Detour Ahead: Overcoming Roadblocks to Educational Technology Use in College Teaching

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Research Overview

• Examined and compared student and faculty perspectives on use of ICTs
• 311 students from 1 English and 1 French language Cegep
• 114 of the professors nominated by students for excellent use of ICTs
Method

Students

• Online questionnaire
• Experiences with technology in cégep
  • Technologies professor used
  • What works well for them
  • Nomination of professors

Professors

• Semi-structured interview
• Checklist of technology used
Student Characteristics

- **Sex**
  - Female: $n = 183$ (59 \%)
  - Male: $n = 126$ (40 \%)
- **Age**: average $= 20.50$
- **Program of Study**
  - Pre-university: $n = 210$ (68 \%)
  - Technical / career: $n = 94$ (31 \%)
Professor Characteristics

- Language of Cegep:
  - English (54%)
  - French (46%)
- Sex: Female (40%), Male (60%)
- Program:
  - Social science (34%)
  - Science (37%)
  - Arts (28%)
Value of Research

- Findings need to be accessible
- Impact on daily teaching
- Collaborative effort
- Solve practical problems
I Like Courses Where Professors Use Technology

<table>
<thead>
<tr>
<th>Agreement Level</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>1%</td>
</tr>
<tr>
<td>Moderately Disagree</td>
<td>2%</td>
</tr>
<tr>
<td>Slightly Disagree</td>
<td>3%</td>
</tr>
<tr>
<td>Slightly Agree</td>
<td>25%</td>
</tr>
<tr>
<td>Moderately Agree</td>
<td>41%</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>28%</td>
</tr>
</tbody>
</table>
Findings and Possible Solutions
#10 : Attendance Records Online

- Professors used – 59%
- Worked well for students – 90%

Comments
- Professors
  - Students should already know
  - Time consuming
#10: Possible Solutions

- Use the online app (iOS/Android) (smartphone/tablet) for either Lea or Moodle to take the attendance.

https://download.moodle.org/mobile/


https://itunes.apple.com/ca/app/omnivox-mobile/id721913649?mt=8
#9 : Use of Clickers

- Professors used – 17%
- Worked well for students – 73%
- Comments
  - Professors
    - Inconvenient to pick up and return
    - Sometimes they do not work
    - Despite this, on faculty wish list
#9 : Possible Solutions

- Use an online (web-based) clicker solution, like Poll Everywhere:
  - https://www.polleverywhere.com/
#8 : Use of Smart Board

- Professors used – 24%
- Worked well for students – 78%

Comments
- Professors
  - On faculty wish list (not readily available)
  - Lack of knowledge about how to use
- Students
  - Still want conventional course notes
#8: Possible Solutions

- Creation of an Active Learning Community of Practice
- Sharing best practices
- Training
- Keep class notes on a LMS (Moodle/Lea) or send them via email
#7: Online Testing

- Professors used – 39%
- Worked well for students – 89%

Comments
- Professors
  - Concerns about cheating
  - Extended time accommodations
#7: Possible Solutions

- Use a software to block access to external websites (LanSchool)
- Shuffle questions and choices (when using Moodle quizzes)
- Check with publishers for “accessible tests”
#6A: Use of E-mail

- Professors used – 99%
- Worked well for students – 87%
- Comments
  - Students (Worked well BUT)
    - Delay in response
    - Too many different means of communication
    - Too many e-mails
    - Large files difficult to send
#6A: Possible Solutions

• Create a private Facebook Community for your class
• Use Messenger to communicate with students
• Large files: put them in a cloud repository (Dropbox, OneDrive) and share the link
#6B: Virtual Office Hours

- Professors used – 30%
- Worked well for students – 86%

Comments

- Students
  - Also wanted face-to-face office hours
#6B: Possible Solutions

- **Blended Solution:** use a web-based solution to connect to students at a distance and stay in your office for the face-to-face meetings. Google Hangout, Skype
#5: Peer Communication

Collaborative work online
• Professors used – 25%
• Worked well for students – 62%

Discussion forums
• Professors used – 28%
• Worked well for students – 53%
• Comments – Students and Professors
  • Group work concerns
#5: Possible Solutions

- **Google Docs & Office 365:** collaborative work in online documents
- **Facebook Community:** online discussion and sharing. Facebook Messenger for online communication
#4: PowerPoint

• Professors used – 91%
• Worked well for students – 98%

• Comments
  • Students (worked well BUT)
    • Cluttered slides
    • Difficult to read
    • Too much text, no images
    • Moved through slides too quickly
#4: Possible Solutions

- Use online solutions: Google Slides, Office 365, Prezi
- Training on how to create more effective presentations
- Put presentations online so that students can follow it during the class and can download it if necessary
#3: Professors’ Knowledge of Technology

- Student and professor concern re level of knowledge
- Professors learned to use technology:
  - On their own – 53%
  - Workshops – 12%
- Professors wanted:
  - Training videos / online tutorials
  - Training for Smart Board and clickers
#3: Possible Solutions

- One-on-One Trainings for teachers
- Workshops on Ed Tech to students
- Communities of Practice: share best practices. Teachers inspiring teachers
- Youtube edtech channels, newsletters, blogs (DawsonITE), my presentations at http://slideshare.net/rscapin
#2: Students’ Knowledge of Technology

• 32% of professors showed students how to use course related technology

• Professors in career / technical programs more likely to show than pre-university

• Professors felt students overestimated their ability

• Students felt professors should teach required skills
#2: Possible Solutions

- **Misconception**: students are tech savvy. True?

- Workshops on edtech content to students: useful apps, websites, cloud solutions

- My presentations: [https://www.slideshare.net/rscapin](https://www.slideshare.net/rscapin)
#1: Students’ Use of Personal Technology

- Students: I like courses in which professors allow use of personal technology in class
- Students: In general professors allow use of personal technology in class
#1: Students’ Use of Personal Technology (cont’d)

- Professors felt students used personal technology inappropriately
- Never asked students purpose of use in class
#1: Possible Solutions

• In conjunction with a **BYOD policy**, make students aware of how technology should be used in the classroom

• Get feedback from students on how they feel in using technology in the classroom
Take Home Messages

• Help is available:
  • Online resources
  • Campus technical support
  • Peer support

• Not only what technology is being used, but how well it is used
Questions?
Contact Us

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