Let the Games Begin: Evaluation of Gamification for Health Informatics Students

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Abstract

The challenge for Health educators is to integrate technology efficiently to assure new information is relayed, received and applied by health informatics students:

- Gamification may be the answer by creating a personalized and cooperative learning environment to facilitate enculturation into the workplace.
- This study aims to evaluate the literature on gamification for adult and health informatics education.
- The evaluative framework of this study is Knowles Andragogy (See Table 1).

Introduction

Problem Traditional health information systems programs fail to adequately prepare students to enter today's healthcare environment (Campbell, et al, 2012). **Subject:** Gamification increases engagement by including game-like elements within a game-based application in non-game contexts (Karp, 2012). **Main Point** I evaluated gamification as an effectual, technological tool for online health informatics education. I also evaluated the role technical communication plays in the paradigm of game development technologies (Figure 1).

Figure 1: Andragogy

Methods

The following methods were used to complete the research:

- 3 Databases total of 20 articles were analyzed
- 3 etextbooks were used to develop the framework
- The keywords used were gamification, education, health informatics, adult learner, and curriculum.

Knowles Theory of Andragogy

CHARACTERISTICS OF ADULT LEARNERS

1. Need to Know: Reasons for learning something
2. Self-Learning: Moves from dependency to self-directedness
3. Adult Learning Experience: Draws on previous experiences
4. Ready-to-Learn: Assumes new social or life roles
5. Problem-Centered: Wants to apply new learning immediately
6. Motivation: Learns by internal, rather than external factors

Table 1: Knowles, M. (2015) Adult Learner

Gamification

Figure 2 shows gamification is a multidisciplinary concept spanning a range of theoretical and technological domains driven by an array of practical motivations (Dichev and Dicheva, 2017).
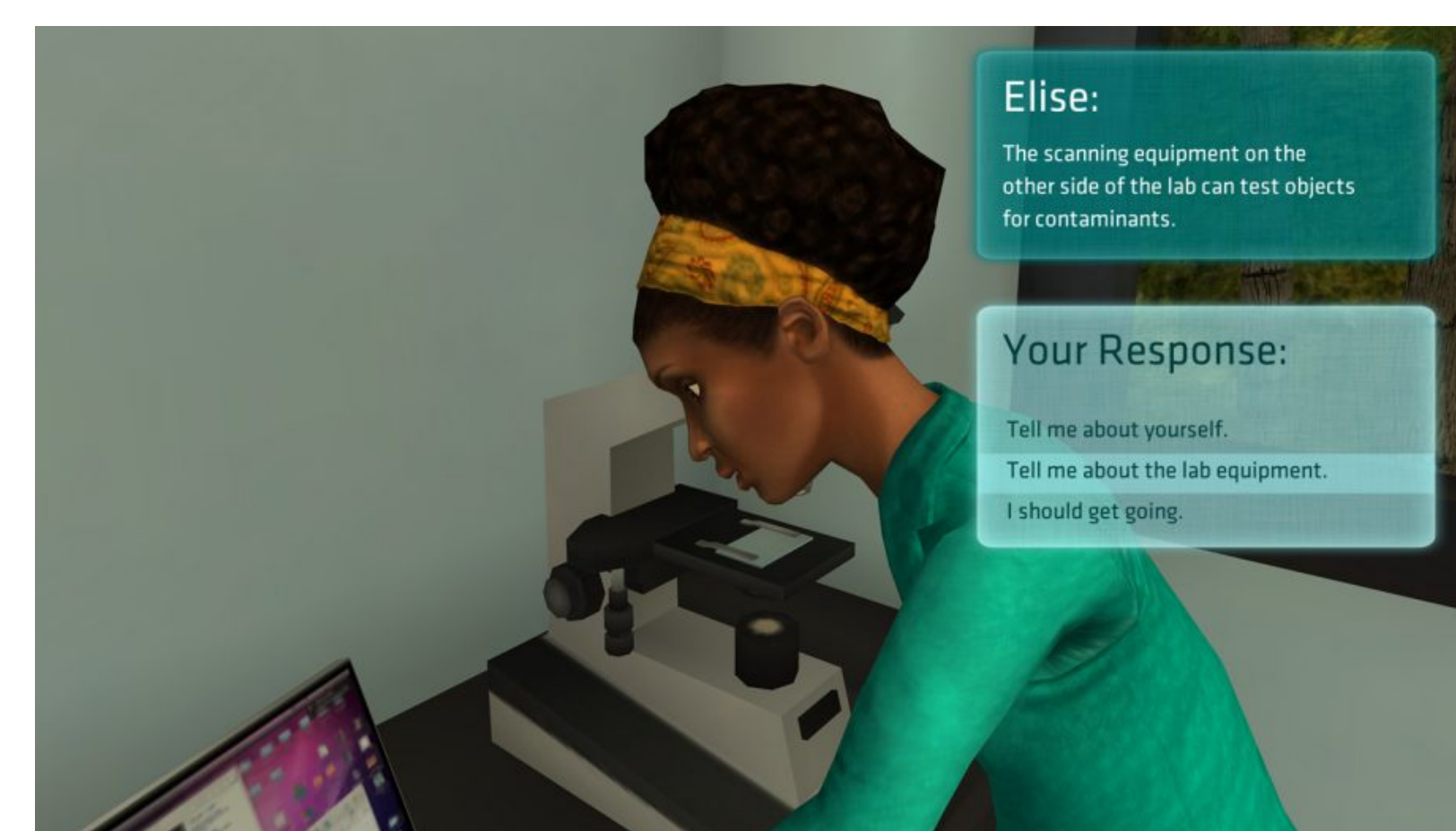

Figure 2: Game seen above is Health Quest

Technical Communications

Knapp (2012) stated, "better learning outcomes for instructional games may be the result of including technical communicators in the game development process." Cargile Cook also reasoned, "today, technical communicators should be multiliterate, possessing a variety of literacies that encompass the many ways people use language to produce information, solve problems, and learn" (Moeller, 2014).

Results

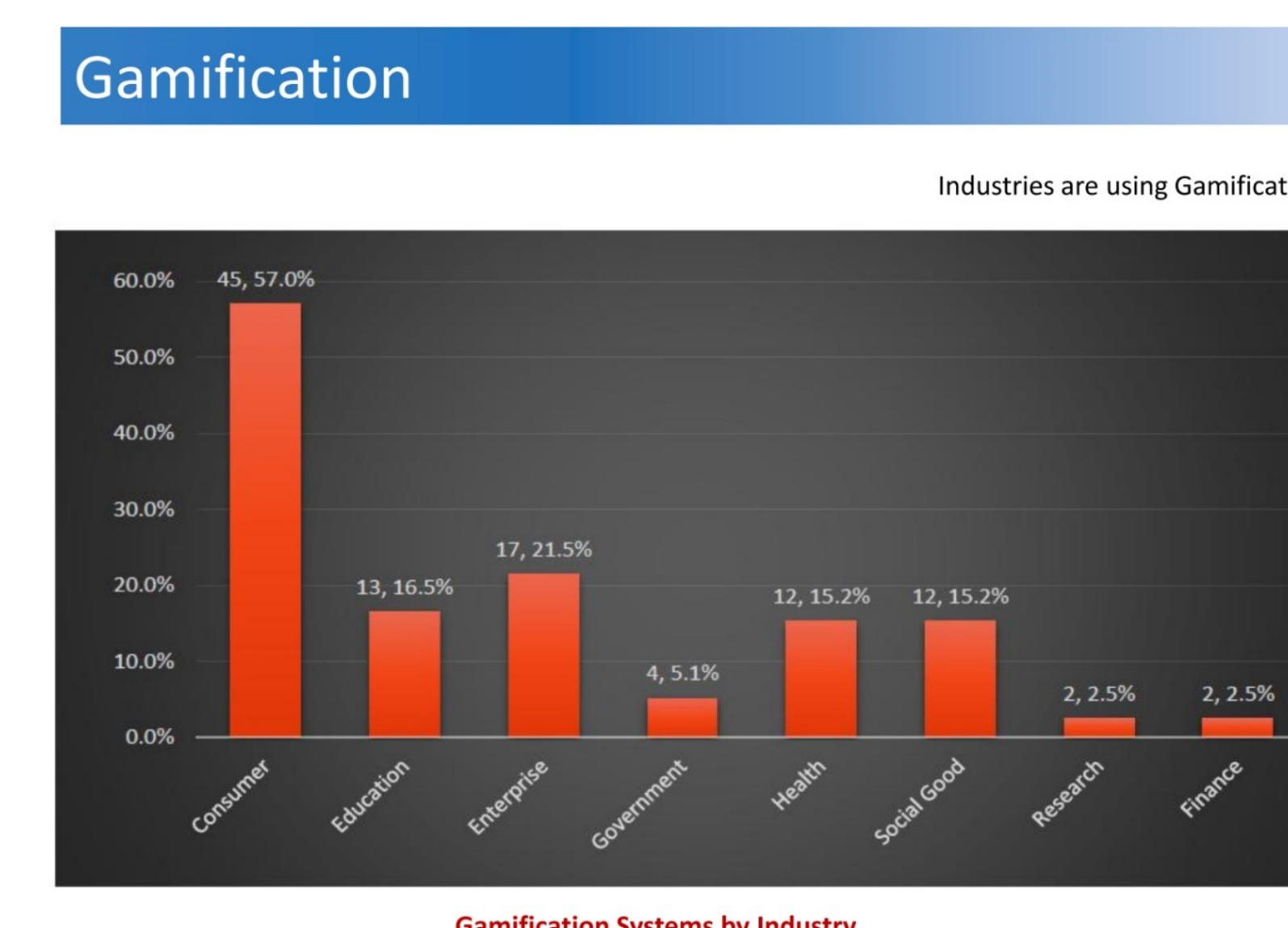I propose designing a novel HIM/T program with gamification activities that support both andragogy and blended learning theories.

Figure 3: Gamification Application by Industry

Conclusion

Gamification holds promise to engage and equip health informatics students with the knowledge and skills required to be responsible and responsive health professionals. *Further research is required to determine the use of gamification activities for health informatics education.*

Implications and Limitations

- Studies show gamification may provide learning environments to improve critical problem-centered and decision-making skills.
- One major limitation revealed was the lack of available health informatics games online to review (Figure 3).

References

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Gaming to inspire future generations of health scientists. December 2017.

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