

## INFLUENCE OF PLAYFULNESS IN NURSING EDUCATION: AN ACTION RESEARCH

A influência do lúdico no ensino de enfermagem: uma pesquisa-ação

La influencia del lúdica en formación de enfermeras: una investigación acción

Kátia Regina Barros Ribeiro<sup>1</sup>, Marta Lenise do Prado<sup>2</sup>, Denise Maria Guerreiro Vieira Silva<sup>3</sup>, Silvana Silveira Kempfer<sup>4</sup>, Mariely Carmelina Bernardi<sup>5</sup>, Saionara Nunes de Oliveira<sup>6</sup>

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### ABSTRACT

**Objective:** This research aims to propose and implement playfulness as a teaching strategy for nursing students.

**Methods:** This is a qualitative, action research study that was carried out with 23 undergraduate nursing students from a Brazilian University. A game was used as a teaching strategy. Data were collected by means of participant observation as well as portfolio and evaluative records prepared by the students. Data analysis followed the operative approach for qualitative data. This research was also approved by the Ethics Committee under the Legal Opinion No. 193/09. **Results:** The game was implemented in two consecutive semesters and was positively evaluated as a strategy that facilitates learning, makes complex subjects more understandable and stimulates curiosity and teamwork. **Conclusion:** Playfulness is a promising interface for nursing teaching in the active methodology and favors the critical, creative and reflective training of students.

**Descriptors:** Nursing, Methods, Teaching, Nursing Education, Higher Education.

### RESUMO

**Objetivo:** Propor e implementar o lúdico como estratégia de ensino para estudantes de enfermagem. **Método:** Estudo qualitativo, do tipo pesquisa-ação, desenvolvido com 23 estudantes do curso de graduação em enfermagem de uma universidade brasileira. Utilizou-se o jogo como estratégia de ensino. Os dados foram coletados pela observação participante, portfólio e registros avaliativos elaborados pelos alunos. A análise seguiu a proposta operativa para dados qualitativos. Pesquisa aprovada pelo Comitê de Ética sob o protocolo nº 193/09. **Resultados:** O jogo foi realizado em dois semestres consecutivos e foi avaliado positivamente como estratégia que facilita o aprendizado, torna assuntos densos mais compreensíveis, estimula a curiosidade e o trabalho em equipe. **Conclusão:** O lúdico é uma

- 1 Nursing graduate by the UFRN, PhD in Nursing Education by the UFSC, Professor at UFRN.
- 2 Nursing graduate by the Universidade de Passo Fundo (UPF), PhD in Nursing Philosophy by the UFSC, Volunteer Full Professor at UFSC.
- 3 Nursing graduate by the Universidade Federal do Estado do Rio de Janeiro (UNIRIO), PhD in Nursing Philosophy by the UFSC, Volunteer Full Professor at UFSC.
- 4 Obstetric Nursing graduate by the Universidade Regional do Noroeste do Estado do Rio Grande do Sul (UNIJUI), PhD in Nursing by the UFSC, Professor at UFSC.
- 5 Nursing graduate by the Universidade Estadual do Oeste do Paraná (UNIOESTE), PhD in Nursing by the UFSC, Head of the Quality Management Sector from the Fundação Hospitalar São Lucas de Cascavel-Paraná.
- 6 Nursing graduate by the UFSC, PhD in Nursing by the UFSC, PhD student at UFSC.

interface promissora para o ensino de enfermagem na metodologia ativa e favorece a formação crítica, criativa e reflexiva dos estudantes.

**Descritores:** Enfermagem, Métodos, Ensino, Educação em Enfermagem, Educação Superior.

## RESUMÉN

**Objetivo:** Propuesta y ejecución del lúdica como estrategia de enseñanza para estudiantes de enfermería. **Metodología:** Estudio cualitativo, clasificado como investigación-acción, desarrollado con 23 alumnos de graduación en enfermería de una universidad brasileña. Se utilizó el juego de mesa como estrategia de enseñanza. Los datos fueron recolectados por medio de la observación participante, portafolio y registros de evaluación elaborados por los alumnos de forma anónima. El análisis siguió el protocolo operativo para los datos cualitativos. La investigación fue aprobada por el Comité Ético bajo el protocolo N° 193/09. **Resultados:** El juego se aplicó en dos semestres consecutivos y se evaluó positivamente como una estrategia que facilita el aprendizaje, hace comprensible materias densas, estimula la curiosidad y el trabajo en equipo. **Conclusión:** El lúdico es una interfaz prometedora para la educación de enfermería en metodología activa y promueve la formación crítica, creativa y reflexiva de los estudiantes.

**Descriptor:** Enfermería, Métodos, Educación, Educación en Enfermería, Educación Superior.

## INTRODUCTION

The new demands in the health care scenario in Brazil, caused by the implementation of the *Sistema Único de Saúde (SUS)* [Unified Health System], have been requiring significant changes in the training model of professionals. This requirement promoted deep mobilization of the *Instituições de Ensino Superior (IES)* [Higher Education Institutions] in the sense of restructuring Course Pedagogical Projects, leveraged by the promulgation of the *Lei de Diretrizes e Bases (LDB)* [Guidelines and Framework Law], in 1996, and the *Diretrizes Curriculares Nacionais (DCNs)* [National Curriculum Guidelines] for undergraduate courses, in 2001.

The emergence of a new health model requires that higher education institutions offering courses linked to SUS be reinvented. The need for a teaching model that leads to a critical, reflective and creative education emerges, promoting competences for students and professionals to develop holistic care. The curricular guidelines recommend investing in didactic strategies that motivate students to reflect on their reality so that they could transform their context.<sup>1</sup>

Educating is no longer a task of transmitting knowledge, but it can be treated as a structure of representations involving society and individuals. Therefore, cultural and social values must be taken into account, and one must reflect on the very meaning of education “in” and “for” society.<sup>2</sup>

In this framework, the traditional teaching model, in which the teacher is the central element in the teaching-learning process, has been gradually replaced by new pedagogical trends. According to these new trends, teachers are seen as mediators and facilitators in educational practice,

guiding towards critical, reflective and creative training, so that the future professionals could show commitment to the population and the principles of SUS.<sup>3</sup>

The great challenge of educational institutions today is to transform the learning context into a creative and enchanting adventure that goes beyond the limits of repetition and leads the learners to the (re)construction of their knowledge, in which they actively participate, becoming curious, creative, critical, reflective, and capable of intervening and (re)creating the reality in which they are inserted.<sup>4</sup> To this end, innovative methods involving transforming practices capable of transposing the contours of strictly technical training are needed so that the education of an individual, seen as a historical being inserted in the action-reflection-action dialectics, occurs effectively.<sup>5</sup>

In this sense, the active methodology is emphasized as “the possibility of stimulating critical-reflective teaching-learning processes, in which the learner participates and is committed to their learning”.<sup>1:209</sup> Active methodology should allow “learning to learn, ensuring learning by doing, and establishing democratic relationships, considering the students and citizens who are subjects of the teaching-learning process”.<sup>6:43-7</sup> Classroom practice should lead to learning and motivate students to seek knowledge, so that they could acknowledge their daily ways.<sup>6</sup>

Considering that playfulness provides a rich environment for learning and facilitates cognitive development,<sup>8</sup> we believe that it is a strategy that leads teachers to the transformation of their practice and to a closer relationship with students, also providing opportunities for learning moments through creativity with fun and the knowledge sharing.

Why consider playfulness as a space for thinking and learning? Because we believe that games give rise to curiosity and encourages the exploration and construction of knowledge caused by a motivation proper to them.

Some indicators are used to evaluate the playful dimension of an educational activity: 1) having functional pleasure; 2) being challenging; 3) creating possibilities or having them; 4) having symbolic dimension and 5) expressing themselves in a constructive or relational way.<sup>9</sup> In this respect, it is also important to emphasize that it is necessary to keep the focus on pedagogical intentions so that the strategy could not be interpreted by students as moments of play.

Hence, the question “How can playfulness favor teaching in nursing?” was developed with the purpose of proposing and implementing playfulness as a teaching strategy for nursing students.

## METHODOLOGY

This is a qualitative study with an action research approach involving the practice of developing scientific knowledge, in which action and research take place

simultaneously and both the researcher and community are participants. For Lewin, it happens in a cyclical movement of action and reflection composed of four stages, namely: planning, action, observation, and reflection.<sup>10</sup>

This study was carried out in a public university in the South Region of Brazil. Twenty-three nursing students enrolled in the Fundamentals for Professional Care course, available in the third phase of the Nursing Undergraduate Program, participated in the study. In this course, the total number of students is divided into two distinct learning groups called tutoring groups. Thus, the game was applied to a tutoring group of 11 students in the first semester of 2013 and to a group of 12 students in the second semester of the same year.

Following the four stages of action research<sup>10</sup>, we defined the content and the playful strategy in the planning stage of description and insertion of the researcher in the field. We decided to work on bladder exploration through a board game. In this stage of the research, the entire construction of the game and its rules, nursing students' invitation, and literature review were carried out. The action stage was structured on the implementation of the game itself and the proposed dynamics in the classroom. The observation stage was characterized by field notes taken by the researcher as a study participant and his observations and reflections. Also, the students' records on the portfolio—an instrument used to monitor the students' individual development throughout the course—and the class's evaluative records—prepared anonymously by the students according to the researcher's request—were used. Conclusively, the reflection stage was carried out, in which the collected data was analyzed and interpreted.

The collected data were grouped and organized using the operative approach for qualitative data analysis. This approach comprises three phases: pre-analysis, in which data are analyzed and described; exploration of the material, in which data is codified and organized into categories; and interpretation of the results supported by the categorized data.<sup>11</sup> The study results are presented according to the four stages suggested by the action research: planning, action, observation, and reflection.<sup>10</sup>

This study is part of the project "Active Methodologies of Teaching in Nursing Vocational Training: Rethinking the strategies for teaching-learning in undergraduate courses", which was approved by the Research Ethics Committee under the Legal Opinion No. 193/09 when the Resolution No. 196/96 of the National Health Council was still in force. This Resolution was replaced by the Resolution No. 466/12, which was adopted in this study.

The students were invited to participate in the study, informed that they could give up at any time without loss. Furthermore, the objective of this research and how to participate in it were explained to them. After signing the informed consent form to preserve anonymity, the participants were identified by alphanumeric codenames.

## RESULTS

### Planning a playful technology for nursing education

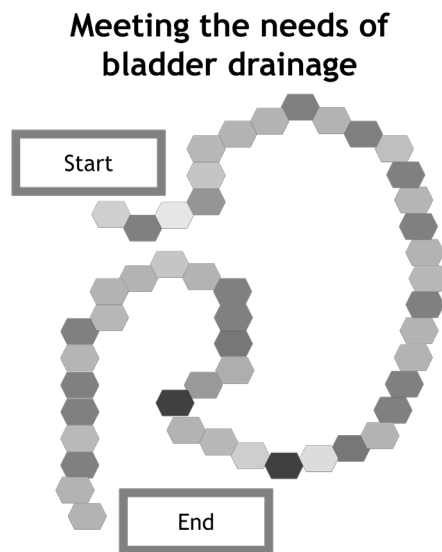
The Fundamentals for Professional Nursing Care course is developed according to four main components: the theoretical-philosophical component; the social, political, and cultural component; the ethical and aesthetic component; and the methodological/technological component.<sup>12</sup> Among the contents of the methodological/technological component is the "Meeting the needs of bladder drainage" theme, which was selected for the proposition of the playful teaching technology.

Playfulness is intrinsically related to the act of playing and to activities that provide joy through actions that move and motivate those who participate in them. It is a means by which one learns in a pleasant way and awakens pleasure at the same time that develops cognitive, affective and motor aspects.<sup>13</sup>

To work on this content, an educational technology was developed with the purpose of using playfulness as an interface in the teaching-learning process. Education technologies are instruments that act as facilitators of the learning process and aim to provide the teacher and student with moments of exchange of experiences. Also, they provide means that lead to the formation of consciousness and development of knowledge.<sup>14-5</sup>

The educational technology used in this study was a board game (Figure 1). This game comprises a track formed by 45 hexagonal spaces in different colors. The spaces corresponding to the beginning and end of the game have the format of a kidney to make a visual association with the class's theme. The board was printed on canvas (120 cm x 90 cm) to be visualized by all participants. The context of the course's subject and the total number of participants were also taken into consideration during the board's development. The game is recommended for a maximum of 15 students or three teams of five students.

**Figure 1** - Illustration of the “Meeting the needs of bladder drainage” board game.



Besides the board, the following object was also used for developing the game: three tokens, a numeric die with six sides, and 27 instruction cards to guide the groups. The cards were prepared based on the class’s topic with questions about anatomy, physiology, physical examination, clinical reasoning, procedures, necessary materials, techniques, and nursing care, as described in Figure 2.

**Figure 2** - Examples of the activities indicated on the command cards of the “Meeting the needs of bladder drainage” game.

1. This initial moment of the game is important for everyone to remember some information that will be important to learn about indwelling bladder catheterization. So draw a part of the urinary system anatomy and explain it.
2. Skip this round and remind your colleagues of the renal system physiology in the next one.
3. Are you enjoying the game? Now we will discuss a little about how to provide care for patients needing bladder drainage. What do you understand about this?
4. Now we will study the use of bladder catheters. What are they and what are they for? You have 5 minutes to find out and tell your colleagues.
5. I'm sorry, but now is not the time to rush. Go back one space and list the material that is needed to perform an indwelling bladder catheterization.

The students were invited to participate in the playful activities with the recommendation that they bring computers, books, and articles. The students also were instructed to read these resources so that they could be used in the learning process.

### The game as a moment of action

Before the start the game, the students were divided into three teams, the board was placed on the center of

the classroom’s floor, and the participants were arranged around the board forming a circle. Each team chose a token and the educators organized the command cards while explaining the rules of the game to all the students (Figure 3).

**Figure 3** - Rules of the “Meeting the needs of bladder drainage” game.

- Each group is entitled to roll the dice on its own turn and move the token according to the roll.
- A numbered card is pulled and positioned in ascending order after the token was moved.
- Do the task written on the card.
- It is allowed to look up information on books, articles and on the internet.
- If the group cannot perform the task within the time set on the card, the opportunity to perform the task is given to the next group. After they agree to performing it, they can move the token one space forward and continue the game by rolling the dice.
- The game ends when one of the groups reaches the finish line.

The groups played only during their corresponding turns, moved the tokens in accordance with the roll and executed the activities described on the command cards. During the activities, the students looked up information in books, articles, and computers, and also brought new questions and performed the activities as requested. Some groups did nothing during their corresponding turns and moved their tokens forward or backward according to the content of the command card. The last three command cards represented special conditions present in the game. These cards requested that the group that was playing merge with another group and, in the next turn, the remaining group would merge with the bigger group by the same card effect. Thus, only one group composed of all students remains at the last turn. All students finish the game together, emphasizing the idea and importance of teamwork in constructing knowledge and care in nursing and in the health team.

### Observing the development of competencies in a critical, reflective and creative education: perception of the participants

Observations and records were made by the participants throughout the educational activity, which corresponded to their perceptions of the educational practice and the proposal for critical, reflective and creative education. This is the observation stage in action research. Thus, given the records from portfolios, we observed that the students perceived the joyful activity as fun, which provided significant learning on the class’s topic, as pointed out below:

*It was a wonderful activity, [...] it was a way of learning, looking up, listening to colleagues, giving opinions and especially making us understand the topic integrally. (TA1)*

*I found the activity very cool because it is a different way of approaching the content, which allows us to talk, question and clear doubts. This makes us use reasoning, especially. (TB7)*

Other aspects that were also highlighted correspond to the interaction between the participants, which was established by the board game, and the groups' participation in constructing knowledge and teamwork, intentionally highlighted at the end of the game. There was an understanding of the intention to reflect on the importance of teamwork and the existence of common objectives. Also, the participants desired that the applied technology can be used throughout the undergraduate program.

*The groups interacted very well, all ended up helping each other and sharing knowledge and experiences. (TA6)*

*I L-O-V-E-D the activity! I found it very cool especially when the teams join together near the end of the game because this is the spirit of nursing: unity! I work as a team and not in competition since everyone aims for the same goal: the patient's safety and health. May this activity be disseminated in the academic world. (TB10)*

*This game is very fun and productive. It stimulates reasoning and teamwork. I'm looking for this game to be available for all topics. (TB2)*

As teachers and participants of the study, we observed that the students started the game in a very competitive way, but throughout the activity, they understood the class's strategy and began to question more and reflect on the answers, which were developed by the teams as a whole. Also, we observed that at the end of the game, when the command card for group fusion was presented, most students were surprised and satisfied, while others, in a playful tone, showed some disappointment since they were near the end of the game and would be the winners.

## DISCUSSION

The use of active methodologies has become imperative in education and numerous activities, techniques, and strategies have been worked on so that learning could be meaningful. In this respect, educational technologies

resulted from processes stand out. These technologies can be evaluated, controlled systematically, and consolidated through experience and research, guiding the development of scientific knowledge with possible repercussions in educational practice.<sup>16</sup>

In order for the proposed activities to be successful, educators must assume the role of facilitator of the teaching-learning process, and the learner must act in a proactive and participatory way. Consequently, they build together knowledge by means of creativity, sensitivity, and action.

Given this context, this study aimed to perform the learning process in a fun, interesting and creative way by developing and applying an educational technology based on active methodology. Creating a teaching strategy, especially when it is based on active methodology, in which the participants need to be committed to reflection and action, represents a challenge to educators/researchers. This challenge exists because, even though educators/researchers know the students and interact with them daily, playful moments give rise to new discoveries.

This activity sensitizes the student, reaffirms that knowledge can be worked on and (re)built through various and different sources and stimulates interest and curiosity.<sup>17</sup> In addition, the importance of playfulness in the learning process is undeniable because it induces attitude changes and motivates the participants, which makes learning more significant and less tiring since the student thinks, makes decisions, interacts, learns and plays at the same time.<sup>18</sup>

Gaming leads to social relationships and interaction between peers. When playful activities are planned carefully and conducted, they contribute to the development of social attitudes, mutual respect, solidarity, cooperation, common sense, responsibility, and initiative. Furthermore, games have the power to further strengthen the group and think about competition as something healthy during knowledge construction.<sup>19</sup>

In addition to the subject's understanding, there was a pedagogical intention that led the game's participants to a mutual relationship of learning, emphasizing teamwork and its importance in health education, which is an essential condition for working for and with complex human beings.

The possibility of looking up throughout the activity, participating in discussions, questioning, clearing doubts, and exercising creativity made the students feel at ease and more stimulated to participate in the class. Consequently, the effective interaction made everyone feel part of the process, which generated satisfaction and the perception that the class was fun because they considered learning by means of a game to be pleasant, constructive and meaningful.

Playing and giving joyful lectures capable to attracting the participants' attention are effective instruments when the goal is to promote the critical education of the students and increase their knowledge.<sup>20</sup> Through games, debates, texts, and the most diverse pedagogical tools, students build their arguments, enrich their reflections and ideas, and have the opportunity to make their own discoveries and develop concepts, moving towards meaningful learning.<sup>21</sup>

Gaming is a voluntary activity carried out in a certain time and space, which obeys rules freely consented to. However, these rules are categorically obligatory and with a previously established purpose, which permeates feelings of tension, joy, and consciousness that distinguishes the game from everyday life.<sup>22</sup>

The following main elements are part of the game: players, strategy, judge, environment, duration, and materials (secondary element).<sup>23</sup> Games bring about an environment of competition—which should not be the same as conflict—as well as a collaborative spirit. The game's quality will depend on the ability to balance challenging and cooperative elements to take advantage of the potential of each participant.<sup>23</sup>

All gamers must learn and accept rules, know how to wait for the proper turn to play, accept the results, face frustrations, be willing to experiment, discover, invent, and feel stimulated for curiosity, self-confidence and autonomy, which can provide progress in various aspects such as language, thought and concentration because gaming is characterized as an opportunity for self-expression and achievement.<sup>20</sup>

Educational games can awaken "motivation, curiosity, and interest in learning" in the student.<sup>24;327</sup> To achieve such goals, the activity must be well-planned, analyzed, well-founded and contextualized because "there can be no educational activity, in other words, a conscious reorganization of the experience, without direction, government, or control. Otherwise, the activity will not be educational but capricious or automatic."<sup>25;43</sup>

Pedagogical games, unlike the playful ones, are developed with the explicit intention of provoking significant learning. Pedagogical games stimulate the gain of new knowledge and the development of operative skills, which are specific cognitive and appreciative aptitudes or capacities that make individuals understand and intervene in social and cultural phenomena, also helping them to build connections.<sup>20</sup>

Therefore, the board game used in this work was designed with the purpose of providing moments of learning in a light and fun way, with an emphasis on reflection on scientific content. Furthermore, the game was designed to promote teamwork so that the participants could understand the importance of cooperation not only in the game but also in the professional health practice.

The teacher and students were able to look up information in many materials such as books, articles, and on the internet while playing the game. This freedom

to seek knowledge and the interaction between teacher and students transform the classroom environment into a pleasant space for private and collective learning, enriched by each one's personal experiences. Hence, a playful activity should not be based on a unique formula or recipe; instead, it has to be dynamic and creative in order to contemplate each group's characteristics and singularities.<sup>20</sup>

The use of a board game as an educational technology proved to be an excellent strategy. All participants regarded the lecture as dynamic, different and fun. Also, according to the participants, the class's topic was covered in a pleasant and creative way, allowing them to question, seek and gain knowledge in a playful way, which made them learn in a critical and reflective way.

## CONCLUSIONS

Working with active methodologies is not an easy task. This research highlighted that importance of performing an educational process based on the interaction and relationship between the teacher and the students for gain and development of knowledge.

The use of a board game as an educational technology represented the playfulness in nursing education, configuring a light, interesting and motivating way to teach and learn, as well as a challenge inherent in working with active methodologies.

Playfulness in nursing education is not a recent activity, but it is always (re)discovered in different contexts, and, in this sense, its application to a dense nursing content enables students to learn in a light and collaborative manner.

The strategy used in this study worked according to the pedagogical intentions. Some adjustments resulted from a process that converges action and research in educational practice, were made during the playful activity.

The students showed satisfaction and joy while gaining knowledge and committed themselves to learn, which leads to new studies for establishing this type of pedagogical strategy as significant in nursing learning.

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**Corresponding author**

Kátia Regina Barros Ribeiro

**Address:** Rua Equador, 87, Nova Parnamirim

Parnamirim/RN, Brazil

**Zip code:** 59150-788

**E-mail address:** katiarbribeiro@gmail.com

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