Editing Wikipedia for medical school credit – results from four cycles of an elective for fourth-year students

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Abstract

Problem

- At the end of 2013, Wikipedia's medical content was made up of more than 155,000 articles across more than 255 languages, and supported by more than 950,000 references[1].
- At least **94% of medical students use Wikipedia** as an information source[2], yet we do not train them to use this popular resource critically or contribute to its overall value[3].
- We feel that **this is a lost opportunity** for our learners and Wikipedia's global audience[4].

Approach

- Beginning in Fall 2013, we offered a month-long immersion elective rotation for fourth-year medical students to receive academic credit for editing Wikipedia[5].
- Faculty and medical librarians joined existing partnerships to design, deliver and evaluate the course.
- We sought to answer three key questions: 1) the impact of the student edits on Wikipedia's content, 2) the impact of the course on student participants, and 3) the number of readers of the articles edited by our students.

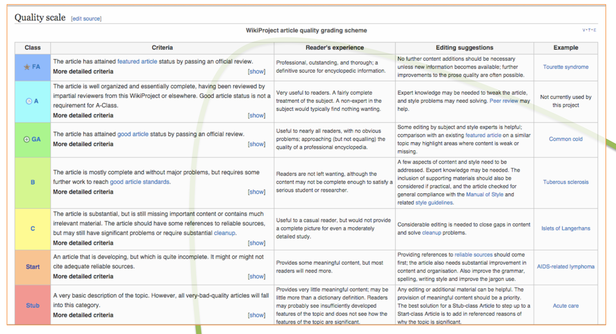
Lessons Learned

- Our first 43 students:
  - contributed 493,994 bytes of content (average of 11,488/student)
  - made 1,528 edits (average 36/student)
  - added a net 274 references
- The change in number of references cited ranged from subtracting 64 to adding 66 references (average of +7 references/student).
- From the start of the project until the publication of a review at three years, none of the contributions of the first 28 students had been reversed or vandalized.
- Highlights of student feedback include:
  - all subjectively felt they improved their selected articles
  - all enjoyed the opportunity to "give back specifically" to Wikipedia
  - nearly all broadened their sense of the scope of physician responsibilities in our socially networked information era
- During only the months that students were actively editing, Wikipedia traffic statistics indicate the 43 articles were collectively viewed 1,116,065 times.
- Subsequent to students' efforts, these 43 articles have been viewed over 22 million times.

Significance

- These results **confirm the viability and large social impact of medical students receiving academic credit for contributing to Wikipedia** and other open-access repositories of medical knowledge[6].
- We encourage other health professional schools to replicate and improve on our initiative.

Partnerships



"I feel good giving back to Wikipedia"

Prioritize the highest impact articles needing improvement

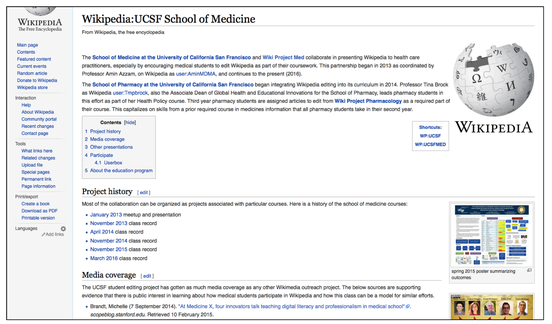
Label	Top priority	High priority	Mid priority	Low priority
Criteria	Subject is extremely important, even crucial, to medicine. Strong interest from non-professionals around the world. Usually a large subject with many associated sub-articles. Less than 1% of medicine-related articles achieve this rating.	Subject is clearly notable. Subject is interesting to, or directly affects, many average readers. This category includes the most common diseases and treatments as well as major areas of specialization. Fewer than 10% of medicine-related articles achieve this rating.	Normal priority for article improvement. A good article would be interesting or useful to many readers. Subject is notable within its particular specialty. This category includes most medical conditions, tests, approved drugs, medical subspecialties, well-known anatomy, and common signs and symptoms.	Article may only be included to cover a specific part of a more important article, or may be only loosely connected to medicine. Subject may be specific to one country or part of one country, such as licensing requirements or organizations. This category includes most of the following: very rare diseases, lesser-known medical signs, equipment, hospitals, individuals, historical information, publications, laws, investigational drugs, detailed genetic and physiological information, and obscure anatomical features.
Examples	Tuberculosis or Cancer	Coeliac disease or Mastectomy	Cholangiocarcinoma or Cramp	Leopard syndrome or Flynn effect

"It's hard to delete other people's work."

Medicine articles by quality and importance

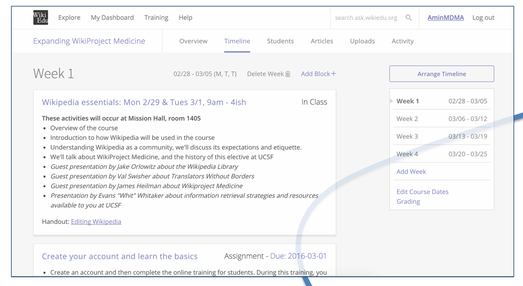
Quality	Importance: Top	High	Mid	Low	NA	???
FA	10	16	19	17		
FL		2	2	6		
FM					42	
GA	26	29	64	72		
B	33	335	862	752		
C	18	308	1,619	1,771		69
Start		270	3,634	7,654		360
Stub		7	2,305	6,222		269
List		19	242	201		16

Students encouraged to choose an article of high importance and low quality → Students seek a balance between comprehensiveness and readability → Students gain an appreciation for open-access health knowledge and their capacity to contribute

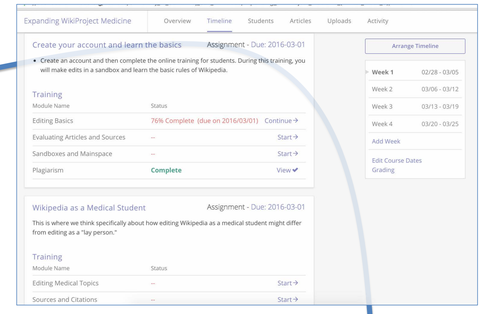


"It's challenging to edit live instead of in my sandbox."

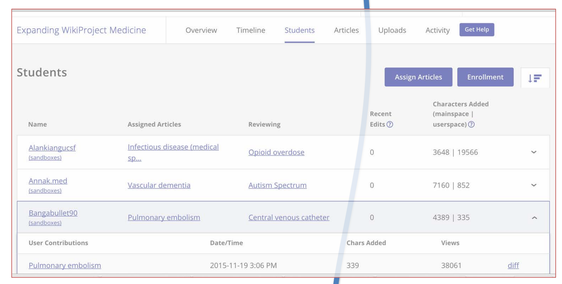
Course Dates	Number of students	Number of pages edited	Days of active editing	Number of edits during course	Average views per page over 30 days	Total views during course
Nov – Dec 2013	5	5	28 days	176	41,072	459,071
April 2014	7	7	28 days	181	47,075	285,233
Nov 2014	16	16	28 days	727	22,127	229,761
Nov 2015	15	15	26 days	444	22,105	635,000
March 2016	7	1	28 days	347	56,491	50,000
	50	44	136 days of student effort	1,875		1,659,065



"I wrote for a lay audience."

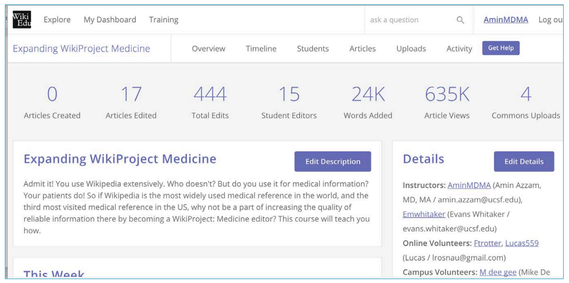


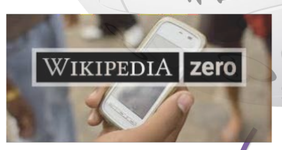
Partner with faculty to provide resources for helping and tracking students



"This has been an illuminating experience, to see how much thought and work goes into producing a product that is very easily consumable and almost disposable."

"I've drunk the Kool Aid"



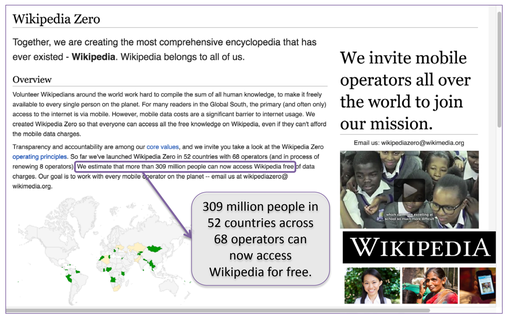


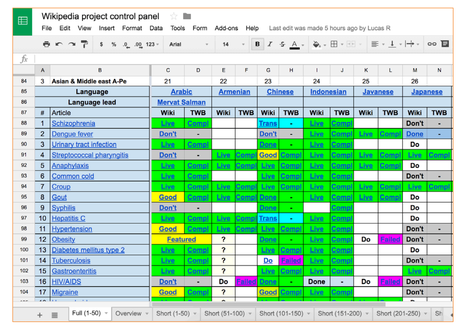
Medical Wikipedia mobile app with versions in 10 languages

Translate articles to 90 other Wikipedia languages

"Contributing to the digital space is now part of my identity as a future physician"

Provide access to Wikipedia in developing countries free of data access charges





Wikipedia:WikiProject Medicine/App

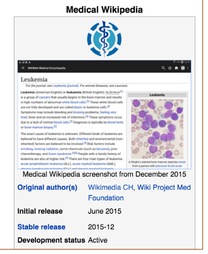
From Wikipedia, the free encyclopedia
< Wikipedia:WikiProject Medicine

Medical Wikipedia is a mobile app which provides offline access to health information on Wikipedia. It is an instance of the Wikipedia arm of Kiwix.

On June 10th, 2015 Wiki Project Med Foundation and Wikimedia Switzerland launched an android app that contains all of the English Wikipedia's health care content: including medical, anatomy, medication, and sanitation related articles as tagged by the respective WikiProjects.

Since then, other language versions of the app have followed and can be downloaded at these links:

- Download the **app in Arabic (AR)** from Google Play
- Download the **app in German (DE)** from Google Play
- Download the **app in English (EN)** from Google Play
- Download the **app in Spanish (ES)** from Google Play
- Download the **app in Persian (FA)** from Google Play
- Download the **app in French (FR)** from Google Play
- Download the **app in Japanese (JA)** from Google Play
- Download the **app in Odia (OR)** from Google Play
- Download the **app in Portuguese (PT)** from Google Play
- Download the **app in Chinese (ZH)** from Google Play



UCSF School of Pharmacy now also improving medicines related pages

TRANSLATORS WITHOUT BORDERS

Data for Wikipedia:WikiProject Medicine (list | summary table)
Total results: 18 Displaying up to 250 results beginning with #1

Result	Article	Importance	Quality	Review Release	Score
1	Antimicrobial (t · h · i)	Top 2014-03-19 (i)	C 2015-01-31 (i)		1312
2	Antiseptic (t · h · i)	Top 2014-12-23 (i)	C 2015-01-31 (i)		1490
3	Anxiety disorder (t · h · i)	Top 2010-07-17 (i)	C 2010-07-17 (i)		1499
4	Cardiovascular disease (t · h · i)	Top 2009-10-23 (i)	C 2009-11-13 (i)		1481
5	Cirrhosis (t · h · i)	Top 2009-02-02 (i)	C 2015-12-26 (i)		1594
6	Death (t · h · i)	Top 2009-01-15 (i)	C 2010-05-23 (i)	0.5	1745
7	Disease (t · h · i)	Top 2009-06-09 (i)	C 2010-04-18 (i)		1756
8	Drug (t · h · i)	Top 2015-10-09 (i)	C 2015-03-06 (i)		1625
9	Health (t · h · i)	Top 2008-06-20 (i)	C 2012-05-23 (i)	0.5	1722
10	Health care (t · h · i)	Top 2008-02-25 (i)	C 2009-11-19 (i)		1589
11	Hearing loss (t · h · i)	Top 2012-07-25 (i)	C 2014-07-19 (i)		729
12	Infection (t · h · i)	Top 2007-11-25 (i)	C 2008-07-24 (i)		1620
13	Medicine (t · h · i)	Top 2009-01-14 (i)	C 2009-05-04 (i)	0.5	1839
14	Mental disorder (t · h · i)	Top 2010-07-17 (i)	C 2014-01-28 (i)		1677
15	Pharmaceutical drug (t · h · i)	Top 2009-02-02 (i)	C 2013-12-30 (i)		1705
16	Physical exercise (t · h · i)	Top 2012-10-25 (i)	C 2011-08-25 (i)		1522
17	Vaccination (t · h · i)	Top 2009-10-23 (i)	C 2015-04-10 (i)		1516
18	Visual impairment (t · h · i)	Top 2015-05-23 (i)	C 2015-05-23 (i)		1366

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