

Project Title

Transforming Learning through Game-based for TeamSTEPPS: THE NEW NORMAL

Project Lead and Members

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Organisation(s) Involved

Sengkang General Hospital

Aims

To train staff in TeamSTEPPS tools through innovative game based learning to deliver mass training in an effective and efficient manner for safer patient care.

Background

See poster appended / below

Methods

See poster appended / below

Results

See poster appended / below

Conclusion

See poster appended / below

Additional Information

Singapore Healthcare Management (SHM) Conference 2021 – 3rd Prize (Human Resource Category)

Project Category

Workforce Transformation

Keywords

Workforce Transformation, Healthcare Training & Education, Gamification, Virtual Reality, Self-Directed Learning, Flipped Classroom, Safe Care, Cost Effectiveness, Time Saving, Human Resource, Sengkang General Hospital, Singapore Health Services, COVID-19, Remote Workforce, TeamSTEPPS, Mass Training, Game-based Learning, Agency for Healthcare Research and Quality

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Sengkang General Hospital
SingHealth

Human Resource

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INTRODUCTION

The COVID-19 pandemic has transformed workplace learning and paved the way to leverage on cutting edge learning technologies, like game-based learning to engage remote workforce and create a sustainable ecosystem for learners. Towards this intent, SKH designed and implemented a game-based learning for TeamSTEPPS to foster a culture of quality and patient safety.



TeamSTEPPS Framework
Team Strategies & Tools to Enhance Performance & Patient Safety

RESULTS

a) Learning Efficacy

- Increase Knowledge & Skills:** Participants indicated that they have good understanding of TeamSTEPPS
- Transfer of Learning:** Participants indicated that they have high confidence in applying learning back to work.
- Learner Satisfaction:** Participants indicated that they would recommend the game-based learning to their colleagues

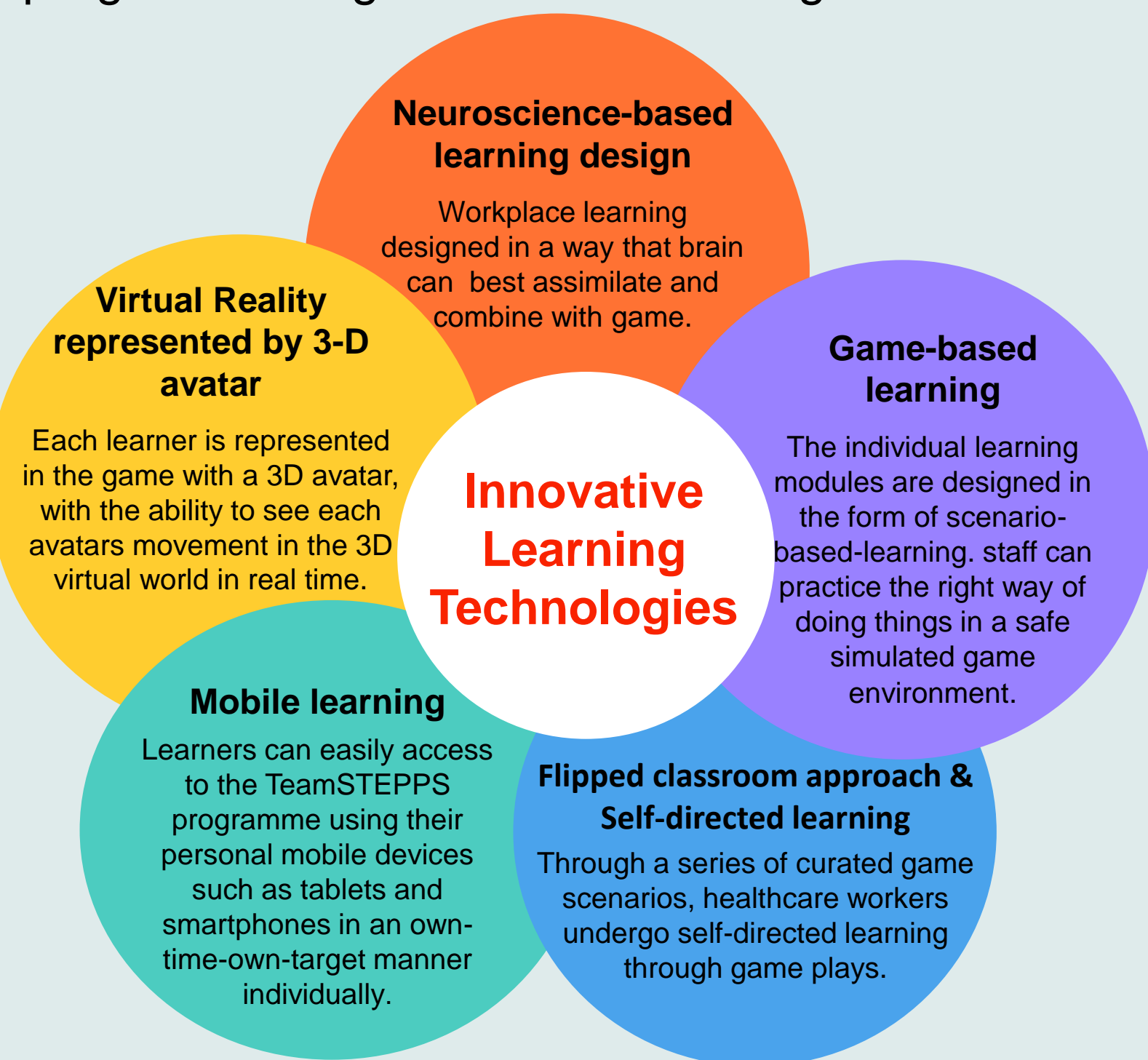


OBJECTIVE

To train staff in TeamSTEPPS tools through innovative game-based learning to deliver mass training in an effective and efficient manner for safer patient care.

METHODOLOGY

SKH leverages on various learning technologies to transform classroom-driven TeamSTEPPS programme to game-based learning.



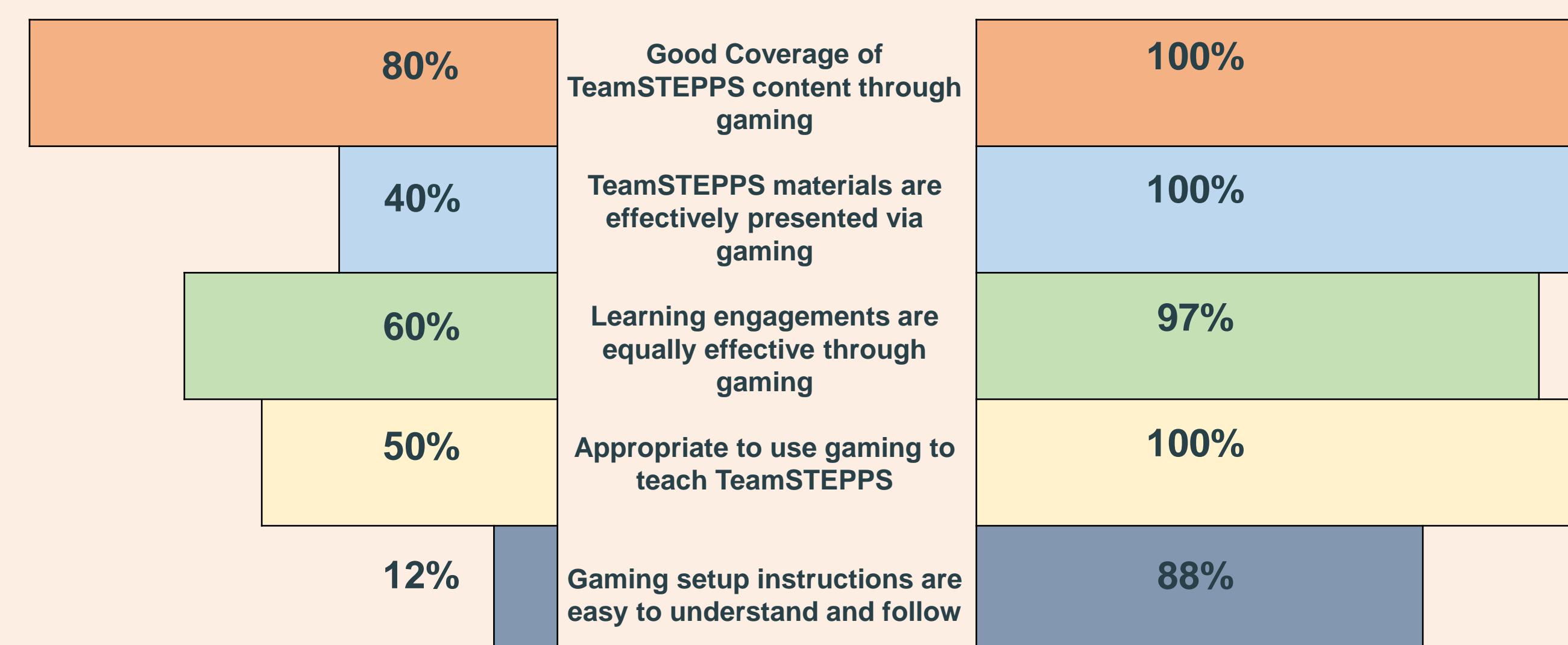
Benefits of Game-Based Learning



Classroom Learning

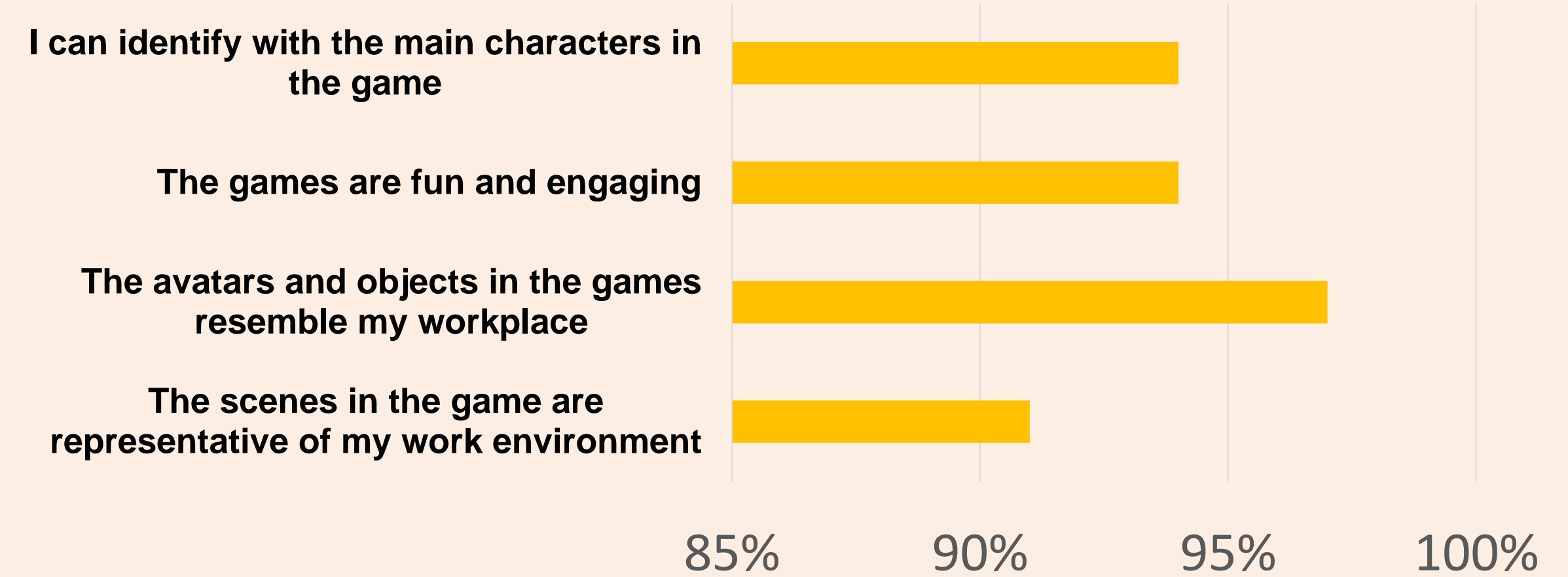
VS

Game-based Learning



b) Positive Gaming Experience

More than 90% of the participants indicated moderate or high on their gaming experience.



c) Positive Financial Outcome

Online learning offers flexibility which make it easier for our staff to attend training based on their availabilities.

- Time and Manpower Cost Savings for both Trainer and Staff.

90% time savings on training for Staff

57% manpower cost savings for Staff

90% time savings for Trainer

95% manpower cost savings for Trainer

Case Study – Situation Monitoring

The Gamelet will provide a virtual environment of a ward setup. Gameplay starts with the player controlling a Senior Staff Nurse (SSN), involving the process overseeing several staff nurses.

Avatar	Player Character	Character	Age
Melvin	Senior Staff Nurse	Mid 30s	
Bianca	Nurse Colleague 1	Early 20s	
Katherine	Nurse Colleague 2	Mid 20s	
Tay Goon Poh	Patient	60s	

- Game Introduction -** Mr. Tay has a history of hypertension and diabetes mellitus. He was involved in a road traffic accident and sustained fractured pelvis. He had just completed ORIF pelvis and was sent to your ward. The Ortho team reviewed Mr. Tay and initiated him ordered for multiple antibiotics, fluid challenge and 2 pints of blood transfusions.
- Porter arrived with blood products and handed to Bianca who left it at the nurses' substation.
Minigame Question: Which item needs attention? Various objects are strewn across the substation. The player must select the blood box to proceed.
- Melvin looks for Bianca and observes that she is overwhelmed with the management of her patients.
Melvin uses the STEPPS tool and determines a huddle is required.
- Melvin pulls Bianca aside and goes through Bianca's duties with her.
Bianca's using the CUS rule to tell us she needs help!
- What? Alright... I don't see how it'll work... (Breathes in) 1...2...3...4...5... Oh, I actually feel much better now!
Melvin calms her down and suggests "Mindful Breathing Exercise".
- Melvin recognises that Bianca is overloaded and tells her to focus on the blood transfusion first while he delegates some of the other work to other nurses.
I'll be happy to help.

Concepts	Tools and Techniques
TeamSTEPPS	<ul style="list-style-type: none"> I am Concerned I am Uncomfortable This is a Safety Issue (CUS) Two-Challenge Rule Situation Monitoring
SKH's Mindfulness Values	<ul style="list-style-type: none"> Presence Patience Kindness
SKH Mindfulness Practise	<ul style="list-style-type: none"> Mindful Breathing Exercise



CONCLUSION

The adoption of innovative learning technologies through game-based learning has been a strategic differentiator in enabling staff to learn, unlearn, and relearn in this new normal.



* TeamSTEPPS™ programme is developed by Agency for Healthcare Research and Quality (AHRQ) in US