

The implementation of a Wikipedia elective to provide writing and research based learning to fourth year medical school students and to develop free-access medical knowledge

Mihir Joshi
University of California, Berkeley
College of Letters & Sciences

Evans Whitaker, MD, MLIS
University of California, San Francisco
Library & Center for Knowledge Management

Amin Azzam, MD, MA
University of California, San Francisco
Department of Psychiatry



Abstract

Context

Wikipedia is the database most heavily relied upon by the general population for medical knowledge. Much of the medical community also refers to Wikipedia, while working, as well. While as a database, Wikipedia is one of the vastest and most developed, the company's small staff and open-edit policy prevent it from ensuring all its articles are both accurate and detailed. For this reason, medical school students in their fourth year have immense capacity to apply their knowledge and research skills to the improvement of Wikipedia's medicine articles. In taking a month-long elective to edit a single article, students can both provide a public service in the improvement of the world's largest open-access database, while honing their own writing and research skills.

Objectives

The goal is to provide fourth year medical school students an opportunity to apply and improve their knowledge and skills regarding expository writing for medicine through a medium that empowers the public with more accurate and detailed knowledge.

Key Message

Medical school students possess the ability to greatly contribute to the medical knowledge available in the public domain, and the act of contributing to a database like Wikipedia provides them with a valuable learning experience regarding writing and research that is otherwise not generally focused upon in clinical rotations and the like.

Conclusion

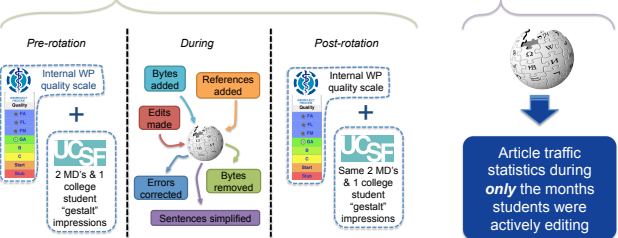
Students have the capacity to both contribute greatly to their chosen article while gaining more knowledge about the research and writing process for such articles, and while developing an understanding for the importance of such free-access knowledge. While empirical evaluation for how much the articles improved is concurrently being performed, most students have received positive feedback from both the staff and the audience of Wikipedia.

Introduction

UCSF faculty & librarians partnered with WikiProject Medicine, Wikipedia Education Program, and experienced Wikipedians to design, deliver and evaluate the elective.

Thus far, we have completed three month-long cycles of our MS-4 Elective
Total of 28 students enrolled

Methods



Results

Impact on Wikipedia Readers

Student	Article	Views	Wiki quality PRE	Wiki quality END
Eaamed	Cirrhosis	151,621	C	C
LaurenSMS4	White blood cell	138,597	C	C
Acallen88	Stroke	119,117	C	C
emhawkins	Hepatitis	112,459	C	B
Lmciszak	Dementia	85,048	C	C
UCSF2014	Alcohol withdrawal syndrome	52,514	C	C
Dr. MRM 23	Endometriosis	51,283	B	B
PIm234	Appendicitis	39,857	C	C
UCSFRb1983	Diabetes	36,943	C	B
Dswatcha	Headache	32,186	B	B
Asaadi1	Amyloidosis	25,369	Start	C
Wwtele	Cholecystitis	24,492	C	B
Rkronen	Post-partum depression	19,087	B	B
Snwatson14	Dyspareunia	12,373	C	C
Future FamDoc	Actinic keratosis	12,300	C	C
Jmtseng	Toxic epidermal necrolysis	10,221	Start	B
Veronicagon4	Placental abruption	8,957	Start	C
Jorgeo005	Therapeutic hypothermia	7,009	C	B
Dorafriedman	Premature rupture of membranes	6,608	Start	B
DrPFili	Prostatectomy	5,265	Start	Start
CmcUCSF2014	Preeclampsia	4,607	B	B
lieeric	Race and health	3,880	B	B
EricaNM	Vulvar cancer	3,662	C	C
Sho2014	Umbilical cord prolapse	3,308	Start	B
Kteli	Ventilator-associated pneumonia	2,876	C	C
Jksingh2014	Nicotine replacement therapy	2,657	C	C
Ystl22	Omphalitis of newborn	1,446	Start	C
TWl2014	In silico medicine	323	Stub	Start

Impact on Wikipedia Article Quality

Bytes added → + 369,994
Bytes removed → - 82,559
net +287,385 bytes (average 10,264/student)

Edits made → 1,084 edits (average 39/student)

References added: Pre 29.4, Post 37.6
Average number of references / article

College Student Average Article Improvement (graded before and after on a 3 point scale):
0.72

	"Very Improved"	"Improved"	"Unimproved"
UCSF MD's "Gestalt" Impressions	14	12	2

Impact on Students

"Simplifying the lead is really challenging."
"I wrote for a lay audience."
"Contributing to the digital space is now part of my identity as a future physician."
"It's hard to delete other people's work."
"I loved the travel flexibility."
"This was easier than I expected."
"I feel good giving back to Wikipedia."
"It's challenging to edit live instead of in my sandbox."
"This was harder than I expected."
"I've drunk the Kool Aid."

Discussion/Dissemination

WIKIPEDIA The Free Encyclopedia

Translators Without Borders have translated 581 English Wikipedia health-related articles to 53 other language Wikipedias

These 28 Wikipedia articles were collectively viewed **974,065** times during **only** the months students were actively editing

Provides Wikipedia access to **400 million** people for **free** in 46 developing countries through 54 mobile phone operators

Reflective Critique/Limitations

- Wide variability in baseline student aptitude and effort.
- UCSF MD & college student "scale" is entirely subjective and not validated.
- Students have not continued editing Wikipedia after the rotation ended.

Appreciations & References

Thanks to Val Swisher, Jack McCue, Lauren Maggio, Fred Trotter, Will Ross, Jake Orlowitz, Lane Raspberry, Kingsley Otoide, James Heilman, Armando Leon, David Bresler, and all 28 students who completed the elective and did such wonderful work!

For more information about our elective:
http://en.wikipedia.org/wiki/Wikipedia:WikiProject_Medicine/UCSF