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# Health Sciences Librarianship Goes Mobile: Using the MS Surface Pro 2 to Deliver Instruction and to Access Medical Content

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# Health Sciences Librarianship Goes Mobile: Using the MS Surface Pro 2 To Deliver Instruction and to Access Medical Content



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**Michigan Academy of Science, Arts, and Letters  
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# Background Information

- Health Sciences Librarian
- Provide reference and research support in-person and virtually, both on & off campus
- Sought a mobile device, especially for off-campus work
- Experimented with an iPad and various Android tablets in 2012-2013



# The Back Story

- Three new medical ebook collections were purchased by the Halle Library to support new health professions programs

- ❖ Physician Assistant – launched May 2014
- ❖ Clinical Nurse Practitioner – launch Fall 2015
- ❖ Doctor of Nursing Practice – launch ~Fall 2016



[blog.itriagehealth.com](http://blog.itriagehealth.com)

- How to best *promote and integrate* these new tools into the library services for these new programs

# Why a Microsoft Surface Pro 2?

- Used MS Windows-based products for the majority of professional work ; no compatibility issues with teaching materials
- Respected colleague was pleased with its ease of *conversion* from a tablet to a laptop
- Most research reported on the iPad or Android products
- Heard about the eFellows grants offered through the Faculty Development Center at EMU

# Central Research Question

**How does the MS Surface Pro 2 perform as a tool in health sciences library research instruction and how does it interact with the medical ebook collections at the EMU Library?**

# Three Areas of Assessment

- Student response to visual clarity
- Functionality & interaction with the ebook collections
  - ❖ AccessMedicine
  - ❖ R2
  - ❖ STAT!Ref
- Performance as a tool in the delivery of
  - ❖ Group research instruction
  - ❖ 1-on-1 instruction

# Visual Display - Student Survey

- Completed *Human Subjects Approval* and was granted “Exempt Review” status
- Delivered *Informed Consent* verbally to participants
- Surveyed 3 health sciences research instruction sessions
- ~20 students per class
- N=61, 100% return rate





# Visual Display - Student Survey



- Distributed a one-page paper survey
- Projected four images on the screen - text, picture, graph, and table
- Asked student to circle their response to the following question:  
“The clarity and crispness of viewing the projected [text, picture, graph, table] is:
  - ❖ A - Crisp and clear
  - ❖ B - Somewhat crisp and clear
  - ❖ C – Not at all crisp and clear/was difficult to read
  - ❖ D – No opinion
- Potential variables: clarity of original images; projector clarity; student seating position in classroom; student eyesight

# Visual Display - Student Survey Results

- Projected Text:
  - ❖ 67% - Somewhat crisp & clear
- Projected Picture:
  - ❖ 62% - Somewhat crisp & clear
- Projected Graph:
  - ❖ 49% - Crisp & clear
  - ❖ 47% - Somewhat crisp & clear
- Projected Table:
  - ❖ 49% - Somewhat crisp & clear
  - ❖ 33% - Not at all crisp & clear/was difficult to read



# eBook Collection - Quality of Features

	AccessMedicine	Rittenhouse/R2	Stat!Ref
Text Readability	E	E	E
Pictures - Clarity	E	E	E
Graphs/Tables - Clarity	E	E	E
Video Processing - Time & Clarity	E	E	E

E=Excellent  
G=Good  
P=Poor


# Downloading eBooks

	AccessMedicine	R2	STAT!Ref
Surface Pro 2	<ul style="list-style-type: none"><li>• No app available</li><li>• Thoroughly readable as web-based</li></ul>	<ul style="list-style-type: none"><li>• No app available</li><li>• Thoroughly readable as web-based</li></ul>	<ul style="list-style-type: none"><li>• No app available</li><li>• Thoroughly readable as web-based</li></ul>
iPad	<ul style="list-style-type: none"><li>• Yes app available (limited to access only 4 selected books/tools)</li><li>• Thoroughly readable as web-based</li></ul>	<ul style="list-style-type: none"><li>• No app available</li><li>• Thoroughly readable as web-based</li></ul>	<ul style="list-style-type: none"><li>• Yes app available (full access to all material)</li><li>• Thoroughly readable as web-based</li></ul>

# Availability of eBook Annotation Apps

	<i>Drawboard PDF</i>	<i>OneNote</i>	<i>Notability</i>	<i>iAnnotate PDF</i>	<i>Evernote</i>
Surface Pro 2	Yes	Yes	No	No	Yes
iPad	No	Yes	Yes	Yes	Yes

# Rating Annotation Apps for eBooks

- Tried the popular annotation app, *Notability*,  Surface Pro 2
- Functional annotation apps – ranked in order of preference by usability
  - ❖ *Drawboard PDF*
  - ❖ *Evernote*
  - ❖ *MS OneNote*

# National Library of Medicine (NLM) Apps

	NLM Apps*	Unbound Medline* *	Centers for Disease Control – CDC	Health Info WHO CDC
Surface Pro 2	No	Yes	Yes	Yes
iPad	Yes	Yes	No	No

**\*NLM apps include:**

- AIDSInfo
- Embryo
- Health Hotlines
- LactMed
- NLM Native Voices
- PubMed for Handhelds
- REMM
- Reunite
- Turning the Pages
- Water Emergency Responses
- For Libraries
- WISER

**\*\*Unbound Medline**

is a product Of Unbound Medicine, Inc.  
Not an NLM product ; Free app

# Advantages

## Combination Tablet & Laptop

- Looks and works like a tablet = *searching & reading*
  - ❖ Can be held in one hand
  - ❖ Stylus works as a type of mouse for pen-based computing
  - ❖ Built-in and for-purchase apps available
- Works like a small laptop = *production*
  - ❖ Has 1 USB port ; 1 charging port
  - ❖ Has full Windows 8 PC and can run all MS Windows desktop programs; multi-tasking ability
  - ❖ Memory card slot for expanded storage
  - ❖ Screen is bright (1080p)
  - ❖ Has a built-in kickstand
  - ❖ Magnetically attachable keyboard
  - ❖ Intel i5 processor



# Disadvantages

- Learning curve with the unique mobile interface
- Hardware
  - ❖ Poor battery life
  - ❖ Heavy, ~2 lbs.
  - ❖ Thick
  - ❖ Relatively small screen for a laptop (larger in 3 gen.)
- Trackpad on the keyboard is finicky and overly sensitive



# Group Instruction- Overall Assessment

- Runs like a laptop, therefore easy to run a multi-tab research session
- Versatility to run software for *both* desktop software & mobile-oriented apps
  - ❖ 1-on-1 research assistance - mobile
  - ❖ research instruction sessions - laptop
- Heavy & thick
- Lack of NLM apps
- Easier to use a wireless/Bluetooth mouse rather than the stylus pen
- Weak battery

# Group Instruction - Projection Issues

- Font size is quite small and has to be increased in order to be seen in the back of the room
- Screen has to be adjusted to accommodate the larger font size, which doesn't allow for full-screen content to be viewed
- Compatibility issues with the projection software & hardware which lead to pauses & delays during screen changes
- Close-out certain software programs in order for other programs to be projected
- Convert the normal HDMI cable to a VGA cable
- Off-site facility projection problems
- Inability to use *Netop* classroom management software

# Group Instruction – Physician Assistant Program

- Teach a graduate-level research instruction class
- Emphasis on demonstrating the use of the ebook collections as a point-of-care tool in a clinical or hospital setting
- Time constraints re: annotation of the ebooks into the research instruction classes
  - ❖ Wide variety of annotation apps available, difficult to learn all of them
  - ❖ Students already have a preferred annotation app

# Individual Instruction

- Issues regarding
  - ❖ Small keyboard
  - ❖ Small screen size
- Positive feedback from the patrons
  - ❖ Versatility of the mobile & laptop interface
  - ❖ Screen brightness & crispness of images
  - ❖ Processor speed



# Conclusions – The Surface Pro 2 is...

A well-designed small laptop

- An excellent mobile tool for *teaching* at off-site facilities
- Converts quickly from a tablet to a laptop therefore easy to use when working with a student in the hallway, in a classroom, or at a reference table
- Processes quickly
- Excellent clarity
- Short battery life



# Conclusions – The Surface Pro 2 is...

A well-designed tablet

- An excellent tablet for *accessing* the ebook collection at the library
- Not a good tablet for
  - ❖ marking up health ebook content
- Health & medical apps
  - ❖ Microsoft has only developed a small number
  - ❖ No National Library of Medicine apps available



**Transformational Nature Makes it an Asset in Library Work**

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