Game Elements in Hospital Clinical Practice:

Active Learning at the University Hospital of Copenhagen

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Introduction

The education in Biomedical Laboratory Science is a practice-based profession where theory and practice are closely connected. As biomedical laboratory instructors we will share about our “Spilledage” (“Days with games”), which were the active learning days we conducted from summer 2014 to winter 2017.

Objective

The intent of this project was to have students learn through the use of game elements and endorse reflective learning. Furthermore, the aim was to encourage students to use higher order thinking (analysis, synthesis and reflection) relevant to their clinical practice.

Materials and method

The idea was to create an active learning environment where the students analyze, share and produce knowledge through peer and instructor feedback. Through the process of playing games, the learning activity included both the students creating the content of the games (i.e. the questions) individually and collaboratively.

The role of the instructor was firstly to present the students with the game frameworks. Furthermore, the instructor was to act as a facilitator during the preparation and execution of the games. To investigate the effect of the “Spilledage” we subsequently conducted two focus group interviews: one with three students and another with two instructors.

We processed and analyzed the interview data (fig.1) in relation to a set of general themes: learning goals, motivation, feedback and social interaction.

Fig. 1. Statements by students and instructors.

Students

”Whenever we moved the difficulty increased as well”

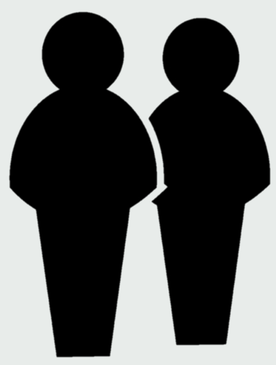
“Games are exiting and being a competitive person, I think it is fun that you can see visually that you’re lacking behind, and you need to dig a bit deeper [in ones mind]”

”It was great that you find the answer by talking with each other”

“Games are […] something you play with your family […] so you associate it with something relaxing and fun”

Instructors

“[The students] are very concerned with creating questions that are very precise and difficult”



“[The students] asked for more assignments”

“[The students] got more aware of their strengths and weaknesses”

“[The students] are not afraid of being ridiculed […] they are very honest, and if they are not able to answer, maybe a co-player can”

Results

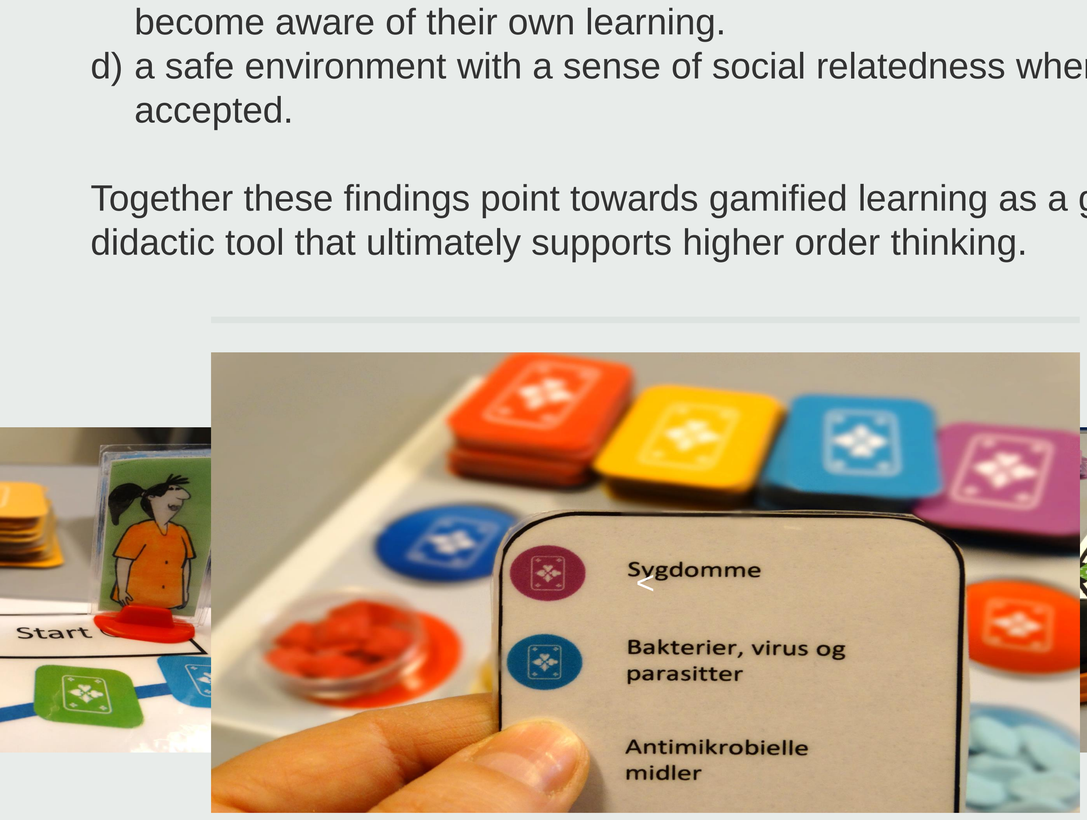
Based on our analysis we found that gamified learning provides:

a) a goal driven environment where difficulty increases as students are making process.
b) a competitive and active learning environment that motivates the students to participate and encourages them to learn.
c) a reflective learning environment where students, through feedback, become aware of their own learning.
d) a safe environment with a sense of social relatedness where failure is accepted.

Together these findings point towards gamified learning as a good didactic tool that ultimately supports higher order thinking.

Conclusion

Based on our analysis we conclude that using games in teaching can have a highly motivating effect on students. It creates a safe space and fun environment.
However, successfully implemented learning games depend on more than just creating a fun competitive environment.
The instructor needs to consider the didactic goals and strategies in order to embed higher order thinking and make students self-reflect on their learning process.



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