# Training of Teachers in Professional Education in the Surgical Center

Formação de Docentes na Educação Profissional no Centro Cirúrgico
Formación Docente en Educación Profesional en el Centro Quirúrgico

**RESUMO**
A formação de docentes na educação profissional no centro cirúrgico apresenta desafios significativos, uma vez que muitos profissionais atuam como instrutores sem a devida capacitação pedagógica. Este ensaio teórico analisa a importância da formação pedagógica para esses docentes, destacando metodologias ativas, como simulação realística e aprendizado baseado em problemas, e estratégias como educação permanente e tutoria entre pares. A revisão da literatura evidencia que a qualificação pedagógica melhora a qualidade do ensino e, consequentemente, o desempenho dos alunos na prática cirúrgica. Além disso, a implementação dessas estratégias requer um compromisso institucional para garantir que os docentes possuam não apenas domínio técnico, mas também competências didáticas essenciais para o ensino no ambiente cirúrgico.
**DESCRITORES:** Formação docente; Educação profissional; Centro cirúrgico; Metodologias ativas; Educação permanente.

**ABSTRACT**
The training of teachers in professional education in the surgical center presents significant challenges, as many professionals act as instructors without adequate pedagogical training. This theoretical essay analyzes the importance of pedagogical training for these teachers, highlighting active methodologies such as realistic simulation and problem-based learning, as well as strategies like continuing education and peer tutoring. The literature review shows that pedagogical qualification improves teaching quality and, consequently, student performance in surgical practice. Moreover, implementing these strategies requires institutional commitment to ensure that teachers possess not only technical expertise but also essential didactic skills for teaching in the surgical environment.
**DESCRIPTORS:** Teacher training; Professional education; Surgical center; Active methodologies; Continuing education.

**RESUMEN**
La formación docente en educación profesional en el centro quirúrgico presenta desafíos significativos, ya que muchos profesionales ejercen como instructores sin una formación pedagógica adecuada. Este ensayo teórico analiza la importancia de la formación pedagógica para estos docentes, destacando metodologías activas, como la simulación realista y el aprendizaje basado en problemas, y estrategias como la formación continua y la mentoría entre pares. La revisión bibliográfica muestra que la formación pedagógica mejora la calidad de la enseñanza y, en consecuencia, el desempeño del alumnado en la práctica quirúrgica. Además, la implementación de estas estrategias requiere un compromiso institucional para garantizar que los docentes posean no solo el dominio técnico, sino también las habilidades docentes esenciales para la docencia en el entorno quirúrgico.
**DESCRIPTORES:** Formación docente; Educación profesional; Centro quirúrgico; Metodologías activas; Formación continua.

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## INTRODUCTION

The training of teachers in professional education focused on the surgical center environment is a topic of growing relevance in the educational and health scenarios. The complexity and specificity of surgical practices require that professionals responsible for training new specialists have not only technical expertise but also adequate pedagogical skills. A study[1] states that the effectiveness of teaching in surgical environments is directly related to the pedagogical training of instructors, who must be


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able to integrate theory and practice efficiently.

However, it has been observed that many health professionals who work as teachers in operating rooms do not have specific training in education, which can negatively impact the teaching-learning process. According to Oliveira and Santos[2], the lack of formal pedagogical training among surgical instructors can result in less effective teaching approaches and difficulty in adapting to the individual needs of students.

The pedagogical training of teachers in professional education in the operating room is a challenge that requires careful attention to the needs of both students and the professionals responsible for teaching. As mentioned, many teachers are specialists in the health field but do not have formal training in teaching methodologies, which can compromise the transmission of knowledge and the development of the skills necessary to work in the surgical environment effectively and safely.

The literature highlights the importance of active teaching methodologies in the training of health professionals, including realistic simulation, problem-based learning, and peer tutoring[3]. These approaches allow for more dynamic learning, favoring the integration of theory and practice and better preparing students for the challenges of the hospital environment. In addition, the incorporation of digital technologies in professional education has proven to be an effective strategy to complement learning, enabling students to review theoretical content before practicing in the operating room[4].

However, the implementation of these methodologies requires that teachers be trained to use them properly. According to Costa and Silva[5], the continuing education of teachers working in professional education in the health field should be encouraged through specialization courses, pedagogical workshops, and mentoring programs. In this way, it is possible to improve their teaching skills, ensuring more efficient teaching that is aligned with professional education guidelines.

Another relevant factor to consider is the need to adapt teacher training programs to the hospital environment. Unlike other educational settings, the operating room has an intense dynamic and requires a different approach to teaching. Studies indicate that teacher training should include teaching strategies that consider the pressure of the environment, the need for quick decision-making, and interdisciplinary interaction between different health professionals[6].

Given this scenario, this article seeks not only to understand the challenges faced by teachers in professional education in the operating room, but also to point out viable solutions to improve their pedagogical training. It is believed that the implementation of structured teacher training programs can bring direct benefits to both teachers and students, resulting in more qualified teaching and, consequently, safer and more efficient surgical care.

In this context, the research question that arises is: what are the most effective strategies for the pedagogical training of teachers working in professional education in operating rooms? The objective of this article is to analyze existing training methodologies and programs, identifying good practices and proposing recommendations to improve the training of these professionals. To this end, recent studies available on Google Scholar will be reviewed, focusing on publications from the last five years, in order to ensure the timeliness and relevance of the information.

The relevance of this study lies in the need to improve the quality of teaching in surgical environments, ensuring that future health professionals receive an excellent education. As highlighted[4], investments in the pedagogical training of teachers directly reflect on the quality of care provided to patients, since well-trained professionals tend to make fewer mistakes and demonstrate greater competence in their roles.

## DEVELOPMENT

This theoretical essay aims to problematize the training of teachers in professional education in the context of the operating room, highlighting the challenges and proposing strategies for the pedagogical improvement of these professionals. The analysis is based on recent literature, seeking to understand the existing gaps and suggest ways for more effective teacher training that is aligned with the contemporary demands of the surgical environment.

### Challenges in the Pedagogical Training of Teachers in the Operating Room

Teaching in the health field, especially in complex environments such as the operating room, requires not only technical mastery but also specific pedagogical skills. However, many professionals who work as teachers in these contexts have predominantly clinical training, with little or no formal pedagogical preparation. This gap can compromise the quality of teaching and, consequently, the training of future health professionals.

Teaching development in the health field faces significant challenges, especially in light of curricular and methodological changes that require teachers to engage in complex and interdisciplinary social practices. The absence of structured pedagogical training programs for nursing teachers is a reality that must be addressed to

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ensure the quality of teaching and patient care.

**Strategies for Teacher Development**

In view of the challenges identified, it is essential to implement strategies that promote the pedagogical development of teachers in the operating room. Continuing education emerges as an effective approach, as it allows for the continuous updating of professionals, aligning educational practices with technological and methodological innovations. Ribeiro[8] emphasizes that continuing education in the training of operating room nurses is essential for training in processes and technology, in addition to strengthening the role of nurses as educators and researchers.

In addition, the use of active teaching methodologies, such as realistic simulation and the problematization of clinical cases, can contribute to a more contextualized and meaningful education. These methodologies encourage the active participation of students, developing the critical and reflective skills necessary for working in highly complex environments.

The pedagogical training of teachers in professional education in the operating room is a topic that demands attention and investment from educational and health institutions. The implementation of continuing education programs and the use of active teaching methodologies are promising strategies for overcoming existing gaps, promoting teacher training that meets contemporary requirements and contributes to excellence in the training of health professionals.

**Table 1 – Comparison of teaching strategies in surgical training:**

| Teaching Strategy | Application in the Operating Room | Benefits |
|---|---|---|
| Realistic Simulation | Practical training with simulated clinical cases, allowing the experience of real situations without risk to the patient. | Improved learning safety, development of technical and behavioral skills. |
| Problem-Based Learning (PBL) | Study of real clinical cases, stimulating critical analysis, decision-making, and collaborative learning. | Improvement of critical thinking, student autonomy, and complex clinical problem solving. |
| Hybrid Teaching | Combination of online and practical teaching, ensuring flexibility and optimization of students' time. | Greater accessibility to theoretical content, better use of surgical practices, and personalization of learning. |
| Continuing Education | Continuous training of teachers and health professionals to update their knowledge and teaching skills. | Reduction of knowledge gaps, improvement in teaching quality, and greater integration between theory and practice. |
| Peer Tutoring | Mutual support between experienced professionals and new teachers, promoting the exchange of experiences and professional development. | Strengthening institutional knowledge, collaborative learning, and greater emotional support for beginning teachers. |

Source: Research data, 2025.

The comparative table presents a variety of pedagogical strategies applicable to the training of teachers in the operating room, highlighting different approaches that can contribute to the training of these professionals. Each strategy has a specific focus, ranging from active methodologies, such as realistic simulation, to approaches geared toward continuous professional development, such as continuing education. These methodologies were selected considering the dynamics of the surgical environment, which requires practical and rapid learning, efficient decision-making, and the development of refined technical skills.

Among the strategies highlighted, realistic simulation and problem-based learning (PBL) demonstrate great effectiveness in training for critical scenarios, providing students with a safe environment to develop skills before working directly with patients. Hybrid teaching contributes to learning flexibility, allowing students to prepare theoretically before practicing in the operating room, optimizing time and improving the quality of training. In addition, continuing education and peer tutoring are essential for the continuous updating of teachers, promoting collaborative learning and ensuring professional support throughout their careers.

The benefits of these strategies are widely recognized. Safety in learning is one of the main advantages of realistic simulation, as it reduces errors during clinical practice, while critical thinking and student autonomy are enhanced by PBL, which encourages the resolution of real clinical problems. Continuing education and peer tutoring strengthen faculty qualifications over time, allowing pedagogical training to keep pace with innovations in the health field.

The table also highlights the need for specific pedagogical training for health professionals who teach in operating rooms. Many of these methodologies require significant institutional investments, such as the acquisition of simulators, regular training for teachers, and policies to encourage pedagogical training. In this sense, one of the challenges faced is the resistance of some institutions to imple-


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ment these changes, which can compromise the quality of teaching in the field.

Therefore, the use of these strategies in teacher training should be widely encouraged, as their impact goes beyond teacher training, directly reflecting on the quality of care provided to patients. To enrich the discussion, the table can be supplemented with examples of good practices already implemented in educational and health institutions, as well as an analysis of the difficulties and barriers encountered in adopting these methodologies. These reflections are fundamental for structuring an efficient teaching plan and ensuring that the pedagogical training of teachers meets the contemporary needs of teaching in the surgical field.

## FINAL CONSIDERATIONS

The training of teachers in professional education focused on the operating room is a challenge that requires a strategic approach and continuous investment to ensure quality teaching. The analysis carried out in this theoretical essay identified gaps in the pedagogical training of professionals who work as teachers in this environment, highlighting the need for specific training to improve their teaching skills. The adoption of active methodologies, such as realistic simulation and problem-based learning (PBL), combined with continuing education strategies, proved essential to optimize learning and better prepare students for professional practice.

The challenges faced by teachers, such as lack of pedagogical training and resistance to adopting new methodologies, reinforce the need for an institutional commitment to implement continuous training programs. The literature review demonstrated that investments in innovative pedagogical strategies directly impact the quality of student training and, consequently, the safety and effectiveness of surgical care.

Therefore, this study contributes to the debate on the training of teachers in professional education in the health field, offering reflections and suggestions that can guide new educational policies. Improving teaching in the operating room involves valuing pedagogical training, ensuring that teachers not only have technical mastery of the area but also the necessary tools to effectively transmit knowledge. For future research, we suggest conducting empirical studies that evaluate the practical application of the methodologies presented and their impacts on the training of health professionals.

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