Research in Online Education

University of Florida
Presentation to Board of Governors
September 2014
Joseph Glover, Provost
Carole Beal, College of Education

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The Holy Grail of Online Education: The Effective Use of Data Analytics

- **Goals:**
  - Allow students to move as quickly as possible
  - Independent learning
  - Personalized learning
  - Apply advances in neuroscience, cognitive science, and education
  - Detect weaknesses
  - Detect when interventions are necessary

- **The State of the Art:**
  - Relatively primitive

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UF Research Agenda in Online Education

- **Through the Preeminence Initiative, UF is investing in this area: Online Learning Institute**

- **Recent hires:**

  - **Carole R. Beal comes to us from the School of Information at the University of Arizona (Ph.D. Stanford University 1983 in Psychology). Research interests:**

    - Technology-based learning

    - Intelligent tutoring systems & serious games for K-12 math & science education

    - Learning analytics

    - Diversity & inclusion in STEM education

  - **Sri Kalyanaraman comes to us from UNC Chapel Hill, where he was Director of the Media Effects Laboratory**

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Hires in Online Learning Institute (cont'd)

- **Angelos Barmpoutis, stationed in our Digital Worlds Institute**

- **An additional hire in Engineering, TBA**

Unizen

- **Formed by Consortium of universities to achieve 3 goals:**

  - Acquire a common Learning Management System to serve as a platform

  - Build or acquire a Data Repository

  - Build, acquire, and research Learning Analytics

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- **Online Learning Institute:** Research on how to optimize learning in online spaces
  - "Everyone's doing it" -- but not every program will survive
  - If we're going to do it, let's do it right
  - We don't necessarily know how to do it well… yet

Examples

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- **Accountability**: are the approaches we use in online education providing the outcomes we want?
  - retention, progress to degree
  - knowledge and skills
  - preparation for workforce, employer satisfaction

EASY
We already know how to do program evaluation

HARDER
If the answer is "no" we don't know (yet) how to improve

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- **What's the connection between students' goals and the online learning experience?**
  - **Persistence is linked to clear goals**

    This isn't what I signed up for...
  - **Attrition is a *major* challenge**
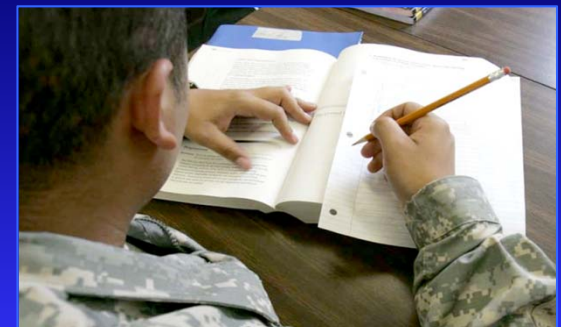 - **Understanding why students enroll in online degree programs will help us make them successful**

Non-residential   International   Veterans

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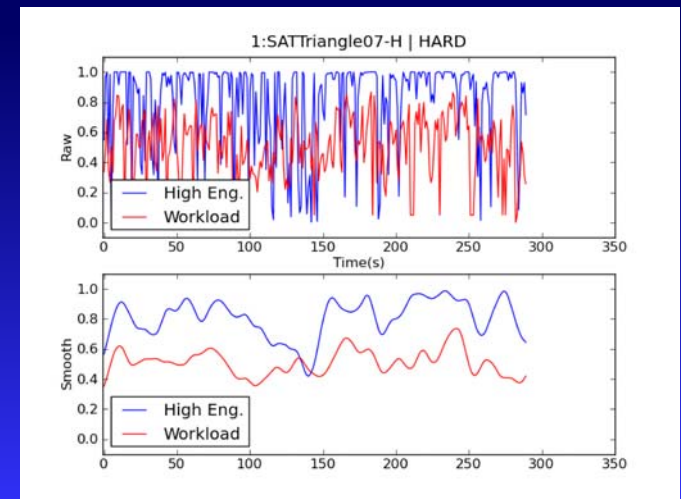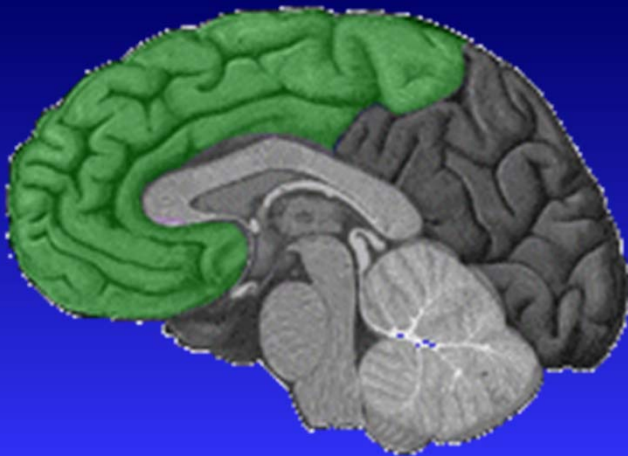
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- **Neuroscience & education:**
  - **Neuroscientists are discovering how the brain learns**
  - **Consumer-level brain monitoring devices are (almost) available**
  - **Link brain data to learning analytics dashboard, use to select activities, optimize results?**

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- **What is the "sweet spot" between *personalized* and *prescriptive*?**

Answering this question will make UFO unique

Theories of education: Optimal outcomes w/ a *self-directed learner*

Overly-prescriptive instruction: *reduced motivation, decline in innovation*

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