Storytelling and the teaching-learning process in the Nursing Major

Storytelling y el proceso de enseñanza-aprendizaje en la carrera de Enfermería

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Abstract

Considering dynamic and meaningful learning, the present study aimed to analyze the use of Storytelling applied remotely as a teaching activity for students of an undergraduate nursing course who participate in an academic association. A cross-sectional analytical and qualitative study was carried out, whose participants were students linked to an academic association at a federal public university, in the city of Rio de Janeiro (RJ), Brazil (BR). Data collection was carried out through an electronic form and remote focus group, demonstrated by descriptive statistics and analysis of the thematic content by category, with the Significance Units identified by colorimetry from the meaning of each Record Unit that gave rise to two categories: 1) Storytelling during the teaching-learning process and 2) Storytelling perceived by students. The stories demonstrate the students' perception in relation to the planning and teaching-learning experience, regarding the use of Storytelling and the collective construction of the story presented, based on the challenges and contributions that this process brought to their training. It was observed that Storytelling can be used as a strategy to mobilize emotions and feelings, dynamic and meaningful, adaptable to the digital format and positively accepted among undergraduate students. Its use is suggested in the teaching-learning process and in research to measure its effectiveness and efficiency.

Keywords: storytelling, nursing service, teaching materials, pedagogical innovation, learning methods, pandemic.

Resumen

Considerando el aprendizaje dinámico y significativo, el presente estudio tuvo como objetivo analizar el uso del *storytelling* (narración de cuentos) aplicado en forma remota como actividad de enseñanza para alumnos de un curso de pregrado en enfermería que participan en una asociación académica. Se llevó a cabo un estudio transversal analítico y cualitativo, cuyos participantes fueron alumnos vinculados a una asociación académica en una universidad pública federal, en la ciudad de Río de Janeiro (RJ), Brasil (BR). La recolección de datos se realizó a través de un formulario electrónico y grupo focal remoto, demostrados por estadística descriptiva y análisis del contenido temático por categoría, siendo las Unidades de Significación identificadas por colorimetría a partir del significado de cada Unidad de Registro que originaron dos categorías: 1) *Storytelling* durante el proceso de enseñanza-aprendizaje y 2) *Storytelling* percibida por los alumnos. Los relatos demuestran la percepción de los alumnos en relación con la planificación y experiencia enseñanza-aprendizaje, mediante el uso del *Storytelling* y la construcción colectiva de la historia presentada, a partir de desafíos y contribuciones que dicho proceso trajo para su formación. Se observó que el *storytelling* puede ser utilizado como una estrategia movilizadora de emociones y sentimientos, dinámica y significativa, adaptable al formato digital y de aceptación positiva entre los alumnos de pregrado. Se sugiere su uso en el proceso de enseñanza-aprendizaje y en la investigación para medir su eficacia y eficiencia.

Palabras clave: storytelling, servicio de enfermería, material didáctico, innovación pedagógica, método de aprendizaje, pandemia.

1. Introduction

Storytelling can be defined as "the art of telling, developing and adapting stories using specific elements—character, environment, conflict and a message—in events that have a beginning, a development and an end (...)" (Vieira, 2020). Storytelling originated in Hollywood scripts, containing a formula to apply in terms of the development of the characters and their stories. Largely used in marketing, storytelling is also fundamental to the development and conduction of strategies, due to the capacity of human beings to create, transmit and give meaning to the world in a narrative way, which seems to positively impact business (Mills & Key, 2022).

The art of storytelling has been explored from promoting startups to inspiring creativity in the workplace and in entrepreneurial leadership strategy. Neuroscience has used storytelling as a research topic and has observed its capacity for neural mobilization (Suzuki et al., 2018), stimulating and encouraging learning.

A systematic review showed the applicability of a digital version of storytelling used in education, both in Pedagogy and in research and methodological guidance. It should be noted that digital storytelling is understood as "the facilitated production of a short digital story in an educational community... that contains a mixture of digital images, text, recorded narration and/or music" (Wu & Chen, 2020, p. 2). Despite its origin, storytelling has been transposed to other areas of knowledge, specifically nursing, for example.

A Norwegian study, through reflections enabled by storytelling (Petty, 2021), aimed to improve empathy and learning of nursing students by parents of children hospitalized in Neonatal Intensive Care Units. Telling stories as a teaching method to guide women and their families about breastfeeding through storytelling was used as a strategy in a study, as it allows a space to talk about social influences in breastfeeding experiences, in addition to promoting elections, affirmations and catharsis.

The authors also emphasize that storytelling, in the context of clinical practice, can help in the development of individualized care plans, improve communication, and serve as a tool for team development (Lober & Komnenich, 2020).

Involving leaders and keeping them focused on the principles of nursing, as a caring profession,

was the focus of a study and, for the authors, storytelling is a multidimensional strategy (Schoenhofer & Boykin, 2022).

Different studies have implemented storytelling as a learning strategy: in a quasi-experimental study to teach about blockages in academic branches compared to traditional classes (Zare et al., 2021); Pharmacology, in a postgraduate course for obstetric nurses (Bano et al., 2020); Ethics, for oncology nurses (Wall, 2021).

The digital version of storytelling has also been used. A Norwegian study aimed to explore the experiences of students from storytelling, with the aim of promoting reflection related to clinical practices (Urstad et al., 2018).

Another characteristic to highlight as positive is to be able to work with topics that sometimes arise from the experience of internships or other practical activities and need to be revisited or even prepare for students in a more proactive way, using as an example the process of death/dying (Moreau et al., 2018).

The change in attitudes towards death of nursing students in their last year in Turkey was identified as a significant effect ($p < 0.05$) resulting from the use of storytelling. The study was conducted with 94 students and data were collected by applying the *Death Attitude Profile-Revised* questionnaire and semi-structured interviews in focus groups. The following aspects were attributed to storytelling: its contribution to learning; its effect on the attitude towards death; reflections on its contribution to knowledge, skills, and attitudes in the provision of care to patients at the end of life (Dorney & Pierangeli, 2021). In terms of palliative care, the strategy can contribute to students' perception of the complexity of care and the importance of the integrality and personalization of care (Price et al., 2015).

Not only in health education, but also in professional education, storytelling can be used. However, a Canadian systematic review showed the need for more solid studies, mainly qualitative, that can assess the impact of digital storytelling on professional education, especially regarding the behavior of professionals. Therefore, the authors included in the review only studies that focused at least on level 2 or 3 of the Kirkpatrick New World model. This model has four levels and measures the evaluation of training, with level 2 focused on the learning of health professionals (degree of acquired knowl-

edge, ability, attitude, confidence and commitment); and level 3 focused on behavior (degree of behavior change) (Gurney et al., 2023). As a result, learning turned out to be more effective when the storytelling strategy was applied from the co-creation or use of one's own stories.

Storytelling has been used as a strategy not only for nursing students and nurses, but also for patients, due to its impact on the brain (Darby et al., 2022). Storytelling can be seen as a nursing practice, even spread through digital social networks (Fischer, 2019). Storytelling, on the part of patients, also seems to help them with their own experiences, in addition to sharing them with other patients, family members and health professionals. A Brazilian study showed the benefits of storytelling with a group of older people attending a basic health institution to encourage active aging (Costa et al., 2016).

A Swiss qualitative study with six participants, involving COVID-19 patients and survivors, revealed how survivors went from being overwhelmed by symptoms to understanding what was happening to them. The strategy allowed to feed back the care-givers and participants of the study to demonstrate gratitude for the care received, to become aware of a new state of normality, to regain control of their lives and to discover important lessons behind the lived experience (Roig-Vila et al., 2023).

Nursing should be highlighted as an essentially practical profession, which is taught through face-to-face contact between teachers, students and users of the health system, so that storytelling can facilitate the identification of obstacles and opportunities that could impact the student-patient during practical teaching (Timpani et al., 2021). Allowing this learning to be carried out through a dynamic and meaningful strategy is a challenge for teachers and students, in terms of identifying their potential and limitations as an active methodology (Henrickson et al., 2022).

Thus, this study aims to analyze the use of remotely applied storytelling as a teaching activity for undergraduate students in nursing.

2. Methodology

This is a cross-sectional analytical study with a qualitative focus on storytelling as a teaching strategy. The context for its development and implementation was in the first year of the COVID-19 pandemic, in June and July 2020, when the university suspended its academic calendar. Despite this suspension, contact was maintained between students, teachers and the university, promoting, at the time, various teaching activities remotely, due to the need for social distancing. In this context, the method/methodology of storytelling emerged as a way to encourage the active participation of students in their learning process.

The storytelling was planned, developed and presented by participating students of an academic association of cardiology and pneumology and the advisors of the faculty, in the form of a course with four remote meetings open to the internal and external community to the university.

The title of the story was "Alfredo´s Tale". The students were divided in the four meetings, some of them being in charge of narrating the story and, at a certain point, others 'interrupting' it to bring a scientific approach to the topic. For example, in the first episode we see the main character in some risk situations and ends up getting infected with SARS-CoV-2. When signs/symptoms occurred, the narrative was interrupted and the explanation about the disease, forms of contagion, signs/symptoms, and medical diagnostic forms began.

Presentations created on the Canva ® Platform were used, in book format, where each page was part of the story. At the end of each chapter (course day), the "scenes from the next chapter" were presented, with the aim of maintaining the public's interest in the story; it was quickly understood by all participants that screen time should not exceed two hours. Each chapter of the story was structured by the students, under the guidance of the teachers, with remote and synchronous discussions for adjustments, criticism and training. After each chapter, there was a virtual *debriefing* between students and teachers.

Regarding the structure of storytelling, the organization was based on the following elements:

Message: the story included elements that were being widely discussed at the time to promote critical reflection, such as: minimizing the risk of contamination; fake news; use of drugs for the prevention/treatment of COVID-19; use of masks; social distancing; age as a protective factor; and terms that circulated both in memes and social networks, newspapers and in everyday conversation. By showing the contamination of the character (Alfredo), although he was

young and at serious risk of death, it was intended to show not only the damage of the disease, but the structure of SUS (Brazil's Unique Health System) and its benefit for the population of Brazil, which allowed the improvement of Alfredo. It was also emphasized that this could have been avoided through individual and collective educational measures.

Environment: the environments were varied, as the story develops according to the clinical evolution of the character, namely: Primary Health Clinic, Emergency Care Unit (UPA), Hospital. All institutions belonging to the Brazilian Unique Health System (SUS). For each environment, the students presented the contextual structure and function in SUS and how the journey of the character occurred in that area of health care.

Character: his name was Alfredo, alluding to a significant character of the Nursing School; he was defined as a young university student, who had difficulty following public health measures such as social distancing and mask wearing, despite having morbid asthma. Based on the infodemic and the spread of fake news at the start of the COVID-19 pandemic, Alfredo preferred to expose himself to risk, as he did not think it was a serious disease, but rather "a common flu"; moreover, he was young.

Conflict: Alfredo presents the first symptoms of COVID-19 and goes to the Primary Health Clinic where he was treated. As his clinical condition worsens, he progresses to acute respiratory failure and, being treated at the UPA, ends up receiving invasive ventilatory support. He is taken to a hospital, where he remains on mechanical ventilation and, because he remains refractory to measurements, is prone. Finally, Alfredo shows a gradual improvement, with some temporal effects. He is discharged and returns to the Primary Health Clinic to continue his rehabilitation process.

The population of this research was composed by students linked to the academic association belonging to an undergraduate course in Nursing of a public university, located in Rio de Janeiro (RJ), Brazil (BR). The inclusion criteria were: adults over 18 years of age, of both sexes and who had participated in at least two of the four remote meetings.

The data collection was carried out in two stages. Initially, all participants responded to an online tool, through Google Forms®, intended for their characterization, whose link was sent to participants by email available in the course registration form by one of the research assistants. The link presented the Free and Informed Consent Form (FPIC), through which the students gave their consent and, if they participated in the research, they would fill out a questionnaire with the following variables: age, career and undergraduate period, whether the institution of origin was public or private, and whether he/she had participated in the event as speaker, listener or organizing committee. At the end of the questionnaire there was a link to the virtual room where the second part of the data collection would take place, through a remote focus group.

The remote focus group was held in the third week of October 2020, at a date and time agreed with the members of the Academic Association. A virtual meeting was held for the focus group, with a total duration of 50 minutes, led by a researcher linked to this project who, however, did not participate directly in the orientation activities of the Association, nor was present in the course. To support the researcher, a student of Scientific Introduction was in the virtual room.

During the focus group, the independent researcher took written records of the participants' speeches and randomly identified them, when they entered Google Meet®, to ensure anonymity. Therefore, the focus group was not recorded and the researchers linked to the academic association could not identify which research participant had provided each piece of data.

The guiding questions used in the focus group were: How was it for you to experience storytelling? Could you tell me a little bit? Can you tell me the advantages and disadvantages of this methodology? And is it good for your training? What contributions could you refer to? And now? What are the recommendations (positive or negative) regarding the use of storytelling for upcoming events and in the subjects of the Undergraduate Courses in Nursing?

The characterization variables were organized by descriptive statistics and the data obtained through the focus group were subjected to categorical thematic content analysis, using the organization proposed by Oliveira (2008). After elaborating the material produced during the focus group, the reading was developed and sentences were selected from beginning to end, which presented assertions about the object of study, being called Registration Units

(RU). Each RU was then coded by colorimetry in Units of Meaning (UM) and the percentage frequencies were presented in number of RU, which allowed an accurate description of the characteristics relevant to the content expressed in the text. Subsequently, the UM were grouped according to their common characteristics, expressing the meanings contained in the focus group material and giving rise to two empirical categories, namely: storytelling during the teaching-learning process and storytelling in the perception of students.

The ethical precepts recommended by the Brazilian National Council of Health by Resolution 466/12 and its complementary ones were respected and, therefore, the present study was approved by the Committee of Ethics in Research with opinion number 4.324.164.

3. Results

Seven undergraduate nursing students participated in the study, most of them linked to the public university (n=05/71%). The average age of the participants was 24.6 years old, and all the students were part of at least one academic association when this study was conducted.

Table 1 presents the results regarding the UM and RU for the creation of the categories.

Table 1. *Units of meaning and registration according to the speech of the participants (n=7) - Rio de Janeiro, RJ, Brazil 2020*

Units of meaning	Units of Registration (UR)	Number of US and UR	Categories
Storytelling planning	E1; E1; E1; E1; E1; E1; E3; E3; E3; E4; E5; E1; E1 = 14	22	Storytelling during the teach¬ing-learning process
¿What is Storytelling?	E1; E1; E1; E1; E1; E2; E6; E6 = 8		
Challenges related to Storytelling	E1; E2; E1; E1; E1 = 5	22	Storytelling perceived by students
Students' opinions/perceptions about storytelling	E1; E1; E3; E5; E5; E1; E1; E3; E4; E6; E1 = 11		
Contributions/positive points in the use of storytelling	E7; E1; E1; E1; E6; E1 = 6		
TOTAL		44	

Note. Data collected

The analysis of thematic content categorical focus group allowed the construction of two thematic categories called: "Storytelling during the teaching-learning process" and "Storytelling in the perception of students". These categories describe students' perception of the planning process and the teaching-learning experience using storytelling. These are statements that permeate the experience in the collective construction of the story presented during the course proposed by the academic association and the perception from the challenges, captures and contributions of the process.

Thus, in category 1 it was possible to identify the importance of storytelling planning for participants. Involving students in case planning, which will be illustrated and discussed later, seems to contribute to the participants' commitment, through knowledge sharing and stimulation of creativity: "We had to get together and use creativity" (E5). "...there was a lot of discussion, a lot of exchange and even disagreements" (E3). "When we learn in the classroom, the teacher presents all the content at once, but it does not happen with storytelling" (E1).

Another contribution observed during the data analysis occurred when storytelling was identified during the teaching-learning process as an incentive for critical thinking among those involved. The participants reported that storytelling is a way to bring reality closer to health education in a contextualized way, which not only covers the discussion about health, but also covers political, social and life history aspects, as seen in the following lines: "It was

an update not only of health scenarios, but also of politics, since history had a whole context" (E6). "It looks like we had the COREN1 in our hands and we were going to take care of it. We did it ourselves, we did not call anyone" (E1).

The students referred to the importance of planning this collectively among the participants, as well as describing it as a true story and in chapters. "It is a backstage story. We treat it like a real person" (E1). "It is a series, with chapters" (E2).

Such information highlights some "clues" that can qualify the use of storytelling in different teaching-learning processes, such as: student involvement from case planning to discussion and case continuity in chapters. Such clues seem to compromise the student with the reality of the case and its continuity, based on decision making, which places the student in a "scenario" of responsibility in health care.

When discussing their experiences during storytelling, the students also presented the challenges, their perceptions, and the contributions of the aforementioned health training strategy. Such topics are present in category 2, entitled: storytelling in the perception of students.

The challenges presented by the students refer to the incentive to "solve" the case presented and the relation between theory and practice. See in the RU below: "We had to solve the case" (E2). "Since I joined the Association, we always related theory to practice, we have that concern, telling stories is the same line of thought" (E1).

Challenges such as the motivation to participate in the solution of the case and the ability to relate theory to practice are presented in the discourse of the participants through the desire to carry out more teaching-learning processes using storytelling, demonstrating a positive perception in relation to the experience related. "...participating in storytelling was really great" (E6). "We want to continue and do more activities like this" (E5). "...it was a very enriching experience, despite all the work it required" (E4).

Regarding the contributions of storytelling to health training, participants referred to the interaction between students and the importance of fostering the autonomy and creativity of the participants. As stated in the RU below: "Creativity in creating the story...

Learning didactics" (E1). "Interaction between members increased... This was also discussed by the group as a positive point for the group" (E7).

Based on the description of the category on the perceptions of students in the use of storytelling, it is understood that such a strategy, in the experience of the participants, is appreciated as relevant in the teaching-learning process.

4. Discussion and conclusions

Providing critical-reflexive and meaningful learning has been a challenge for teachers and, therefore, using strategies that can involve students in the construction of their knowledge tends to enhance this process. In this context, storytelling seems to be a powerful strategy to stimulate the student through a story, told in the form of text, images or videos; and thus, engage in a way that can follow the beginning, middle and end of a situation (Costa et al., 2016; Bano et al., 2020; Lober and Komnenich, 2020; Wall, 2021; Zare et al., 2021; Schoenhofer and Boykin, 2022).

Regarding the knowledge produced in higher education, it is also clear that the student population is composed of young adults who live a universe in which the required responsibilities are sometimes greater than they can understand and follow. This can lead to a wrong way of seeing learning, making it more difficult than meaningful. Therefore, by using methodological strategies that allow and promote learning in a constructive and non-transmissive way, the teacher can help the student in this transition to adult life and, at the same time, contribute to the formation of a critical-reflective, emotionally intelligent and innovative profession.

Undergraduate students in nursing, participants of an academic association of a public university located in Rio de Janeiro, Brazil (BR), were encouraged and guided by professors not only to teach, but to actively participate in its elaboration, using storytelling as a strategy to address the proposed topic.

Category 1 entitled "Storytelling during the teaching-learning process", showed how the strategy required aspects such as creativity, debates and updating of the public policies in force at that time. In addition, it brought a health reality close to the

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1 Nursing professional registration in the Brazilian states.

students, as observed by statements such as "…it seems that we had COREN in our hands…" and "…we treat it like a real person."

This proximity to reality, through storytelling, was experienced by teachers in an undergraduate course, where they needed to investigate the traits involved in the learning of *disabled children*. The author states that this strategy not only motivates and emotionally engages students but can increase their understanding and correlation with practice (Jarvis et al., 2004). The stimulation of learning of nursing students through storytelling was used to provide a relation between the use of drugs and critical thinking in a significant and creative way, enhancing knowledge on the subject, as observed in a qualitative study (Grady & Bell, 2021).

Digital storytelling, a multimedia recorded story (Moreau et al., 2018), was used to optimize the relationship between nurses and families of critical patients, who identified this strategy as a catalyst to change this interaction. Storytelling can promote understanding of a given health situation and cultivate compassion, as it tends to lead students/professionals to reflect on their beliefs, through emotions and feelings (Beierwaltes et al., 2020). Ensuring Patient Safety (PS) during healthcare is a pressing issue in the training of future professionals and should ideally be addressed in an inter-professional way, which is a major challenge. A study conducted with medical and pharmacy students, through a virtual platform due to COVID-19 in 2020, used an interactive PS program and storytelling about medication errors based on real facts, providing greater empathy, behavior change and attitude and meaning creation (Garwood et al., 2022).

This strategy, considered innovative despite its current use, can be used to help health professionals understand both patients and health systems, potentially generating better care outcomes (Moreau et al., 2018). Digital storytelling, due to its reflective potential, should be used as an educational intervention, also showing the applicability of research results (Beierwaltes et al., 2020).

It can be observed in category 1, situations experienced by students who improve learning, such as "we had to get together and use creativity" and "…there was a lot of discussion, a lot of exchange…" that creativity develops through storytelling because students need to create their own stories. In addi-

tion, they learn to search for the topic in face-to-face and/or virtual libraries, develop critical reading of found texts, synthesize readings to support the story, improve communication between them and with the target audience, learn to use digital tools, among other skills (Robin, 2016).

Additionally, storytelling can contribute to the development of fundamental interpersonal skills for health professionals such as teamwork, advocacy and attentive listening. In this way, in addition to learning new knowledge from an active and emancipatory position, they can also develop values and relational skills that will be widely implemented during their professional life (Henrickson et al., 2022). This is positive when thinking about college extension or extracurricular activities, as they are also learning opportunities, as seen in a British study on university dental students. A questionnaire and a focus group were applied to evaluate the results of the sessions with the students at the end of each stage of internship. The potential of storytelling to stimulate reflection, develop teamwork, communication and organization skills, as well as technical skills (Zijlstra-Shaw & Jowett, 2020) was identified.

Category 2, "Storytelling in the perception of students", included the challenges experienced in the process of making the story. It is interesting to note that despite the mobilization required by the use of an active learning methodology, students recognize the positive effects as in the phrases "…participating in storytelling was really great" "We want to continue and do more activities like this" "…it was a very enriching experience, despite all the work it required".

Storytelling was seen in a positive and motivating way by the students of the nursing career, where 90% stated that the strategy improved the acquisition of knowledge and 67.8% indicated it helped in their clinical skills; it is also observed that 91.2% mentioned they could use it in other subjects, which shows the positive aspects highlighted by the students who experienced it (Rodríguez-Almagro et al., 2021). For nursing students in a study that compared teaching academic branch blocks through lectures and storytelling, there were no differences in satisfaction ($p < 0.001$) or learning ($p = 0.20$) (Zare et al., 2021).

A Norwegian study with 37 students from two undergraduate nursing courses showed that digital storytelling allowed more engagement, analysis and

understanding on their part, despite feeling more vulnerable when sharing stories (Urstad et al., 2018). An American study, whose data were also collected through a focus group, presented results discussed by students in the last year of an undergraduate nursing degree. Seeing the health situation from the perspective of patients and their families through digital storytelling and being able to live this memory in every contact with the material, was seen as a positive thing by the students, who also highlighted the use of this strategy throughout their professional career to keep them connected with their patients (Bhana, 2014).

Perhaps, for students involved in creating stories, the experience of sharing their product with other colleagues and the resulting criticism can promote the development of emotional intelligence, as well as collaboration and social learning (Robin, 2016). This was also observed in this research, through the phrases "learning the didactics" and "increased interaction between members... Which was also discussed by the group as a bright spot."

The potential of storytelling, in its classic or digital version, has been gaining ground as a strategy to use in education, especially for the coexistence of different generations at the university. A review published in 2014 already indicated that generation Y, born between the early 1980s and the late 1990s, demanded the development of interpersonal skills, with storytelling being one of the potential strategies (Shorey et al., 2021).

Another review study carried out from six electronic databases based on English productions, between June 2016 and July 2021, corroborates the discussion related to the characteristics of the different generations (Özveren et al., 2020). Generation Z, the so-called digital natives, prefer to learn independently and less passively, and storytelling identifies as an active methodology that can favor theoretical-practical learning and the development of communication skills, so necessary in this generation of students, who despite their technological dependence, have poorly developed face-to-face social skills. However, the authors emphasize that more diverse and culturally mixed qualitative methods or studies are needed to measure the effectiveness of technological integration and digital storytelling in terms of increasing students' learning and confidence in their future careers (Özveren et al., 2020).

Despite its potential benefits, it is necessary to make some considerations regarding storytelling, especially in its digital version. The incorporation of the Internet has worried the scientific community about exposure time, however, paradoxically, Information and Communication Technologies (ICT) have been increasingly used in schools and universities as a way to involve students (Caliari et al., 2017; Roman et al., 2017). A descriptive study with 350 first year students of the teacher training course who responded to a scale developed by Bianchi and Phillips (2005), quoted by Roig-Vila, López-Padrón and Urrea-Solano (2023), whose objective was to identify problems immediately of the general use of smartphones among adults, revealed that academic performance was not affected in 66.6% of the participants; and regarding the need for its use in the face of a ban, 66.6% faced difficulties in complying with this order.

While the potential for innovation associated with storytelling is highlighted, the metaverse reveals as user experiences intensify with technological advances and augmented reality. Virtual information generated by a computer in a real-world scenario has an effect of deepening the experience or broadening the understanding of who is "living" the story, due to its reliability with reality (Yang, 2023). Studies that use virtual realities in teaching-learning processes and methods are still emerging in nursing.

Therefore, storytelling is seen as a strategy mobilizing emotions and feelings, able to bring dynamism and meaning to learning, adaptable to the digital format and positive acceptance among undergraduate students, providing opportunities for the development of technical and non-technical skills (Costa et al., 2016; Bano et al., 2020; Lober and Komnenich, 2020; Wall, 2021; Zare et al., 2021; Schoenhofer and Boykin, 2022; Gurney et al., 2022 3).

The main limitation of this research is that it was conducted with a single population of students participating in an academic association, which demonstrates a previous commitment in the active search for learning. However, it should be mentioned that the members were from different classes and some from other universities. Larger samples with diverse sociocultural characteristics are recommended.

For us professors, following the process of creating the story, guiding the students and observing its evolution was extremely rewarding. The

experience made possible the relationship between teaching-extension-research, showing the potential to promote participatory and meaningful learning for students and teachers.

Storytelling should be used in the education of students, professionals, and patients, and it should also be extensively researched to measure its effectiveness and efficiency. To this end, professors must update their teaching practices in order to be able to communicate and stimulate the interest and learning of the different generations, either in the classroom or in internships, or in everyday work activities.

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