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The Importance of Design Integrated with the Latest Learning Technologies

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Overview



- Introduction
 - End Goal: Increase Performance
 - ADL Future Direction in Context of Performance Design
- Design and Technology
 - Learning Theories & Instructional Strategies
 - Technologies
 - Informal Learning Environment
- Conclusion



Introduction



- End Goal: Increased Performance
 - Liability vs Performance Training
 - Mandatory Yearly Training Courses
 - High End Simulation

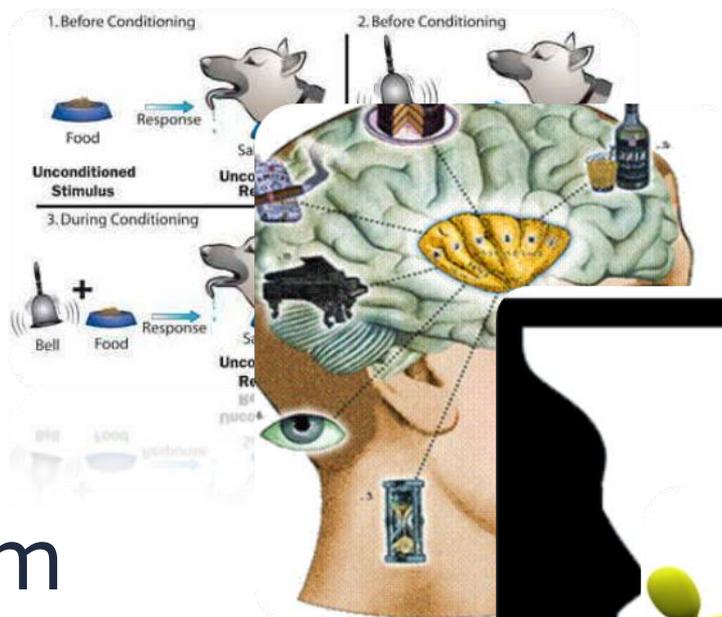




Learning Theories



- Behaviorism
- Cognitivism
- Constructivism
- Social





Instructional Strategies



- Direct Instruction
- Indirect Instruction
- Experiential Learning
- Independent Study
- Interactive Instruction

<http://www.youtube.com/watch?v=dxPVyieptwA&NR=1>



Technology & ISD



- Instructional/Training requirements should drive learning objectives/goals
- Learning objectives/goals should drive selection of instructional strategies
- Instructional strategies should drive technology selection

- In other words, technology **ENABLES** learning



Importance of Design



- Film
- Compare this...

There is a semi-official consensus among film critics that Citizen Kane is the greatest film ever made, which has led Roger Ebert to quip: "So it's settled: Citizen Kane is the official greatest film of all time." [2] It topped both the AFI's 100 Years... 100 Movies list and the 10th Anniversary Update, as well as all of the Sight & Sound polls of the 10 greatest films for nearly half a century

- www.wikipedia.com from "AFI Crowns Top 10 Films in 10 Classic Genres." American Film Institute via ComingSoon.net, June 17, 2008.



Importance of Design

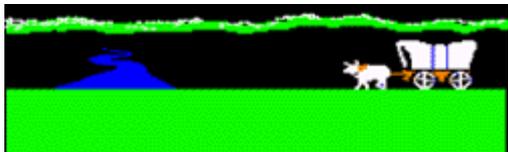


- With...

Transformers: Revenge of the Fallen is a noisy, underplotted, and overlong special effects extravaganza that lacks a human touch.

- www.rottentomatoes.com

- Games
- Compare this...



Press RETURN to st
Date: A
Weather: M
Health: 9
Food: 9
Next landmark: 4
Miles traveled: 6

The river is too deep to
ford. You lose:
74 bullets
2 wagon wheels
2 wagon axles
2 oxen
BOOGER (drowned)
SNOT (drowned)
STINKY (drowned)

You have died of dysentery'
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- www.wikipedia

- Images from classicgaming.gamespy.com



Importance of Design



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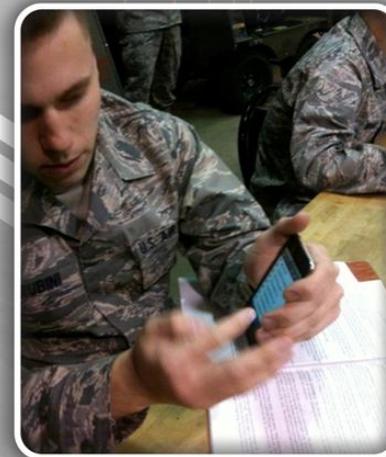
Technologies



- Hardware
 - PC, Tablet PC, Mobile Phone, Simulator, Gaming Console, etc.
- Software
 - Virtual World, Simulation, LMS, Web Browser, Intelligent Tutoring System, Social Applications, Games, etc.



Emergent Technologies Trends





Technologies



Are we using technologies effectively?



Virtual Worlds



- Avatar creation
- Exploration of synthetic environment
- Interaction with others
- Every action in the environment can be recorded





Mobile Devices



- Ubiquitous
- Enable Performance Support
- Personalized
- User data can be recorded





Intelligent Tutoring Systems



- High initial costs; low maintenance thereafter depending on situation
- Server as mentor to learner
 - Can help guide learner in higher order thinking skills
- Possibility of linking multiple small, domain-specific ITS



Social Media



- Connects people in new ways
- Helps people expand their networks
- Real-time
- Professional, informal, familial





Importance of Design



- ISD should consider the learners' environment, culture, prior experience and abilities, capacity and motivation.
- Almost impossible to cater to each person's individuality...
- Further need for increased **learning skills** in order to help learners function more effectively in information-saturated environment.



Design of Informal Learning Environment



- Provide list of training objectives/goals
- Learners should be able to find information on web regarding requirements/goals
- Need for accurate assessment mechanisms
- Highly applicable to much of the learning content; but not to all situations
- Discovery learning, higher levels of retention



Next Gen Learner



- Learner Skills
 - Cognitive Domain
 - Bloom's Taxonomy
 - Logic
 - Meta-cognition
 - Mental Models
 - Memory
 - Cognitive Load



Next Gen Learner



- Learner Skills

- Affective Domain

- Emotional Control

- Learner's abilities to maintain emotional control in a variety of situations

- Resilience

- Emotional Awareness

- Learner's abilities to identify fluctuation in their own emotional state





Conclusion



- End Goal: Increased performance
- Apply sound learning theories and instructional strategies
- Leverage technologies' strengths
- Consider pushing less content; allow learners to learn informally accompanied by formal assessment mechanisms



Thank You



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