

Syzygy

...on the circumstances games can work in public
education

Bill MacKenty, M.Ed.
www.mackenty.org



Why games?

- How do we take advantage of the extraordinary energy, enthusiasm and interest our students show in computer games?
- 1st question: Are computer games educational?
 - Yes, in many different ways
- 2nd question: how can we use them in education?
 - We're working on it

To talk about...

- 6 planets which must align for games to work in education
- Different types of technical support in education
- Different types of games we can use in education
- Dispel a common myth about technology in education
- Things to think about if you want to use games in education
- Work through an example game

Who knows a 15 year
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The story so far...



- Started teaching in 1999 – started my exploration in computer games in education around 2003
- I realized there was something in the air when I was the advisor of the yu-gi-oh card club
- I don't see a coalesced community of thought around games in education...yet... Gee, Aldrich, Schaefer, Prensky, Koster, Jenkins. Many individual teachers scattered around. Mark Prensky.

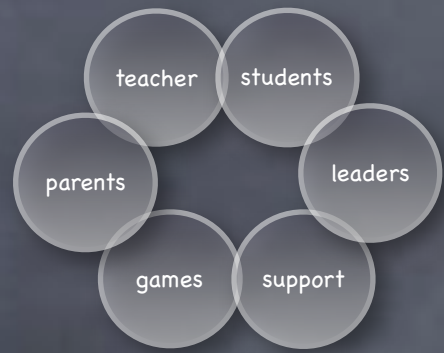


Thank you Mr. Tufte

Don't ask "I have a game, how do I use it in class?". Instead, ask "I have to teach something, is a game a good choice?".

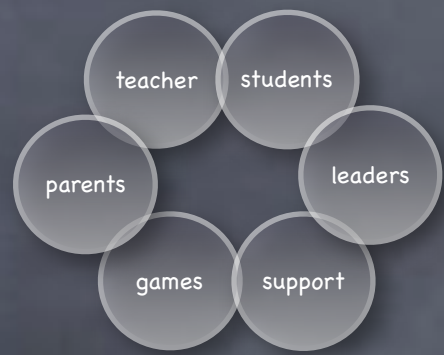


sometimes in education we are looking for a cookie-cutter approach. I call this "the big technique" - and this model isn't the best way to think about games in education



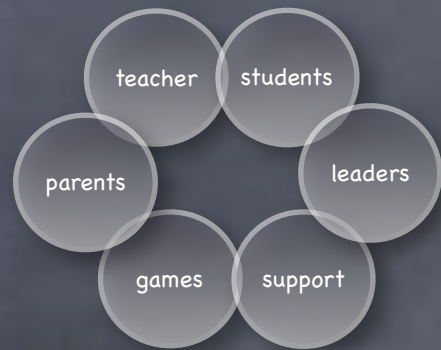
Right teacher

- Seasoned, experienced teacher (more than 2 years) but don't discourage new teachers...
- Technical acumen
- Strong instructional design
- The older teacher and technology myth



Right game

- Three types of games:
 - COTS, serious games, edutainment

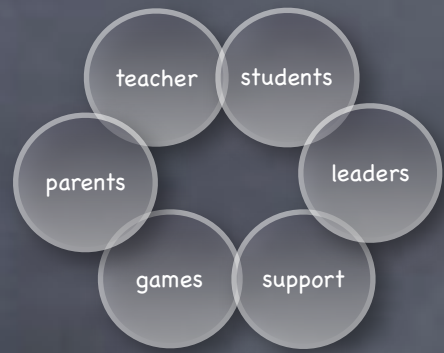


Right game

• COTS games

- A game kids want to play in their free time
- Designed purely for challenging fun and entertainment
- High quality gameplay, graphics and sound
- Gameplay that meets different playing styles



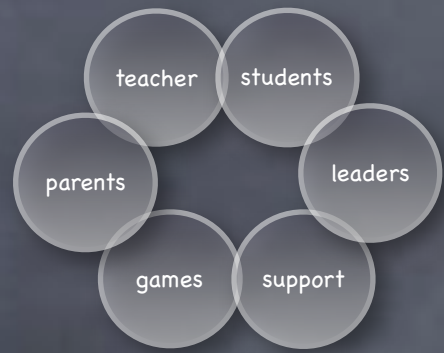


Right
game

• Serious Games

- Theme-based (political, health care, housing market, specific historical event, UN game Food Force)
- Usually web-based flash games – basic graphics and sound
- Gameplay is usually linear
- Has limited number of clear variables to manipulate and the player can see the outcome





Right game

• Edutainment games

- Usually content-focused (math, reading, etc..)
- Usually age or grade-focused
- Generally rewards successful completion of fun academic tasks with animations or dancing animals.
- Players can choose from a variety of theme-specific mini-games

Agnes 3-6

The Learning Company



Deluxe!

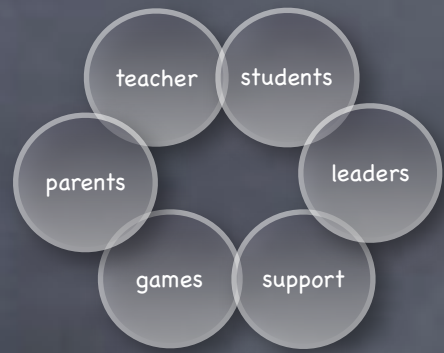
Reader Rabbit 1



Includes Phonics and Reading Games

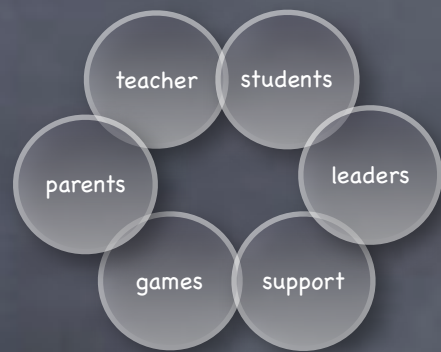


READING
and Phonics



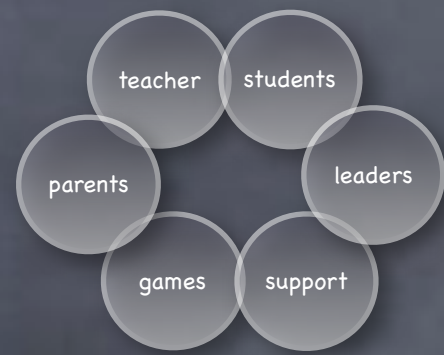
Right game

- I'm partial to COTS games
 - High production value
 - Appeal to different playing styles and dynamically adjusts difficulty.
 - Kids will play it after school
 - Once we ask kids to start thinking about COTS, they will start thinking about COTS games
- I'm warming up to serious games



Right game

- Control time spent on task (should be part of the design)
- If you put a student in front of a computer for an hour, and expect something magical to happen, you will be disappointed.
- The really interesting thing: muzzy lane and the Hungarian revolution game education games are starting to get good
- No place for very sexual or highly violent games – like, ever.



Right students

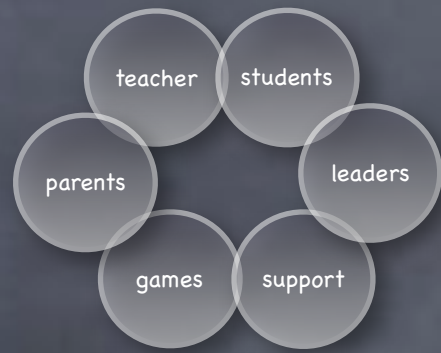


- Games in education work for the middle and low-end of the bell curve
 - Gifted kids and children with serious learning issues
 - Please take into account gender and learning differences
- For major discipline problems, this might not work
- Technology motivates students – we are harnessing this energy



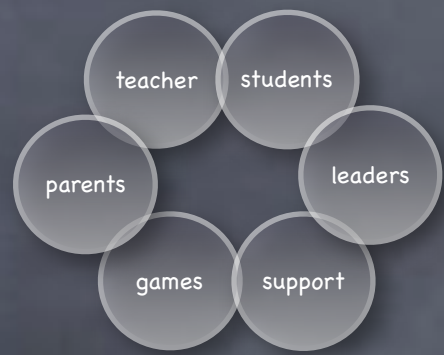
Right leaders

- Need to be flexible
- Need to insist on strong learning outcomes
- Not be micromanagers



Right support

- Teacher is often the only technical support available
- How to think about technology in education and support:
 - If you are using technology to actually teach, technical support needs to be available within three minutes.
 - If you are using technology to support your teaching, technical support can be 24 / 48 hours
 - Invest in a student tech-team, and make sure your technology is well managed
 - A good system administrator is worth their weight in gold (good = competent + friendly)



Right parents

- Demonstrate learning objectives “We are learning about evolutionary adaptation”. Be very specific.
- Talk to them about appropriate media use (less than 2 hours a day, and under 4 years media should be quite limited).

Example – Railroad Tycoon III

- now lets make a brief lesson – using the ideas we just discussed

What do the kids actually do?

Real-time action – lay track, route the trains, and the world comes to life. Cities and industries grow up around you as you service them, hauling raw materials to market and carrying manufactured goods away; Cargos are loaded onto train cars and passengers shuffle between cities.

Easy to get started – laying track is as easy as clicking and dragging. Bridges, tunnels, railroad stations and switches sprout up automatically where they're needed.

Challenging to master – with a new market system that tracks supply and demand and complex random events that can cause a boom or bust at any time, players must stay on their toes at all times or risk obsolescence, financial collapse, or hostile takeover.



Final thoughts...

- computers aren't that good at creating context, but good at reinforcing content
- create active engagement. This is very important.
- the story of games in education is the story of technology in education
- be careful about waking this up in kids and then failing - kids will be genuinely disappointed
- the cool thing about failure in computer games
- how do we know what is true?

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Questions? Comments?

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