How college students use free online resources

Full report, August 11 2016

Jonathan Morgan, WMF Design Research

Source: https://commons.wikimedia.org/wiki/File:Homework_(8120708019).jpg

Outline

- **Background**
- Demographics
- Top sites
- Types of sites
- Student preferences
- Next steps

Thesis

“Many Wikipedia users are not able to learn from a significant portion of the content we have because of the way it is presented.”

- Trevor Parscal, September 2015

Thesis

“Many Wikipedia users are not able to learn from a significant portion of the content we have because of the way it is presented.”

- Trevor Parscal, September 2015

- Who are we failing?
- How are we failing them?
- Where are they turning instead?

Thesis

“Many Wikipedia users are not able to learn from a significant portion of the content we have because of the way it is presented.”

- Trevor Parscal, September 2015

- Who are we failing?
  - **Choose an audience**
- How are we failing them?
  - **Identify their needs**
- Where are they turning instead?
  - **Understand their behaviors**

Audience: U.S. college students

- Heavy Internet users
- Heavy Wikipedia users
- Access to multiple Internet-enabled devices
- Need information on a wide variety of topics
- Use our content in many different contexts
- Adopt new technologies, new resources early & often
- (relatively) easy to reach

Research site: University of Washington

- **Access**
  - WMF a “corporate affiliate” of UW Human Centered Design & Engineering
- **Size**
  - 30,000 undergraduate, 10,000 graduate students
- **Diversity**
  - 28% Asian, 15% international, 13% Underrepresented minorities

Focus: Free Online Information Resources

- Used for school work
- Accessible via the Internet (website, app, DLC)
- Free to use
- Not provided by or through home university
- Not a search engine

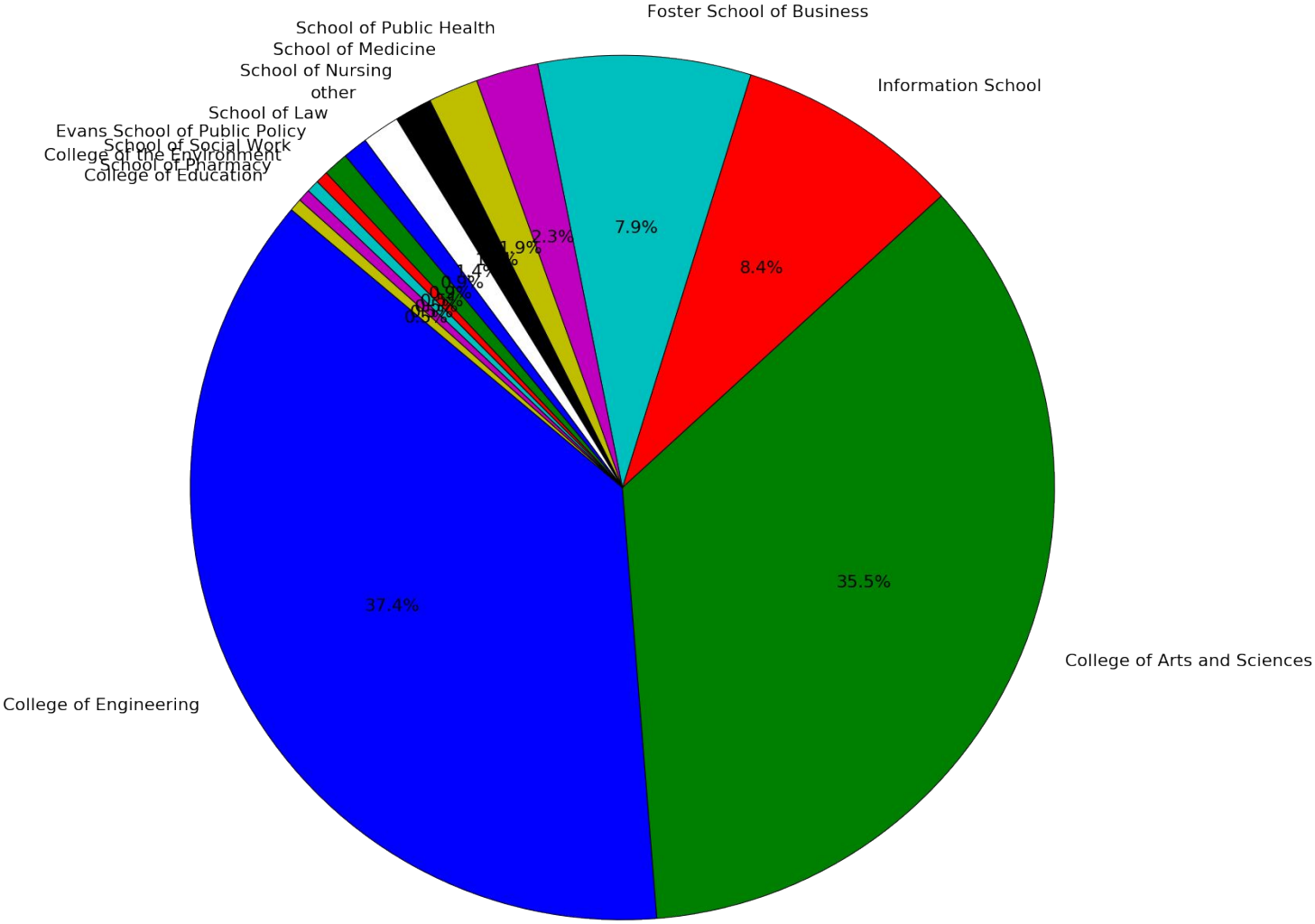
Method: Survey

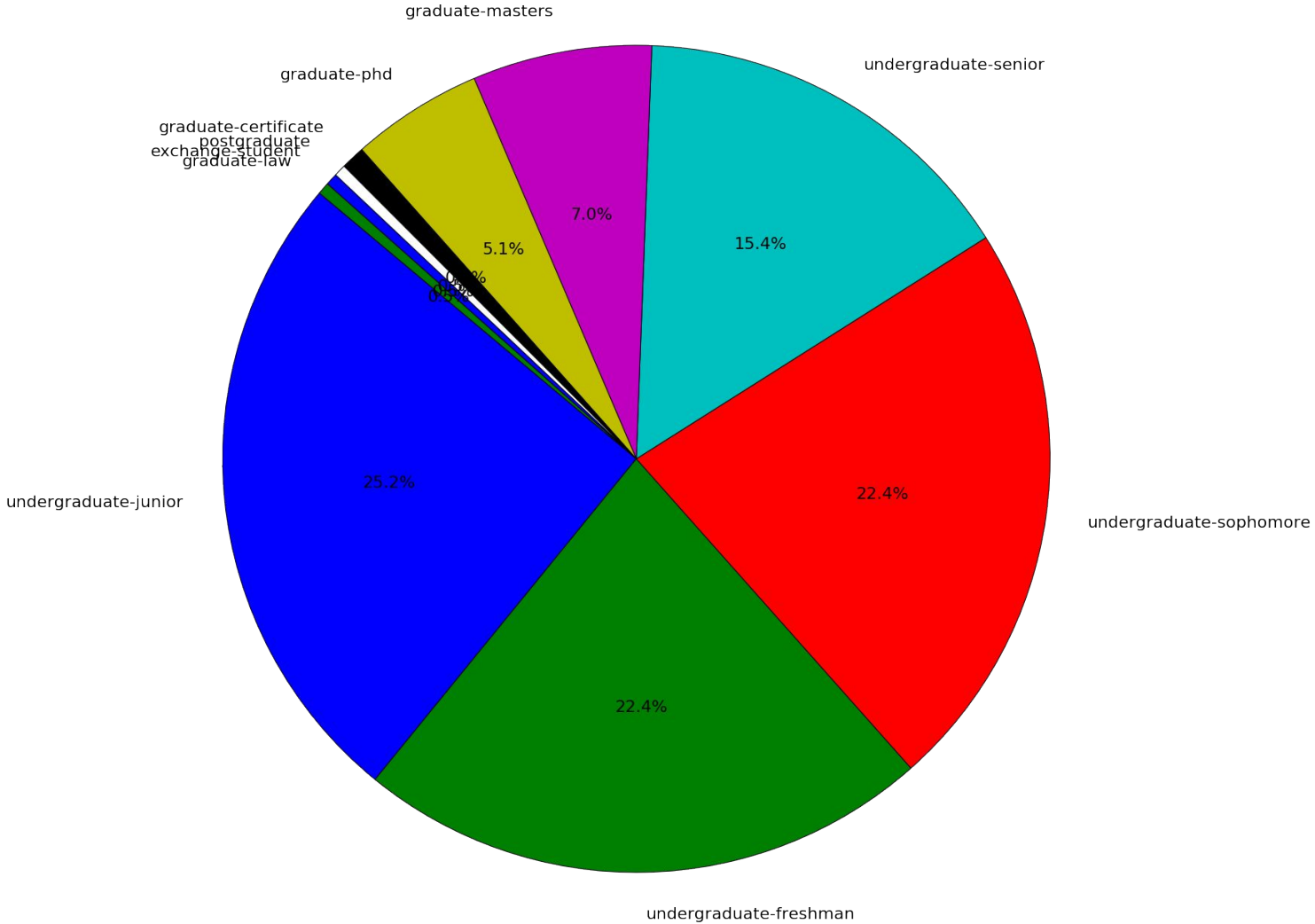
Developed with and deployed by UW students

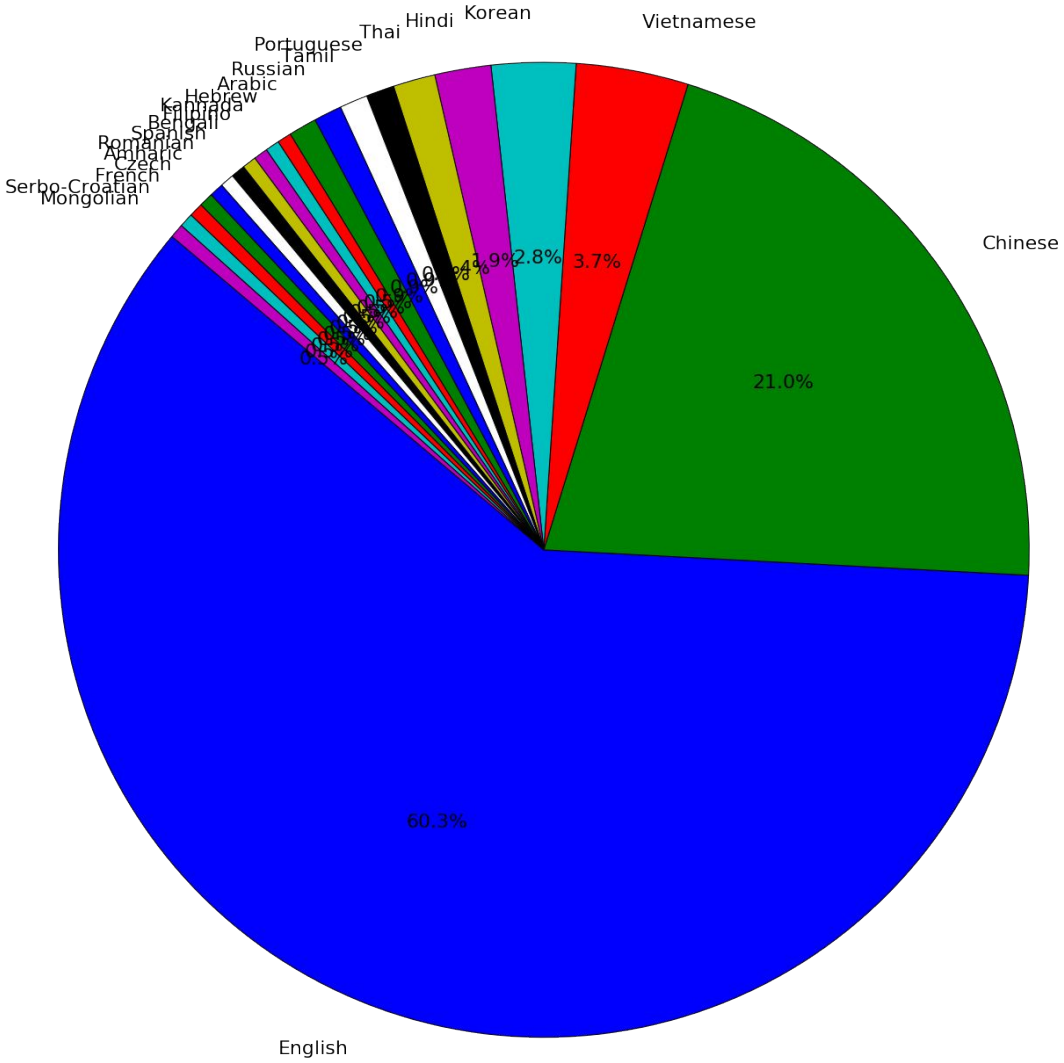
- Resources students used — Wikipedia and ‘competitors’
- Features/aspects of those resources they found most valuable
- Ran for two weeks, 214 responses recorded

Outline

- Background
- **Demographics**
- Top sites
- Types of sites
- Student preferences
- Next steps

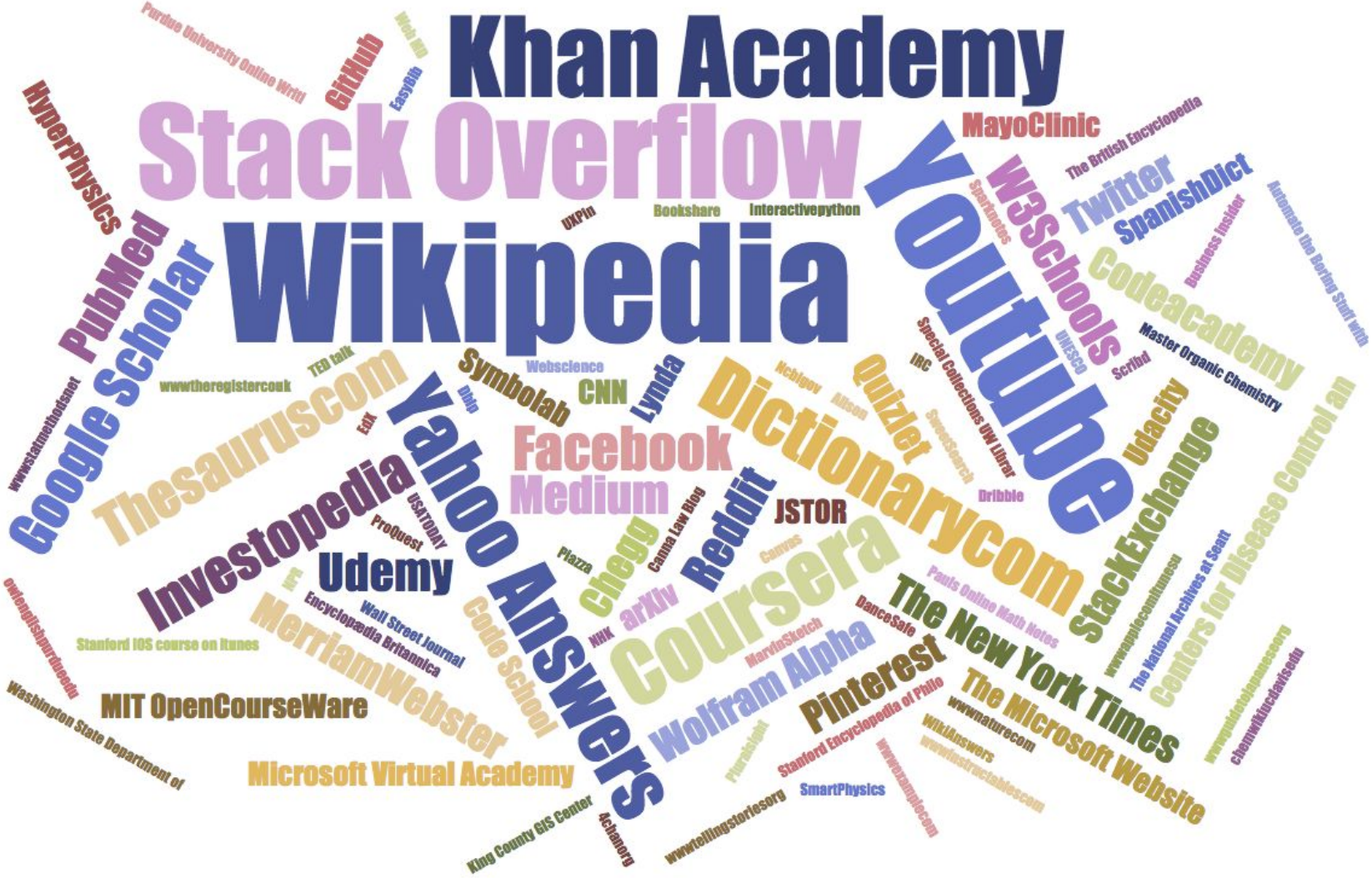

Foster School of Business
School of Public Health
School of Medicine
School of Nursing
other
School of Law
Evans School of Public Policy
School of Social Work
College of the Environment
School of Pharmacy
College of Education
Information School
7.9%
8.4%
2.3%
1.9%
35.5%
37.4%
College of Arts and Sciences
College of Engineering


graduate-masters
graduate-phd
graduate-certificate
postgraduate
exchange-student
graduate-law
undergraduate-senior
7.0%
5.1%
15.4%
25.2%
undergraduate-junior
22.4%
undergraduate-sophomore
22.4%
undergraduate-freshman


Korean
Vietnamese
Hindi
Thai
Portuguese
Tamil
Russian
Arabic
Hebrew
Kannada
Tagalog
Bengali
Spanish
Romanian
Amharic
Czech
French
Serbo-Croatian
Mongolian
Chinese
2.8%
3.7%
21.0%
60.3%
English

Outline

- Background
- Demographics
- **Top sites**
- Types of sites
- Student preferences
- Next steps


Khan Academy
Stack Overflow
Wikipedia
Youtube
Dictionarycom
Yahoo Answers
Coursera
Facebook
Medium
Thesauruscom
Investopedia
Google Scholar
PubMed
HyperPhysics
GitHub
Purdue University Online Writi
Web MD
EasyBib
MayoClinic
The British Encyclopedia
Twitter
SpanishDict
W3Schools
Sparknotes
Codeacademy
Business Insider
Automate the Boring Stuff with
Master Organic Chemistry
Scribd
UNESCO
Special Collections UW Librar
IRC
Quizlet
Nchigov
Alison
Udacity
StackExchange
Centers for Disease Control an
Dribble
SweetSearch
JSTOR
Reddit
Canna Law Blog
Chegg
Plazza
Canvas
arXiv
NHK
Code School
Wall Street Journal
Encyclopædia Britannica
MerriamWebster
Udemy
ProQuest
USATODAY
Edx
Dbin
Symbolab
Webscience
CNN
Lynda
TED talk
wwwtheregistercouk
wwwstatmethodsnet
owlenglishpurdueedu
Stanford IOS course on Itunes
MIT OpenCourseWare
Washington State Department of
Microsoft Virtual Academy
King County GIS Center
Achanorg
Wolfram Alpha
Pinterest
MarvinSketch
DanceSafe
Pauls Online Math Notes
The New York Times
The Microsoft Website
The National Archives at Seatt
wwwapplecomitunesu
wwwquidetoiapanesorg
chemwikiucdavisedu
wwwnaturecom
WikiAnswers
wwwinstructablescom
Stanford Encyclopedia of Philo
Pluralsight
SmartPhysics
wwwexamplecom
wwwtellingstoriesorg
Bookshare
Interactivepython
UXPin

Top 5 FOIRs

resource	mentions
Wikipedia	**74**
YouTube	40
Stack Overflow	32
Khan Academy	20
Coursera	11

Top 5 FOIRs

resource	mentions	
Wikipedia	**74**	**21%**
YouTube	40	
Stack Overflow	32	
Khan Academy	20	
Coursera	11	
total	177	**50%**

Wikipedia

What they use it for

- Quick facts
- Deep exploration of a topic
- Jumping off point for further research

What they like about it

- Easy to find related information
- Access to sources
- Good quality
- Comprehensive

YouTube

What they use it for

- Tutorials
- Reviewing course material
- Subject overviews

What they like about it

- Entertaining
- Easy to understand
- Taught by real people
- Visual

Stack Overflow

What they use it for

- Solve specific technical problems
- Learning best practices

What they like about it

- Expert-driven
- Lots of examples
- Quick

Khan Academy & Coursera

What they use it for

- Reviewing basic course concepts
- Learning subjects on their own

What they like about it

- Visual
- Good, clear explanations
- Easy to find relevant content
- Self-paced
- Comprehensive

Summary

- Wikipedia supports multiple learning activities: quick facts, topic survey, deep research
- Students find audio/video explanations easy to understand
- Online courses help students review class material at their own pace
- Q&A sites give students quick solutions for specific problems

Outline

- Background
- Demographics
- Top sites
- **Types of sites**
- Student preferences
- Next steps

Types of sites students use to learn

Longform

- Encyclopedias, dictionaries, gov’t websites, news sites, tutorials

Social media and social Q&A

- Facebook, Twitter, StackOverflow, Yahoo Answers, Reddit

Multimedia

- YouTube, Pinterest, podcasts

Online courses

- Khan Academy, Coursera, Udemy, EdX, Codecademy

Specialized search/answer engines

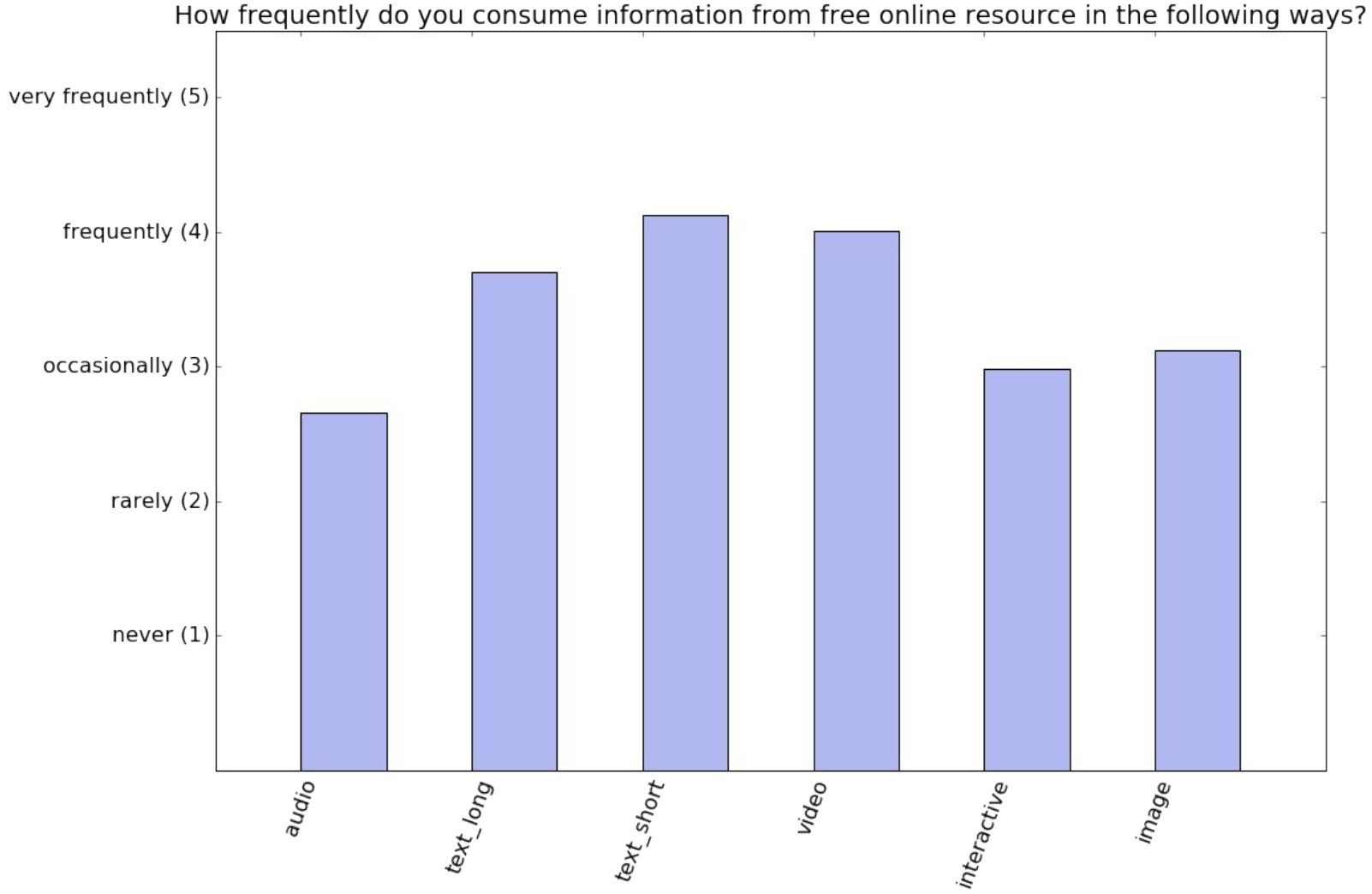
- Google Scholar, Pubmed, Wolfram Alpha

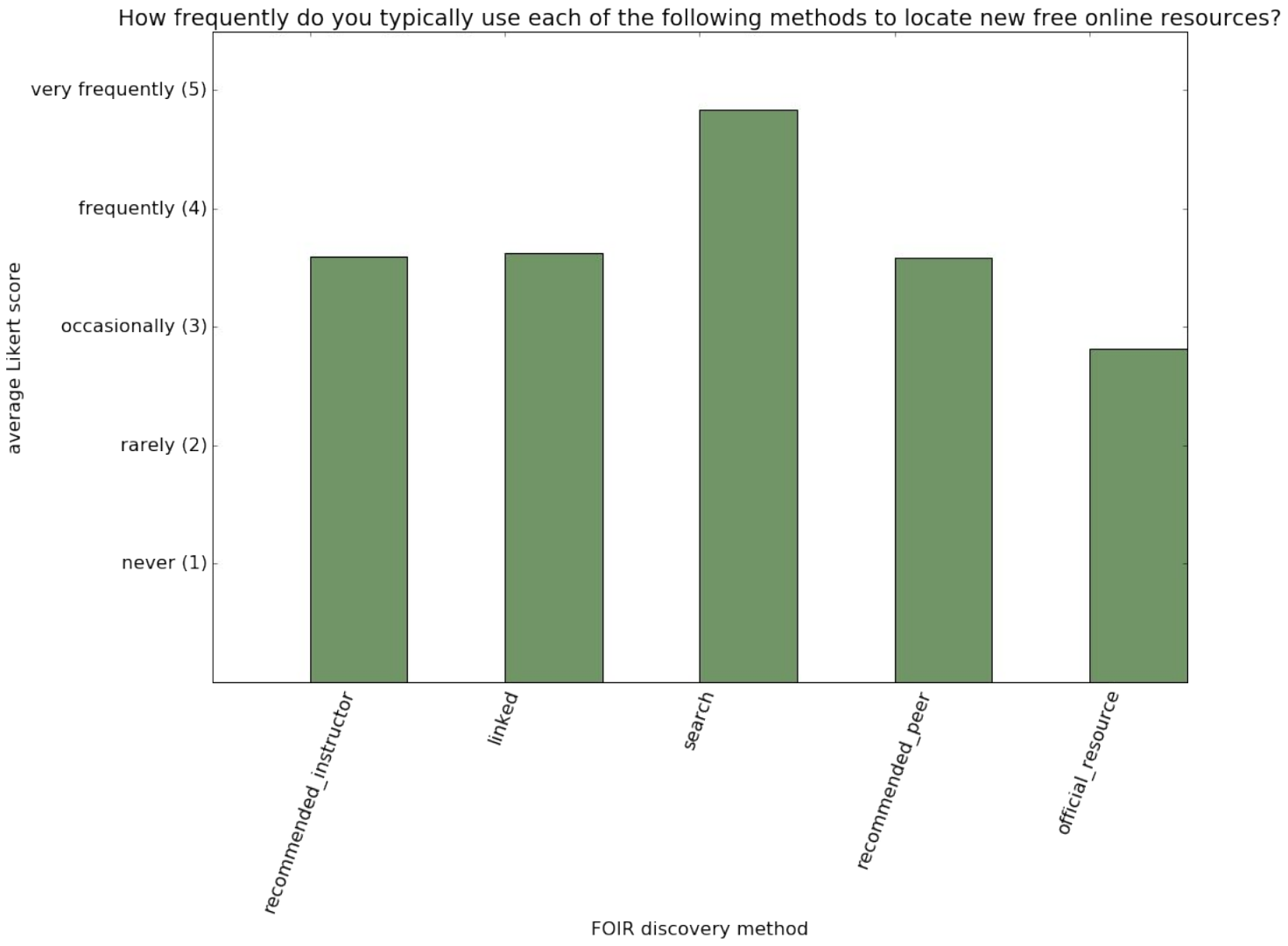
Types of sites students use to learn

Longform	**48%**
Social	17%
Multimedia	14%
Courses	14%
Search	6%

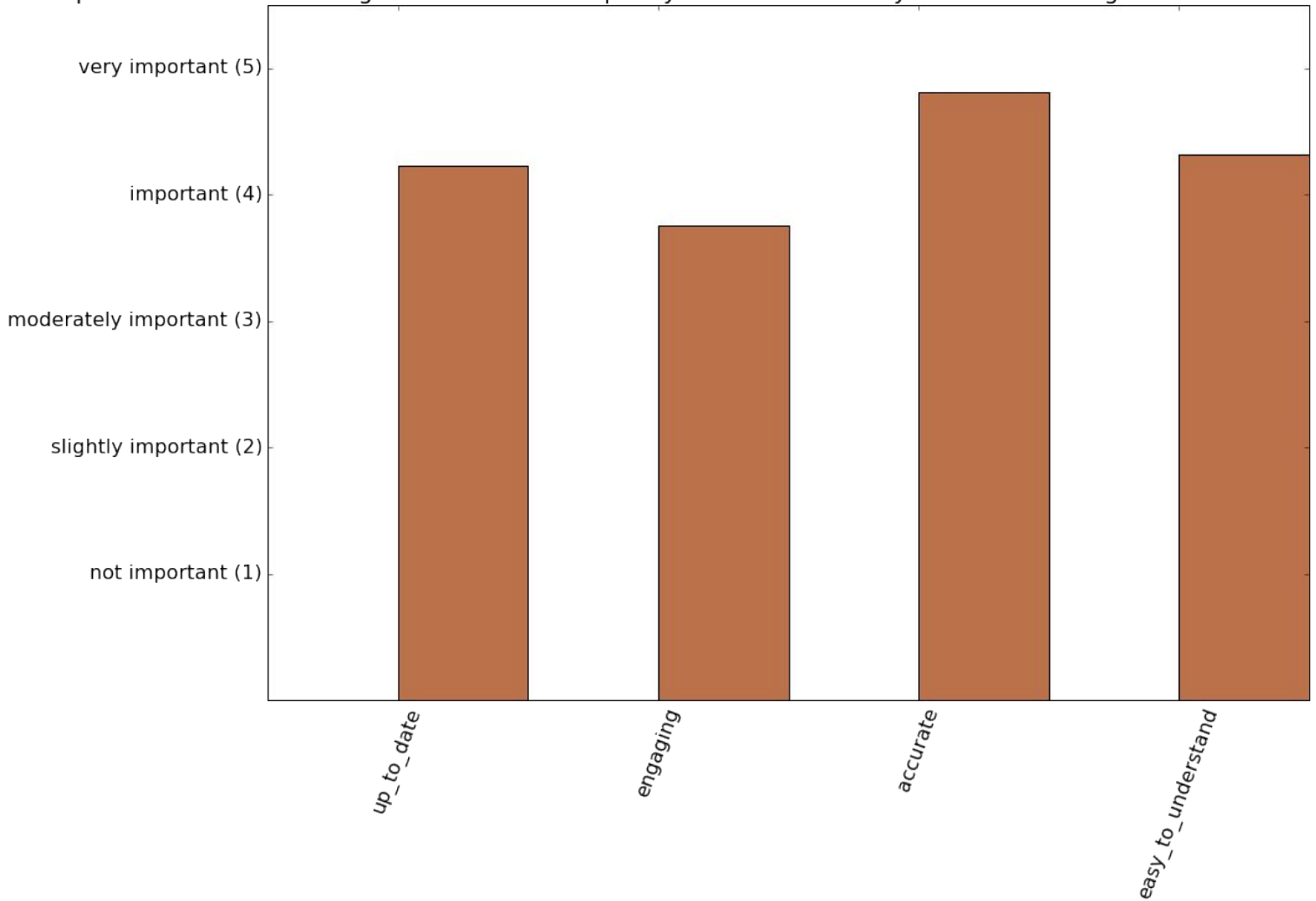
Outline

- Background
- Demographics
- Top sites
- Types of sites
- **Student preferences**
- Next steps


How frequently do you consume information from free online resource in the following ways?
very frequently (5)
frequently (4)
occasionally (3)
rarely (2)
never (1)
audio
text_long
text_short
video
interactive
image


How frequently do you typically use each of the following methods to locate new free online resources?
very frequently (5)
frequently (4)
occasionally (3)
rarely (2)
never (1)
average Likert score
recommended_instructor
linked
search
recommended_peer
official_resource
FOIR discovery method

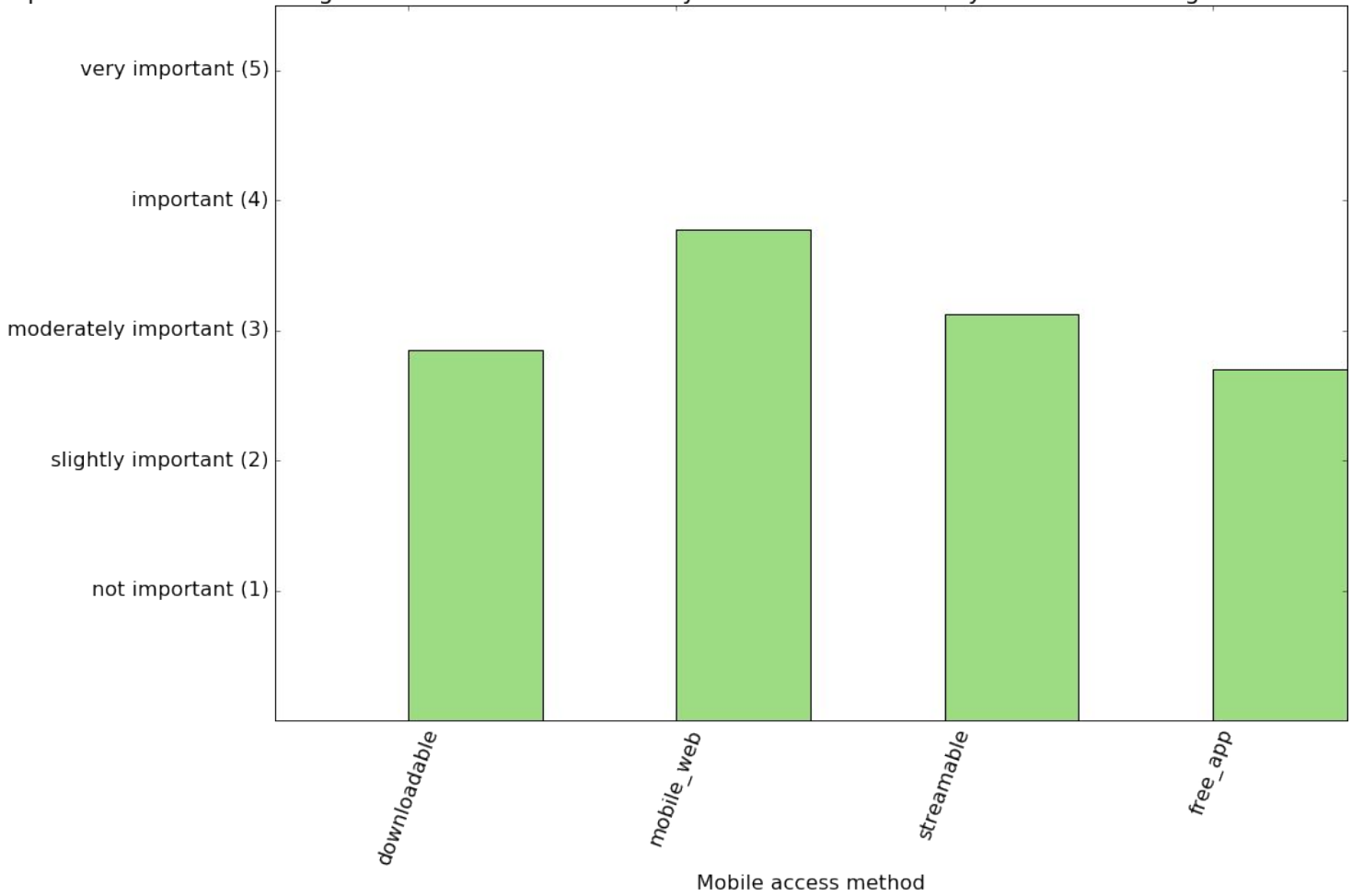
How important are the following factors related to quality of information to you when deciding whether to use a free online resource?



Mobile trends

- 90% of students use a smartphone to access the Internet
- Relatively few (7%) sites are used **primarily** on mobile
    - Wikipedia accounts for about 33% of these

How important are the following factors related to availability on mobile devices to you when deciding whether to use a free online resource?



Outline

- Background
- Demographics
- Top sites
- Types of sites
- Student preferences
- **Next steps**

Improve our content to support learning better

- Create better topic overviews
  - en.wikipedia.org/wiki/Outline_of_ancient_Rome
  - en.wikipedia.org/wiki/Book:Thermodynamics
- Optimize lede sections for topic exploration
  - meta.wikimedia.org/wiki/Research:Newsletter/2016/July
- Expose content from sibling projects better
  - en.wikipedia.org/wiki/Athens
- Embed more multimedia
  - youtu.be/wID_ImYQAgQ

Support multimedia contribution and curation

- Make it easier to create videos, audio, interactive visualizations
- Make it easier to find relevant multimedia content
- Make it easier to organize related multimedia content

Build new platforms to support content remixing

- Card stacks
  - www.vox.com/cards
- Online courses
  - www.edx.org
- Interactive stories
  - www.nytimes.com/projects/2012/snow-fall

Discussion

Full report: https://meta.wikimedia.org/wiki/Research:FOIR_survey

Thank you!

Full report: https://meta.wikimedia.org/wiki/Research:FOIR_survey

Source: "UW FOIR research group poster planning session" Jonathan Morgan CC BY SA 3.0 2016