

The background features a large, faded watermark of the Marion Technical Institute logo. The logo consists of the letters 'MTI' in a large, bold, serif font, with 'MARION TECHNICAL INSTITUTE' written in a smaller, sans-serif font below it. The entire logo is enclosed in a circular border.

MTI

Meeting the Future Head On!

Tom Welch

International Center for Leadership in Education

September 24, 2008

Intro to the Project

- Unique Endeavor
- Joint Project between MTI and the ICLE
- Project reflects the goals
 - New approaches
 - Nonlinear
 - “Version” orientation
 - Increasing complexity
- Focus on carving out new opportunities for student learning


The Changing Landscape

- Increasing gap between the way students think, learn and experience the world and the way their teachers think, learn and experience the world
 - Not a value judgment
 - A plain recognition of the facts

September 24, 2008

Brief Overview of the Day

- Morning Session
 - Intro to the Project
 - Goals
 - Opportunities
 - Charting the Road ahead
 - Involvement and expectations

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- The background of the slide features a large, faded watermark of the MIT logo. The logo consists of the letters 'MIT' in a large, bold, serif font, with the words 'Massachusetts Institute of Technology' written in a smaller font below it. The entire logo is set against a circular, glowing yellow and white background.
- Luncheon
 - Overview of the Research
 - Meeting the Future Head On
 - Gaming Presentations
 - Zon
 - History/Mystery
 - Time Engineers
 - Next Steps

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- Essential Question

- Are there ways to engage students in learning through the use of computer games that will cause learning to occur as never before ?

Goals

Some of the long term goals

- Increased learning
- Increased levels of learner engagement
- Increased learner opportunities
- Increased harmony between teaching practices and learning practices
- Increasing match between learning and credentialing

Some of the medium term goals

- Participation in online games for learning
- Learner/Faculty Research Group
- Securing of grant funding to move the project forward

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Some of the short term goals

- Learner/Faculty research group
- Student surveys
- Environmental scans
- Initial gaming experiences
 - Zon
 - Other

Computer Gaming

- It's not your daddy's "Pong" Game
 - (Vocab: MMORPG)
- Increasing research focus
 - Pew report
 - Steady publication of books on the subject
 - NASA RFI
 - Funding opportunities

Some of the Current Thinking

- CG's have a great deal in common with “traditional” learning
 - Learning is active, not passive
 - Success is implied
 - Failure is seen as part of the learning process
 - Persistence is rewarded
 - “Do overs” are built in
 - Both individual skill and social interaction are involved

A peek at some of the research

- Marc Prensky
- The Pew Report
- Other sources

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My Latest Book:

How Computer and Video Games Are Preparing Your Kids
For 21st Century Success—and How You Can Help!

“

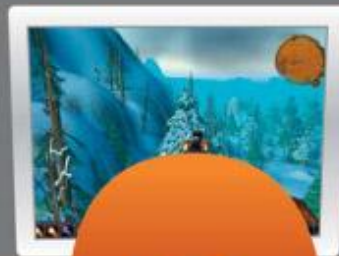
**Don't Bother
Me Mom—**

**I'm
Learning!**

”

Marc Prensky

with a foreword and contributions by
James Paul Gee, Ph.D.
Tashia Morgridge Professor of Reading
University of Wisconsin-Madison





***WE HUGELY
UNDERESTIMATE
WHAT OUR
STUDENTS
CAN DO!***

Today's students get Engaged through

- 1. Creating things they want to make**
- 2. Voicing their opinions**
- 3. Making decisions / Having control**
- 4. Interacting with and affecting the world**

Games have

The Motivator: Goals you want to reach

The Learning Loop: Decisions & Feedback

The Practice Machine: Leveling Up

The Persistence Inducer: Adaptivity / Flow

The Creativity Switch: Cooperation

The Emotional Rush: Competition

For Learning, Engagement Matters!



**School
Engagement**

Rare

**Kids being
bored is OK**

**Game
Engagement**

Crucial

**If not engaging,
games don't get
bought, so boring
is NOT OK**

For Learning in Games, Complexity Matters!



What “Digital Immigrants” know

**“Mini”
Games**

**5 min- 2 hours
TRIVIAL**

**Or, at best,
One-Noted**

What “Digital Natives” play

**“Complex”
Games**

**10-100 hours
NOT TRIVIAL**

**Require the same amount of
time, or more, as a
Carnegie course
(i.e. 40 hours +)**

10 Rules of Game Engagement

(from complex games)

Focus On Engagement

Have “Be a Hero” Goals

Add Frequent Decision Making

Don’t Suck The Fun Out

Emphasize Gameplay Over Eye Candy

Provide a Strong Emotional Connection

Level Up For Evaluation

Balance Cooperation & Competition

Personalize & Adapt

Iterate

Focus On Engagement

**School
Focus**

**Game
Focus**

Content

Engagement

Have “Be a Hero” Goals

**School
Goals**

**Learn the
“material”**

**Get Good Grade
/Pass test**

Understand

**Game
Goals**

Be a Hero

**Help Your
Friends**

Build/Create

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Understanding Matters

**because It helps you
reach goals**

Add Frequent Decision Making

**School
Decisions**

Almost never

Mostly on tests

**No immediate
feedback**

**Game
Decisions**

Every $\frac{1}{2}$ sec

**Help you
reach goals**

**Immediate
Feedback**

Gameplay

includes

- **Continuous decision making**
- **Level Ups**
- **Good pacing**
- **Complexity**
- **Important choices**
- **Immediate feedback**
- **Adapting to the player's skills**

Level Up For Evaluation

**School
Evaluation**

**Game
Evaluation**

Test-based

**Level-based:
Only move
up when
competent**

Balance Cooperation & Competition

**School
C & C**

**Haphazard,
Test-based**

**Game
C & C**

**Extremely
carefully
thought out
& balanced**

Personalize & Adapt

**School
P & A**

**Almost
none**

**Game
P & A**

**Different for
each
player.
Feels made
just for you**

Fun Matters



School Fun

Oxymoron?

Teacher
dependent

Game Fun

**Absolute
requirement**

**Comes from solving
a problem mentally**

Curriculum Design

Game Design

Focus

- **Content**
- **Engagement**

Mode

- **Presentation**
- **Gameplay**

Decisions

- **Relatively Rare**
- **Frequent and important**

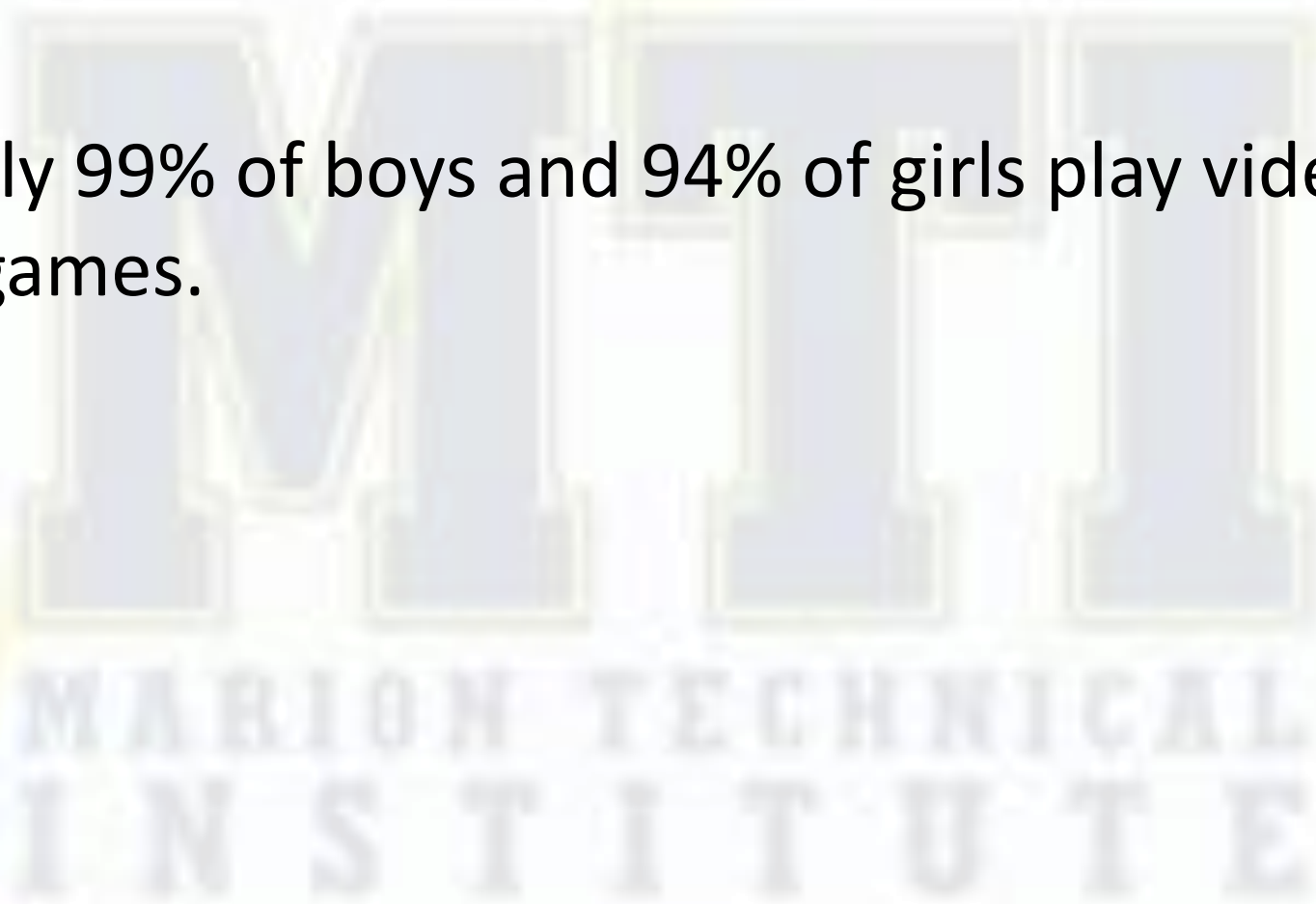
ENGAGEMENT

What others are saying:

Almost all teens play games.

Video gaming is pervasive in the lives of American teens—young teens and older teens, girls and boys, and teens from across the socioeconomic spectrum. Opportunities for gaming are everywhere, and teens are playing video games frequently. When asked, half of all teens reported playing a video game “yesterday.” Those who play daily typically play for an hour or more.

- Fully 97% of teens ages 12-17 play computer, web, portable, or console games. Additionally:
- 50% of teens played games “yesterday.”
- 86% of teens play on a console like the Xbox, PlayStation, or Wii.
- 73% play games on a desktop or a laptop computer.
- 60% use a portable gaming device like a Sony PlayStation Portable, a Nintendo DS, or a Game Boy.
- 48% use a cell phone or handheld organizer to play games.

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Fully 99% of boys and 94% of girls play video games.

Source: Pew Internet & American Life Project. Gaming and Civic Engagement Survey of Teens/Parents, Nov. 2007-Feb. 2008.

- **Youth play many different kinds of video games.**
- Most teens do not limit themselves to just a few game genres, instead choosing to play many different types of games. Daily gamers are more likely to play a wider range of game genres than non-daily gamers.
- 80% of teens play five or more different game genres, and 40% play eight or more types of games.
- 55% of daily gamers play eight or more types of games; just 33% of less frequent gamers do so.
- Girls play an average of 6 different game genres; boys average 8 different types.

Game Genres in Order of Popularity

What kinds of games do you play? Do you play...?

Genre (examples)	% teens who report playing games in this genre
Racing (NASCAR, Mario Kart, Burnout)	74%
Puzzle (Bejeweled, Tetris, Solitaire)	72
Sports (Madden, FIFA, Tony Hawk)	68
Action (Grand Theft Auto, Devil May Cry, Ratchet and Clank)	67
Adventure (Legend of Zelda, Tomb Raider)	66
Rhythm (Guitar Hero, Dance Dance Revolution, Lumines)	61
Strategy (Civilization IV, StarCraft, Command and Conquer)	59
Simulation (The Sims, Rollercoaster Tycoon, Ace Combat)	49
Fighting (Tekken, Super Smash Bros., Mortal Kombat)	49
First-Person Shooters (Halo, Counter-Strike, Half-Life)	47
Role-Playing (Final Fantasy, Blue Dragon, Knights of the Old Republic)	36
Survival Horror (Resident Evil, Silent Hill, Condemned)	32
MMOGs (World of Warcraft)	21
Virtual Worlds (Second Life, Gaia, Habbo Hotel)	10

Gaming is often a social experience for teens.

- 65% of game-playing teens play with other people who are in the room with them.
- 27% play games with people who they connect with through the internet.
- 82% play games alone, although 71% of this group also plays with others.

Some other voices

On several measures-including family closeness, activity involvement, positive school engagement, positive mental health, substance abuse, self-concept, friendship network, and disobedience to parents-game players scored more favorably than did peers who never played computer games.

It is concluded that computer games can be a positive feature of a healthy adolescence.

(Durkin & Barber, 2002, p. 376)

Young people's literacy activities in the semiotic domain of gaming may prepare them to operate, communicate, and exchange information effectively in a world that is increasingly digital and transnational-and in ways that their formal school does not.

Gaming Lives in the Twenty-First Century: Literate Connections

(Gail E. Hawisher and Cynthia L. Selfe)

“The most under-examined potential of games may be their impact as an educational medium. I can relive historical eras (as in Pirates!), investigate complex systems like the Earth's chemical & life cycles (SimEarth), govern island nations (Tropico), manage complex industrial empires (Railroad Tycoon), or, indeed, run an entire civilization (Civilization series). . .

So MTI . . .

- Where do we go from here?
- The Afternoon Games
 - Zon
 - Time Engineers

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- Stay tuned (and engaged) to follow this project into the future.

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Did I forget to mention travel in time to Ancient Greece (Caesar I, II & III), Rome (Age of Empires I, and II), relive European colonization of the Americas (Colonization), or manage an ant colony, farm, hospital, skyscraper, theme park, zoo, airport, or fast food chain?”