

Is the Virtual Grass Greener? Video Game Simulation Use as a Teaching Tool

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YOUR ADVENTURE

NACTA 2018 • Iowa State University • Ames, IA • June 12-15, 2018



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Introduction and Objective

- ▶ Technology has become an integral part of our lives
 - ▶ Instructors must find new, innovative ways to hold students' attention
 - ▶ Technology-based assignments and projects are growing in popularity
- ▶ Objective
 - ▶ Utilize video game "Farming Simulator" to assist with instruction of undergraduate students enrolled in farm and ranch management courses at TTU and UTM

Conceptual Framework

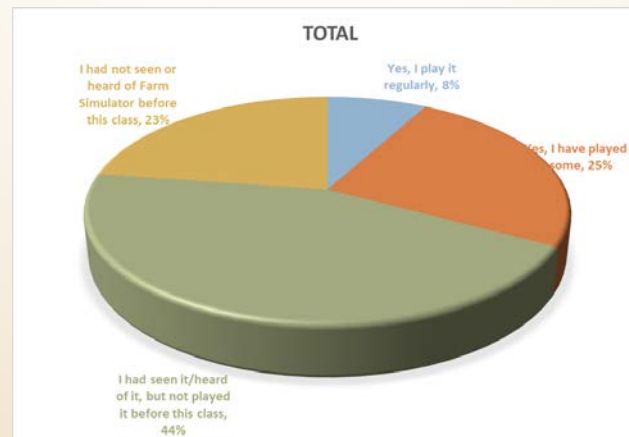
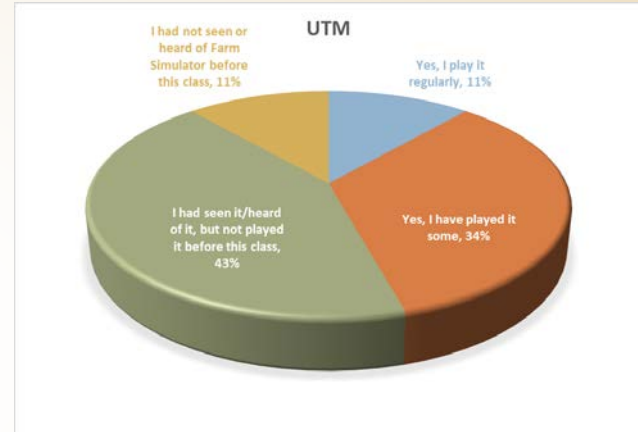
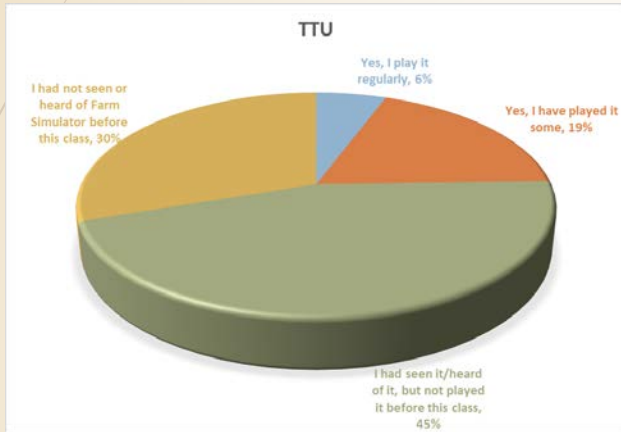
- ▶ “Farming Simulator” Video Game
 - ▶ Provides player with true-to-life farming “experience”
 - ▶ Player must make all production and financial decisions
 - ▶ Can produce a variety of crops and/or livestock
 - ▶ Farm machines and implements can be purchased
 - ▶ Loans can be obtained for farm financing

Methods

- ▶ Sample consisted of undergraduate students enrolled in a junior level Farm and Ranch Management class during the Spring 2018 semester
 - ▶ Texas Tech University (53 students)
 - ▶ University of Tennessee at Martin (35 students)
- ▶ Farming Simulator game was installed on university computer lab machines at TTU and UTM
- ▶ TTU and UTM students played game during multiple lab sessions
 - ▶ All students completed tutorial exercises and accompanying lab assignment
- ▶ Students completed classroom assessment techniques (CATS) survey upon completion of game component of the course

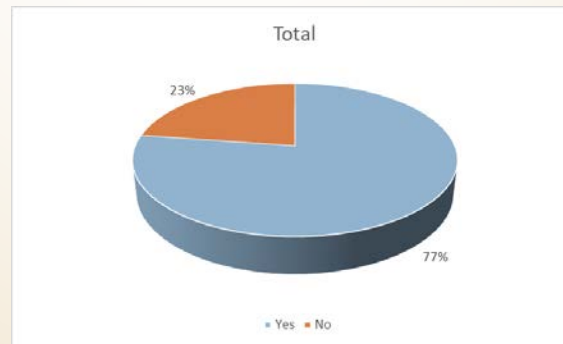
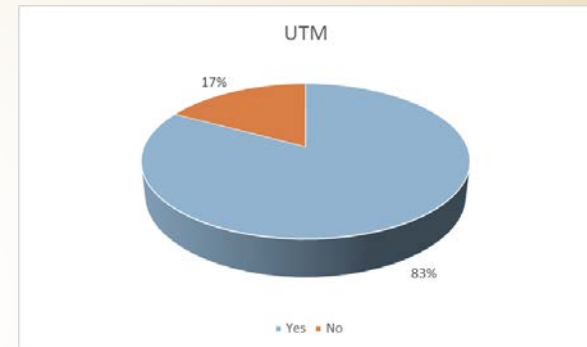
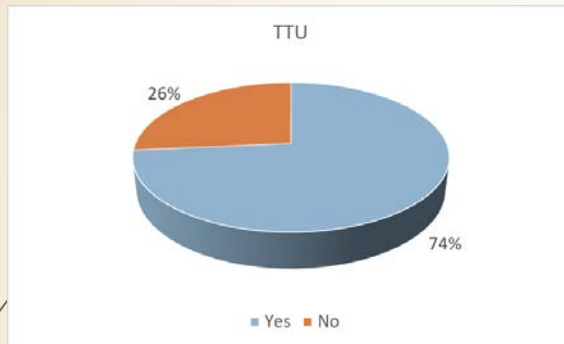
Results

Seen/heard of Farm Simulator prior to this class



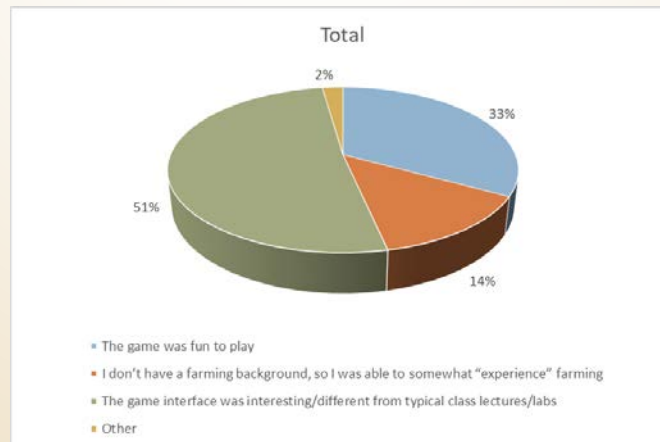
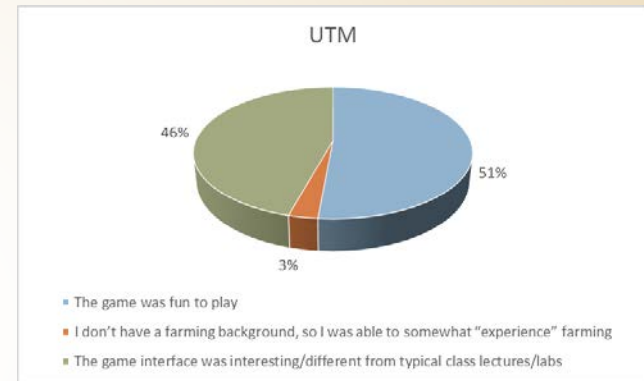
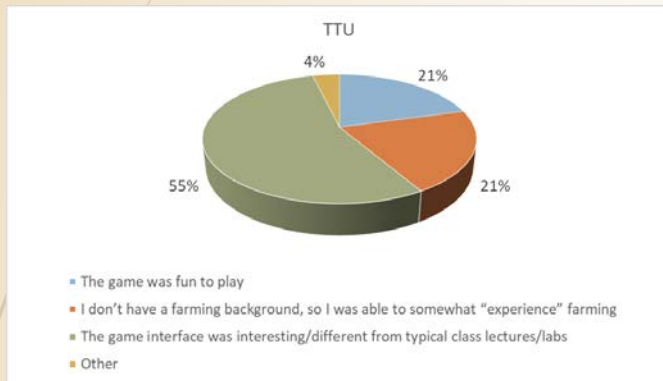
Results

- ▶ Enjoyed the game, overall



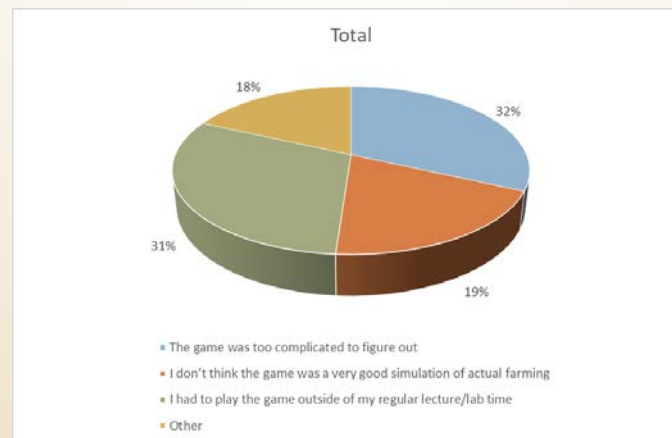
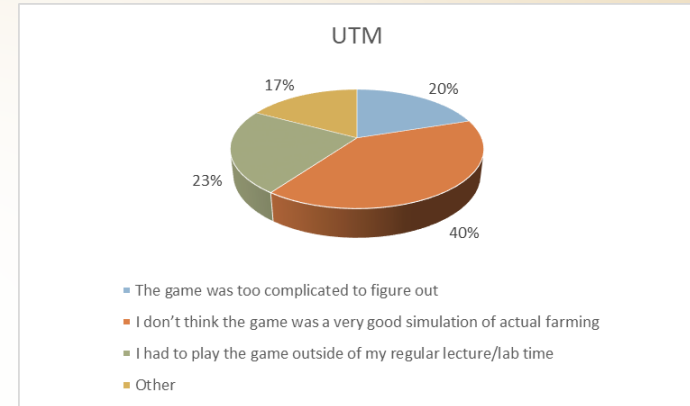
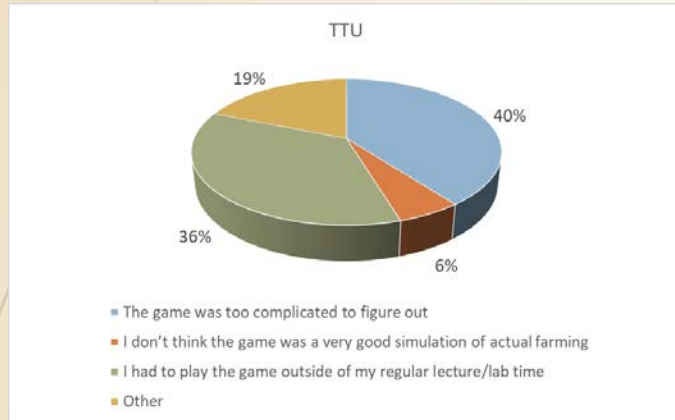
Results

Game likes



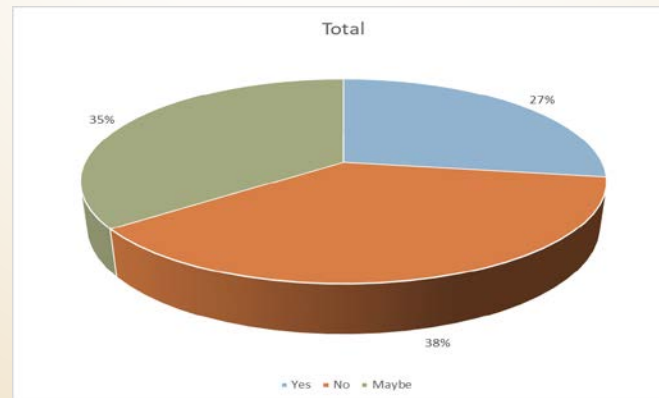
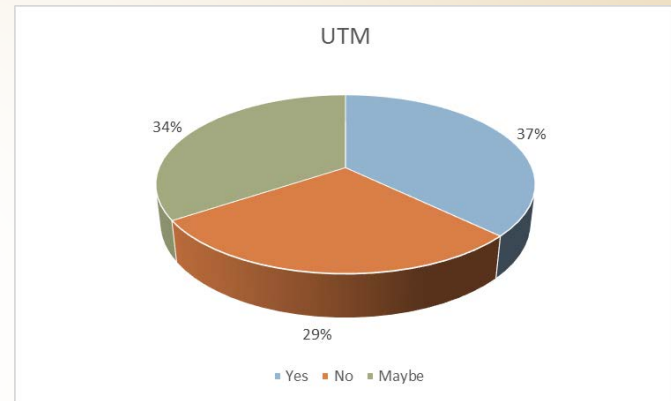
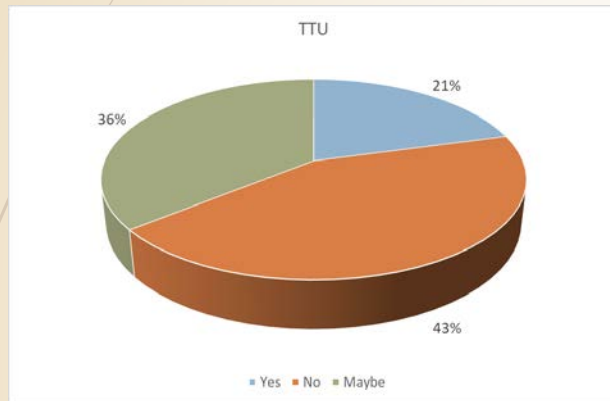
Results

Game dislikes



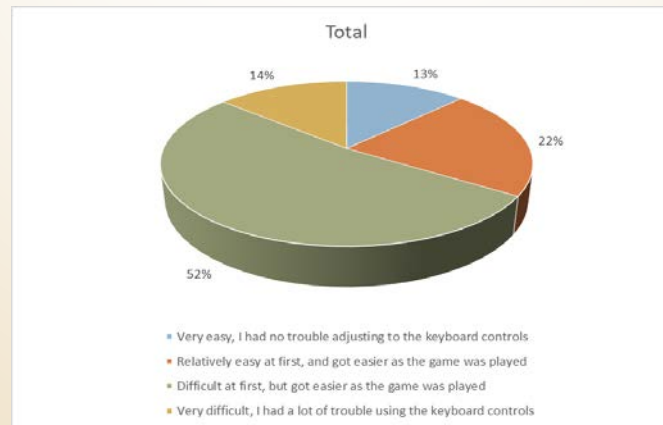
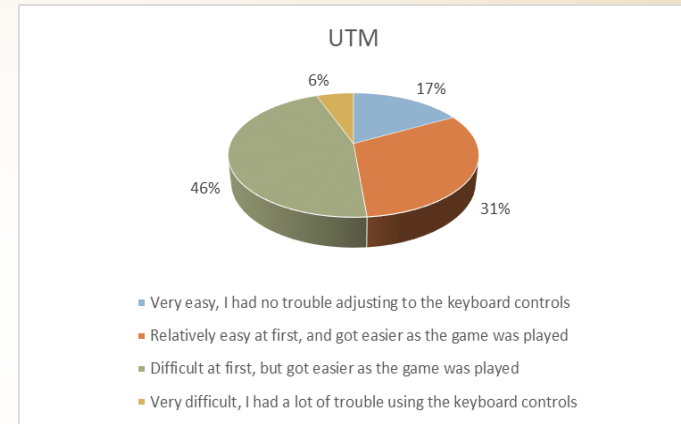
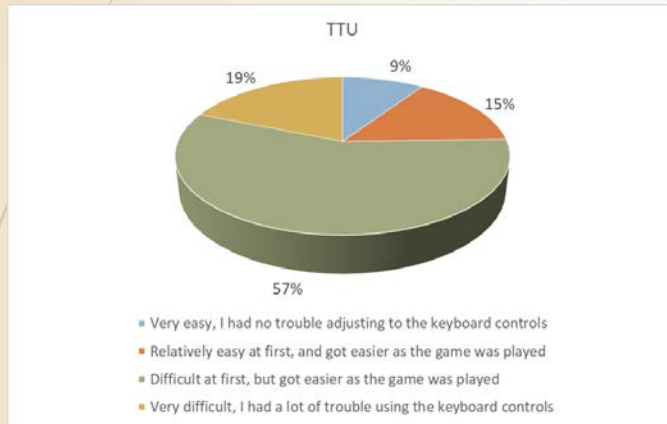
Results

- ▶ Play game for leisure (if not a part of the class)



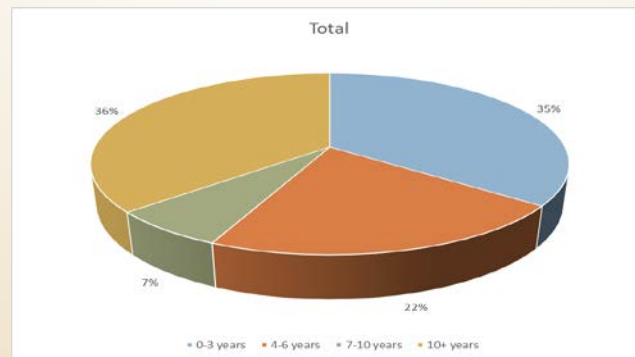
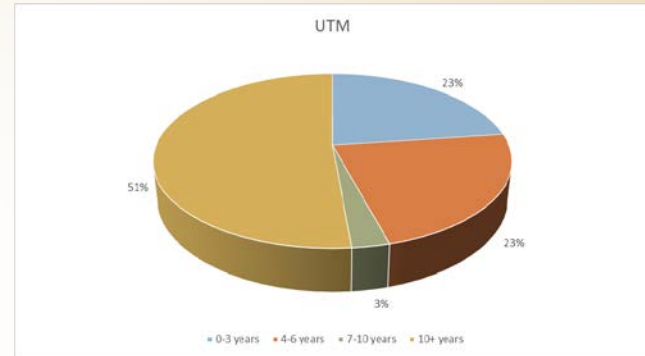
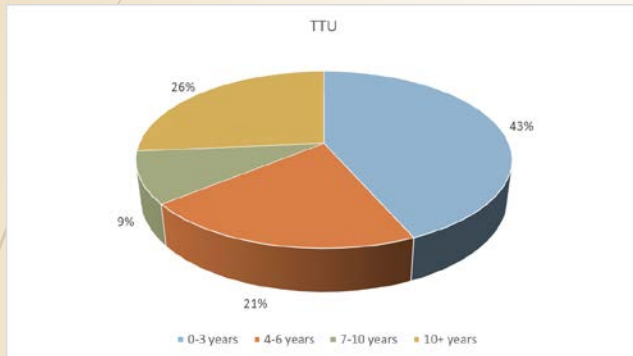
Results

Difficulty of keyboard-control operations



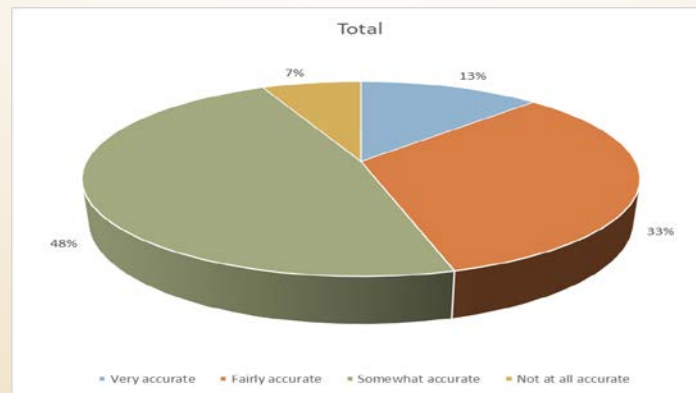
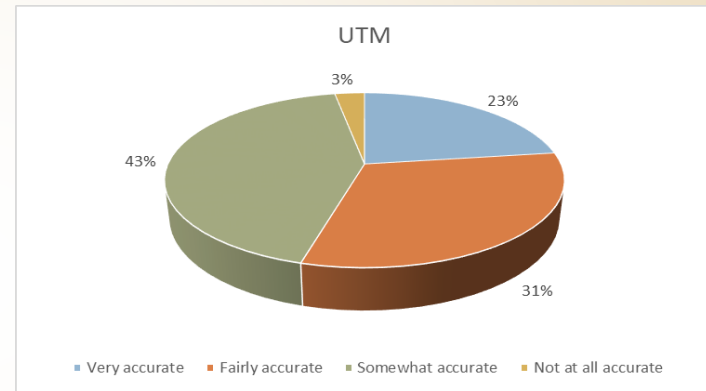
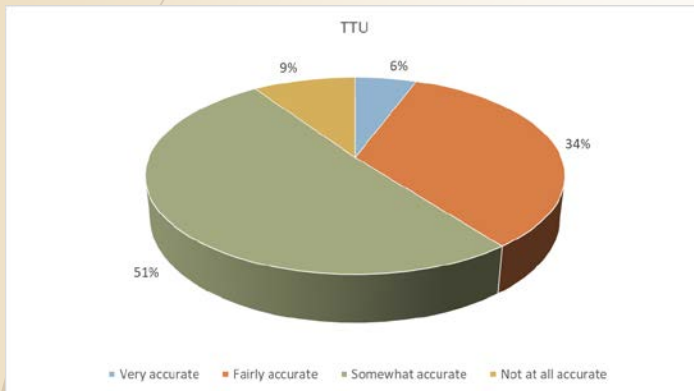
Results

Real-world farm/ranching experience



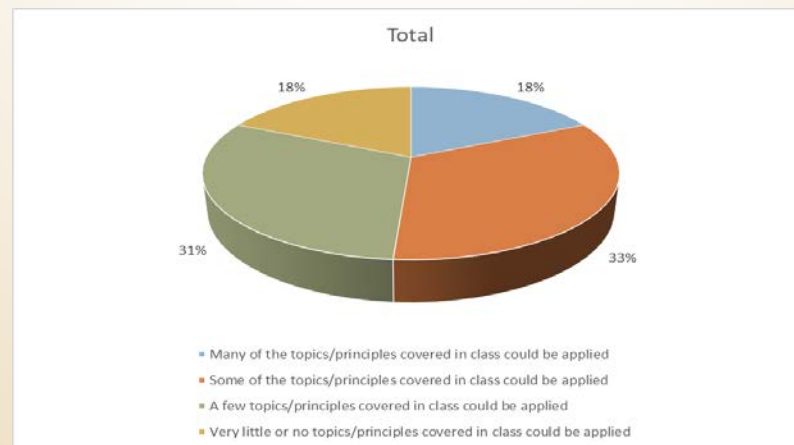
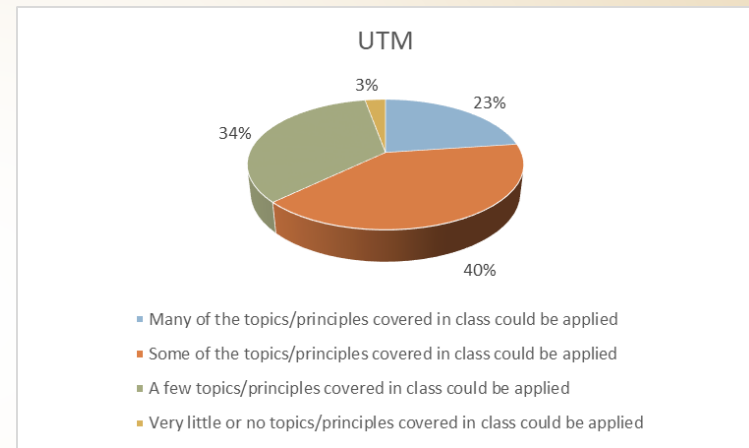
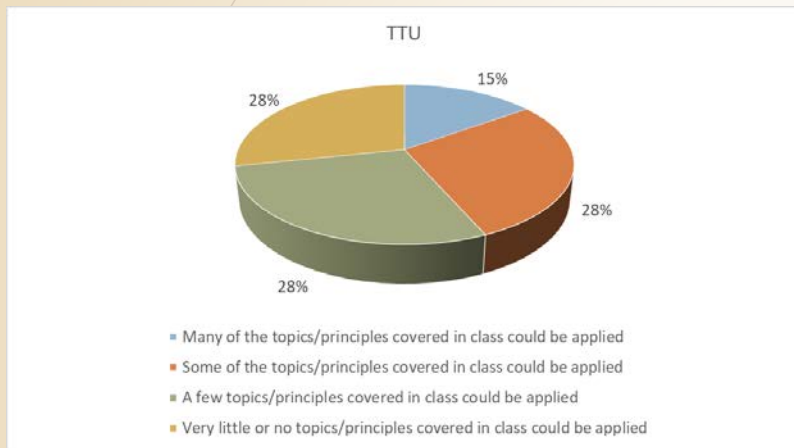
Results

Accuracy of farm decision-making process replication



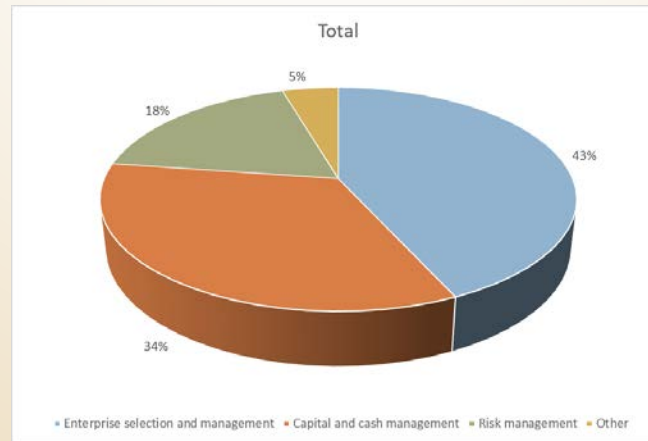
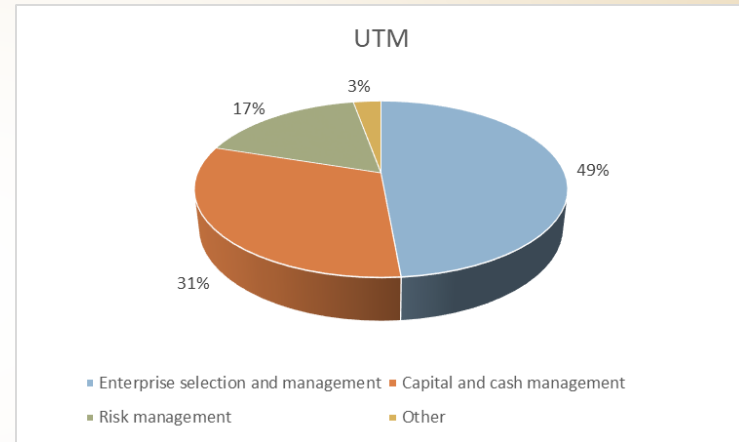
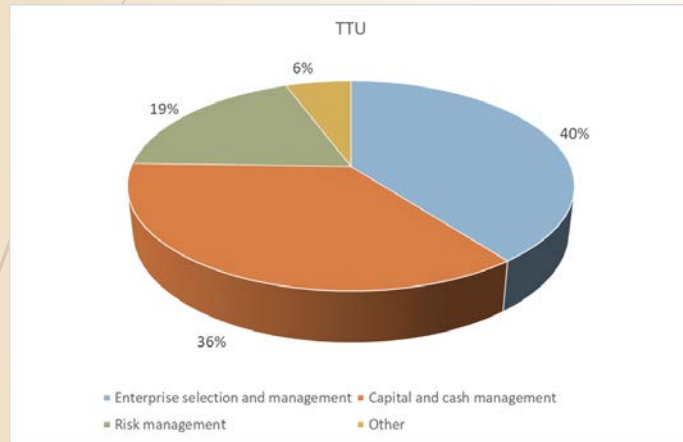
Results

Game application of course principles



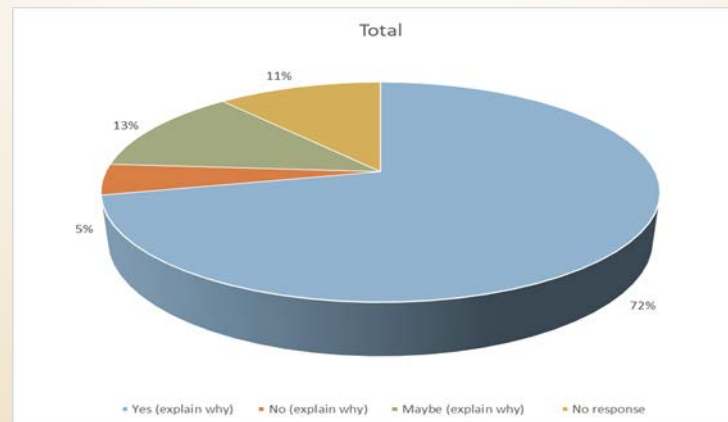
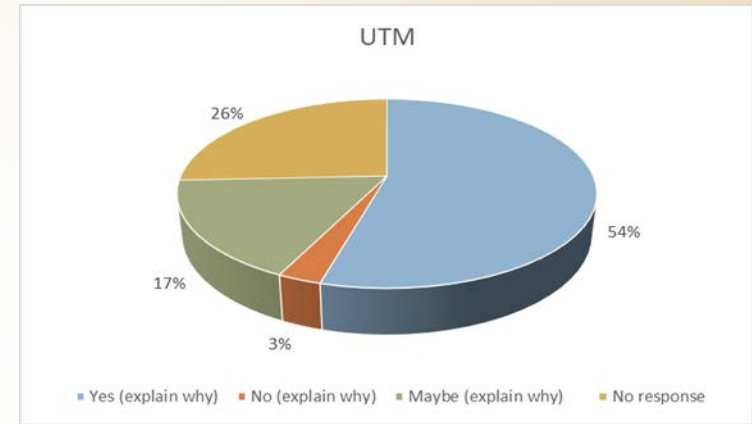
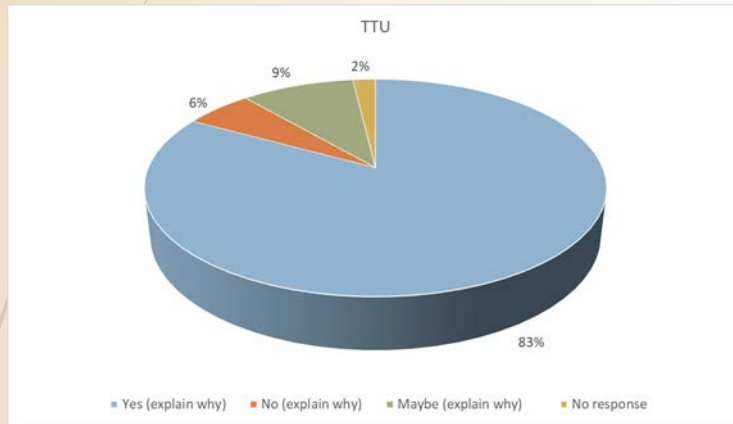
Results

Most applicable course topics



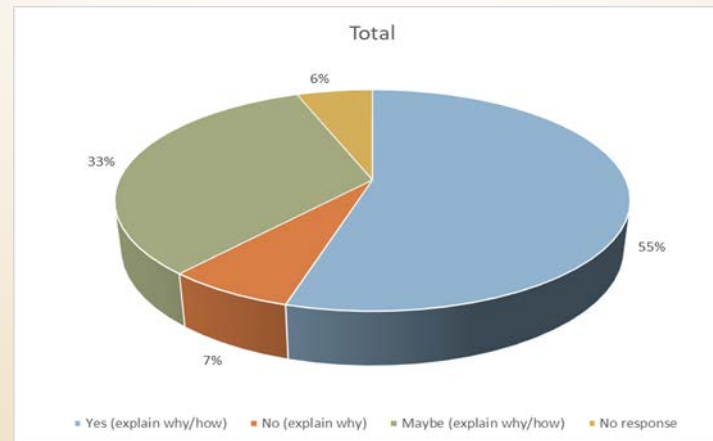
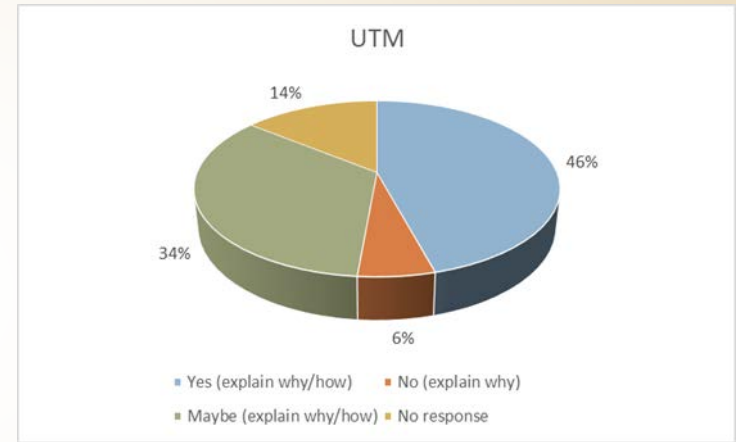
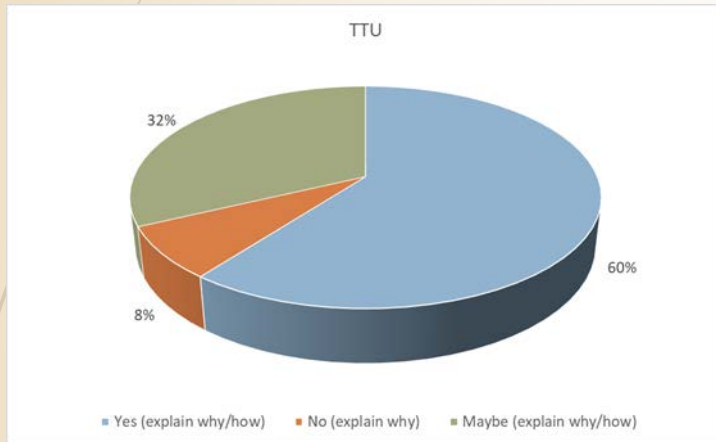
Results

Interest in incorporating game into lab



Results

Interest in incorporating game as class project



Conclusions and Future Plans

- ▶ Students enjoyed the game overall
- ▶ Students will want to install game on personal computers
- ▶ Students REALLY want game controllers instead of using keyboard controls
- ▶ Future plans
 - ▶ Further integrate game into lab portion of the courses
 - ▶ Develop semester-long game project
 - ▶ Introduce “friendly-competition” among students
 - ▶ Expand game to other courses such as agricultural finance