theoretical Evaluation of the 3rd Unit	On-site	Before the evaluation, compliments were given to group 4. Group 5 had no questions. The assessment was only about the BCM contents.
03/09/2019 a 09/09/2019	Virtual seminar on Osteogenesis Imperfecta	Long- distance	Development of group 5's seminar on Moodle Forum through discussions generated by the materials provided: slides, text, mind map, videos with reports of real or fictitious patients (from Grey's Anatomy series), author video, clinical case, question forum, questionnaire and conversation circle (its differential).
09/10/2019	Focus Group	On-site	Formation of a focus group with a representative of each team from the asynchronous virtual seminar to discuss the hybrid experience lived.

Source: Adapted from Félix (2020)

The day after the end of this intervention, a focus group with the students was proposed in a private room of the IES. The focus group is a research technique in which a certain number of people, selected and brought together by researchers, discuss and comment, based on a previous script, on a theme that is both the result of a personal experience and the object of research.

This technique aims to capture, through the exchanges held in the group, concepts, feelings, attitudes, beliefs, experiences and reactions that might be difficult to manifest through other methods (GATTI, 2012). It can be said that the data collection obtained through the focus group, recorded via Smartphone and later transcribed, allowed us to have a view, if not total, but as comprehensive as possible of the virtual seminars held, as can be better observed in the following section.

Results and discussions: case study analysis

The data collected through the focus group about the asynchronous virtual seminars were submitted to content analysis. According to Bardin (2016), content analysis consists of a set of techniques for analyzing communications, which can be organized in three chronological poles: pre-analysis, exploration of the material and treatment of the results, inference and interpretation.

Making use of this technique, at first, we were able to elucidate some doubts that arose during the development of the virtual seminars and that were questioned during the focus group, such as: Why did the teams, in general, fragment the forums so much? Why did all the teams propose so many activities, when just one was recommended several times? Why did the groups, without exception, propose clinical cases as an activity? Why the virtual seminars, despite being an instigating didactic strategy, were tiring?

According to the students - identified as RG1 (Group 1 Representative), RG2 (Group 2 Representative) and so on - the fragmentation of the forum into several topics was due to two reasons: 1. It was not clear in the face-to-face workshop that it was not to open topics; and 2. Moodle's format confuses the user:

"Because so, I think it wasn't really clear to group 1 that, then you explained, it would be to not open topics, keep the discussion in a single forum. I even tried to do this section, but it wasn't very clear for everybody to do just that. RG3

"Because Moodle is a little bit disorganized. And when I clicked to answer something, it was clinical case here, I don't know what here, and that, something else. You are flying around, not knowing where you are going". RG3.

Regarding the proposal of so many activities, especially the clinical case, this happened because the students were very guided by what group 1 did and because it is easier to understand the content, besides drawing attention, as we can see in the following comment:

"I think that the first group was quite a difficult task, but that in front of his group it was possible to organize all the others. I believe that I think that the basis that we had first to post was with group 1. I think it is extremely important to emphasize that, that group 1 was primordial for my group So, RG1, the first group was primordial so that I could understand that the clinical case was important, that the person would understand better, would search for it. RG3.

This makes it evident that, when proposing a strategy like this, the mediator needs to be attentive to all the groups, especially the first one, which will inevitably be the reference for the others.

As for the fact that the virtual seminars were instigating, but tiring, this happened because of a misunderstanding. The participants of this hybrid methodological proposal thought they needed to enter the virtual classroom every day during each seminar, when, in fact, they could enter any day, at the time they felt most comfortable, to give their opinion, argue, counter-argue and ask questions, as it is possible to verify by the following speech:

"Be every day, because it got too tiring. If it were a day, like Saturday, and we left it up to you to answer at any time, it could be more profitable than every day. RG4.

Besides these immediate clarifications, the data obtained in the focus group allowed us to identify the following categories: Potentialities and Weaknesses of the Virtual Seminars; Facilities and Difficulties in the use of Moodle and Workshop Ideal, obtained from the frequency with which the themes emerged in the statements.

Regarding the potentialities, the greatest contribution of the virtual seminars was to instigate the students' protagonism in their learning process. By allowing the student to alternate moments of online teaching and discourse, we enabled him to assume himself as an autonomous being, that is, "as a social and historical being, as a thinking, communicating, transforming, creating, making dreams come true, able to be angry because he is able to love (FREIRE, 2000, p. 46).

Such condition stimulated him to research in several sources, review, correlate the materials, going beyond what the theme proposed to make it understandable to himself and others, as well as gave him the opportunity to express himself, to show and interact with each other and with the teacher, which also corresponds to the communicational logic of Online Education (SILVA, 2010), as can be verified by the following lines:

"...I went searching ...on YouTube...on Google academic...on Scielo...I took note of the situation" RG1.4

"Go beyond just what the topic proposes... Besides getting organized, looking for other information to make it more accessible" RG5

"...the forum made it possible for me, gave a voice to a person who, is embarrassed to speak I have a difficulty speaking in public because of a trauma" RG4

" ...everyone can show their personality ...people ... Shy in class ... can express themselves in some way" RG5

"For people of the team who can't express themselves in class to ask a question, it's much easier, no one was looking eye to eye ...easier to ... praise someone, which is sometimes a difficult task" RG3

"It promoted this interaction...that we don't have in class...there was not this matter of authority, teacher over student, but rather an exchange and mediation of knowledge" RG3

As the teams had to develop their themes in an integrated way with technologies, this fact both sharpened their creativity, a characteristic that corresponds to one of the principles of ICTs, and stimulated/strengthened the desire to be a teacher and researcher in parallel with the nursing practice, a reflection of personalized learning (BACICH; MORAN, 2018), as can be observed from the statements below:

"...the seminar...in the knowledge production part...it was a pretty cool foundation...it just encouraged us more I want to be a teacher" RG1

"This work showed ... a dialogue perspective, presentation, learning, a different context that I... liked a lot. It also strengthened my side of the teaching issue and, mainly, because I, it is not that I have the dream of being a teacher, I actually have the dream of being a researcher. Yes, I really like this area. I want to be a researcher and work in hospital assistance. So, it was fermented a lot because of the clinical cases. I am very attract about these things. That's it. It increased my desire to discover new things... new ways of learning, discovering new looks.

"Yes... it promoted creativity, putting yourself in the other person's place, and reinforced the question of organization" RG4

In order to draw attention, to meet all audiences (or at least most of them) and promote interactivity (or at least some student participation), each group provided several materials in the forum: slides, summaries, videos, mind maps, polls, conversation circle, word search, string, and clinical cases, exploring the Moodle interfaces, in order to enhance communication and learning, characteristics of a citizen education immersed in cyberculture (SILVA, 2010).

In the evaluation aspect, by including self-assessment linked to the stimulus of co-responsibility, we wanted the participants to realize and evaluate their own learning and others so that they could have more autonomy and develop their skills as a researcher. In general, the student's evaluation was based on network education rules, that is, the quality of the posts generated in the forum, as we can observe by the following expression:

"In relation to evaluate...the criterion...well elaborated answer...interaction was very important...we sent and people didn't correspond or sometimes they answered, like, very superficial...analyze how...the person was deepening...I looked at how they put, if they made our life easier, like, dividing in topics. If they put reference" RG4

The virtual seminars also favored the creation of a more comprehensive and collaborative environment, as we can see from the sentences below:

"Another difficulty...the use of the platform...I am sluggish to mess with anything on internet...I think of the five groups...it was the group that posted the least interactive content" RG2

"... we had a lot of difficulty with the technology itself, but there were people who were willing to help... they recorded videos explaining" RG2

Such difficulties show that the policies of integration of ICT in school activities are still unsatisfactory (ALMEIDA, 2010b; VALENTE; ALMEIDA, 1997) and unequal among educational institutions of the same region (ALMEIDA; ASSIS, 2011).

At the intergroup level, it can be said that many students participated in the virtual seminars. Although this participation was not constant and not always in-depth, there was interaction, exchange of information, resolution of activities and learning, not restricted to the topic that was being addressed, but in relation to nursing itself, the didactics that was being presented and in relation to the available resources, proper of a citizen education and immersed in cyberculture (SILVA, 2010), as we can see from the following comments:

"The possibility it gives of interaction.... When you pass information to someone else, you learn more" RG4

"...from my group gave to understand more the issue of humanization as a professional...I highlighted this a lot after I saw the case reports that put our humanization as a professional was super important, mainly, because nursing is super connected to this issue" RG3

"It provided ... This facility for you to understand what you learn ... the people there sought their method, in the way they understood... to put as many things as possible. ...so that people could understand in the most dynamic way possible... learn ...in the way they most adapted" RG3

The virtual seminars, being asynchronous and lasting a week for each team's presentation, allowed students, as we can see in the statements below, a reasonable amount of time to access the available

content and at the time that was most favorable to them, a flexibility only possible through hybrid education (BACICH; MORAN, 2018):

"A didactic that you are there, anytime you can, from where you can to be able to understand the content" RG3

"It is easier for you to be able to read, when you are more rested, when you have more free time to study" RG5

The didactic strategy integrated to ICT also promoted in students the development of a typical competence of hybrid education, the self-evaluation, given that some students realized the importance of planning and organization to achieve goals (BARBOSA, 2016); others began to study the content in advance to attend classes and began to take notes of what the teacher said in class, making mind maps during the class and creating individual WhatsApp groups to forward the available materials by teachers of the institution, as is evident in the statements below:

"Yes, it changed, but not the same change...I noticed habits.... I didn't study before coming to class.... Not now. I study before at home to come to class.... Sometimes I even debate with the teacher...before, the people in my group didn't write down what the teacher said..., but now I've noticed that in class everyone types it up...made the mind map on the spot all pretty or it was a flowchart" RG1

"...my colleagues...started to adopt organizational and planning methods after the seminar.... They made individual WhatsApp groups for themselves so they could post, add materials...make a schedule for the day of what they were going to do" RG3

"...this work...matured me more...I had already been trying to be organized..., but it proved that it has to be this way" RG5

Moreover, some students found this teaching methodology better than "normal" classes, as can be seen in the following statements:

"...I thought it was better even than normal class.... It optimizes time and is much better" RG3

"...I like this didactic method because I have a week to access these subjects...in the classroom, we can't get all this necessary information.

"I come to class, but for me I feel a little lost. Because I listen, I see, but I don't understand.

"...in class I don't ask more than three times.... The teacher already spends a lot of time teaching...sometimes with a lot of noise and if stop...it delays the subject; the class ends later and people talk more and end up messing everything up" RG3

"... in the classroom you have to give your class in the best way possible. But there are people who won't even listen because they don't adapt to this method" RG5

These statements reinforce the need to diversify teaching strategies, but especially the importance of offering face-to-face classes that are more meaningful to the students, whether by valuing the interpersonal relationship of the group, or by performing activities that provide a more human, interesting, and genuine teaching-learning process.

Nevertheless, despite the contributions arising from the virtual seminars, there were several weaknesses. However, the most emblematic of them concerns the relevance that the subjects place on the written test, the traditional classes, and the hierarchization of the curriculum. Regarding this last aspect, we can say that the treatment given to Anatomy is overvalued to the detriment of Histology. For example, instead of reconciling the study for the Anatomy exam with the participation in asynchronous virtual seminars, some students consciously dedicate themselves entirely to that exam, since it is socially considered more important than the virtual seminars, as can be seen in the comments below:

"...I don't know if it was because there was a test this month, but... I think there was also a lack of interest... one of the main problems we had... And what I also missed was the lack of familiarization with Moodle. First group was the response. I asked some questions and they never answered" RG3

"...as the diseases are rare, I was not so interested.... If it was...diabetes, a heart attack...it would instigate me more. But since the diseases are rare, possibly I won't even see it" RG1

"...there were many predictors, but when it the came time to do it...I didn't do it" RG2

"...you could see that it was very badly done because it was a lack of interest" RG4

"...a lot of people just wanted to get a grade...this was kind of demotivating " RG4

We can observe in the statements of these subjects the enunciation of a supposed lack of interest from their colleagues. However, we see the situation from another point of view. The students were interested in the virtual seminars, but had to prioritize the Anatomy exam because, institutionally, it has a greater curricular relevance than the hybrid methodological proposal we were developing with them. This was seen from the beginning as something extra, and not as something integrated into the curriculum, like the Anatomy exam, or even the Histology exam.

The subject of Histology is perceived by the subjects as less importance than Anatomy. As a result, some students did not participate adequately in the virtual seminars because they were studying for the Anatomy exam, or because they were unmotivated by the negative result in it. This hierarchy of subjects that make up a curriculum needs to be rethought because it "drowns the freedom of the learner, squashing his right to be curious and restless" (FREIRE, 2000, p. 66-67).

The fact that students are not so interested in the virtual seminar topics because they would not be easily verified in their daily lives, calls

attention to the importance of doing a previous content survey with the student body during the planning of an activity like the one being discussed here, to instigate more and better student participation. Or even, to propose other activities in the Histology discipline, especially those that can articulate theory with practice so that it can provide the student with autonomy beyond the walls of the university.

Moreover, the difficulties revolved around not having a personal computer, having problems with the cell phone during the seminars, lack of internet access outside the HEI premises and difficulty in using the platform, as it is possible to verify by the statements below:

"... I ended up not participating anymore because I had problems with the phone, computer" RG4

"... they said that they didn't have, like, much with this technology and some, as they were going from the interior and coming back, it was complicated to have access to the internet at the times we wanted" RG3

"Difficulty... in my group to mess with any technological thing... it was up to a single person" RG4

Such statements report us again the issue of unsatisfactory investments of Brazil in public policies that ensure the integration of ICT in educational spaces, as well as the minimum conditions necessary to explore the potential of cyberspace, such as Internet access, which represents the basis of communication in the era of mobility (ALMEIDA; ASSIS, 2011; PELLANDA, 2009).

With regard to VLE Moodle, one of its great contributions was to enable the exploration of the same theme in various ways for various audiences at the same time, as we can see in the following comment:

"...explain the same thing in several ways.... will serve a wider audience" RG5

Another favorable point of the platform is its resources. The Forum, for example, when well explored, contributes to a greater interaction and exchange of knowledge among students and between them and the teacher,

which is the proposal of online education (SILVA, 2010), as it is possible to deduce in the light of the following comments:

"If all teachers adopted it, I believe it would be a perfect tool for questions and for us to have more interaction with the teacher" RG3

"Moodle...promoted...our autonomy in wanting to search and wanting to share with others what we know" RG3

However, students found Moodle, in general, complicated. Because of this, they called the platform boring, disorganized and ugly, preferring Google Classroom, as we can see in the following statements:

"...Moodle is a bit disorganized... You can easily get lost, not knowing where to go" RG3

"Moodle...is a complicated platform "RG2

"Moodle is ugly...it's a cool platform, but it needed to be improved...Google classroom is a better tool ... more organized, prettier to see and work with "RG3

Finally, the students alleged that, although the tutorial with the practical part of the workshop was explanatory, the ideal would have been to explain this process in the computer screen recording mode or, alternatively, that the workshop had happened with only one representative of each group in the lab or in a room with internet access. Such movement would have favored the socialization of the theoretical information with more clarity, it would have been possible to access Moodle and show, in practice, what needed to be done. This can be seen in the following statements:

"...record screen, step by step" RG1

"... I suggest ... access Moodle and say look here, do this and so on" RG3

"It would have been more effective if representative from each group were taken to the lab...and did this workshop with them and pass it on to the others" RG3

The speeches reveal that theory needs to be articulated with practice and that this articulation needs to be more dialogued to involve the student more. In other words, when connectivity was lacking in the classroom during the workshop, we should have promoted another moment, face-to-face or synchronous virtual (immediate response), to demystify in a more assertive way possible difficulties that might arise due to the lack of familiarity with Moodle.

Final considerations

It can be said that the hybrid teaching strategy, based on asynchronous virtual seminars, brought several contributions. As far as the students are concerned, it is possible to say that it established good habits (previous study before the class, organization and planning methods), consolidated theories (planning and organization allow the concretization of objectives), instigated desires (to be a teacher, a researcher) and promoted the students' protagonism, once there was the development of their autonomous capacity, stimulus to their creativity, incentive to research, interaction and collaboration in class.

The students also pointed out that the workshop would have been more fruitful if it had been carried out with only one representative from each team, in a place with internet access to go on executing with them what needed to be done as an online teacher, or else carry out the process in the computer screen recording mode and make it available for everyone. Similarly, they claimed that Moodle is a complicated platform, thus preferring Google Classroom, because it is more organized, accessible, and has a nicer design.

In general, it can be said that the virtual seminars, despite providing a liberating experience to the students, was perceived from its inception as something extra, and not as an activity integrated to the curriculum. So much that some students, instead of reconciling their participation in the

asynchronous virtual seminars with the Anatomy and Histology exams, consciously opted for the exam, especially of the first discipline, since it was considered the most important one in the curriculum, to the detriment of the hybrid methodological proposal developed with them.

Finally, it is evident that, in order to propose an active and hybrid methodology, and promote online education, it is necessary to change teachers' and students' attitudes, but mainly a redefinition of the curriculum, because one subject cannot be overvalued at the expense of others, because all of them are necessary for the individual's education, just as it is essential to invest more in public policies that increase the population's access to network digital technologies and that insert teachers, since their initial training, in active pedagogical practices inserted in cyberculture.

References

ALMEIDA, Maria Elizabeth B. de; SILVA, Maria da Graça Moreira da. CURRÍCULO, TECNOLOGIA E CULTURA DIGITAL: ESPAÇOS E TEMPOS DE WEB CURRÍCULO. *Revista e-curriculum*, São Paulo, v.7 n.1 Abril/2011.

Disponível em:

<http://revistas.pucsp.br/index.php/curriculum/article/viewFile/5676/4002>. Acesso: 12 jan. 2020.

ALMEIDA, Maria Elizabeth Bianconcini. *Integração de Tecnologias na Educação Pública do Brasil e de Portugal*. I Encontro Internacional TIC e Educação – ticEDUCA2010. Portugal: Universidade de Lisboa, 2010b.

ALMEIDA, Elizabeth Bianconcini de; ASSIS, Maria Paulina de.

Integração da web 2.0 ao currículo: a geração web currículo.

Organización de los Estados Americanos: *Revista digital la educ@cion*, 2011. Disponível em:

<https://paulassis.files.wordpress.com/2011/04/integrac3a7c3a3o-da-web-2-0-ao-curr3adculo-a-gerac3a7c3a3o-web-curr3adculo.pdf>. Acesso: 12 jan. 2020.

AMEM, Bernadete Malmegrim Vanzella; NUNES, Lena Cardoso.

Tecnologias de informação e comunicação: contribuições para o processo

interdisciplinar no ensino superior. *Revista Brasileira de Educação Médica*, Rio de Janeiro, v. 30, n. 3, p. 171-180, 2006. Disponível em:

<http://www.scielo.br/pdf/rbem/v30n3/07.pdf>. Acesso: 10 mar. 2018.

ANASTASIOU, Léa das Graças Camargos; ALVES, Leonir Pessate. (Orgs). *Processos de ensinagem na universidade: pressupostos para as estratégias de trabalho docente em aula*. 6. ed. Joinville: Univille, 2006.

BACICH, Lilian; MORAN, José (ORGS.). *Metodologias ativas para uma educação inovadora: uma abordagem teórico-prática*. Porto Alegre: Penso, 2018.

BARBOSA, Renata Cristina. *Avaliação, tecnologia e ensino híbrido*. Revista Linha Direta, 2016. Disponível em: <https://www.portalinhadireta.com.br/publico/images/pilares/616f72c1eb9f3e7c3d5e16705bfc5f1f.pdf>. Acesso em: 12 jan. 2020.

BARDIN, Laurence. *Análise de conteúdo*. São Paulo: Edições 70, 2016.

BRANSKI, Regina Meyer et al. METODOLOGIA DE ESTUDO DE CASOS APLICADA À LOGÍSTICA. XXIV ANPET Congresso de Pesquisa e Ensino em Transporte. Brasil, Salvador, janeiro de 2010. Disponível em: https://www.researchgate.net/publication/277598822_METODOLOGIA_DE_ESTUDO_DE_CASOS_APLICADA_A_LOGISTICA. Acesso em: 05 set. 2020.

CECCIM, Ricardo Burg; FEUERWERKER, Laura Macruz. Mudança na graduação das profissões de saúde sob o eixo da integralidade. *Cadernos de Saúde Pública*, Rio de Janeiro, v. 20, n. 5, p. 1400-1410, set-out. 2004.

CHRISTENSEN, Clayton; HORN, Michael e STAKER, Heather. *Ensino Híbrido: uma Inovação Disruptiva? Uma introdução à teoria dos híbridos*. Maio de 2013. Disponível em: <https://www.pucpr.br/wp-content/uploads/2017/10/ensino-hibrido-uma-inovacao-disruptiva.pdf>. Acesso: 03 ago 2019.

EISENHARDT, K.M. (1989) Building theories form case study research. *Academy of Management Review*. New York, New York, v. 14 n. 4.

FREIRE, Paulo. *Pedagogia da autonomia: saberes necessários à prática educativa*. 50. ed. Rio de Janeiro: Paz e Terra, 2000. 165p.

FÉLIX, Viviane Patrícia Pereira. *Seminários virtuais assíncrono de histologia: análise de uma pesquisa-formação em um curso superior de enfermagem de Alagoas*. Dissertação (Mestrado em Ensino de Ciências e Matemática) – Universidade Federal de Alagoas. Centro de Educação. Programa de Pós-Graduação em Ensino de Ciências e Matemática. Maceió, 2020.

GATTI, Bernardete Angelina. *Grupo focal na pesquisa em ciências sociais e humanas*. Brasília: Liber Livro Editora, 2012.

HORN, Michael; STAKER, Heather; CHRISTENSEN, Clayton. *Blended: usando a inovação disruptiva para aprimorar a educação*. Penso Editora, 2016.

LARA, Rafael; QUARTIERO, Elisa Cunha. Educação para uma geração pós-internet: olhares a partir da formação inicial de professores. In: SANCHES, Jayme. *Congresso Iberoamericano de Informática Educativa*. Santiago, Chile, 2010.

LÉVY, Pierre. *Cibercultura*. 3º ed. São Paulo: Editora 34, 2010.

MARTINS, Alexandra da Costa Souza; ALVES, Lucicleide Araújo de Sousa Alves. O fórum de discussão como instrumento avaliativo de aprendizagem. *Informática na educação: Teoria & Prática*. Porto Alegre, v. 19, n. 2, jun./set. 2016.

MORAN, José. *Mudando a educação com metodologias ativas*. Coleção Mídias Contemporâneas. Convergências Midiáticas, Educação e Cidadania: aproximações jovens. Vol. II. Carlos Alberto de Souza e Ofelia Elisa Torres Morales (Orgs.). PG: Foca Foto-PROEX/UEPG, 2015. Disponível em: http://www2.eca.usp.br/moran/wp-content/uploads/2013/12/mudando_moran.pdf. Acesso em: 15 mar. 2019.

OLIVEIRA, Jéssica Maria; MACIEL, Marília de Holanda; SILVA, Rutt Keles Alexandre da. Metodologias Ativas: Caminhos Facilitadores da Aprendizagem Para Contribuir No Alcance Do Ods 4. *Anais do 16º Congresso Internacional de Tecnologia na Educação*. Brasil, Recife, setembro de 2018.

RODRIGUES, E. F. A questão da verificação de aprendizagem no modelo de ensino híbrido. In: BACICH, L.; TANZI NETO, A.; TREVISANI, F. de M. (Org.). *Ensino híbrido: personalização e tecnologia na educação*. Porto Alegre: Penso, 2015.

SILVA, Roger Magalhães da et al. Situações-limite na formação de professores de ciências na perspectiva freireana: da percepção da realidade à dimensão pedagógica. *Investigações em Ensino de Ciências – V21(3)*, pp. 127-151, 2016. Disponível em: <https://www.if.ufrgs.br/cref/ojs/index.php/ienci/article/view/671/447>. Acesso em: 02 Set 2019.

SILVA, Marco. Criar e professorar um curso online: relato de experiência. In: SILVA, Marco (Org.). *Educação online*. São Paulo: LOYOLA, 2ª ed.: jun./2006, p. 53-75.

SILVA, Marco. Educar na cibercultura: desafios à formação de professores para docência em cursos online. *Revista Digital de Tecnologias Cognitivas*. São Paulo, n. 3, p. 36-51, jan./jun., 2010.

SPINARDI, Janine Donato e BOTH, José Ivo. Blended Learning: O Ensino Híbrido e a Avaliação da Aprendizagem no Ensino Superior. Rio de Janeiro: *B. Téc. Senac*, v. 44, n. 1, jan./abr. 2018. Disponível em: <https://www.bts.senac.br/bts/article/view/648>. Acesso: 05 Jan 2019.

VALENTE, José Armando; ALMEIDA, Fernando José. Visão analítica da informática no Brasil: a questão da formação do professor. *Revista Brasileira de Informática na Educação*. Sociedade Brasileira de Computação, Florianópolis, n. 1, 1997. Disponível em <http://www.professores.uff.br/hjbortol/car/library/valente.html>. Acesso em: 10 mar. 2018.

VEEN, Wim; WRAKKING, Benn. *Homo Zappiens: educando na era digital*. Porto Alegre: Artmed, 2009.

YIN, R.K. (2009) *Case study research, design and methods (applied social research methods)*. Thousand Oaks. California: Sage Publications.

Received in september of 2020.

Accepted in January of 2021.