



Homemade
PowerPoint
Games

in a K-12 e-Learning Environments

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The K-12 Classroom



Peoria Christian School
(circa 1950)




Middle School in Maine
(circa 2005)

Images from <http://www.peoriachristian.org/index.php?Section=26> and <http://www.maineonline.org/Think-Learning>

An Exception

- WebQuests - <http://www.webquest.org>
- a creative instructional strategy that guides students through a set of specific tasks, using pre-selected resources, to complete an assignment
- based on what teachers already do
 - design instruction for students
 - use Internet resources
 - make good use of student time
- teachers feel good about integrating technology into their classroom



Another Exception

- schools typically have access to PowerPoint
- teachers already have some facility with the tool
- students are also familiar with the tool
- everyone would like to be able to use it for more than just another PowerPoint presentation

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It's better because it's homemade!

University High Projects

- US Studies
- British Literature



Creating a PPT Game

1. Introduce PPT games
2. Sharing game ideas and stories
3. Different levels of questioning
4. Create prototype of the game
5. Peer review
6. Share games with the class

Methodology

- US Studies: multiple-choice questions
- British Literature: essay-style questions



US Studies Findings

- from a statistical standpoint, there were no significant difference in student performance (F value = 1.324 / α = 0.253)

Student Average Scores By Class By Topic On Mid-Term Exam

	Class 1	Class 2	Total
Exam Score in Game Area	5.76	4.72	5.35
Average Exam Score in Non-Game Areas	5.10	4.71	5.01

British Literature Findings

- from a statistical standpoint, there were no significant difference in student performance (F value = 0.090 / α = 0.766)

Summary of Student Performance Data

	Control Group	Experiment Group
Pre-Test	78.83%	76.61%
Post-Test	85.14%	84.36%
Average Difference	+ 6.32%	+ 7.75%

Conclusions

- PPT Games were as effective as the other methods students used to review
- both the teacher and the researchers that they enjoyed this activity

Possibilities

- very small sample size ($n=50$ / $n=35$)
- extrapolate out the same performance difference with ten times the sample size the same margin of difference in improvement becomes statistically significant

Future Research

- second data set from US Studies course
- both teachers have indicated a willingness to participate in similar projects in both the Fall and Winter semesters this academic year

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<http://it.coe.uga.edu/wwild/pptgames/index.html>

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