A Comparison of Student and Faculty Academic Technology Use Across Disciplines

Kevin R. Guidry
Allison BrckaLorenz
Indiana University-Bloomington
Technology seems important...
...but it shouldn’t be.

“[Media are] mere vehicles that deliver instruction but do not influence student achievement, any more than the truck that delivers our groceries causes changes in our nutrition” (Clark, 1983, p. 445).
So what about...

• Disciplinary differences?
• Student/faculty differences?
Methodology

• Additional technology questions
  – National Survey of Student Engagement (NSSE)
  – Faculty Survey of Student Engagement (FSSE)
Sample

- 18 institutions
- 4,503 senior students
- 747 faculty members
Methodology

• 10 questions
  – Never, Sometimes, Often, Very often, I do not know what this is
Methodology

• Technologies:
  – Course management systems (WebCT, Blackboard, Desire2Learn, Sakai, etc.)
  – Student response systems (clickers, wireless learning calculator systems, etc.)
  – Online portfolios
  – Blogs
  – Collaborative editing software (Wikis, Google Docs, etc.)
  – Online student video projects (using YouTube, Google Video, etc.)
  – Video games, simulations, or virtual worlds (Ayiti, EleMental, Second Life, Civilization, etc.)
  – Online survey tools (SurveyMonkey, Zoomerang, etc.)
  – Videoconferencing or Internet phone chat (Skype, TeamSpeak, etc.)
  – Plagiarism detection tools (Turnitin, DOC Cop, etc.)
Results: Student Clusters

- High Use: 4.8%
- Medium Use: 19.8%
- Low Use: 48.2%
- No use: 27.1%
Results: Faculty Clusters

- High use: 8.9%
- No use: 37.6%
- Low use: 53.6%
Results: Student Disciplines

- **Total**
- **Social Science**
- **Professional**
- **Physical Science**
- **Engineering**
- **Education**
- **Business**
- **Biological Sciences**
- **Arts and Humanities**

The graph shows the distribution of student discipline areas across different levels of use: High Use, Medium Use, Low Use, and No use.
Results: Student Disciplines

• Consistently “high” users:
  – Professional
  – Business
  – Education

• Notable technologies:
  – Professional students & clickers
  – Education students & e-portfolios
Results: Faculty Disciplines

- **Total**
  - High use: 0%
  - Low use: 60%
  - No use: 40%

- **Social Science**
  - High use: 0%
  - Low use: 50%
  - No use: 50%

- **Professional**
  - High use: 0%
  - Low use: 60%
  - No use: 40%

- **Physical Science**
  - High use: 0%
  - Low use: 70%
  - No use: 30%

- **Engineering**
  - High use: 0%
  - Low use: 50%
  - No use: 50%

- **Education**
  - High use: 10%
  - Low use: 50%
  - No use: 40%

- **Business**
  - High use: 0%
  - Low use: 70%
  - No use: 30%

- **Biological Sciences**
  - High use: 10%
  - Low use: 50%
  - No use: 40%

- **Arts and Humanities**
  - High use: 20%
  - Low use: 40%
  - No use: 40%
Results: Faculty Disciplines

• Uniformly low use of:
  – Blogs (mean 1.21; std dev .59)
  – Collaborative editing tools (mean 1.22; std dev .61)
  – Games, simulations, and virtual worlds (mean 1.15; std dev .50)

• Notable technologies:
  – Education faculty & e-portfolios
Results: Student/Faculty Comparison

- More student use than faculty (except plagiarism detection tools)
Conclusion

• Students report more use of technology
• Faculty use of technology is low
• Disciplines matter
Questions?

• Kevin R. Guidry
  kguidry@indiana.edu

Paper and slides available on AIR website and NSSE website (nsse.iub.edu)