

Diabetes Escape Room: Perceived Knowledge and Suggestions for Future Improvement

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Background

A group of NDSU faculty members designed and implemented an educational team-based game, *Diabetes Escape Room*, in a pharmacy skills laboratory course (P3 students)¹.

Teams consisted of 5 students;

Each team had 75 minutes to complete 4 complex puzzles focused on diabetes pharmacotherapy.

Objectives

The objective of this poster is to present the results of student team interviews to:

- Assess the knowledge gained from immersing within gaming activity;
- Examine student's feedback for potential game improvements;
- Identify supporting information for future implementation of the game.

Methods

Upon completion of Diabetes Escape Room gaming activity, 6 student teams were invited to participate in an exit interview to describe their experience; An interview protocol containing a list of questions helped maintained consistency across all interviews.

Interviews were recorded and videos were transcribed and uploaded into Nvivo® software for qualitative analysis. The data was coded "on-the-fly"² from the participants' comments during the interviews.

After an initial sorting, identified codes were analyzed by the researchers and categorized into common themes that showed potential areas for game improvement.

Results

The results of qualitative analysis illustrated how knowledge was applied and learned and suggested improvements for the gaming activity.

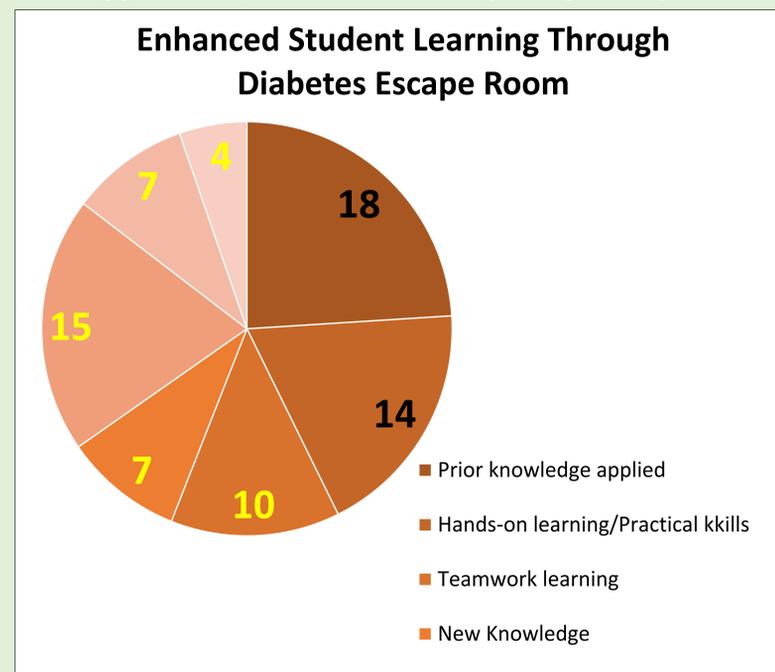


Figure 1. Subcategories of Improved Student Learning Through the Diabetes Escape Room

We found 75 codes related to student perceived learning through the escape room (Figure 1).

Most learning was perceived to take place through:

- Application of prior knowledge;
- Building of practical skills through hands on learning.

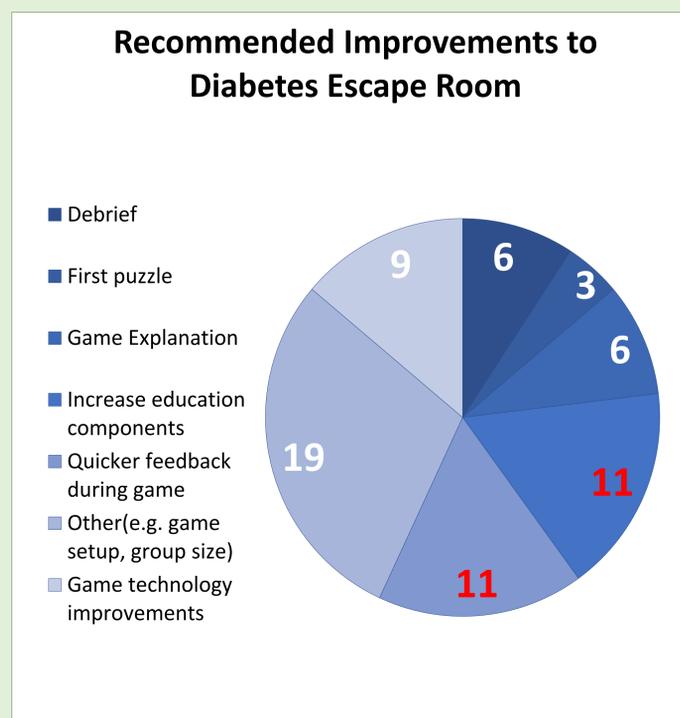


Figure 2. Subcategories of Recommended Improvements to the Diabetes Escape Room

A number of 65 codes related to suggested improvements for future implementation of the gaming activity (Figure 2).

On-time feedback from game facilitators during the gaming activity and increasing the educational components were the most beneficial singled out improvements suggested by participants.

Implications

Using this information, we have determined how to improve the educational effectiveness of the gaming activity as well as the most beneficial improvements that will enhance learning.

Potential gaming improvements as stated by the participants:

- "... it was a fun game but we did not attack this from the standpoint of a pharmacist, we had five people in a room utilizing different geared knowledge sets when it came to solving these problems but there was not a whole lot of pharmaceutical based information that we were going off of to get from point A to point B"
- "there might be some speakers saying go on, move to the next step because we played multiple puzzles and then we were not sure if we were completely finished or if we had to wait for somebody to say yes or no"
- "So, cutting everybody off at ten minutes and giving us the big, broad topics and a teacher then showing us this is the actual, correct way [to do the different diabetes related activities]... So, having a debriefing of the main skills to put you on the right path"
- "Maybe giving some pre-knowledge about it [the escape room]. Like, one of you is going to be doing a foot exam or just being prepared."

Implementation of these suggestions for improvement, will allow for increased success of this educational gaming activity both at NDSU and at other interested schools of pharmacy.

References

- Eukel H, Frenzel J, Cernusca, D. Educational Gaming for Pharmacy Students – Design and Evaluation of a Diabetes-themed Escape Room. *Am J Pharm Educ.* 2017; 81 (7): Article 6265
- Richards, L. *Handling Qualitative Data. A Practical Guide.* Thousand Oaks: Sage Publications; c2005. 207 p.