DIGH 402 - Instructional Design and e-Learning

Spring Semester 2015

Week 6 - Extra

# design and development in e-Learning

personalisation principle 1

# design and development in e-Learning

personalisation principle 2 - on-screen agents for learning (part 1)

- commonly known as paedagogical agents
- on-screen characters and coaches to help guide the learning process
    - characters, avatars, videos...
- synthesised computer generated voice, human recorded voice, printed text...
- representations of real people using video and human voice
- artificial characters using animation and a computer generated voice
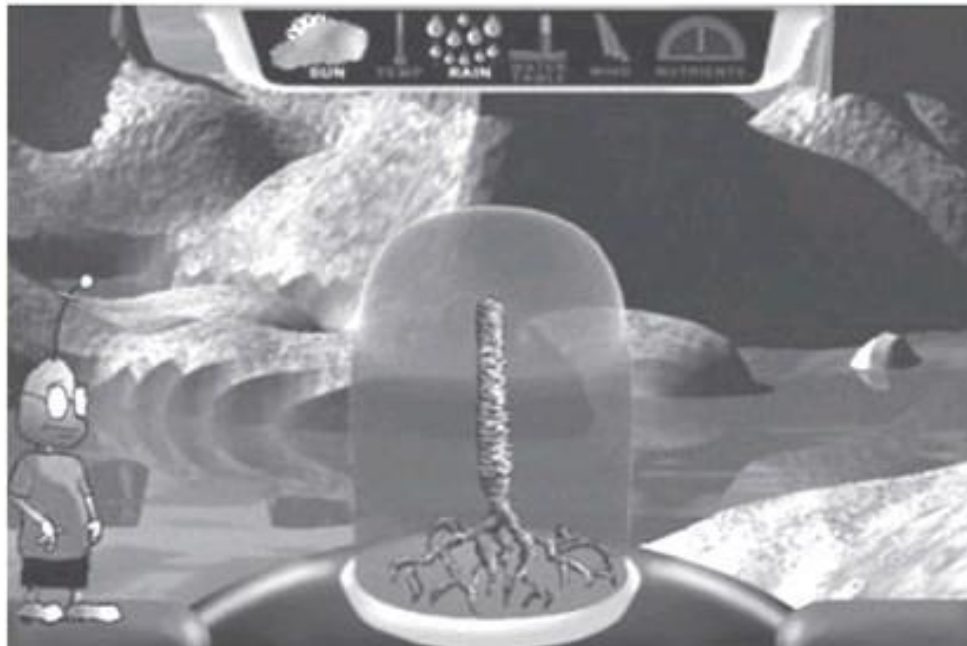- employment as worthwhile techniques in instructional design

# design and development in e-Learning

personalisation principle 2 - on-screen agents for learning (part 1)

# design and development in e-Learning

personalisation principle 2 - on-screen agents for learning (part 2)

Moreno, R., Mayer, R.E., Spires, H., and Lester, J. 2001. "The case for social agency in computer-based teaching: Do students learn more deeply when they interact with animated pedagogical agents?" Cognition and Instruction 19. PP.177-214.

- Atkinson, R.K. 2002. "Optimizing learning from examples using animated pedagogical agents." Journal of Educational Psychology 94. PP.416-427.

# design and development in e-Learning

personalisation principle 2 - on-screen agents for learning (part 2)

# design and development in e-Learning

personalisation principle 2 - on-screen agents and student learning

- positive effects of on-screen agents...
    - liking a character not necessarily the same as improved learning
- value of agents relative to cost, both financially and extra development
- Herman...
    - 24 to 48% improvement in transfer test
- Peedy...
    - 30% improvement

# design and development in e-Learning

personalisation principle 2 - on-screen agents and visual realism

- effectiveness of 'Herman' and 'Peedy'

- caricature or realism in design of on-screen agents

- 'Design-A-Plant' with two different-on-screen agents

     - Moreno, R., Mayer, R.E., Spires, H., and Lester, J. 2001. "The case for social agency in computer-based teaching: Do students learn more deeply when they interact with animated pedagogical agents?" Cognition and Instruction 19. PP.177-214.

- other tests include:

     - Craig, S.D., Gholson, B., and Driscoll, D.M. 2002. "Animated pedagogical agents in multimedia learning environments: Effects of agent properties, picture features, and redundancy." Journal of Educational Psychology 94. PP.428-434.

# design and development in e-Learning

personalisation principle 2 - on-screen agents and aural realism

- conversational style to improve efficiency of on-screen agents
- 'Design-A-Plant' game with Herman...
    - spoken rather than on-screen text
- Peedy...
    - conversational style important for on-screen agent
- on-screen agent's voice important to success of role in instructional design

# design and development in e-Learning

personalisation principle 2 - on-screen agents and aural realism