

WHAT ARE SERIOUS GAMING, GAMIFICATION & VIRTUAL REALITY SIMULATION?



To achieve the best patient care and outcomes, healthcare providers continually seek innovative approaches to improve training for both current and future healthcare workers. The COVID-19 pandemic has pushed healthcare to turn to digital alternatives to in-person immersive training, including serious gaming, gamification, and virtual reality (VR) simulation. What are these new tools in the education and training arsenal that can enhance learning to improve patient care and outcomes?



SERIOUS GAMING

Games designed to facilitate learning through playing. Serious games must have a clear educational purpose and train more than entertain. It enhances knowledge acquisition and skill development through specific challenges.



GAMIFICATION

Applies typical elements of game playing (point scoring, competition with others, rules of play, etc.) to existing learning processes



VIRTUAL REALITY

Uses VR headsets to transport and immerse users into a virtual environment that feels real. It engages all four brain systems (cognitive, behavioral, emotional, and experiential) in synchrony. Users gain comfortability with situations that are impossible or incredibly difficult to replicate in the real world.

KEY ELEMENTS



Story to guide users



Immediate and individualized feedback



Goal of learning



Simulation

BENEFITS

- ➔ Increased engagement & motivation
- ➔ Facilitates profound reflection
- ➔ Provides real and safe practice
- ➔ Improves memorization & retention
- ➔ Flexible and portable
- ➔ Limitless training in limitless scenarios
- ➔ Cost effective

IMPACT

90%



of employees are more productive when they use gamification

69%



of workers are more likely to stay at a company for 3+ years when tasks are gamified

95%



of employees enjoy using gamified systems

72%



of people believe gamification inspires them to work harder

Source: Medium.org

RESULTS WHEN USED IN CLINICAL EDUCATION



Can yield fewer diagnostic errors¹



Effective for improving knowledge & skills²



Boosts confidence to perform tasks on-the-job³



Reduces stress and anxiety in learners⁴

1. <https://www.healthimaging.com/topics/practice-management/gamification-education-reduces-errors-boosts-confidence>

2. <https://www.jmir.org/2019/3/e12994/>

3. <https://www.healthimaging.com/topics/advanced-visualization/radiography-students-3d-virtual-reality-training>

4. <https://www.forbes.com/sites/charlestowersclark/2021/02/19/medicine-mindfulness-how-vr-training-is-helping-healthcare-through-the-pandemic/?sh=3ddb54bf58b9>