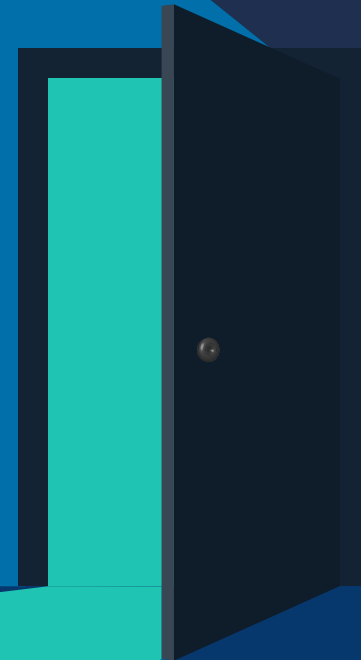


Integrating Digital Escape Room Learning Experiences for Medical Students

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Today's Presenters

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Session Objectives



Escape Rooms & Gamification

- Define what an “escape room” is and how it can be used in educational settings.
- Review gamification and its benefits for educational content delivery



Educational Escape Rooms (EERS) Example

- View an educational escape room (EER) within a medical education setting



If You Build It, They Will Come

- Discuss building and implementing escape-room style activities at your institution
- Review sample toolkit



**What comes to
mind when you
hear the term
“escape room”?**



So...what exactly is an escape room?

“Live-action, team-based games where players discover clues, solve puzzles, and accomplish tasks.”



Search



Think



Solve



Escape



Learning Theories



Experiential Learning Theory

Creates an experience to serve as a basis for reflection and conceptualization



Reinforcement Learning Theory

Creates rewards and consequences to motivate use and learning

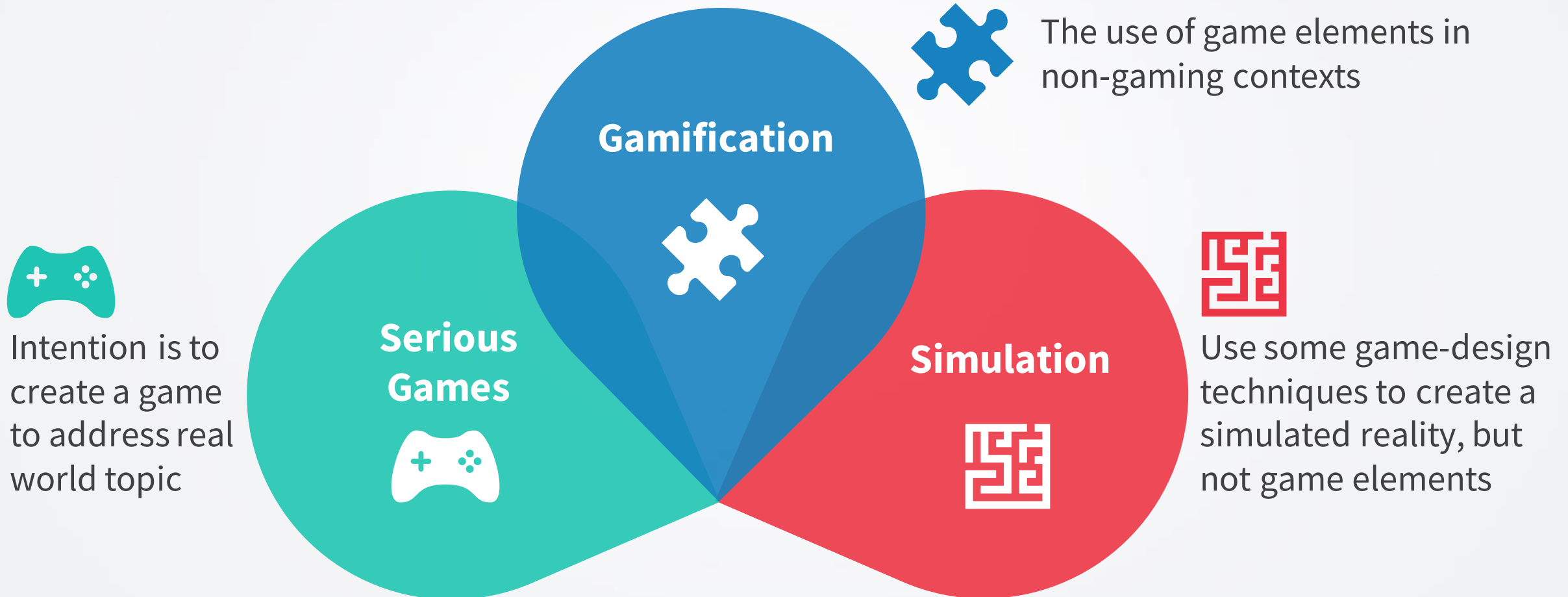


Social Comparison Learning Theory

Forces self-evaluation of knowledge gaps, thereby motivating learning

3 Forms of Game-Based Learning

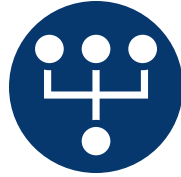
Van Gallen et al., 2021, Gamification of health professions education: a systematic review



Gaming and Learning

Engagement

- Immersive Storytelling
- Competition
- Branching Pathways



Practice

- Low-stakes Opportunities
- Repeatability
- Motivation



Assessment

- Knowledge Checks
- Content Mastery
- Objectives



Active Learning

- Critical Thinking
- Active Recall
- Application



Collaboration

- Teamwork
- Communication
- Human Interaction



Feedback

- Real-time Results
- Scaffolding
- Challenge





Patient Safety

Why Patient Safety

Medical errors are a leading cause of injury in the United States.



Professionalism

Develop patient safety knowledge and its relationship to being a competent medical professional.

Continuous Improvement

Instill a commitment to continuous improvement of quality of care, including reducing medical error and increasing safety.

Confidence

Build effective habits for entering GME, including developing the confidence to contribute to care by identifying drivers of patient harm.



Scan QR code to access The Physician Charter, ABIM Foundation

Other Driving Factors



Curriculum

Limited opportunities in curriculum for patient safety



Remote

Rapid shift to remote instruction during the pandemic



Active Learning

Increase in active learning and reduced lecture-based learning



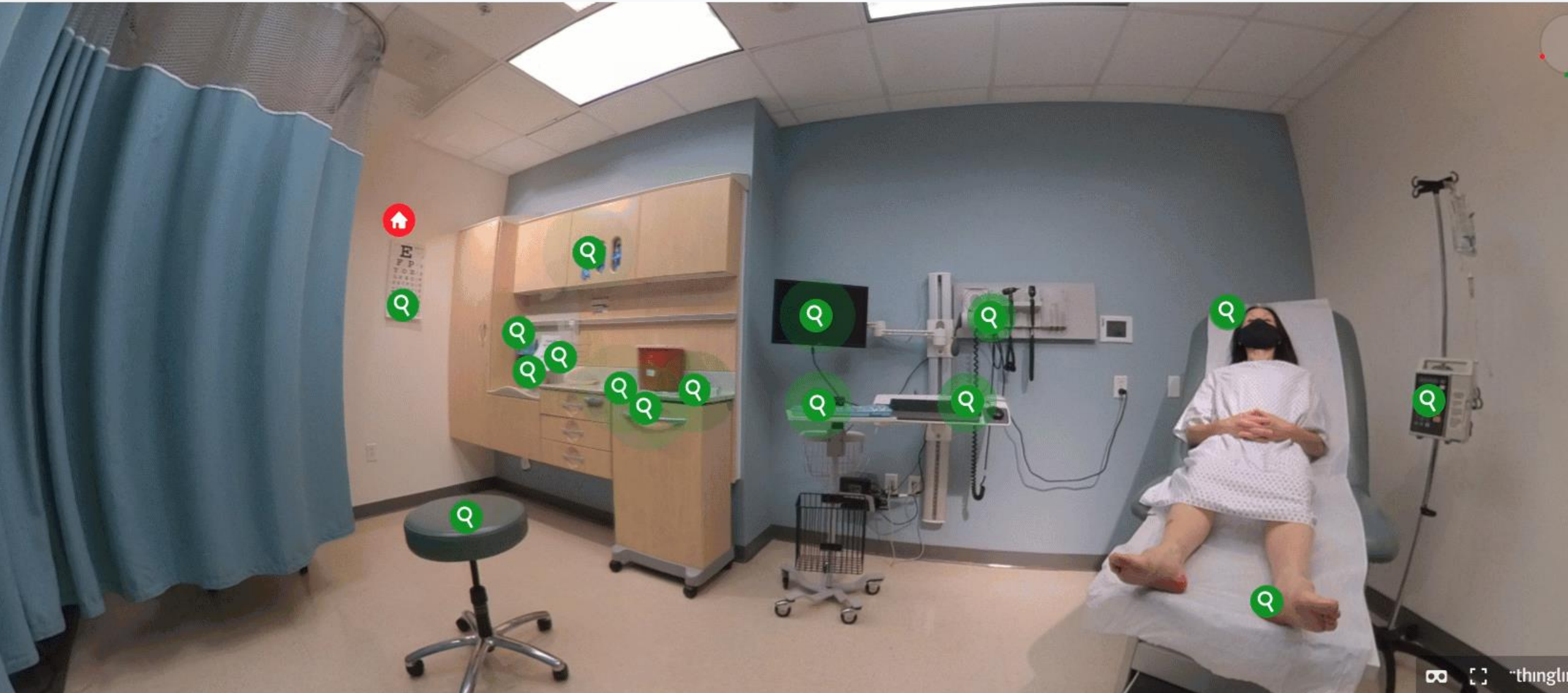
Gamification

Help manage cognitive load and increase engagement

Sources: Kutaimy, et al. 2018; Spicer, et al. 2021; Rose, 2020; Mayer and Chandler, 2001; Lewis, 2016; Brom et al., 2019.

Escape Room

ThingLink with 360 image of a simulation room and standardized patient



Results

Average Overall Score

Pre-quiz: 73%

Post-quiz: **82%**



10 Pre/Post Questions

Handwashing frequency & duration, fall prevention, medication reconciliation, common medical errors, alarm fatigue, pressure sore stage 1, medical vial labeling, patient communication



99

of Students

Class of 2023



Significant Improvement

Handwashing, pressure sore treatment and medication vial labeling questions



Student Feedback

“Fun, interactive, and a novel Zoom experience.”
“Well-organized and well-informed.”



What did it cost?

Low to medium cost tools.

Free Google

Google Forms, Google Slides

Free H5P

Free through Lumi

\$35 ThingLink Optional

Annual Teacher Premium

\$60 Genial.ly Optional

Annual EDU license

Free Multimedia and Design

All in-house; no external hiring.

Var. LMS Optional

Free: Google, Moodle. We used Canvas.

\$0-500 360 Camera Optional

We **borrowed** Insta 360 for \$0, then purchased a Ricoh Theta for \$300.



Takeaways

What did we learn?

Takeaways

It Takes a Village
Multidisciplinary
team with expertise

Alignment is Critical
Clear goals and
learning objectives

Test and Test Again

- Builds confidence
- Nothing is perfect

Time Constraints

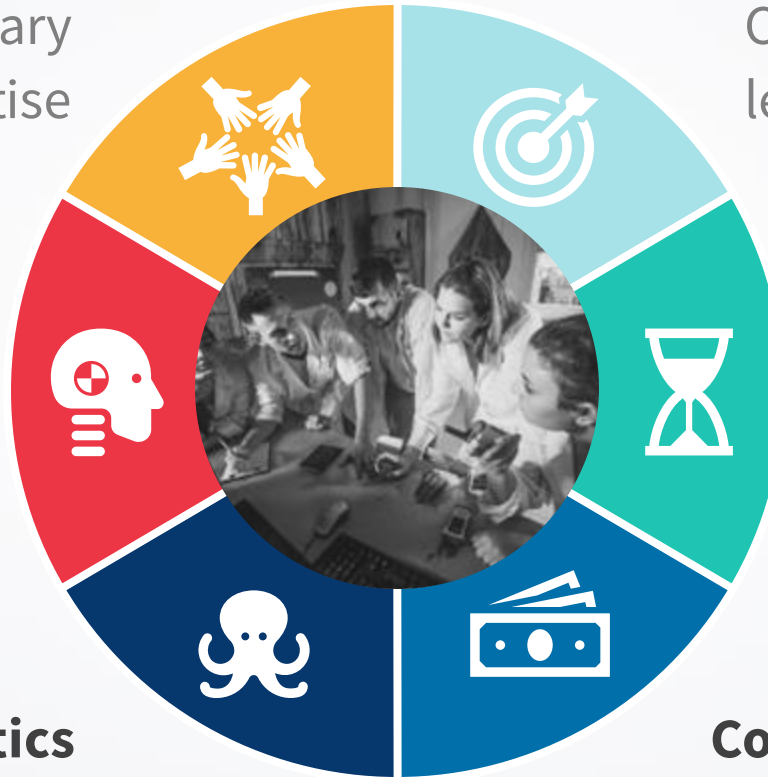
- Scripting/story
- Curating Resources
- Custom design and development

Logistics

- Individual vs. multiplayer
- F2F vs. virtual experience

Cost Constraints

- Technology
- Personnel





Q&A

What questions do
you have?



References & Resources

Scan the QR code above or visit

<https://shorturl.at/chzHP>

Let's Connect!



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