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How Disruptive Learning Technologies Deliver Higher Knowledge Levels

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What we know about the brain

Designed to solve problems, related to survival, in an unstable outdoor environment, in constant motion, walking 12 miles a day.
So we created: The classroom
We modelled online learning on the classroom

The best that can be said about most online learning:

Gives you the sensation of coma without the worry and inconvenience.
Millennial gaming culture

Jane McGonigal:
Average 21-year-old has spent 10,000 hours gaming
= time they’ve spent in school 5th to 12th grade

* 99% of boys, 94% girls
Gaming culture

Gaming as a spectator sport:
PewDiePie, 43 million subscribers, most of any YouTube channel

Games about games:
33 million people in the U.S. play fantasy sport
Gamification in learning

Meta study of 65 studies and 6,476 trainees, video game trainees have:

- 11% higher factual knowledge level
- 14% higher skill-based knowledge level
- 9% higher retention rate

Source: "A Meta-Analytic Examination of the Instructional Effectiveness of Computer-Based Simulation Games" Traci Sitzman, Personnel Psychology, January, 2010
Cloud Defense game

Challenge: practice and master new security concepts

Solution: A hybrid “tower of defense” and “first-person shooter” game

- Storyline about a crime syndicate
- Scores, rewards, leveling, feedback, and leaderboard
Game Mechanics

- Storyline about a crime syndicate
- Leveling
- Scores and feedback
- Leaderboard
- Badging
- Feedback
- Game aesthetic
Rapid prototyping, testing, and iteration

**Usability test:**
Identify usability problems in menus, in-game displays, controls, and gameplay.

**Playtest:**
Does the game engender the excitement and learning for which it was designed.
Game analytics funnel
3-D immersive management game

- 3-D, high fidelity, virtual hotel
- Solve guest satisfaction, safety, security, and business operations problems
Millennials spend more time with digital video than with both social media and traditional TV screens.

Snap-chat-watch, visual storytelling, talking with pictures
“Mission Possible” sales sim

Hewlett Packard Enterprise

Challenge: Train HP’s 10,000 global sales reps on how to position its four strategic Transformation Areas

Solution: ‘Mission Possible’ online training program with game mechanics like:
- Story-line with live-action video
- Points and leaderboard
- Levels
- Badges
Launched Globally in 5 languages
From multimedia to transmedia storytelling

Leveraging the explosion of screens and devices to connect wider and deeper; telling a story with video, games, mobile devices, social media, and virtual reality where each medium makes its own unique contribution to the unfolding of the story.
Transmedia storytelling

A scripted video drama series: “The iTent”

Radio-style podcast interviews with company leaders

“Scribe“ instructional videos

Marketing campaign

Watch video trailer: https://vimeo.com/51927222
Podcast demo: http://www.ggdevelopment.com/gtsr_127xged/InclusionCafe_Sample.mp3
Scribe: http://vimeo.com/36701235
From horizontal to vertical viewing

Snapchat: Vertical video ads have nine times more completed views than horizontal video
From flat imagery to 3D scenes

“Virtual Reality is the next major computing and communication platform after phones”

Mark Zuckerberg

“We expect virtual and augmented reality to become an $80 billion market by 2025, roughly the size of today’s desktop PC market”

Goldman Sachs
Simulate technical skills

“Flight simulator” for any task that’s too dangerous, expensive or inconvenient to practice in real life

Learning and retrieval under the same conditions
Simulate technical skills

Five NFL teams and nine college teams are already using VR to train their quarterbacks.

Improves decision-making by 30 percent, and made decisions about one second faster.
Simulate technical skills (cont)

Applications:
- Emergency response
- Product installation or repair
- Administrative processes
- Healthcare procedures
- Etc.
VR “The final medium”

“...We shouldn’t think of VR as a media experience at all, we should just consider it an ‘experience’”

Stanford University professor Jeremy Bailenson
Soft-skills training

“The ultimate empathy machine”
Chris Milk, film maker

Decision makers at the World Economic Forum in Davos experiencing a Syrian refugee camp in Jordan
Public speaking

Fear of public speaking can be reduced with almost 20 percent in just four weeks with VR exercises.

South Korean study: 27 participants practiced speaking in front of a virtual avatar audiences in job interviews, business meetings and conferences. At the end, they presented to a live audience. Nine of ten participants had a reduction in anxiety levels as measured by heart rate, level of eye contact, and self-reported questionnaire.
Soft-skills training (cont.)

Applications:
- Sales and service skills
- Coaching skills
- Diversity and inclusion
- Onboarding
- Etc.

“For about 12 years now, we’ve been running study after study showing that feeling discrimination firsthand while walking a mile in someone else’s shoes is a better way to change attitudes and behavior.”
Jeremy Bailenson, Stanford University Prof.
Virtual reality headsets

- **Google cardboard**
  - Headset: $15

- **Samsung Gear VR**
  - Headset: $500
  - PS bundle: $800
  - Google cardboard $100

- **Sony PlayStation VR**
  - Headset: $500
  - PS bundle: $800

- **HTC Vive**
  - Headset: $800
  - PC bundle: $1,700

- **Facebook Oculus Rift**
  - Headset: $600
  - PC bundle: $1,500
Not just a consumption too, but a creation tool as well...

Google Tilt Brush is an example of a 3D prototyping tool
Augmented reality

Do you remember R2-D2 projecting a holographic message of Princess Leia?

Augmented reality can do that, and more, promising to replace computers and phones.
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Gronstedt Group

Custom-develops epic learning experiences that inspire breakthrough performances for these clients

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