Integrating Technology for Collaborative Learning and Knowledge Sharing: Its Implications for Undergraduate Education*

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Introduction

- While the impact of technology on the academic achievement shows mixed results, numerous studies highlight the benefits of the use of technology on class engagement (Piirainen-Marsh & Tainio, 2009), interactional skill (Backlund & Hendrix, 2009), motivation (Yang, 2012).

Introduction

- Games, when adopted properly, brought about positive impacts such as strategic thinking, technical language, and problem solving skills (Gee, 2003; Gros, 2007; Shaffer, 2006; Squire, 2005) and student engagement (Connolly et al., 2012; Perrotta et al., 2013).

Objectives

- to explore students' perception of the game-making for knowledge sharing
  - In particular we would like to investigate how our research participants make sense of their game-making activities and how they perceive the potential of the group-based game-making for knowledge sharing.

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Methods

RD
- Qualitative

DC
- Interviews
- Observation

DA
- Game workshop
- Observation
- Interviews

DP
- Triangulation
- Coding
- Themes

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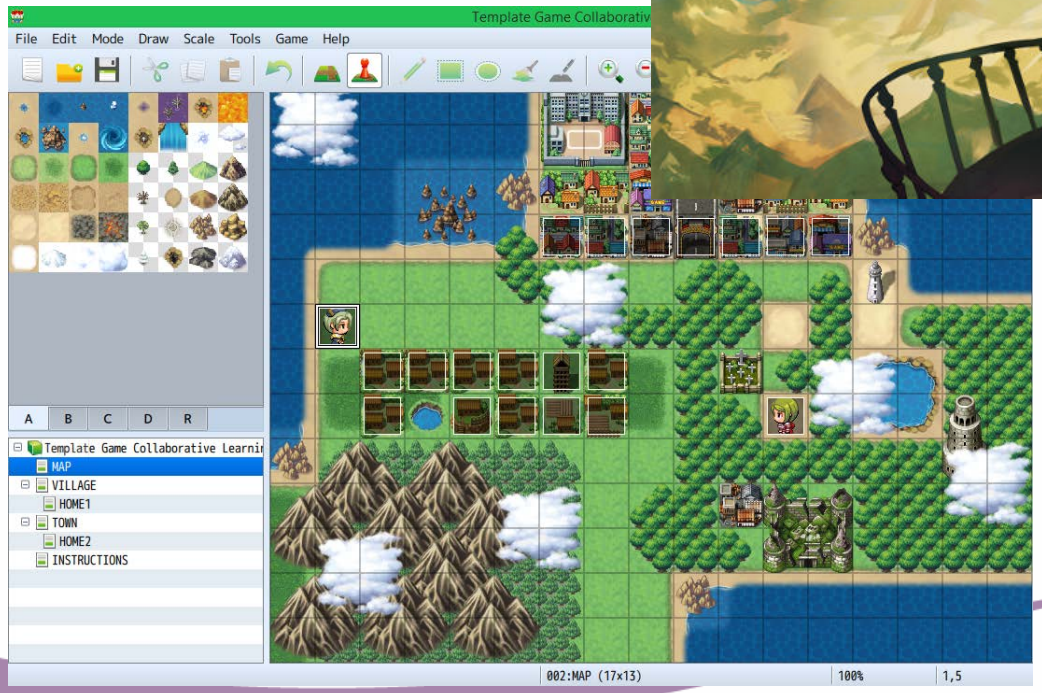
Game Software and Template



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Modifying the Game Template

The workshop

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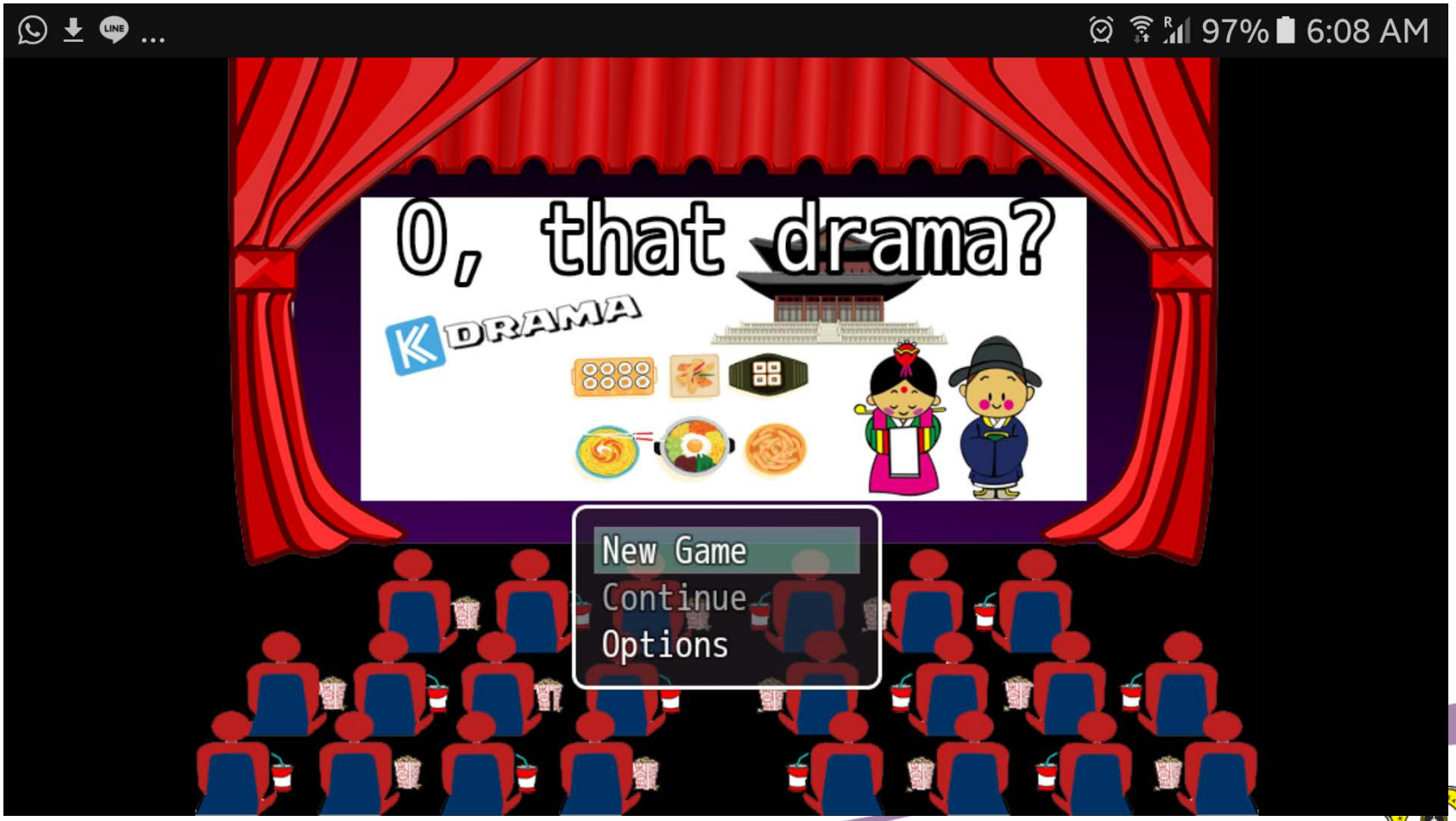
The Game Result



The game when played on smartphones

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The Game Result

The game when played on smartphones

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The Game Result

The game when played on smartphones

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Results

Overarching themes

- Games can be a powerful tool for knowledge sharing
- Group dynamic is key in creating the game
- There should be a balance between game modification and knowledge sharing

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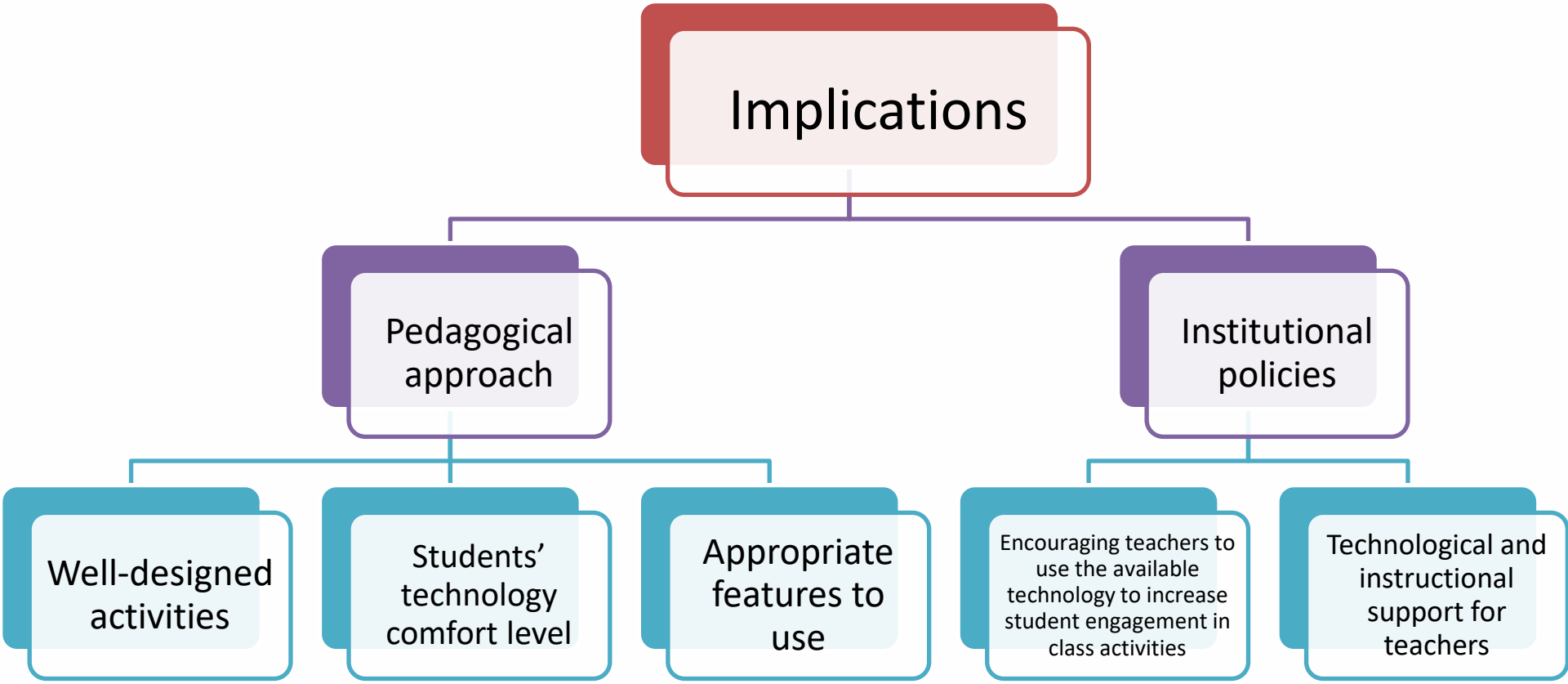

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Limitation

- Students' tight schedule
- Lack of game trainers to supervise
- The game only allows multiple choice answers
- The game should be installed in students' computer (not cloud-based)

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What’s next

- Planning longer workshops (several sessions)
- Designing storyboard samples
- Recruiting participants from different departments
- Recruiting more trainers
- Creating cloud storage where students can work in different locations

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