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# **Revolutionizing Nursing Education and Practice: The Role of Technology in the Digital Era**

*J. Rose Jenila<sup>1</sup>, Prof Dr Pradeep V S<sup>2</sup>*

<sup>1</sup>Research Scholar, Malwanchal University, Indore

<sup>2</sup>Research Supervisor, Malwanchal University, Indore

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## **Introduction**

Nursing education and practice scenario has been dramatically replaced by the arrival of digital technology. The integration of innovative equipment and platforms has re-defined how knowledge is provided, skills are obtained, and the patient's care is given. This article examines the versatile applications of technology in nursing education and practice, which highlights its benefits, challenges, and future ability.

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## **The Evolution of Nursing Education in the Digital Era**

### **1. E-Learning Platforms**

E-learning has become the cornerstone of modern nursing education, which provides flexibility and access to students worldwide. Online platforms such as moodle, blackboard and canvas institutions are able to give interactive materials including video lectures, quiz and forums. These devices promote self-book learning, allowing nursing students to use educational materials anytime and anywhere.

For example, during the Covid-19 epidemic, e-learning ensured the continuity of education despite physical sanctions. Virtual simulation platforms such as shadow health and coordinats allowed students to practice clinical landscapes in a controlled environment.

### **2. Virtual Reality (VR) and Augmented Reality (AR)**

Virtual and enhanced reality technologies have revolutionized clinical training by creating immersive learning experience. Nursing students can imitate complex processes such as catheter insertion or CPR in a risk-free setting. AR overlay can also be used during practical sessions to provide real-time guidance.

For example, VR platforms such as Oxford Medical Simulation enable learners to practice making important decisions in fake emergency scenarios, leading to their confidence and ability.

### **3. Artificial Intelligence (AI) in Education**

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## **Conversion application in nursing practice**

1. Electronic Health Record (EHR) Documentation and better communication in healthcare settings have been streamlined by adopting the EHR system. The nurses can now deliver the patient's record immediately, to make decisions and reduce errors. For example, EHR platforms such as EPIC and Cerner are able to monitor the important signs, laboratory results and history of the drug in real time. This integration promotes a holistic approach to the patient's care.

2. Telehealth services Telehealth has expanded the access to nursing care, especially in remote and underscore areas. Through video consultation and distance monitoring devices, nurses can assess patients, provide health education, and manage chronic conditions without physical interaction. The use

of telehealth platforms has been particularly impressive in the management of post-operative care such as Teldock and MEWAL, where patients receive guidance and support from nurses comfortably in their homes.

3. **Wearable technology** Wearable equipment, such as smartwatch and fitness trackers, provide real-time health data, enable nurses to continuously monitor patients' conditions. These devices help track parameters such as heart rate, oxygen saturation and activity levels, facilitating early detection of complications. For example, in diabetes care, the wearable glucose monitor alerts both patients and nurses about abnormal sugar levels, which allows for timely intervention.

4. **Robotics in nursing** Robots are being used rapidly to help nurses in routine functions, such as drug distribution, raising patients and sterilizing equipment. This progression reduces physical stress and allow nurses to focus more on patient-centered care. Robots like tug and moxi have been deployed in hospitals in hand

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