Back to the Blackboard? Personal Technology Use and Knowledge Acquisition

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Background

Students in face-to-face classrooms (F2F) are using multiple technologies, communicating on social media, and surfing the web while listening to the professor.

Faculty allow their adult learners to self-regulate use of information and communication technologies (ICTs).

Faculty themselves use technology and social media in the classroom in the hopes that it will engage students and enhance their learning.
Problem

Are we tacitly encouraging students’ intellectual “absence” by allowing use of multiple technologies and social media in the classroom?
Objectives

- Articulate 3 effects of students’ use of technology in the classroom
- Discuss 2 ways faculty can mitigate effects of technology use on student learning
- Identify different elements related to classroom technology use
Conceptual Frameworks

- Theory Of Situated Action
- Gratifications Theory
- Theories Of Cognition
- Media Theories
- Bloom’s Taxonomy
- Composite Cognition
Use & Gratifications Theory

Uses & Gratifications
Social Media Model

- Pleasure
  - Recognition
  - Personalities
  - Video
  - Pictures

- Empowerment
  - Personality driven
  - Interactive conversations

- Self confidence
  - Credible Information
  - Shareable

Twitter
Facebook
Situated Theory

Meaning is: defined by teacher
Meaning is: negotiated
Meaning is: defined by student

Instructivist
social constructivist
radical constructivist

Situated theory

Source: http://www.nm.stir.ac.uk/mentors/mentorship-learning-theories.php
Bloom’s Taxonomy

NEW Version

OLD Version

- Creating
- Evaluating
- Analyzing
- Applying
- Understanding
- Remembering

- Eval.
- Synthesis
- Analysis
- Application
- Comprehension
- Knowledge
Composite Cognition

Lower-Level Cognition
- Remember (Knowledge)
- Understanding (Comprehension)

Higher-Level Cognition
- Apply (Application)
- Analyze (Analysis)
- Evaluate (Evaluation)
- Create (Synthesis)

Critical Thinking Cognition
- Assessment
- Planning
- Implementation
- Evaluation
Methods: Exploratory Research

- Review of literature
- Search terms
  - Social media
  - Multi-tasking
  - Technology
  - Nursing
  - Students
  - Presence
  - Attention
  - Distraction
- 2010 or later
- Disciplines searched
  - Nursing
  - Computer science
  - Cognitive psychology
  - Education
  - Communication
  - Marketing
  - Media studies
  - Neuroscience
  - Academic development
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<th>Article/Year</th>
<th>Facebook</th>
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## Review of Literature: Selected Sources

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Student Survey

Asked what technology students use for classroom assignments
- 93% used Internet resources
- 65% used online examples provided in learning management platform (e.g., Blackboard, etc.)
- 78% used downloadable supplemental materials provided online (e.g., articles)

Asked what other technology students used in completing classroom assignments
- YouTube
- Microsoft Movie Editor
- GarageBand
- Cell phone video
Please rank your experience in using technology (m-learning)  n=86

- No Experience: 7.06%
- Novice: 11.76%
- Competent: 41.18%
- Experienced: 30.59%
- Expert: 9.41%
Would you like to see more assignments using technology/m-learning in your classes? n=86
Results

- Large-scale studies with non-nursing populations
- Little found related to nursing student technology use
- Multi-tasking
  - Degrades learning
  - Increases learning time
  - Decreases student engagement
  - Lowers GPA
Multitasking? Presence?
Results

Technology use affects students around user

- Distracted by neighbor’s use of
  - Social media
  - Technology
  - Cell phones
  - Laptops
  - Tablets

Neighbors’ grades *declined*

Students find technology “biologically impossible to resist”
Implications

- Multiple entities compete for student attention in F2F classroom

Professor’s role
- Limit outside distractions
- Encourage delayed gratification (learning) versus immediate gratification (technology use)
- Use interactive versus passive teaching strategies
Multitasking vs. Serial

Time

4 things

the same 4 things
Conclusions

Further research needed

- Larger samples of nursing students
- Incorporate both qualitative and quantitative data
- Use identified tools such as engagement survey and internet use survey validated in previous research with non-nursing populations
- Use NCLEX pass rates as outcome variable.
Selected References


Complete references on request
Thank You!

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AZUSA PACIFIC UNIVERSITY

[Map of Azusa Pacific University with regional centers marked]

[Photo of Azusa Pacific University building]