







## PROBLEM-BASED LEARNING IN REMOTE EDUCATION: EXPERIENCES OF NURSING STUDENTS DURING COVID-19 PANDEMIC

APRENDIZAGEM BASEADA EM PROBLEMAS NO ENSINO REMOTO: VIVÊNCIAS DE ESTUDANTES DE ENFERMAGEM NA PANDEMIA COVID-19

APRENDIZAJE BASADO EN PROBLEMAS EN EDUCACIÓN REMOTA: EXPERIENCIAS DE ESTUDIANTES DE ENFERMERÍA EN LA PANDEMIA COVID-19

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### ABSTRACT

**Objective:** to understand the perception of Nursing students facing the remote tutorial process in the period of social isolation resulting from COVID-19. **Method:** this is qualitative research in a comprehensive and interpretive mode, based on the assumptions of dialectical hermeneutics, which seeks to contextualize the actors' discourse, their understandings, and authenticities. The study was conducted through interviews with 22 students from the second grade of the Nursing course of a public institution in the interior of São Paulo, Brazil, from September to December 2020. **Results:** twenty-one of the 22 students interviewed were female, between 19 and 24 years old, and mostly living with family members during the pandemic period. Four themes were identified in the analysis of the perception of these students regarding the remote tutorial process: the dynamics of the remote tutorial process; the limitations imposed on activities at home; the pandemic annoyances; and the lack of institutional resources and moments of coexistence. **Conclusion:** the remote tutorial process is essential for the continuity of learning for Nursing students. However, we identified the lack of effective integration with professional practice and among the members of the process and the inadequacy of the household resources. It appears that the sudden change in the established order led to facing challenges and contributed to new learning.

**Keywords:** Problem-Based Learning; Education, Distance; Education, Nursing; Coronavirus Infections.

### RESUMO

**Objetivo:** compreender a percepção dos estudantes de Enfermagem frente ao processo tutorial remoto no período de isolamento social decorrente da COVID-19. **Método:** trata-se de pesquisa qualitativa na modalidade compreensiva e interpretativa, fundamentada nos pressupostos da hermenêutica dialética, a qual busca contextualizar o discurso dos atores, as suas compreensões e autenticidades. O estudo foi realizado a partir de entrevistas com 22 estudantes da segunda série do curso de Enfermagem de uma instituição pública do interior de São Paulo, Brasil, de setembro a dezembro de 2020. **Resultados:** dos 22 estudantes entrevistados, 21 se identificaram como sendo do sexo feminino, com idades entre 19 e 24 anos e, em sua maioria, residindo com familiares no período da pandemia. Identificaram-se quatro temáticas na análise da percepção desses estudantes frente ao processo tutorial remoto: a dinâmica do processo tutorial remoto; as limitações impostas às atividades no domicílio; os incômodos da pandemia; e a falta de recursos institucionais e de momentos de convivência. **Conclusão:** o processo tutorial remoto configura-se como essencial para a continuidade da aprendizagem dos estudantes de Enfermagem. Identificou-se, porém, a falta de efetiva integração com a prática profissional e entre os integrantes do processo e a inadequação dos recursos do domicílio. Depreende-se que a repentina alteração da ordem estabelecida levou ao enfrentamento dos desafios e contribuiu para novas aprendizagens.

**Palavras-chave:** Aprendizagem Baseada em Problemas; Educação a Distância; Educação em Enfermagem; Infecções por Coronavírus.

### RESUMEN

**Objetivo:** comprender la percepción de los estudiantes de enfermería frente al proceso de tutoría remota en el período de aislamiento social derivado del COVID-19. **Método:** se trata de una investigación cualitativa de forma comprensiva e interpretativa, basada en los supuestos de la hermenéutica dialéctica, que busca contextualizar el discurso de los actores, sus entendimientos y autenticidades. El estudio se realizó a través de entrevistas a 22 estudiantes del segundo grado del curso de Enfermería en una institución pública del interior de São Paulo, Brasil, de septiembre a diciembre de 2020. **Resultados:** de los 22 estudiantes entrevistados, 21 se identificaron como siendo del sexo femenino, con edades comprendidas entre 19 y 24 años y en su mayoría viviendo con familiares durante el período pandémico. Se identificaron cuatro temas en el análisis de la percepción de estos estudiantes sobre el proceso de tutoría a distancia: la dinámica del proceso de tutoría a distancia; las limitaciones impuestas a las actividades en el hogar; las molestias pandémicas; y la falta de recursos institucionales y momentos de convivencia. **Conclusión:** el proceso de tutoría a distancia es fundamental para la continuidad del aprendizaje de los estudiantes de enfermería.

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*Se identificó, sin embargo, la falta de integración efectiva con la práctica profesional y entre los integrantes del proceso y la inadecuación de los recursos del hogar. Parece que el cambio repentino en el orden establecido llevó a enfrentar desafíos y contribuyó a nuevos aprendizajes.*

**Palabras clave:** Aprendizaje Basado en Problemas; Educación a Distancia; Educación en Enfermería; Infecciones por Coronavirus.

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## INTRODUCTION

Problem-based learning - PBL has been used for some decades as an alternative to the traditional teaching method, providing a more comprehensive and integrative professional training, enabling the confrontation of everyday situations that are covered with great complexity, especially in the health area. It is one of the most successful educational innovations in higher education in the last 50 years.<sup>1</sup>

Based on the constructivist perspective, this teaching modality was proposed by Barrows and Tamblyn in 1960 and is supported by John Dewey's theory of inquiry. The author discusses the importance of linking action and experience with theoretical content, which should occur through reflection and problematization of experiences in the context of professional practice. Thus, there is a search for possibilities of intervention, in reality, providing more pleasurable, dynamic, solid, critical, and comprehensive learning.<sup>2</sup>

PBL is a student-centered teaching method developed in small groups. During the process of its use, a systematic approach leads to problem-solving. As a proposal for curricular restructuring, it aims to integrate disciplines for practical situations.<sup>3</sup>

In the active learning methods, the student actively participates in a movement of argumentation and criticism, which allows the manifestation and exploration of their attitudes, as well as the development of activities that stimulate critical thinking and other cognitive skills, in which the transmission of knowledge is not emphasized<sup>4</sup>. The PBL is developed under the guidance of a professor called a tutor and, in addition to enabling the acquisition of new knowledge related to the problem, it is a method used to build professional skills essential to Nursing, such as self-learning and collaborative learning.<sup>4</sup>

Working in small groups allows students to share, compare and debate the information they have found and learned, thus developing their clinical reasoning skills.

Also, developing interpersonal relationships and effective teamwork promotes the growth of leadership skills needed to solve health problems.<sup>5</sup>

A literature review study on the use of PBL in Nursing courses showed that it is a strategy used worldwide, but most of the time, it is still experimental. The main advantages are the development of critical thinking, autonomy, motivation for learning, the ability to actively search for knowledge, work in teams and solve problems. However, students and professors find it difficult to understand the principles of the method due to the culture of using the traditional method.<sup>6</sup>

From this perspective, the Nursing course of a higher education institution (HEI) located in the interior of the state of São Paulo develops an integrated curriculum organized by professional competence, through active learning methods, with emphasis on the use of PBL in first and second semesters of the course since 2002. Therefore, it has a structure made up of a problem construction team, specialists in different areas for consultations, conferences, and complementary practical activities.

However, in early 2020, health education institutions and students were surprised by the COVID-19 pandemic, which led to the suspension of in-person activities, starting the remote emergency mode, which is the plausible alternative to continue the process of student learning in response to a crisis or disaster. Given its complexity, this way of maintaining the learning process was called emergency remote teaching, as it comprises the involvement of remote solutions from face-to-face formats.<sup>7</sup>

The pandemic affected the whole world to find alternatives aimed at the continuity of educational actions. A Polish study that addresses the experience with teaching through simulation in the medical course showed that the alternative was acceptable. Although not suitable for the development of psychomotor skills, they could train critical thinking, decision-making, and communication.<sup>8</sup>

Even with a structure for the development of PBL in decision-making aimed at implementing remote learning, there were many discussions between teachers, students, and institutional management, involving controversies and arguments about the losses and difficulties, as well as the repercussions on learning in this teaching format.

The tutorial activities through the remote mode took place at the same times already proposed for the face-to-face tutorials, in groups of six to eight students, synchronously, through the Google meet platform inserted in the virtual learning environment (AVA) - the institutions moodle organized due to the pandemic. This platform has resources that allow, in many aspects, to approach the face-to-face activities, such as the presentation of a screen and chat that help in the brainstorming stage, elaboration of learning questions, and synthesis of knowledge. Moodle presents resources for posting asynchronous conferences and other student support materials.

This study starts from the following question: what is the students' perception about the remote tutorial process? It aims to understand the perception of Nursing students regarding the remote tutorial process developed in the period of social isolation resulting from COVID-19.

## METHOD

### Type of Study

This is qualitative research in the comprehensive and interpretive modality, based on the assumptions of dialectical hermeneutics, which seeks and contextualizes the actors' discourse, their understandings, and authenticities.<sup>9</sup>

The hermeneutic perspective pays attention to the understanding of the text and, although it maintains a concern with the present time, it also recognizes the encounter with the past. It maintains the focus on what is different in current life, considering that, as it is mediated by language, the reality is not always completely transparent. In the union of hermeneutics with dialectics, the idea of criticism, denial, contrast, dissent, opposition, modification, process, nonsense, movement, and transformation of social reality is added, which expands the possibilities interpretation and understanding of the phenomenon analyzed.

Thus, the understanding of the text, the speech, or testimony is obtained as a result of a social and knowledge process. Although it is the result of multiple determinations, it maintains specific meaning and enables the understanding and criticism of reality in a movement of complementarity in which hermeneutics allows the understanding of texts, historical facts, daily life, and the reality in which they occur.

Dialectics represents a movement necessary for the production of rationality in the social processes constituted by complexity.<sup>9</sup>

### Context/Population

The study was carried out in a public institution of higher education in the interior of the state of São Paulo, which offers 40 places per year for the on-site Nursing course. For data collection, we invited the second-semester students, as they had already experienced the face-to-face tutorial process in the first semester. The tutorial process takes place twice a week, with three periods for each problem, one period for raising learning issues, and two periods for discussions. Each student group, with six to eight members, has a tutor, most often a professor from the Nursing Course. The topics covered in the tutorials of the second semesters of the course are based on performance, including attention to individual and collective needs and also the management and organization of health services. In individual care, the problems follow a cephalocaudal logic, run through the head and neck, chest, and abdomen, and include the nervous, endocrine, respiratory, cardiac, and digestive systems. Added to this sequence, there are cross-cutting themes linked to the social determinants of the health and disease process since the problems are constructed in an interdisciplinary logic.

The inclusion criterion was to be properly enrolled in the second semester of the course and to be experiencing the remote tutorial process. We excluded those who did not respond to the invitation after two attempts.

To select the interviewees, we carried out drawings sequentially until data saturation was obtained. Saturation can be understood as the moment of research in which the collection of new data would not bring further clarification to the studied object. In this perspective, the sample size results from the diversity of the population that will be analyzed, taking into account the concepts related to the volume of data.<sup>10</sup> For this study, the saturation occurred after 22 interviews, which corresponds to 55% of students in the semester.

### Data collection procedure

Three undergraduate researchers in Nursing carried out data collection from September to December 2020.

They were duly trained and supported in the interview technique by their advisor who has a Ph.D. and experience in qualitative research. They used WhatsApp to invite the participants for the study. In cases in which the student agreed to participate, the Informed Consent Form (ICF) was sent via e-mail, which was signed and returned to the researchers by the same via. The best day and time for the interview was also defined and the interviewee was asked to stay in a place free from interference and noise. Afterward, the students participated in interviews carried out by telephone, which had a script with the following guiding questions: talk about how it is being for you to carry out the tutoring remotely. What are your suggestions for this process? How is the experience of this moment of a pandemic for you? We also collected identification data (age, gender, who currently lives with, and distance between the city of origin and the city where they studied). The interviews lasted an average of 20 minutes and were fully recorded and transcribed for further analysis. Five students refused to participate, even after having expressed interest in the initial consultation, and, as a result, a new draw was carried out. There was no need to repeat the interviews.

### Analysis Processes

From the perspective of dialectical hermeneutics, we took the following stages to interpret the data. In the first stage, the “data ordering” occurred and was carried out from the transcription of the interviews and successive readings of the material, which led to the organization of the reports and allowed the beginning of the classification. In the second stage, called “data classification”, there was a search for understanding the data, based on questions about them, based on the theoretical foundations, and the understanding that they do not exist by themselves. Through readings and re-readings of the interviewees’ statements, we identified the relevant structures and we grouped them into 37 nuclei of meaning, which enables the establishment of empirical categories that were confronted with the analytical categories established to guide the investigation, seeking the dialectical relationships between them, resulting in four final categories. Thus, the “final analysis” stage was the moment when the articulation between the collected data and the theoretical references of the research was established, in a movement that considered the divergence, the contradiction, the concrete and the abstract, the particular and the general, as referenced

by the dialectical movement.<sup>9</sup> After categorizing the results, they were analyzed by three participants, who stated that their perceptions were represented in the themes addressed.

### Ethical aspects

We submitted the study to the evaluation of the Ethics and Research with Human Beings Committee of the proposing institution, following Resolution 466/2012. Students who agreed to participate signed the Informed Consent Form. To maintain anonymity, the interviews were numbered according to the order in which they were carried out: e1... e22.

## RESULTS

Twenty-two students from the second semester of the Nursing course were interviewed, 21 of whom were female. The age ranged from 19 to 24 years, the distance between the city where the family lives and the institution where they studied was from 0 to 500 km, and eight of the interviewees lived in the same city as the institution. During the pandemic period, most were living with family members, only one lived with friends from the university. As for the family organization, 14 (63.6%) lived with their father, mother, and siblings. The others lived only with their mother and siblings; with father, stepmother and siblings; with mother, brother, stepfather, and stepfather’s children; among others.

In the analysis of the interviews, we found four categories that reveal the perception of Nursing students regarding the remote tutorial process developed in the period of social isolation resulting from COVID-19: the dynamics of the remote tutorial process; the limitations imposed on activities at home; the pandemic annoyances; and the lack of institutional resources and moments of coexistence.

### The dynamics of the remote tutorial process

Students reported that, in the beginning, their adaptation to the remote tutorial process was very complicated, which generated anxiety and concern, as they believed that it would not be possible to develop tutoring in this modality. However, with time and due to the impossibility of being present in person, they adapted to the situation. They also claimed that, for the success of the activities, it is important that there is integration among peers and good group dynamics.



For them, the remote activities enabled them to feel more comfortable talking in the group, and not needing to travel saved their time. Even so, they mentioned the disadvantage of being a tiring and low-yielding process.

*[...] when online classes started, I thought my participation dropped a lot... it was more difficult, it seems like you're talking to the wall, there was no such integration because of being virtual and, [...] I think that we learned to live with it, right, and live with everything... (e1).*

*I think that the fact of not being present is [...] it ends up dispersing more, it gets more tiring to stay on the computer, [...] (e8).*

*But, in the beginning, I had a lot of anxiety, yes, I was very worried about not being able to handle it, but then I adapted better (e2).*

*[...] my tutoring group is really good, we can talk a lot, we can articulate a lot, each one completes the other [...] (i13).*

*[...] I feel more freedom to speak because I feel that no one is looking at me directly and it helped me (i19).*

*[...] you get tired much faster, so the time ends up being shorter, because your performance lasts up to a certain time, [...] a matter of concentration [...] (e1).*

*[...] the issue of displacement, like having to go to college, go back, and I admit that I found it a little easier, at least for me (e3).*

### Limitations imposed on activities at home

Respondents expressed difficulties with the home environment, which are different from the needs of the remote study, as there is interference from family members, noise, lack of computer and efficient internet, culminating in difficulties in the concentration necessary for learning, and making it a tiring process.

*[...] I felt a lot of difficulties, mainly due to the lack of space to have classes, because all the time there are people at home or they come into the room and make the biggest noise and always get in the way (e21).*

*In the beginning, it was difficult, because I was used to staying in Marília, in my life, in my house, right? But now it's been a long time since the pandemic and I was able to adapt a bit and I can't wait to go back (e19).*

*[...] there is the internet, right? She is not always available, [...] lack of silence because there is external noise, sometimes someone passing by with the truck, things that get in the way, a dog barking, so I think this also makes it difficult (e8).*

*I think that what is only difficult when the platform stops, sometimes the audio is very late, but these are things that are difficult for me because of the computer, but I can't afford to buy a computer right now, neither do my parents (e14).*

### The annoyances of the pandemic

In the interviews, the students addressed the negative effects caused by the pandemic in their lives, such as anguish, discouragement, stress, anxiety, and tiredness, both as a result of news disseminated by the media, and social isolation, especially considering its long duration.

*[...] it only causes more agony and more anguish and it is a period that we will have to go through, but nothing is working out (i21).*

*[...] sometimes we watch the news, right, then we get suffocated, then I stop watching, following, it was the only way, like, that I managed to keep myself psychologically well, it wasn't following the news (e10).*

*I even lost a lot of weight during the pandemic, and I feel very tired too... I felt a bit psychologically heavy too, as a matter of anxiety [...] (e9).*

*[...] a month, two months, three months went by and I stayed only at home. This will never end and it seems to only get worse, and it was giving me stress, anxiety, which I had never felt before because it became something permanent that should have been temporary (e17).*

### Lack of institutional resources and moments of coexistence

Although the students have moved towards adapting to the new condition, they stated that they miss the interaction with their classmates, exchanges between members of different groups, and the creation of bonds between peers.

From this perspective, they also mentioned the lack of access to the library, in addition to obtaining books and other physical resources, but, above all, due to the meetings and exchanges that take place in this scenario.

The lack of laboratory practices in basic disciplines, such as Anatomy, Embryology, and Histology, corroborates the theme, as well as the professional practice unit, in which there are problematization and correlation with the learning of tutorials.

*Even contact with other people within the library, is a help, people from the same year, from different tutors, so this contact is much more difficult now (e2).*

*[...] it is more difficult to create bonds in the group because we only see each other at that moment and there is no way to talk outside the tutoring environment. And I think it's not positive, just bad (e21).*

*I think it was more the research because being online I don't have as much access to books as I had in the library and I don't like to research much in articles [...] making it difficult to understand the physiological content itself (e19).*

*[...] there is a lack of embryology and anatomy activities and the practices that we would have, to follow the cycle, for us to be able to study the entire case correctly [...] (i11).*

## DISCUSSION

In the characterization of the interviewees, we found that most participants were female, which results from the fact that Nursing has historically been marked by the presence of religious women and by their association with the role of mother and care for the other, being transferred for generations, from woman to woman. Even with the advent of scientific Nursing and the creation of Nursing schools associated with universities, which broke with the obligation to be female to study Nursing, the predominance of women remained linked to the profession.<sup>11</sup>

The age group of students who participated in the survey was between 19 and 24 years old, which is in line with the 2018 Census of Higher Education, which finds that the average age of entering undergraduate courses is 19 years old, and 23 years old graduates.

Thus, there is a predominance of youth in the transition process between the university and the labor market.<sup>12</sup>

After the advent of the COVID-19 pandemic, most students returned to daily life with their families, and they have different family arrangements, which approximates to understanding the meaning of the modern family. Although in a pluralist view, the current organization of families maintains the purpose of emotional support to its members, with affective ties prevailing.<sup>13</sup> However, even though family life may have provided security and emotional support to these young people, the domestic environment, as was verified in the interviews, was not sufficiently prepared for the study to take place with the necessary tranquility for concentration and learning.

With the COVID-19 pandemic, society as a whole - and especially the institutions that train health professionals - were challenged to promote innovations, avoiding risks to this training. However, a context of the use of active methods, which presupposes learning articulated with professional practice through actions and interactions, makes the adoption of remote learning strategies even more complex.

More specifically, when it comes to PBL, even if learning has a role problem arising from situations of professional practice as its starting point, the remote tutorial process is covered by gaps that are explained by the interviewed students, which is consistent in many aspects, in which we found studies carried out in different parts of the world.<sup>14-23</sup>

The training of health professionals involves face-to-face learning, and in small groups, there is a clear appreciation of face-to-face contact. Even though there are currently different resources available, there can be discomfort with such resources, especially given the need to promote changes so quickly. Also, collaborative learning is essential for developing a sense of belonging to a professional community. These losses can be alleviated by working in small synchronous remote learning groups, as occurred with the tutorial process of the interviewees in this study, aiming at the continuity of the pedagogical quality of this space through direct contact between tutors and peers.<sup>14</sup>

Therefore, it is about opposing modalities but a movement of change, in which the object is at the same time in the given condition and in the condition of mutation, so, to make progress, this contradictory situation needs to be considered.<sup>15</sup>

However, even in online lectures, we found that it is necessary to promote student involvement and minimize distractions, and the use of the software is proposed to support active learning and make the lecture productive in this period of turmoil due to social isolation.<sup>16</sup>

A systematic review on the effectiveness of remote medical education during the crisis at COVID-19 found the resources available on the web, increased knowledge, and psychological support for students among the strengths of this type of teaching. As for weaknesses, there were technological challenges, low student involvement, and losses related to the assessment process. We also found that the emotional aspects of students were negatively affected during the pandemic.<sup>17</sup>

The comparison between medical students who participated in remote tutoring with those who had traditional face-to-face tutoring, considering the performances: participation, communication, preparation, critical thinking, and group work skills, showed that remote modality students had worse performance in all areas. The authors add that students feel distant and separate from the rest of the group, even though they are connected through audio and video, which can reduce the desire to participate. Also, the home environment is more prone to distractions due to interference from other people or events around them.<sup>18</sup>

In remote learning, there was a change in the established order portrayed in face-to-face meetings, with more possibility of informal exchanges that occur at arrival, departure, and break times, which contributes to the sharing of concerns and the establishment of links.

The COVID-19 pandemic negatively affects the learning process and also led to emotional distress. A study carried out with medical students revealed that a third of them showed concern with the remote teaching process, believing that this form of teaching is ineffective compared to face-to-face teaching. Also, there was a significant worsening in mental health status, especially anxiety and depression. For the authors, the sudden switch to remote learning may have overwhelmed students.<sup>19</sup>

As exposed by the interviewees in this study, there were many technological difficulties, such as internet connection and lack of adequate access devices like computers or notebooks. Also, we found difficulty in maintaining focus, concentration, and motivation in

front of a screen. Problems such as physical discomfort, exhaustion, visual problems, muscle, and joint pain have also been reported with long periods of remote learning.<sup>20,21</sup>

The interviewed students faced difficulties related to the material resources available, which interfered with the learning process. A systematic review that addressed remote medical education found that in developed countries such as the United Kingdom, Italy, the United States, and Australia, this teaching modality was considered advantageous, with the platforms used and the different teaching strategies that enabled active and interactive, increasing student focus and engagement. In developing countries such as Brazil, there were difficulties in the lack of infrastructure and knowledge about how to operate virtual platforms, in finding a silent environment for studies, and the lack of access to virtual teaching materials.<sup>22</sup>

More specifically in Brazil, not all students have access to digital technology and some may be socially vulnerable, which makes learning even more difficult outside the institutional area.<sup>23</sup>

Even in the face of the difficulties faced by the COVID-19 pandemic, they recognize that important educational advances will be perpetuated, as society was led to think, innovate, practice, evaluate and research, and it is possible that, with this, it will be established a new way of acting in educational practices.<sup>24</sup>

Therefore, we find similarity with the understanding of Hegel and Marx, that the world evolves due to internal tensions between opposites, and the merit for advancing changes lies in the recognition of both dimensions.<sup>25</sup>

As a limitation of the study, we observed the scarce literature on the use of PBL in Nursing courses. Thus, the discussion was mostly based on studies carried out in medical courses. Even so, this research contributes to knowledge in the area, as it addresses a challenging teaching and learning condition. Even though most Nursing courses do not use PBL as a priority strategy for curriculum development, it is a method that can be useful in times of pandemics.

## CONCLUSION

The development of the remote tutorial process during the COVID-19 pandemic period was undoubtedly essential for the continuity of learning for Nursing students. However, a transition carried out

quickly and with few possibilities of effective adaptation of the necessary resources could not have the same impact as face-to-face activities, especially when it comes to active learning methodology. This methodology presupposes effective integration with professional practice and interaction between the members of the process, obtaining broad and integrative training in cognitive, affective, and psychomotor aspects.

There were also losses related to the inadequacy of the home environment and material resources for the tutorial process to take place as desired. The lack of institutional resources that are made available for teaching in active methods, including laboratories, practical activities of the basic subjects, and contact with professional practice, which is associated with the problems discussed in the tutorials, was considered by students as important gaps in remote teaching.

Certainly, the losses imposed by social distancing resulting from the pandemic, on the one hand, are irreparable. On the other hand, new learnings were acquired, which may contribute to new advances, even after the return of in-person activities. In this context, the search for overcoming obstacles provided a frank process of change and highlighted the challenges regarding active methodologies for teaching and learning in Nursing.

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