



**PUTTING EFFORT  
INTO PLAY**

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2015 NBEA ANNUAL CONVENTION**

# DESIRE, DISCOVER, PLAY

- How many of you received an activity tracker for Christmas?
  - What was your *desire* for an activity tracker?
  - What did you want to *discover* by using an activity tracker?
  - How can *play* help you achieve the goals you set with your activity tracker?
- How many of you like to *play* games?
- How many of you *play* Words with Friends or Candy Crush?
- How many of you currently *play* games in your classroom?



# PLAY

- Play - activity that is psychologically removed from the real world
- Children play in ways that promote the full range of skills that human beings everywhere must develop:
  - Physical play
  - Language play
  - Exploratory play
  - Constructive play
  - Social play
  - Fantasy play



*“Mrs. Lanham understood that play is how children learn.”*

# PLAY AND EDUCATION

*Play's educational power lies in its triviality.*

*Play serves the serious purpose of education, but the player is not deliberately educating himself or herself. The player is playing just for the fun of playing, not for anything else; education is a byproduct. If the player were playing for a serious purpose, much of play's educative power would be lost.*

*“One of the things that gives games so much power in teaching kids is that games really encourage you to keep trying. This seems like a perfect fit for when you are teaching kids, to teach them in a safe environment and encourage them to try without fearing failure”*

Institute of Play

## ASPEN IDEAS FESTIVAL

<http://www.aspenideas.org/session/katie-salen-game-changers-new-ways-teach-our-kids>

<http://www.aspenideas.org/session/game-changer-salman-khan—new-ways-teach-our-kids>

# WHAT WE NEED TO KNOW

- *How* can games teach us that different choices have different outcomes?
- *What* kinds of games help us learn?
- *How* do games help us solve problems?
- *How* do teachers use games to provide rapid feedback to their students?

# GAMES ARE NATURE'S WAY OF GETTING US TO LEARN

- *Why* are academic games important learning tools?
  - Encourage students to learn outside of class
  - Allow students to focus well enough to learn better
  - Motivate and interest students, increasing student engagement
  - Encourage active learning, as well as collaboration, and interactivity
  - Used as vehicles for enhancing problem solving and decision making skills

*“Play is by its very nature educational. And it should be pleasurable.  
When the fun goes out of play, most often so does the learning.”*

Joanne E. Oppenheim

- Meaning of knowing - *Shift from* recalling and repeating information *to* finding, evaluating, and using information
- Games make learning more fun and contribute to a positive classroom atmosphere
- Games enable students to assess their own knowledge and find areas for improvement
  - Players understand through self-direction exploration
  - Data helps players know how they are doing, what they need to work on, and where to go
- Games encourage critical thought
- Games build cooperation and teamwork skills
- Games create a need to know, a need to ask, examine, and assimilate and master certain skills

<http://youtu.be/9VONeNVPaNs>

# PLAY AND FEAR OF FAILURE

- *How* can games help students overcome the fear of failure?
  - Much of the activity of play consists in failing to reach the goal established by a game's rules
  - Players rarely experience this failure as an obstacle to trying again and again, as they work toward mastery.
  - There is something in play that gives players permission to take risks considered outlandish or impossible in “real life”
  - There is something in play that activates the tenacity and persistence required for effective learning
  - Games give students feedback that strengthens their understanding of course concepts, without consequences like grades

- Games can be a great escape from the real world because bad consequences are rarely serious or lasting
- It's only a game
- If you lose, start the game over and try again
- Often, it's possible to recover within a game and to use what you have learned to successfully complete a task
- There are no consequences for the player personally

*“serious games and virtual environments are the future of education”*

Dr. Jeffrey Taekman

# GAMES AND ASSESSMENT

- Grades can tell students if they have failed to learn something, but students may not make good use of that feedback
- By the time students get their grades, it's often too late to do anything about them
- Games that allow students to assess their knowledge for themselves give them a chance to see where they are having trouble *before* a test

# BOARD GAMES

- Provide the ability to fantasize and live uncommon experiences
- Provide entertainment
- Factors to consider when choosing a game
  - clear and easily understood rules
  - entertaining
  - opportunity to interact with other players
  - challenging
  - allows players to influence the outcome rather than owing it to chance
  - inspires imagination
  - not too predictable
  - smooth rhythm, with few inactive (pause) moments during play

# SIMULATIONS

- Educational and learning objectives of business games
  - Experience gained
  - Strategy formulation
  - Decision-making skills
  - Learning outcomes and objectives
  - Teamwork

Rank Order	1970s	1980s	1990s	2000s
Learning outcomes and objectives	1	2	5	3
Decision-making skills	2	4	2	4
Teamwork	3	5	4	5
Experience gained	4	3	3	1
Strategy formulation	5	1	1	2

# DIGITAL GAMES IN THE CLASSROOM

- Level Up Learning: A National Survey of Teaching with Digital Games
  - Study surveyed nearly 700 U. S. K-8 teachers
  - A majority of teachers are using digital games in their classrooms
  - Games are increasingly played on mobile devices that travel with their students
  - Nearly three-quarters (74%) of K-8 teachers use digital games for instruction
    - (4/5 play games at school at least once a month; 55% play weekly)
  - Digital game-using teachers use games to deliver content mandated by local (43%) and state/national curriculum standards (41%), and to assess students on supplemental (33%) and core knowledge (29%)
  - Teachers who use games more often found great improvement in their student's learning across subject areas
  - Teachers value the ability games have to motivate low-performing students

*Do you play video/digital games for entertainment or other non-work/non-professional related reasons?*

**YES**

**NO**

78%

82%

18%

55%

PLAY

DON'T PLAY

USE GAMES TO TEACH

USE GAMES TO TEACH

**Game-using Teachers**

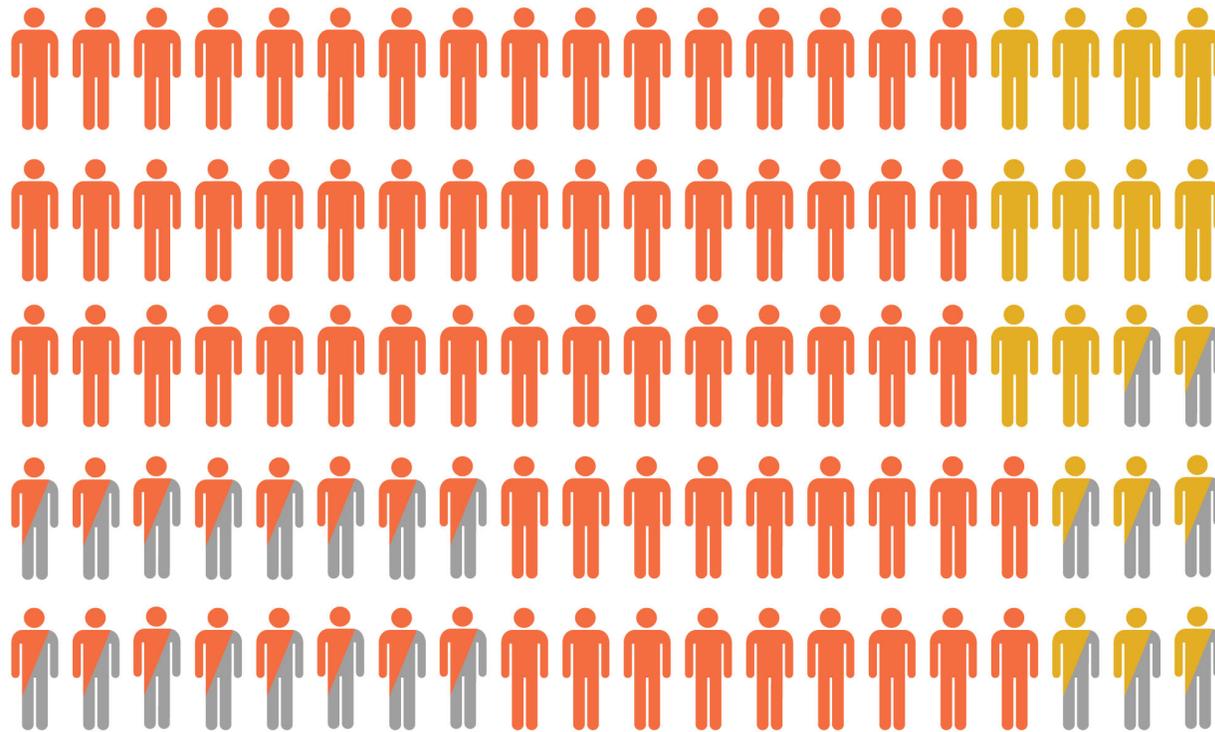
**Non-Game-using Teachers**

22%

DO NOT USE GAMES TO TEACH

45%

DO NOT USE GAMES TO TEACH



- Who's using games with their students?

- Gender does not predict digital game use in instruction
- Younger teachers who play digital games for their own pleasure are more likely to use games
- Teachers who use games more often report greater improvement in their students' core and supplemental skills
- Teachers who use games more regularly also use games to hit a wider range of objectives (teach core and supplemental content, assess students) and expose students to a wider variety of game genres and devices

- Educational games rule in K-8 classrooms.
  - Four out of five game-using teachers say their students primarily play games created for an educational audience, compared to just 5% whose students most often play commercial games.
  - Eight percent of game-using teachers say their students mostly play a hybrid of the first two options —entertainment games that have been adapted for educational use.

**PROFILE 1:  
THE DABLERS**



PLAYS GAMES



MODERATE

BARRIERS



MODERATE

TEACHES WITH GAMES



LOW-MODERATE

COMMUNITY SUPPORT



MODERATE

COMFORT LEVEL WITH GAMES



MODERATE

PD SOURCES



LOW-MODERATE

**PROFILE 2:  
THE PLAYERS**



PLAYS GAMES



HIGH

BARRIERS



HIGH

TEACHES WITH GAMES



LOWEST

COMMUNITY SUPPORT



LOWEST

COMFORT LEVEL WITH GAMES



LOWEST

PD SOURCES



LOW

**PROFILE 3:  
THE BARRIER BUSTERS**



PLAYS GAMES



HIGH

BARRIERS



HIGH

TEACHES WITH GAMES



HIGH

COMMUNITY SUPPORT



MODERATE

COMFORT LEVEL WITH GAMES



HIGH

PD SOURCES



HIGHEST

**PROFILE 4:  
THE NATURALS**



PLAYS GAMES



HIGH

BARRIERS



LOWEST

TEACHES WITH GAMES



HIGH

COMMUNITY SUPPORT



HIGH

COMFORT LEVEL WITH GAMES



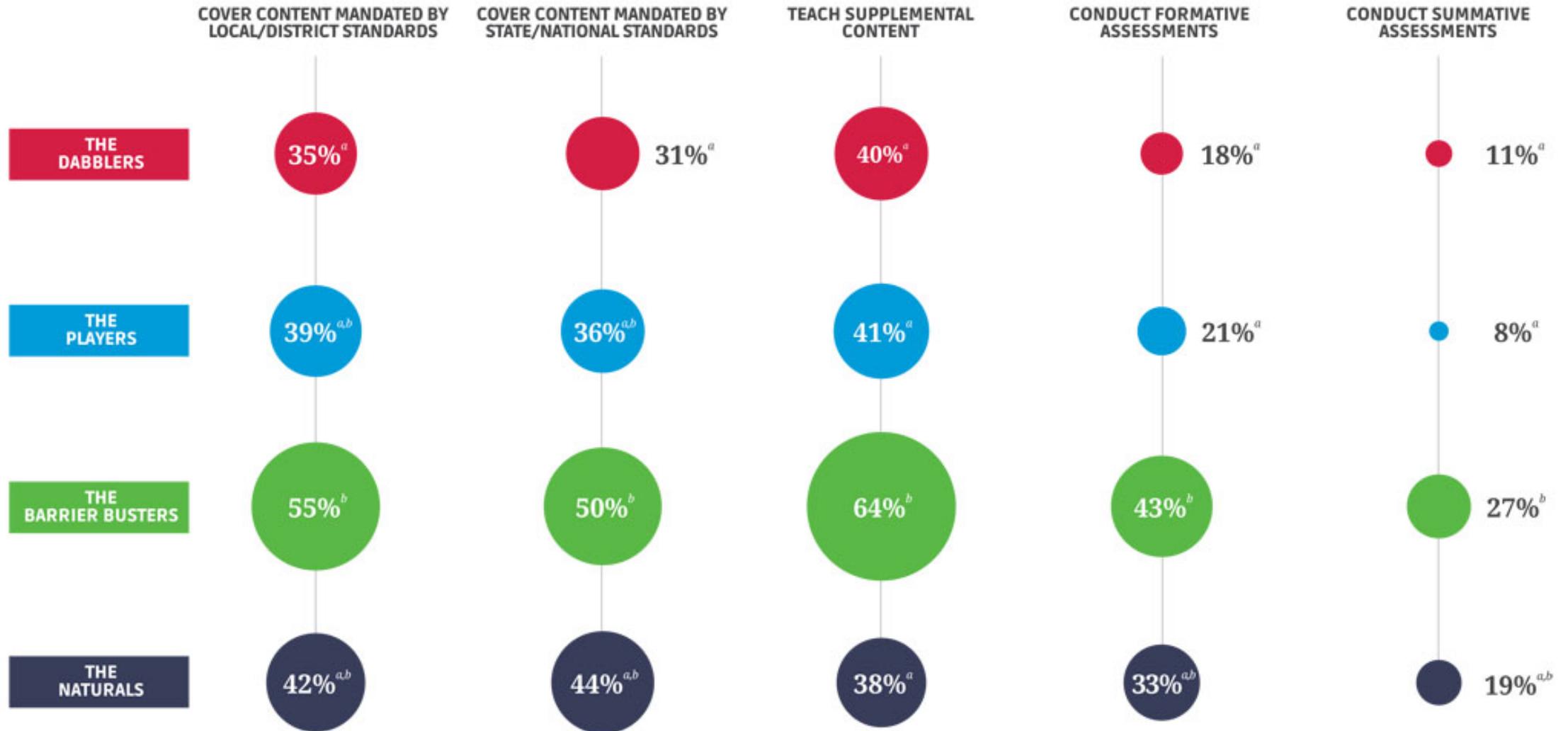
HIGH

PD SOURCES



LOW-MODERATE

## Curricular purpose of digital games by teacher profile



Statistical significance should be read between rows. Items with different superscripts differ significantly ( $p < .05$ ). Items that share a common superscript, or don't have a superscript, do not differ significantly.



# **GREAT TEACHERS**

**KEEP STUDENTS ENGAGED IN THE LEARNING  
PROCESS BY VARYING CLASS EXERCISES**

**PEDAGOGICAL TOOLS SUCH AS GAMES ARE**

- **INTERACTIVE**
- **FUN**
- **APPEALING TO MOST STUDENTS**
- **BENEFICIAL TO THE LEARNING PROCESS**

# GAMES AND BUSINESS EDUCATION

- Kinds of Games
  - Individual or Team
  - Memory/Recall
  - Racing/Times
  - Trivia
  - Hypothetical
  - Information Scavenger Hunts

Middle School	High School	College/University
Accounting Simulations	Accounting Simulations	Entrepreneur Simulations
Financial Literacy Simulations	Financial Literacy Simulations	Small Business Simulations
Entrepreneur Board Games	Entrepreneur Simulations	Personal Finance Simulations
Stock Market Simulations	Stock Market Simulations	Stock Market Simulations
	Investment Simulations	Investment Simulations

# Suitability by Subject & Depth

- .... Excellent
- ... Very Good
- .. Good
- . Some

	Lemonade Stand	Micro Business	Accounting	Entrepreneur	Entrepreneur Board Game	Small Business	CEO	World MMOG	Stock Market	Investment	Financial Literacy	Personal Finance	Personal Finance Card Game	Point of Sale	Budding Entrepreneur	Apps for iOS and Android	Health	Simulation Designer
<b>Subject</b>																		
<b>Business</b>	...	...	...	...	...	...	...	...	.	.	.	.		.	.	Apps cover many subjects at various levels of depth Covers 59 fundamental health and wellness topics		Uses your content
<b>Entrepreneurship</b>	...	...	...	....	....	....	...	....	.	.	.	.		.	...			
<b>Marketing</b>	.	..	..	...	..	....	....	....							.			
<b>Investing</b>	.	.	.	.	.	.	..	..	....	....	..	....			.			
<b>Finance</b>	.	.	.	..	..	....	....	....	....	....	....	....	....	.	..			
<b>Economics</b>	.	.	.	..	..	..	....	....	..	....	....	....	.	.	.			
<b>Accounting</b>	..	....	....	....	....	....	....	....	.	.	..	..	.	..	.			
<b>Math</b>	....	....	....	..	....	..	..	.	..	..	..	..	.	..	.			
<b>Career</b>	..	..	..	....	....	..	..	....	..	..	....	....		..	.			
<b>Work-Life Balance</b>	.	.	.	....	....	..	.	..			..	..						
<b>Life Skills</b>	.	.	.	....	....	....	.	....	.	..	....	....	..	.	....			
<b>Health &amp; Wellness</b>																...		
<b>Content Level</b>																		
<b>Introductory</b>	....	....	....	..	....	..	....	....	....	....	....	..	....	....	....		....	
<b>Advanced Concepts</b>	.	..	..	....	..	....	....	....	.	..	....	....	..	.			.	

- **Have Fun with Twitter** - create hashtags about a relevant classroom topic and encourage participation from external parties
- **Use Video Chats** - Use videoconferencing solutions such as Skype to connect with faraway experts or other classrooms for an online meeting via webcam
- **Create a Class Blog or Wiki** - Encourage students to respond to in-class lessons or current events and topics, and devise a system for posting thoughts, news or impressions of them to a class blog or Wiki
- **Put Together a Podcast** - Have your class take turns reading passages from a book, or schedule and record a discussion point based on your curriculum or a specific topic
- **Use Pinterest** - Create a private board on Pinterest to share snapshots of classroom activities, projects, and field trips, or encourage parents to connect and find ways to help show their support for the classroom

- **Harness the Power of Excel** - Focus on real-world scenarios to teach basic financial planning concepts
- **Promote Greater Good** - If there's an international, national or even local need for charitable donations or disaster relief, classrooms can use online tools to solicit and track charitable donations, or spread awareness for these causes.
  - Sites like FirstGiving or Pledgeie can be used as a complement to cause-based learning and help students create social awareness

# LET THE GAMES BEGIN . . .

- Questions?

Look for a list of games for business classes in the upcoming 2015 NBEA Yearbook, *Recent and Projected Technology Trends*, Chapter 9 – Game-Based Learning and Gamification

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