Learning in Space

New Mexico Supercomputing Challenge

Final Report

January 21, 2010

Team 59

Hope Christian High School

Team Members
Cameron Harjes
Aaron Gabaldon
Tyler Spahr
Ben Robinson

Teacher:
Mrs. King

Project Mentor.
DeLesley Hutchins

Executive Summary:

Learning in Space is a knowledge based game designed to test kids' abilities to learn and retain information in a game type setting. The game is designed to operate in Alice, and covers three different sections. The sections being covered are history, science, and math. The game will be tested on a fourth grade class at Hope Christian School, and will test their knowledge in these three subjects. Before the game, a pre-test will be given. The pre-test will give the class an idea of what will be on the game the next day. Then, once the pre-test and game are completed, the scores will be written down and put into graphs so the results will be easy to compare. With the completion of the test and the game, a conclusion will be drawn up and will be compared to the hypothesis; that kids learn and retain information better when it is in game type form. According to the results of the game, kids' learn better when information is presented in a game form.

Acknowledgements:

The team would like to thank: Mrs. King for stepping in and taking over the class, Mrs Feather for being our original teacher, Mr. Bennet for coming and helping the team with statistical information and ideas to improve the project, and Mrs. Harjes for letting us use her class to test.

Thank you sincerely;

Team 59

Table of Contents:

Introduction:

       The problem the group is trying to solve is how well students learn and retain information from playing video games. There are studies that show that if the students have more fun they will enjoy studying and retain information. Hopefully if the students enjoy learning early, they will continue enjoying learning in the future. The team will use graphs showing how well the students did before the game, how well they did after they played the game and how well they did after.

Research:

The result of study for the project is that young students seem to learn faster when they are engaging in an alternate activity, aside from tradition school studies. This may include video games, which is what the current project is researching, or other activities like competitive games that reward good performance. There are many studies that encourage the use of educational video games, but there is always opposition, to the subject. The problems that these studies center on is the fact that some games focus more on enhanced game play, rather scoring an improved average. Another problem is that not all students improve the grades in their studies, although the majority does, education video games are not a fool proof way of improving the grades of all young students. The results of the study are that a majority of younger students benefit at least some from education videos games, but there are some downsides, as stated before. In conclusion educational video games do have some minor downsides, but the good outweighs the bad, and overall educational video games are a great way to get students to enjoy school work.

Project Details:

In the project, 4th grade students will be tested on their knowledge of certain subjects. The plan is to let them take a test before the team will let them play the game and take a test afterward. The same information will be used and the thought is that if the students have fun while they are learning they will remember more of the knowledge they are tested on. A pre test will be given to the kids and once they have completed it, a graph will be made with the information received. After the pre test, the students will play the game. Then students the will take the post test. The results will be tallied and bar charts will be made for the results. Hopefully, the graphs show that after playing the game the students will remember more and are able to retain the knowledge when they have fun.

Results:

PRE-TEST AVERAGES

■	90%+
■	80%-89%
■	70%-79%
■	60%-69%
■	59%-

GAME AVERAGES

■	90%+
■	80%-89%
■	70%-79%
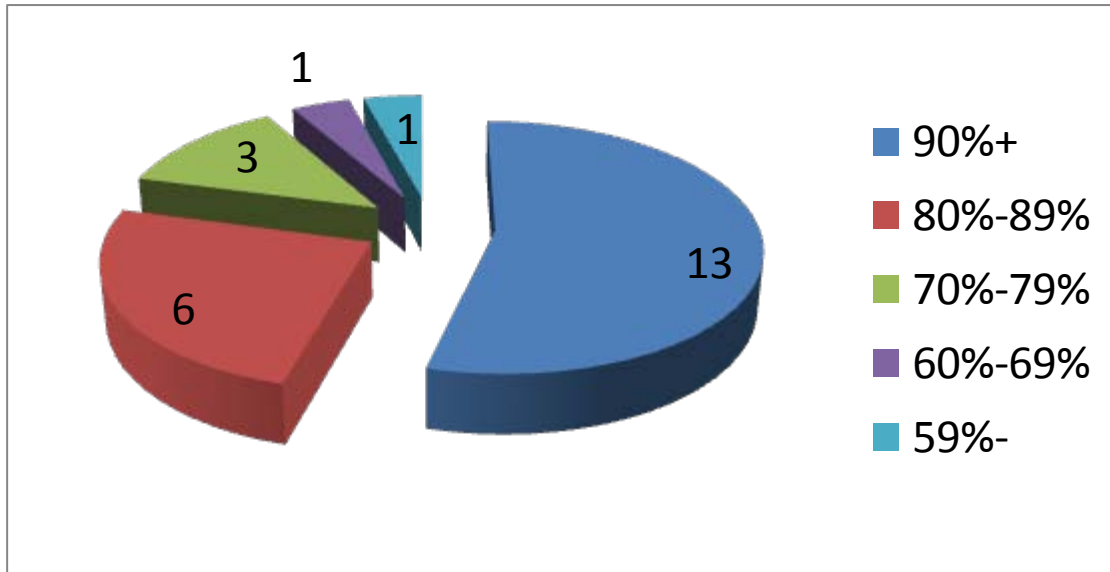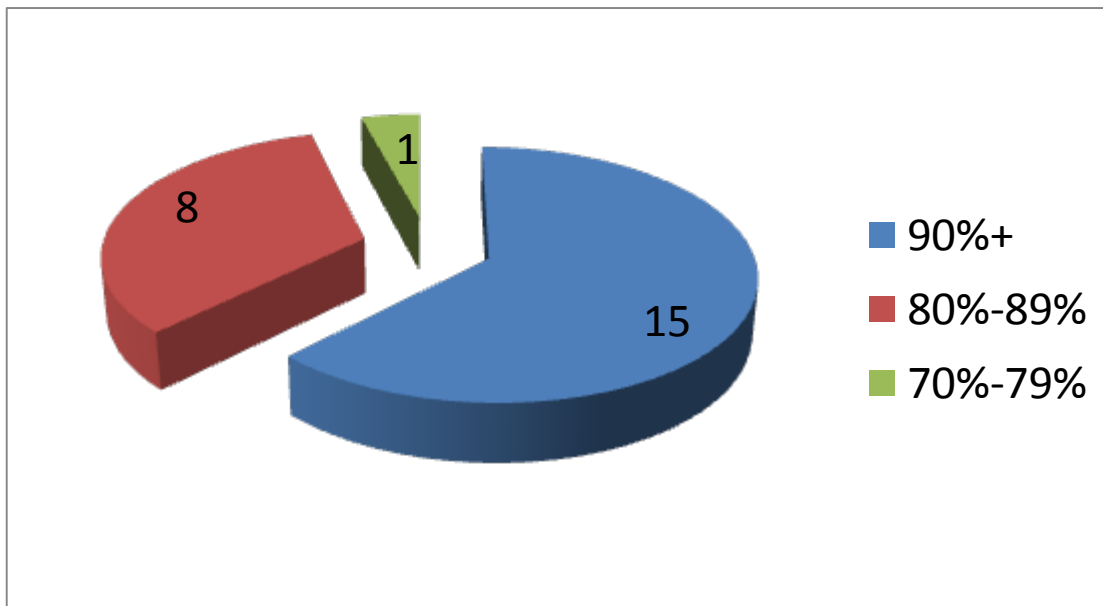
As the data shows the children preformed at a higher level when playing the game than they did when they took the written test. This data makes the hypothesis correct. The students learn better under a game type setting.

Conclusion:

The research for this project has stated that most young students will have a better learning experience and recall more information that was covered when they are playing some type of educational video game. Although not all students benefited from the type of learning introduced by educational video games, the majority did. In this specific project twenty-four students were tested, sixteen improved their score on the post survey and had good reports of the game. This leaves eight students that had a similar score on their post survey as their pre-survey, or they scored an even lower score than before.

Works Cited:

"Are Educational Video Games Good For Children?" *Associated Content*. Web.

Business, financial, personal finance news - CNNMoney.com. Web. 29 Oct. 2009.

                    <http://www.money.cnn.com>.

"Educational Game." *Wikipedia*. Web. <http://en/www.wikipedia.org/wiki/educational_game>.

GameLinkage.com. Web. 29 Oct. 2009. <http://www.gamelinkage.com>.

Homework Tips - Help With Homework. Web. 29 Oct. 2009.

                    <http://www.homeworktips.about.com>.

"How Kids Learn." *How Kids Learn: What's Your Childs Learning Style?* Msn. Web.

Language Schools, Learn English USA,ESL,Spanish,Italian,Study Abroad Programs,TEFL

                    Courses, Business College Search, Job Postings in UK,TESOL England, Online

                    Computer Training, New York, London. Web. 29 Oct. 2009.

                    <http://www.learn4good.com>.

Learning Games For Kids. Web. 29 Oct. 2009. <http://www.learninggamesforkids.com>.

Learning Styles Online.com - including a free inventory. Web. 29 Oct. 2009.

                    <http://www.learning-styles-online.com>.

Science Daily: News & Articles in Science, Health, Environment & Technology. Web. 29 Oct.

2009. <http://www.sciencedaily.com>.