

Use of a game-based app as a learning tool for students with mathematics learning disabilities to increase fraction knowledge/skill

SEARCH

Enter search terms:

Search

in this series



[Advanced Search](#)

[Email Notifications and RSS](#)

BROWSE BY

[All Collections](#)

[Author](#)

[USF Faculty Publications](#)

[Open Access Journals](#)

[Conferences and Events](#)

[Theses and Dissertations](#)

[Textbooks Collection](#)

[Projects Collection](#)

USEFUL LINKS

[USF Graduate Home](#)

[My Account](#)

[Contact Us](#)

[Policies](#)

[Rights Information](#)

[SelectedWorks](#)

[Submit Research](#)

GRADUATE THESES AND DISSERTATIONS

Use of a Game-Based App as a Learning Tool for Students with Mathematics Learning Disabilities to Increase Fraction Knowledge/Skill

[Download](#)

INCLUDED IN

[Instructional Media Design Commons](#), [Science and Mathematics Education Commons](#), [Special Education and Teaching Commons](#)

SHARE



Orhan Simsek, *University of South Florida*

Graduation Year

2016

Document Type

Thesis

Degree

Ph.D.

Degree Name

Doctor of Philosophy (Ph.D.)

Degree Granting Department

Special Education

Major Professor

David Allsopp, Ph.D.

Committee Member

David Hoppey, Ph.D.

Committee Member

Elizabeth Doone, Ph.D.

Committee Member

Sanghoon Park, Ph.D.

Keywords

App, Math, Fraction, and Mathematics Learning Disabilities

Abstract

The aim of this study was to investigate the effectiveness of a game-based app (*Motion Math: Fraction*) to help students with Mathematics Learning Disabilities (MLD) to gain fraction skills including comparison, estimation, and word problem solving in an after school program. The researcher used multiple baseline design by extending with follow-up phase to determine whether students retained the knowledge they learned while engaging with the app. Even though six students participated to the study, the researcher withdrew two of them and analyzed data came from four students. The result o the study showed that all of the students improved their fractions skills after engaging with *Motion Math: Fraction* and maintained the knowledge after no longer playing. The researcher presented recommendations for further studies, for implementation into classroom, and recommend for app developers to increase app efficiency for students who have different learning profiles, and needs variety learning materials while learning the content matters.

Scholar Commons Citation

Simsek, Orhan, "Use of a Game-Based App as a Learning Tool for Students with Mathematics Learning Disabilities to Increase Fraction Knowledge/Skill" (2016). *Graduate Theses and Dissertations*.

<https://scholarcommons.usf.edu/etd/6390>

Students can use games to learn money management and financial decision-making. Brian Page. Using Math Apps to Increase Understanding. These 10 free or low-cost apps turn learning math into a game. Monica Burns. A game-based learning expert looks at why teachers should try using games, and shares a new book—available for free—that will help them identify worthwhile games for their students. Matthew Farber. Ideas for Using Minecraft in the Classroom. Minecraft is no longer a new tool in the field of game-based learning. Gaming as a Tool for Narrative Writing. Teachers are leveraging the power of gaming to turn even reluctant student writers into enthusiastic storytellers. Suzie Boss. Game-Based Learning: Resource Roundup. Games support academic and social skills in students with disabilities. When your students know how to play a game, they can play it independently. We also know that students have difficulty generalizing skills, so games that use math or reading skills in a game will motivate children to use those skills across more social settings. Social Skill Training and Practice: Many children with disabilities, especially developmental disabilities such as autism spectrum disorders, have difficulty with social interactions. You can build a board game based on any number of different games: Parchesi, Sorry, Monopoly. The simplest games are simple games that start at one place and end at the finish line. Digital Game-based Learning (DGBL) refers to the development and use of computer games for educational purposes (Prensky 2001). A DGBL activity engages students in the process of problem solving or knowledge acquisition when facing the challenges presented by the game (Huang et al. 2010 b, 2013). On the other hand, teachers can provide instructional materials and learning sheets, interact with students, and assign homework via the teacher interface. The unit of “Line symmetry figures” in the elementary mathematics course was designed for the game-based learning model. Classroom education doesn’t have to be mind-numbing! Use game-based learning in the classroom to help engage students in the learning process. Improved retention of material, increased student engagement, and an overall enjoyable learning environment. Let’s take a look at how to successfully use gamification in the classroom. What are the advantages of using games in the classroom? 1. Improved recall and retention. Attitude plays an important role in how well students are able to recall the material they learn.