

Educational Research via Playtesting

Innovative Approaches to Data Gathering and Analysis



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Jim Parker
&
Katrin Becker



- What are we playing now?
- Videogames
- Game development
- Player Experience
- Playtesting
- Back to School
- Looking Outside the Silo
- The Game of School
- Take-Aways
- Resources



Overview





What are we playing now?

An interactive entertainment playable on a computer based electronic device.

Computer Game – played on a computer (PC, Mac, etc.)

Video Game – Played on a special purpose device dedicated to playing games.

We can vary these definitions a bit.



What is a Video Game?



Computer games are enabled by software,
but are more than that.

A game can include design, art, music,
interaction, sets, props, narrative, actors,
a script.



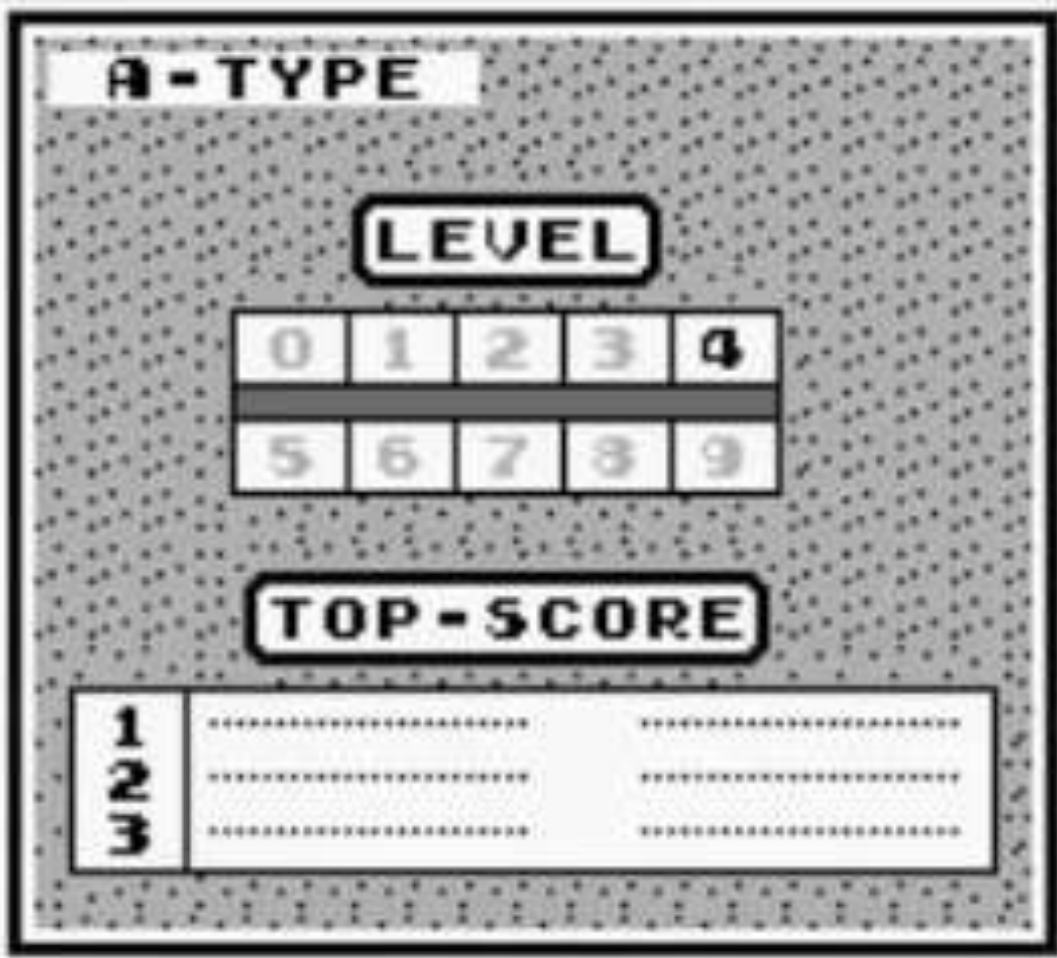
Computer Games/video Games





Computer Games/Video Games





Computer Games/Video Games

What do we not think of as a computer game?

- Solitaire
- Chess

These games do not need a computer in order to be played.

computer mediated



Computer Games/Video Games



Game development:

- the creation of a computer game.
1. Design
 2. Create assets including software
 3. Play – any good? Bugs?
 4. Iterate



Game Development



A computer game is not a software product.

It is a media product, like a TV show or motion picture.

It contains software as a *component*, like a car.

So, when our movie is complete, how do we test it?



What is a game?



We have people watch it!

ANY QUESTIONS?

Called a
test
screening.



Test screening



We run the film, sometimes without special effects, music, sound effects, or other post production features.

We ask the audience questions about the film.
We sometimes have the cast or director there for the audience to interrogate.

We sometimes watch the audience watch the film.

Some groups even measure audience reactions using blood pressure/skin response.



Test Screening



Why?

To find out if our film is hitting its target.

These are commercial items. The film has a target audience and is intended to tell a specific story in a specific manner.

If it is failing, we need to know early and know why.



Test Screening



We apply similar techniques to videogames.



How does this apply to Games?



Games focus on the player experience.



The Player Experience



In the game industry we do a **play test.**

compare/contrast w/ what we do in the classroom...

We select a small sample of our target audience to play the game.

We watch them play.

We ask them about their experience.



Play Testing



Is the game too easy (hard)?
Is the game easy to learn?
Are the controls intuitive (and typical)?
Is the interface clear and simple?
Is the art interesting?
Is the music appropriate and appealing?
Are the sound effects effective?
Is the story interesting?

Is the game FUN?



Play Testing



Play testing concerns itself with matters of opinion and judgment, not fact.

What is **fun**, exactly?

What one player likes another may dislike.
How will we resolve these issues?



Play Testing



How do we conduct a play test?

First, select a competent Test Administrator (TA) to be in charge.

TA selects 3-10 test subjects with the correct demographics.

- Will be paid
- Will sign release forms (minors have parents sign)



Play Testing



The TA prepares a set of questions to serve as a pre/post test.

- Some dummy (unrelated) questions.

TA prepares a site where the game can be played.

- Include a setup to do a short presentation
- Computers and installed games
- Set up for video and sound recording



Play Testing



Subjects are brought into the testing area.

- Are asked the pre-test questions.
- Are given the game instructions
- Are introduced to the game (short talk)

And then are asked to play it.



Play Testing



TA or delegate observes the play as it proceeds and notes player reactions.

Play proceeds for 15 minutes followed by a break.

TA and player can exchange questions and answers.

Play for another 15 minutes.

Post test questions.



Play Testing



Post test questions

- Best parts
- Worst parts (why?)
- How easy to play?
- Confusing parts
- Exciting parts
- Make sure releases are signed, pay the players, and excuse them.



Play Testing



NOW turn off the video, label and seal it.
The dev. team can watch it but cannot copy it
or send it across the Internet, and must return it.

Members of the development team can be at
the play test but must not interact with the
players, at least until the video is off and data
ceases to be collected.

Repeat testing cannot use the same subjects.



Play Testing



A report is made by synthesizing all of the information seen during the test.

Should be informative to the development team, so translation from player language to developer language may be needed.

Note all times a player verbalizes and what is happening.

Note player successes and failures and their reaction to them.

Note well where the player stops playing!



Play Testing





Our Turn



Exercise:

We are going to test a game.

- I'm looking for one volunteer to be the tester. This person will come up the front to play the game for a short time.
- The rest of the participants will be test administrators. You will need a piece of paper for taking observation notes (don't rely on memory).

The game can be found at: www.minkhollow.ca/mackays
We're going to play 'War of the Swirls'

First we will read the 'How to Play' page.
Then we will have the tester play while the rest of us observe.



Our Turn



Tester Pre-test:

- Have you played a web based game before?
- Which one (or 2)?
- How often?
What browser do you use?
- Do you own an iPad?



Play Testing





WAR OF THE SWIRLS

SAVING THE
WORLD TAKES
ICE CREAM



START

HOW TO PLAY

WHO KNEW?

Now have the player begin to play.

The TAs must observe the group, noting important aspects of play. Write down the observations.

Play for 5 minutes, then stop.



Play Testing



Post-test:

How far did you get in the game?

Was it easy to play?

What was the best part of the game?

Was there a frustrating aspect? What was it?

Did you have fun? Would you play again?



Play Testing



In a real testing session:

- Conduct a 2-3 minute cool down session, allowing the players to make any comments they choose. Take note of these comments.
- Afterwards, if it is wanted, the developers are here and you can speak to them.
- Hand in the reports first.



Play Testing





Back to School



How can we apply concepts of Playtesting to Classroom research?



Looking Outside the Silo



1. Is the game too easy (hard)?
2. Is the game easy to learn?
3. Are the controls intuitive (and typical)?
4. Is the interface clear and simple?
5. Is the art interesting?
6. Is the music appropriate and appealing?
7. Are the sound effects effective?
8. Is the story interesting?
9. **Is the game FUN?**



Play Testing



1. Is the game too easy (hard)?
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7. Are the sound effects effective?
8. Is the story interesting?
9. **Is the game FUN?**



Play Testing



1. Is the lesson too easy (hard)?
2. Is the lesson easy to learn?
3. Are the exercises intuitive (and typical)?
4. Is the interface clear and simple?
5. Are the visualizations interesting?
6. Is audio (verbal) component appropriate and appealing?
7. Is there a worthwhile written component?
8. Is the story interesting?
9. Is the activity FUN?



The Game of School



How can we use playtesting ideas to inform our teaching?

SHOULD we consider "fun" in our lessons?

What can be gained by examining instruction to assess

- levels of difficulty
- intuitiveness
- interface issues

What can we learn by looking at how learners interact with our instruction?



Take-Aways



Educational research is supported by a well-defined collection of methodologies, but are there methodologies elsewhere that can provide fresh perspectives?

The use of videogames in learning is becoming more accepted, but are there other things we can learn from games?

There are fundamental differences between games and instruction such as the fact that one seeks primarily to entertain and the other to enlighten or educate, it turns out that the practices, processes, and theories behind playtesting games can in fact inform aspects of pedagogy - particularly those that relate to engagement.

In game design, the primary focus is on the player experience and there has been considerable research into ways to assess and measure the player experience through playtesting. Playtesting is concerned with such things as whether or not the game is fun, which parts are too easy or hard, and whether and when people become bored. All of these properties have relevance to teaching and learning even though they may not appear to be directly connected with meeting learning objectives. Rather, playtesting is concerned with the motivation of the player/student to continue the particular course of learning, which speaks to the success of the methodology in capturing the student's imagination. Sometimes, simply taking a novel approach to evaluation can yield insights that were not uncovered by more common approaches. This presentation will provide a brief overview of formal playtesting procedures and highlight ways these approaches could be used in the classroom as well as how this could inform pedagogy.



Abstract of Presentation:



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Resources

