

From Theory to Real World Practice:

A Case Study on MRCC EdTech's Medical Simulation

Immersive Simulation – Experiential Learning – Medical Mastery

The healthcare industry needs nursing professionals with interdisciplinary skills and expert patient care skills to create the best possible patient outcomes. Nurses need to work efficiently and expertly to navigate clinical complexities in the dynamic hospital environment. Medical universities and nursing institutions prioritize practical learning and competency-based curricula.

Rising Nursing Challenges

Nursing examinations test students not only on their theoretical competencies but also on their hands-on skills in surgical intervention and patient care. In the real world, there is no margin for error. The common challenges that medical and nursing training institutions face are:

- Limited clinical placement opportunities to practice clinical skills
- Lack of safe space for medical students to learn from their mistakes
- No standardized training modules
- Lack of high-risk or rare medical scenarios for practicing critical skills
- Time constraints of traditional clinical rotations
- No assessment and feedback mechanism to reflect on crucial training
- Inadequate interpersonal collaboration and learning
- Insufficient scenarios to work on ethical dilemmas
- No standardized assessment for clinical competency skills
- Compatibility issues with LMS platforms

Role of MRCC EdTech

MRCC EdTech creates custom solutions for universities and training institutions offering nursing education. We inspire strong connections between teachers and students with futuristic learning tools.

Learning

Book-based education is not always suitable in the healthcare industry. The detailed images of internal organs and their workings will enable nursing students to understand anatomy better. The nursing syllabus includes numerous abstract concepts that can be hard to understand and comprehend.

The MRCC EdTech solution creates multiple micro-learning modules that ensure knowledge retention. The 2D/3D images and videos easily explain abstract concepts and allow students to understand them effortlessly.

Training

Practical and real-life clinical training is crucial for student nurses to become proficient in-patient care. The availability of standardized patients and clinical rotations is scarce, and it doesn't allow for personalized training experiences.

MRCC EdTech creates immersive training simulations that mimic real-life scenarios and enable students to practice their clinical skills and receive realistic responses from simulation patients. They can replicate clinical processes in a safe environment and learn from their mistakes without worrying about affecting a real person. It allows students to practice skills as many times as they want at their own pace.

MRCC EdTech simulations also support Oculus devices. The VR, AR, and MR technologies transport nursing students to clinical environments and improve their non-technical skills along with their clinical skills.

Immediate Feedback

In the traditional setting, nursing trainers don't have sufficient time to offer personalized feedback to each student. As a result, it is impossible to support different types of learners as they must follow the pace of the teacher.

MRCC EdTech supports each student in mastering all types of nursing skills by customizing their learning experience with detailed feedback. Student activities during simulation sessions are recorded so that they can be given play-by-play feedback later. The automatic feedback system provides constructive feedback for each step in the simulation, allowing nurses to understand the exact point where the mistake was made.

Assessment

Medical and nursing training institutions are moving away from assessment based on knowledge and simple practical skills to complex clinical activities that involve non-technical skills like information gathering, prioritization, and effective teamwork.

MRCC EdTech automates assessment creation to customize assessments based on prior student performance. Trainers can use AI-powered assessment engines to quickly create formative and summative assessments.

MRCC EdTech Medical Simulations: Bridging Theory and Practice

MRCC EdTech's bespoke medical simulations empower aspiring nursing and medical professionals to navigate complex clinical environments, foster critical reasoning, and expand clinical skills through evidence-based practice. From patient assessment to complicated surgical interventions, future nurses can practice and hone their skills in a controlled and safe environment.

Simulations

Simulation-based training is interactive, responsive, and immersive, allowing nursing and medical students to gain hands-on experience in all clinical procedures. The detailed simulation begins with an introduction to the procedure, a role play, choosing a patient type, an understanding of patient case papers, a step-by-step demo of the process, and a try-me activity. The students can apply the concepts they learned and follow the steps learned during the live demo. At each step, students are notified of whether they have completed the test. Once the student tries the procedure on their own, they can get a detailed assessment of their activities and their clinical responses. Detailed explanations of mistakes at the time of learning will reinforce the steps necessary for medical procedures. Simulations allow students to retake activities multiple times until they master the process.

360° Virtual Tour

A 360° virtual tour captures the operation theater environment to enable nursing and medical students to learn from real-life environments. The virtual clinical environment can be navigated in auto and guided modes. In auto mode, the students can have a 360° experience of the operation theater. In the guided mode, essential questions are tagged to specific parts of the video to enable nursing trainees to understand the concepts and improve exam readiness.

Game-Based Patient Care

Creating numerous practice sessions for nursing and medical students will help them hone their clinical and non-clinical skills. Game-based simulations are useful for developing non-technical skills. Trainees will be interested in completing each level of the game to level up and enjoy game rewards. Such an interactive experience will strengthen nursing training.

2D/3D Graphics and Animation

MRCC EdTech's 2D/3D graphics and animations provide detailed views of complex anatomical structures, surgical procedures, and pathologies. Students can grasp nuanced details with precision. The 3D animations provide an in-depth exploration of diseases and procedures, fostering diagnostic acumen and critical thinking.

AR/VR/MR Immersion

MRCC EdTech expands immersive learning with support for Oculus devices. For simulations, 360° video tours, and 3D animations, institutions can enable a virtual experience using Oculus devices.

MRCC EdTech Synergy:

Sculpting Digital Assets for Success in Healthcare

Institutions and universities can incorporate dynamic e-learning through state-of-the-art simulations, interactive modules, and multimedia-rich graphics and animations. To evolve with the demands of the modern era, healthcare institutions can use MRCC EdTech simulations for:

- 01** Instructional design – to create realistic simulations to practice multiple clinical scenarios with custom learning levels, medical complications, and procedures
- 02** Storyboards – to create the flow of each learning module, including navigation, interaction, and assessment, to visualize the content structure
- 03** Project management – to monitor and track training progress and completion
- 04** Digital asset management – to create detailed anatomical models, videos, animations, interactive diagrams, demo videos, video tours, etc., with easy access and version control
- 05** Metadata management – to seamlessly tag digital assets with multiple parameters like diagnostic codes, patient demographics, treatment options, treatment dates, etc., to retrieve and analyze specific data points



Unlock Educational Efficiency With the MRCC EdTech Training Revolution

Harness the MRCC EdTech medical simulation platform to enable the transformation of nursing and medical training. Empower learners and foster clinical excellence by dissecting complex medical concepts and imparting critical patient care skills. The MRCC EdTech platform is ideal when you need:

CMS/DAM platforms – to centralize content management and digital asset management for existing LMS platforms

Platform upgrades – to personalize learning paths, enhance real-time progress tracking, and include interactive assessments

Workflow automation – to reduce manual data and paperwork, automate the learning environment, integrate with database systems, and simplify the enrollment process

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MRCC EdTech seamlessly integrates AR, VR, and MR technologies to offer a dynamic educational paradigm, transcending traditional boundaries. MRCC EdTech's ability to capture data and metadata during simulations enables institutions to fine-tune their curricula, aligning them with evolving healthcare demands. The data-driven feedback loop is useful in making precise curriculum adjustments, personalizing learning journeys, and increasing student enrollment.

MRCC Group Offices

Boston | Santa Clara | Orange County | Sydney | Mumbai | Chennai | Delhi

✉ sales.edtech@mrccsolutions.com

☎ (781) 273-5050, +91 (22) 66746674

🌐 www.mrccedtech.com