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## EXPERIENCE REPORT

# INSTRUCTIONAL DESIGN: A LEARNING STRATEGY APPLIED TO NURSING HISTORY IN REMOTE TEACHING

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### ABSTRACT

Objective: to describe the elaboration of a virtual learning object to teach the Nursing History academic discipline. Method: a descriptive and exploratory study of the experience report type about the elaboration of a learning object as an active methodology in remote classes of the Nursing History academic discipline using the Analysis, Design, Development, Implementation and Evaluation (ADDIE) model of instructional design. The academic discipline was taught from December 2020 to March 2021 in Macaé, RJ, Brazil. Results: the discipline had an hour load of 30 hours, distributed in 10 synchronous meetings and nine asynchronous activities, with the participation of 26 students through the MOODLE platform, in addition to other pedagogical strategies. The challenges were mainly of a motivational nature and the students' interaction with the platforms showed commitment and interest; moreover, they were fundamental to turning learning-teaching into a dynamic and pleasant process. Conclusion: elaboration of the Virtual Learning Object was a strategy that assisted in improving the students' performance, in addition to promoting innovation in the teachers' pedagogical methods.

**DESCRIPTORS:** Nursing; Nursing History; Education in Nursing; Educational Technology; Pandemic.

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## INTRODUCTION

Proposed by the World Health Organization as a strategy to contain and prevent spread of the novel coronavirus pandemic, social isolation exerted a direct impact on several social, economic and, especially, educational sectors<sup>1</sup>, which underwent transformations due to the growth of Education at a Distance (EaD)<sup>2</sup>.

In order to cope with the health crisis, the Ministry of Education published an ordinance substituting in-person education with classes that resorted to information technology in practical activities, internships and laboratories. However, the curricular guidelines of the Nursing Undergraduate Courses contemplate a training process focused on comprehensive provision of care to people. Therefore, remote teaching exposes weaknesses reflected in the clinical practice developed in the internship field and in the integration between teaching, health services and the community<sup>3-4</sup>.

In view of this scenario, educational technologies promoting an active methodological commitment and oriented to reality and problematization were adopted. The use of Virtual Learning Objects (VLOs) was among them. VLOs are developed through methods of instructional design, which is conceptualized as a process to identify a learning problem with the purpose of planning, implementing and evaluating its solution<sup>5-6</sup>.

One of the most used models in this context is ADDIE, an acronym derived from its stages: Analysis, Design, Development, Implementation and Evaluation. The following was identified in the analysis stage: the students' profile, the programmatic content, the educational objectives and the learning environment<sup>5-6</sup>. In the Design phase, a curricular component with a pedagogical approach is elaborated, detailing diverse information related to the course study program. The educational resource is put into practice in the implementation phase. In the validation phase, we verify achievement of the objectives proposed, limitations and suggestions for improvement<sup>7-8</sup>.

The objective of the current study was to describe the elaboration of a virtual learning object to teach the Nursing History academic discipline.

## METHOD

A descriptive and exploratory study was developed to report the experience with the elaboration of a virtual learning object for the "Nursing History: Studies and sources" discipline, in the first academic semester of 2020. It was applied to the students attending the Nursing undergraduate course at a public Higher Education Institution in the municipality of Macaé, RJ. This mandatory discipline comprises the curricular matrix of the course, with a total hour load of 30 hours. During the pandemic, it was taught in the remote modality, including synchronous and asynchronous activities.

Creation stages: Analysis, Design, Development, Implementation and Evaluation; known as the "ADDIE" model — Analyze, Design, Development, Implementation and Evaluation<sup>8</sup>.

Description of the experience:

1- Analysis – It consisted in a reflection on the academic discipline aiming to obtain a diagnostic analysis. To this end, we created a pre-test on *Google Forms* containing 50 questions referring to the syllabus of the discipline, questions about the sociodemographic profile and mastery of the use of digital media. Feasibility of the AVAUM – *Moodle* institutional platform, a Virtual Learning Environment, was analyzed to list each planned

stage involved in the design of the discipline and for its active form of teaching evaluation.

2- Design – The following were used as teaching methodologies/pedagogical strategies: Virtual games, Virtual Guided Tour to Nursing Museums, Oral exposure of recorded classes, reading of articles, and meetings of Nursing History research groups. The teaching method had three evaluation moments: Diagnostic (pre-test); Qualitative (tasks with feedback in each stage); and Cumulative (post-test and papers) A total of 10 weeks were delimited (totaling 30 hours) to conduct the challenges/scored activities. The pre-test served the exclusive purpose of diagnosing possible adjustments to the subsequent activities, not being scored.

3- Development – The synchronous and asynchronous meetings were organized based on the programmatic contents, represented and listed below for each Meeting and Post-meeting:

Meeting 1 – Welcoming. Coexistence agreement. Presentation of the Teaching Plan. Getting to know the AVAUM platform. Diagnostic evaluation: application of the PRÉ-TEST for the discipline; Post-meeting 1 – Reading of a scientific article, Use of *Padlet* with review of the initial questions of the pre-test; Guided tour to the *Instagram/Facebook* of the person indicated by the professors. It is noted that the students had already been using the AVAUM platform for three semesters, as the Nursing History discipline is taught in the 4<sup>th</sup> period, with no need for training regarding its use.

Meeting 2 – Discussion of the activity in *Instagram*. Research sources: use in preservation of Brazilian Nursing History; Post-meeting 2 – *Narradores de Javé* (The Storytellers) film. Targeted analysis: In which aspects does the film portray topics involved in the production of historical research?

Meeting 3 – Feedback of the activity in *Socrative*. The beginning of Nursing and its phases. *Florence Nightingale* and Modern Nursing; Post-meeting 3 – Challenge Forum – AVAUM.

Meeting 4 – Debate: A comparison between *Florence* and *Anna Nery*. The beginning of Nursing in Brazil. Implementation of Modern Nursing, creation of the Anna Nery Nursing School (*Escola de Enfermagem Anna Nery, EEAN*); Post-meeting 4 – Continuation of the Challenge Forum – AVAUM.

Meeting 5 – Virtual guided tour to the EEAN/UFRJ museum — Implementation of the *Nightingalean* Model. Visit to the Nursing History Display: BVS/Bireme/OPAS. Activity: Identification of the research sources in the display; Post-meeting 5 – Application: review of meetings one to five in *Kahoot*.

Meeting 6 – Class entities – ABEn in its 94 years of service. Video: 90 years of ABEn, available on the Nursing History Display; Post-meeting 6 – The students should bring the following to Meeting 7: An image that would portray Nursing in different countries; representative of the figure of nurses for society. *Live*: Fantastic stories of ABEn in cordel format — Tribute to its 94 years (*ABEn Nacional*).

Meeting 7 – Professional identity in the historical, theoretical and practical contexts. Nursing knowledge and its theoretical and practical dimensions; Post-meeting 7 – Doubts forum – AVAUM.

Meeting 8 – Application of the POST-TEST; Post-meeting 8 – Selection of a Carnival march about the history of health and of Brazil.

Meeting 9 – POST-CARNIVAL DANCE: Health and disease in Carnival marches. Evaluation of the discipline – Feedback of the post-test; Post-meeting 9 – Photographic wall – Creation of the drive, inclusion and classification of the photographs.

Meeting 10 – Feedback of the discipline for the students. Release of grades. Class council, production of a report.

4 – Implementation – The academic discipline was taught from December 3<sup>rd</sup>, 2020, to March 4<sup>th</sup>, 2021, corresponding to the first school term of 2020, on Thursdays from 1:30 p.m. to 3:30 p.m. And distributed into 19 hours of synchronous meetings (10 meetings) and 11 hours of asynchronous activities (nine activities). It was taught by two full professors of the Nursing course and by invited professors/collaborators from other institutions; 26 students enrolled in the discipline (100%), of which 24 were women (92.30%) and two were men (7.69%). Only two students did not finish the academic discipline. The following were used in addition to the aforementioned platforms: *Padlet*, *Socrative* and *Kahoot*. The five challenges described above were worth up to two points each; and the post-test, up to 10 points.

Described in the development section, the synchronous activities were categorized during the class and the students participated in real-time interactions with the professors in charge, which allowed evaluating involvement with the objects to be learned, through engagement and class interaction.

5 – Evaluation – The students' evaluation was cumulative and procedural, based on the activities proposed. The grade consisted of the arithmetic mean for the evaluative activities (*Padlet* + *Socrative* + Challenge forum + *Kahoot* + Doubts forum) added to the post-test grade. The mean passing grade was 5.0 (five). The evaluative activities were available up to 11:59 p.m. of the day prior to the beginning of a new activity.

The performance mean verified through the diagnostic test and the final testing procedure referring to the class rose from 46.67% to 78.78%, a significant improvement in relation to expanded knowledge on Nursing History.

## DISCUSSION

All stages of the ADDIE methodology for the VLO were held with synchronous activities on the *Google Meet* platform and the asynchronous activities were performed on the University's *Moodle* platform (AVAUM). As these platforms are fully self-managed, they promoted the students' autonomy in the performance of the activities.

Efficacy of a platform depends on aspects such as the teaching methodologies adopted by professors, in addition to the characteristics of the teaching institution, to the professors' and students' profiles, and to the resources available<sup>9</sup>. Active methodologies were used in this experience. It is noted that good results in learning are related to familiarity with the platform. In this case, the students had been using the platform for three academic semesters, a familiarization period that allowed for an initial exchange of experiences, including identification of weaknesses in the system and, dialogically, development of the best solutions for performance in this discipline.

Despite systematization of the VLO methodological stages, the human factor and flexibilization for its execution are important aspects in conception of the planning, in order to improve remote teaching quality<sup>8-10</sup>. This flexibilization became crucial due to the social distancing requirement in order to control the pandemic, culminating in exacerbation of the vulnerability conditions of the entire Brazilian population, including many students, who were forced to provide family livelihood and to experience the abrupt loss of their loved ones. The university ensured distribution of chips providing data for the emergency remote activities and maintained scholarships related to the in-person academic activities (scientific initiation, monitoring, extension) throughout two years to those in vulnerability situations, even if these activities were not performed.

In addition, the analysis of the sociodemographic profile and mastery in the use of digital media on the first day of class allowed recognizing students with some type of limitation/difficulty. An individualized work plan was defined as a solution strategy, monitored by supervisors of the discipline to provide them assistance. All the students were skilled in the use digital tools; therefore, the supervisors' activities were redirected to guidance, encouragement and positive reinforcement of participation in each meeting.

Development of the discipline was a collective construction of all the subjects involved: students, supervisors, professors and guests, highlighting the important role of the professors for the students' development during the synchronous and asynchronous activities. Professors need to be flexible, persistent and sensitive to motivate the students regarding their difficulties with the academic discipline. One of the professors' duties is guiding the students in understanding the educational proposals, such as creation of study groups, access to support materials and autonomy in the pursuit of learning<sup>11</sup>. Monitoring of the students' progress is based on the teaching-learning strategies and also on issues related to their psychosocial development, influenced by factors such as adaptation to a new learning environment, which can hamper their motivation to learn<sup>12</sup>.

Academic life encompasses a socialization environment for the students that goes beyond relationships between teaching and learning. Professors should ensure that the activities proposed in the elaboration of the online discipline allow for the development of the students' communication, coping, reaction, proactivity and expression skills in a social integration environment using tools such as video lessons, chats and doubts forums, among other didactic means for communication and interaction, in order for students to remain motivated to learn<sup>13</sup>.

The professors also developed the Challenge Forum, where a student asked a question on the contents taught and encouraged a classmate to answer. Choice of the classmate was conditioned to not repeating the challenge nor the classmate challenged, so that all students could participate, creating a cascade reaction. Especially in this activity, use of an active methodology was verified in elaboration of the discipline, stimulating autonomy in the search of mutual topics and questionings, by requiring previous mastery of the subject matter by students.

The challenges proposed in this discipline intended to integrate the academic activities with reality, stimulated the students' critical thinking on the historical content, and instigated them to play a proactive role in the pursuit and expression of knowledge, expanding the debate from the dialogical point of view. Establishing challenges contributed positive results in the students' self-confidence in relation to verbalizing their critical views about the contents chosen. Therefore, we corroborated the beneficial aspect of these challenges, which tend to reduce the fear of failure, increasing the chances of success in the professional career<sup>13</sup>. However, the "gamified" teaching model can cause certain discomfort to some students, due to the competitive environment and to the pressure to give correct answers to the highest number of questions in the challenges<sup>12</sup>.

Whereas active methodologies are positive and aggregating, it is necessary to keep focused on the learning objective, preventing the students' from getting distracted both in the use of social media and during the interactive games and the "Carnival Dance". To minimize possible distractions, the students were sensitized with previous explanations about the objectives proposed, reinforcement of the commands by the supervisors via email messages and, mainly, encouraging awareness raising on the break of paradigms represented by teaching a historical content with active methodologies that were so innovative for their reality.

The students were encouraged to be protagonists of this process and success was proven through the feedback result at the end of the academic discipline. When the mean performance values of the class were presented and the students' self-assessment and the evaluation of the discipline were performed, greater maturity/conscience levels were

noticed in the students when discussing their participation in the activities proposed. Some students even reported that they truly understood the importance of the discipline to reflect on the political and social role of Nursing, not only as a professional activity but also as a category and a member of a society.

## CONCLUSION

Elaboration of the VLO assisted in improving the students' performance and promoted innovation in the teachers' pedagogical methods, thus contributing in the exchange of experiences about the didactic and pedagogical strategies for teaching in general. The virtual discipline developed in this study can be used in other educational proposals, especially in fundamentally theoretical disciplines, promoting interchange of strategies to improve the learning process in the Nursing and Health areas.

Going beyond formal academic education, we understand that the area of in-service education can also be contemplated considering its improvement in ways of teaching, training and updating human resources in different work contexts, whether public or private. The education area is not limited to formal academic education in services, as it encompasses the improvement of ways of teaching, training and updating human resources in different work contexts, whether public or private.

We hope that the successful experience of emergency remote teaching developed in pandemic times may inspire fellow teachers and professors in the classrooms, contributing to the teaching of Nursing History in different educational institutions, from High School to *lato* and *stricto sensu* specialization courses.

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Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work - Aperibense PGG de S, Xavier BTU dos S, Ribeiro RL; Drafting the work or revising it critically for important intellectual content - Xavier BTU dos S, Ribeiro RL, Masson VA, Carvalho Filho MA; Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved - Aperibense PGG de S, Masson VA. All authors approved the final version of the text.

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