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INNOVATIVE METHODS OF TEACHING PRACTICAL SKILLS FOR NURSING STUDENTS – A REVIEW

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Introduction:

Education shines a bright light on the path humanity should take in order to progress. Education's goals go beyond teaching reading and writing to include developing students' critical thinking skills, subject mastery, and independence. There is always room for improvement when people are open to new ideas and methods. Students and educators alike can reap the rewards of cultivating and encouraging creative thought and action.[1] Education guides humanity forward. Students' failure to learn self-discipline and achievement is not their fault. We must make education a sport and engage children so they stay in school rather than leave. Education should excite them rather than dull them. It's crucial to their development and citizenship.[2]

Due to the rapid pace of scientific development, nursing personnel are continually challenged to expand their knowledge base. The choice of a suitable teaching approach is inextricably tied to advancements in technology, population growth, economic issues, regional disparities, demands for higher education, and people's propensity for self-motivation and self-learning.[3]

Nurses are expected to use modern technologies in everyday situations more than ever, so nurse educators must train appropriately. Learning innovations like virtual learning and adaptive technologies assist nurse educators improve student outcomes including certification and credentialing exam scores and real-world practice readiness. Many of these tech-driven nursing education changes are routine. Virtual conferencing, smartphones, and apps are so ingrained in students' lives that using them in a nurse educator's curriculum is easy.[4]

Over time, nursing education has changed, and now students spend more and more time in classes that are not directly caring for patients. Despite having a higher academic background, students are generally less clinically experienced and confident than prior generations of trainees. Reforms to the curriculum were partially implemented for ethical and risk-reduction purposes when exposing students to patients. Clinical skills facilities have been built up to address this, but they are insufficient to close the theory/practice break up. Herein lies the "new" approach to simulation education. More lately, education has undergone a significant

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transformation toward a student-cantered approach, even if certain technology has been around for decades or even longer. By adopting modern teaching techniques, a beginner's desire for nursing education in this day and age is to help lessen student competitiveness, foster cooperation, and increase a good study atmosphere. In contemporary teaching methods, the student is the primary focus. These ways of teaching are based on activities and put the learner at the center, which makes them fully involved in the process of learning. From inert listeners to active participants, students progress. In the curriculum implementation of nursing academic institutions, a cocktail of all the different teaching methodologies should be employed.[5]

Current Trends in Teaching Methodology

The development of technology has made education simple and accessible. Online learning, open learning, web-based learning, computer-mediated learning, blended learning, and m-learning provide the opportunity to learn from any location, at any time, and through any means. The positive outlook in the education industry has been shown by new ways of teaching and learning and quick changes in how they are delivered. Currently, the real-time classrooms and interaction have been supplanted by online chatrooms and virtual classrooms. Using platforms such as video conferencing (Google meet, Google presentation, Webinar jam, Microsoft Team, Zoom, Slack, Cisco WebEx) and a custom cloud-based learning management system (ELIAS/ MOODLE), virtual classrooms are being designed.Before lectures begin, the reversed classroom provides online study materials, pre-recorded videos, and a link to the lecture. The adaptability of online learning for participation and interaction engendered confidence and a sense of security. In addition, the more the nation becomes digitally connected, the more opportunities there are for producing digital natives, who find it easy to expose themselves online and manage their lives on virtual platforms.[6]

The degree to which a lecturer or clinical instructor employs novel methods of education is directly proportional to the degree to which their students learn something new. Evidence-based innovation is essential for applications. In order to prepare for class, a teacher must

1. A nurse educator must recognize the importance of selecting new methods for implementing technology as a teaching instrument.
2. A nurse educator needs to research ways to connect with students who don't want to go to college.
3. Educators in the nursing field should pay close attention to the unique challenges of reaching students from low-income backgrounds.

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4. It is important for nurse educators to learn how to work with students in places that are open to everyone, such as labs, rooms, community areas, and so on.
5. Research needs to be done on how to teach students to think critically and creatively, and educators of nurses need to conduct this research.

The nursing profession necessitates the integration of both theoretical and practical training. Several educational initiatives have been employed to enhance students' psychomotor and communicative abilities. These tactics are outlined below:

Simulation Method

Nursing students benefit greatly from simulation because it gives them the opportunity to hone their clinical abilities in a risk-free setting before applying them to actual patients. Here is a rundown of what you may expect from the nurse simulation approach to education:

Types of Simulation:

There are different types of simulations used in nursing education:

- ***High-fidelity simulation:*** Incorporates the use of sophisticated manikins or computer-based simulations, whose physiology and reactions are quite similar to those of actual patients.
- ***Medium-fidelity simulation:*** Utilizes simplified manikins or task trainers that are designed to target specific skills or procedures.
- **Low-fidelity simulation:** Uses low-tech tools to imitate clinical settings, such as role-playing, paper scenarios, or simple props.

Key Components of Nursing Simulation:

- ***Scenario development:*** Educators construct realistic scenarios that mirror clinical circumstances that nursing students may encounter.
- ***Debriefing:*** Students participate in a debriefing session following the simulation to evaluate their performance, identify areas for refinement, and gain insight from their experiences.
- ***Assessment:*** Through simulation-based assessments, nursing teachers can evaluate the knowledge and abilities of their students.
- ***Standardized patients:*** In order to increase the realism of simulations, sometimes actual patients or trained actors assume the role of patients.

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Case base learning:

A popular teaching strategy in a variety of industries, including business, law, health, and education, is case-based learning (CBL). When applied to education, case-based learning (CBL) entails giving students hypothetical or real-world cases or scenarios and guiding them through an organized process of analysis, discussion, and problem-solving. In the field of medical and healthcare education, this method is especially popular and is referred to as "case-based learning" or "case-based teaching."

Key Components of Case base learning:

- **Real or Hypothetical Cases:** Case-based learning (CBL) often starts with the presentation of a complex, real-world case study or scenario. Real-life patient stories, historical events, or made-up scenarios could all serve as inspiration for these cases. Patient histories, symptoms, and diagnostic conundrums are common case topics in medical teaching.
- **Active Learning:** CBL puts a lot of weight on active learning, which means that students are involved in the process of learning. They have to look at the case, figure out what the problems are, and suggest ways to fix them. This helps people learn how to think critically, solve problems, and make decisions.
- **Group Discussion:** In case-based learning, students typically participate in groups where they analyze and debate cases together. As students discuss ideas, challenge one another's presumptions, and exchange opinions, this fosters collaboration and communication skills.

Problem Based Learning:

Problem-Based Learning (PBL) is an instructional strategy utilized in nursing and healthcare education to cultivate clinical reasoning, critical thinking, and problem-solving abilities in nursing students. PBL is a learner-centered strategy that requires students to actively participate in solving complicated, real-world healthcare problems.

Problem-Based Learning (PBL) is a structured and learner-centered approach to education. While there can be variations in the process, a common framework for PBL often consists of seven steps:

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- ***Introduction to the Problem:***

  In this phase, a case, scenario, or problem—real or imagined—is given to the pupils. The goal of this introduction is to pique students' interest and curiosity. Since there may not be an obvious solution and the situation is frequently complex, inquiry and critical thinking are encouraged.

- ***Defining the Problem:***

  Students collaborate to identify the problem's central issues and uncertainties. They determine what they know and what they need to learn to effectively resolve the problem. This step encourages critical analysis and the identification of problems.

- ***Brainstorming and Hypothesis Generation:***

  Students participate in brainstorming sessions in which they produce ideas, possible explanations, or solutions to problems that have been discovered. This step promotes creativity and the investigation of various points of view.

- ***Structured Self-Directed Learning:***

  Students learn independently after brainstorming. They use textbooks, scientific literature, online resources, and other sources to learn how to solve the problem. This phase encourages independent learning, research, and information synthesis.

- ***Sharing Knowledge and Collaborative Learning:***

  After self-directed learning, students meet in small groups to discuss and share their knowledge. The group works together to understand the issue, discuss their ideas, and consolidate their expertise.

- ***Synthesis and Problem-Solving:***

  Here, students use what they learned from self-directed learning and group discussions to create a logical solution. To find a rational solution, they use knowledge, reasoning, and critical thinking.

- ***Presentation and Reflection:***

  Students share their results, theories, and solutions with the class. Presentations enable for peer discussion, feedback, and learning. Students evaluate their learning, discoveries, and knowledge.

Videoconferencing and web-based conferencing

By utilizing this method and technology, students and teachers are able to connect, clarify their questions, and present a live demonstration from a distance. Videoconferencing and web-based chatting are useful tools for teaching nursing that have many benefits for both teachers and

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students. These tools make it possible to learn from afar, improve teamwork, and open the door to more interactive and interesting ways of teaching.

E – learning:

Delivering nursing education and training through electronic learning, or e-learning, has grown in popularity and effectiveness. A few benefits of e-learning for nurses include its adaptability, accessibility, and capacity to customize courses to meet specific needs. A dependable internet connection, student isolation, and worries about clinical experiences in remote or virtual environments are challenges in nursing e-learning. Nursing educators and institutions must also ensure e-learning programs are accredited and licensed. E-learning in nursing now offers high-quality education to a wider and more diverse student population and promotes lifelong learning for nursing practitioners.

Conclusion:

A mix of technologies and social media is very important for this because it encourages the integration of technologies, making virtual relationships more human, and making learning more personalized. As time goes on, new tools keep coming out that could change and improve the way higher education works. There have been calls around the world for a change in nursing education from focusing on the teacher to focusing on the students. There isn't much research to back up the claims that some of these new and innovative technologies can help students learn and do better in school (for example, Active Learning Classrooms and Simulation Technology). Also, most of them haven't been fully tested yet and will probably need to be improved over time as flaws are found and new problems arise. Also, teachers need to be fully trained and given incentives to use new tools. Still, these tools and/or others that haven't even been thought of yet will definitely be used in health care education as it changes to meet the many challenges of learning in the 21st century.

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