TEAM MEMBERS

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THE STATE OF MED STUDENT GUNMANSHIP

• Why students use mobile learning:
  • Instant access to information
  • Low cost (tablet vs. textbooks)
  • Situational and contextual learning in situ
  • Continuous communication between learners and tutors
  • Self-assessment and institutional assessment

• E-learning is increasingly being made specifically for mobile devices in lieu of computers

• “Mobile learning” is just learning

But don’t just take my word for it…

- Anytime mobile access to lectures significantly increases performance on MCQ tests over traditional studying
  - Kalludi S et al, 2015

- 3rd year medical students experience measurable increases in clinical decision making ability IF experienced in the technology
  - Nuss MA et al, 2014

- EM and IM residents increase medical use of smartphones over time, most receive no prior training
  - Raaum SE et al, 2015

- FM residency program found iPad should be integrated into curricula and education on use should be provided
  - Archibald D et al, 2014
BUT WHAT ABOUT BRODY?

- Technology use in medical education and clinical medicine is on the rise at all levels
  - Are these trends reflected by Brody students?
  - Is there an opportunity to expand technology access and education at Brody?
  - Is there an opportunity to better train students as clinical decision makers?
  - Is there an opportunity to better prepare Brody students for today’s residency programs?
SurveyMonkey® was used to send a 5 question survey to the current M1-M4 Brody student body (309 Students)

- 3 Multiple Choice Questions – What is Used
  - What year are you?
  - What technology do you use in the Classroom Setting?
  - What technology do you use in the Clinical Setting?
- 2 Free Response Questions – How it’s Used
  - What programs/apps do you use?
  - How do you use these programs/apps to supplement your learning?
Responses

Total BSOM Student Body

42%

Total Respondents by Class

M1 25%
M2 24%
M3 24%
M4 27%
Question 2: What's in your backpack?

- 98% Laptop
  - 59% MacBook
  - 39% PC

- 61% Tablet
  - 33% iPad
  - 20% Mini

- 47% Smartphone
ADJUNCT TRENDS IN THE CLASSROOM
QUESTION 3: WHAT’S IN YOUR WHITE COAT?

- 24% Laptop
- 50% iPad
  - 40% Mini
- 80% Smartphone
Mobile learning over time

Mobile learning over time in a clinic is depicted in the graph above. The data shows a trend of increases and decreases in usage over four months, labeled M1 to M4. The purple line represents mobile usage, while the brown line represents computer usage. The graph indicates that mobile usage peaks at 90% in M2 and then declines to around 80% in M3 and M4. Computer usage shows a more consistent trend, with usage fluctuating between 10% and 20% throughout the months.
TALK TRENDY TO ME

• CLASSROOM
  • Apple Laptop (59%)
  • iPad Tablet (53%)

• CLINIC
  • Smartphone (80%)
  • iPad Tablet (50%)

• When all responses combined and compared to respondents
  • 52% of classroom technology use is mobile (handheld)
  • 85% of clinical technology use is mobile (handheld)
QUESTIONS 4 & 5: USE

Total Technology Usage

- Notetaking: 39%
- Clinical Reference: 53%
- EMR: 13%
- Lecture Material: 28%
- Productivity: 30%
- No Tech: 10%

Total Technology Use
USE ACROSS CLASSES

Usage by Class

- Notetaking
- Clinical Reference
- EMR
- Lecture Material
- Productivity
- No Tech

Bars represent usage across different classes for various categories such as Notetaking, Clinical Reference, EMR, Lecture Material, Productivity, and No Tech.
Top programs

1.) UpToDate (47%)
2.) ePocrates (41%)
PROGRAMS BY CLASS

• **M1s**
  - 1.) Microsoft Office (73%)
  - 2.) UpToDate (35%)
  - 3.) Anki/Essential Anatomy (31%)

• **M2s**
  - 1.) UpToDate/Essential Anatomy/Anki (40%)
  - 2.) Microsoft Office (27%)
  - 3.) USMLE Qbank (17%)

• **M3s**
  - 1.) UpToDate (53%)
  - 2.) ePocrates (50%)
  - 3.) EMR/MedScape/Search Engine (29%)

• **M4s**
  - 1.) ePocrates (78%)
  - 2.) UpToDate (56%)
  - 3.) MedScape (41%)
National Trends

Extensive mixed methods study on third-year iPad use:

- Top 5 Apps
  - EMR
  - ePocrates
  - PDF Expert
  - VisualDx
  - Micromedex

- 71% of third-year medical students use iPad and expertise grew with time

Nuss MA et al, 2014
• Over 50% of students are using handheld technology
  • With upward trend across years

• Clinical reference is consistently a major use, even in the preclinical years
  • With upward trend across years

• Brody is mirroring national trends

• Push for curricular incorporation applies
POSSIBLE CONSIDERATIONS

• Access to this technology
  • *Pre-loaded curriculum on an tablet presented with white coat*

• Inclusions of these adjuncts in both the preclinical and clinical curriculum
  • *Anatomy – already happening*
  • *Foundations*
  • *OSCE+PBL*
  • *Preceptorship*
  • *Clinical Years*
  • *Residency and beyond*


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