



Focused translation efforts for health promotion

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Disclaimer: The findings and conclusions in this report are those of the authors and do not necessarily represent the official position of the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. Products mentioned in this presentation do not constitute an endorsement by the CDC or NIOSH.



“Our challenge at NIOSH is to put our research into practice... As we know from our experience that people are turning to Wikipedia for information, we want to make sure that the information there is complete, up to date, and free of errors.”



John Howard, Director of NIOSH

This Photo is licensed under CC BY4, Wiki Commons File:WikiConference_USA_2015_144.JPG

NIOSH Science Blog

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Expanding and Improving Occupational Safety and Health Content in Wikipedia. It Matters.

Posted on July 23, 2018 by Max Lum, Thais C. Morata, James Hare, and John P. Sadowski



Image by NIOSH

NIOSH is one of the first US federal agencies to collaborate with the Wikimedia organizations and it is doing so by actively contributing data and the latest research to help improve the health of the population. NIOSH’s effort involves examining mechanisms to help make sure that the occupational safety and health information that reaches Wikipedia’s millions of readers is complete, up-to-date, and free of errors.

The January 2017 NIOSH eNews *article* [Reaching Our Audience Where They Are: Our Work with Wikipedia](#) describes the motivation behind NIOSH’s efforts to expand and improve occupational safety and health content in Wikipedia. Wikipedia

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<https://www.cdc.gov/niosh/enews/enewsv14n9.html>

January 2017

<https://blogs.cdc.gov/niosh-science-blog/2018/07/23/osh-wikipedia/>

Multi-component approach



Since ~ 2010, NIOSH has had Wikipedians-in-Residence who

- Directly improve Wikipedia articles on occupational safety and health topics
- Create and improve **Wikidata** items on NIOSH publications
- Create and maintain NIOSH media files in **Wikimedia Commons**
- Contribute to strategic planning
- Coordinate with and train NIOSH staff to make contributions and develop activities*
- Organize session or events to expand and improve content in these platforms
- Connect Wikimedians with NIOSH resources
- Created and manage

[https://en.wikipedia.org/wiki/Wikipedia:WikiProject Occupational Safety and Health](https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Occupational_Safety_and_Health)

*beyond Wikipedia editing per se

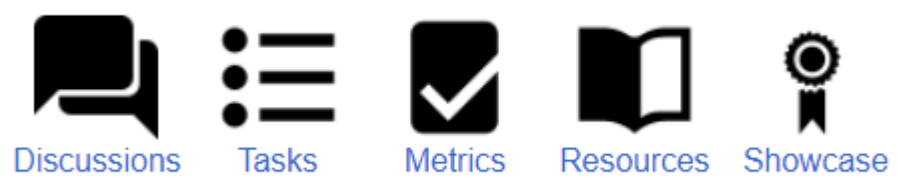


Wikipedia:WikiProject Occupational Safety and Health

From Wikipedia, the free encyclopedia

A WikiProject dedicated to improving Wikipedia content on occupational safety and health.

[https://en.wikipedia.org/wiki/Wikipedia:WikiProject Occupational Safety and Health](https://en.wikipedia.org/wiki/Wikipedia:WikiProject_Occupational_Safety_and_Health)



Metrics

Quality	Importance						Total
	Top	High	Mid	Low	NA	???	
★ FA		1	2	7			10
★ FL			1				1
⊕ GA		6	14	21		1	42
B	7	34	60	87		13	201
C	20	57	109	235		20	441
Start	21	49	126	571		30	797
Stub	2	7	35	364		15	423
List	3	4	5	61	1	18	92
Category					165		165
Disambig					1		1
File					3		3
Project					16		16
Template					5		5
NA			1	12	169		182
Other					2		2
Assessed	53	158	353	1,358	362	97	2,381
Unassessed			2	2		361	365
Total	53	158	355	1,360	362	458	2,746

Occupational health disparities in the US: need for accurate translations*

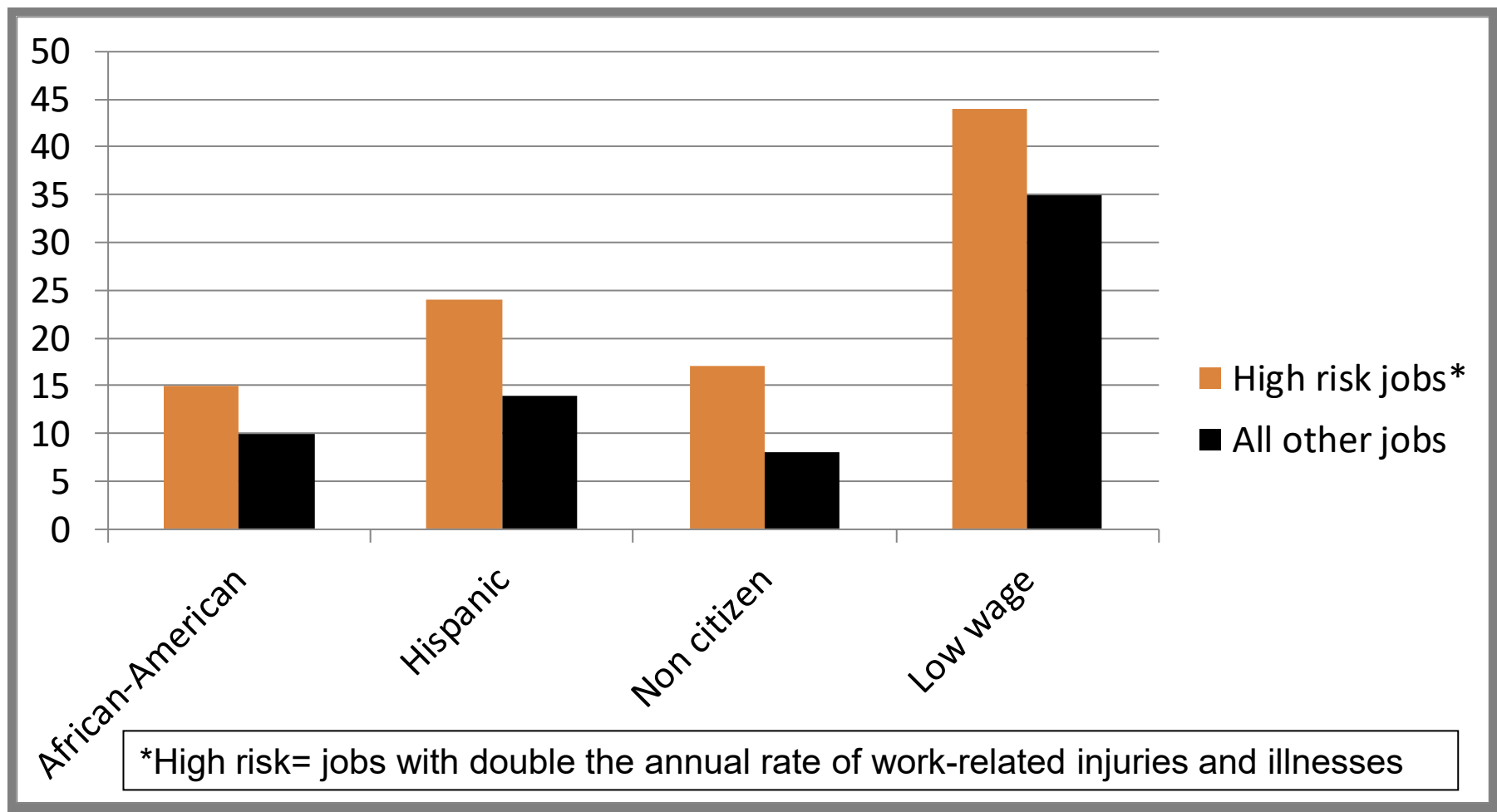
“People who live and work in low socioeconomic circumstances (which disproportionately include racial and ethnic minorities) are at increased risk for mortality, morbidity, unhealthy behaviors, reduced access to and inadequate quality of care”

“Inequities arise from *modifiable* exposures, associated with social disadvantage, and are considered ethically unfair”

Source: Key findings from the CDC Health Disparities and Inequalities Report—United States, 2011

U.S. minorities, immigrants, and low wage workers are overrepresented in the jobs with the highest injury and illness rates

% of Workers



Vulnerable/underserved populations in occupational health

Groups of workers who have biologic, social, or economic characteristics that place them at increased risk for work-related conditions or on whom inadequate data have been collected

- Disadvantaged groups
- Disabled persons
- Low-wage workers
- Undocumented workers
- Those for whom language or other barriers present health or safety risks

Source: National Research Council and Institute of Medicine of the National Academies, 2007



Translating wikipedia, a path to universal access to health content

James Heilman, MD, CCFP(EM)
Wiki Project Med

Why is this needed?

Broader view:

Every day thousands die for a lack of healthcare and a major factor is poor access to understandable information

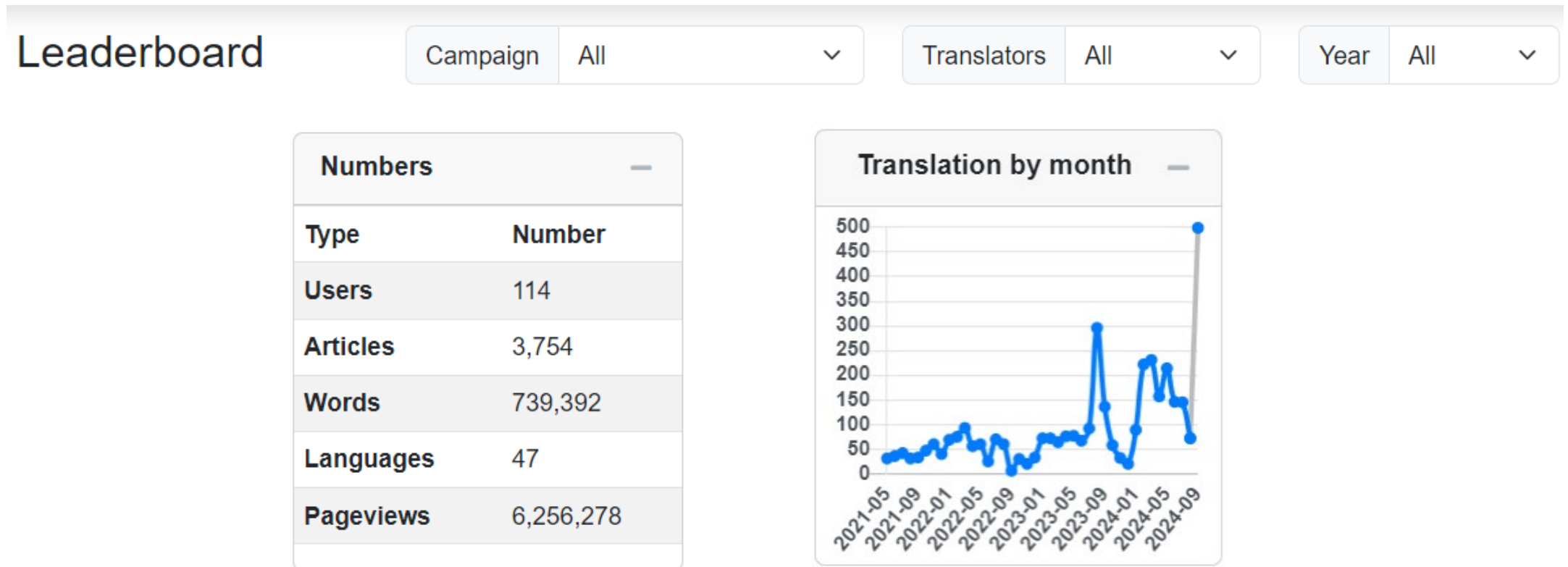
History of Wiki Project Med Translation Efforts



- Started in 2011 in collaboration with Translators Without Borders among others
- Initial efforts resulted in:
 - > 19,000 articles; > 22 million words
 - Work in > 150 languages by >3,250 translators
 - > 3.7 billion pageviews since 2015
 - Represents >40% of content that exists in other languages on key topics (~10% of all health content)
- Starting content was:
 - ~1,300 improved leads of articles on English WP
 - Received > 4.5 billion views since 2015

Relaunched in 2021

- Starting content on own website (MDWiki.org)
- A new dashboard to guide translators, automatically track progress, and collect data on impact



https://mdwiki.toolforge.org/Translation_Dashboard/leaderboard.php

This tool looks for Wikidata items that have a page on mdwiki.org but not in another wikipedia language ([Example](#)). [How to use.](#)

Campaign

Occupational Health



Language

two letter code



➔ Login





Approaches

Provide information to underserved workers by placing plain language OSH content in English and Spanish++++ on a trusted, accessible platform thru outreach campaigns

Wiki4WorldHearingDay2019



Wiki4YearOfSound2020



Wiki4WorldHearingDay2023



#Wiki4WorldHearingDay2023

Wiki4WorldHearingDay2024





Partnering with Wiki Edu and university programs in the US and Canada and others abroad with

<https://outreachdashboard.wmflabs.org/explore>



Wiki Edu My Dashboard ask a question en [TMorata](#) Log out

Equity in Occupational Health [Home](#) [Timeline](#) [Students](#) [Articles](#) [Uploads](#) [Activity](#) [Resources](#)

1	14	59	6 ⁱ	7.85K	59 ⁱ	179K
Articles Created	Articles Edited	Total Edits	Student Editors	Words Added	References Added	Article Views

[https://dashboard.wikiedu.org/courses/Georgetown_University/Equity_in_Occupational_Health_\(Spring\)](https://dashboard.wikiedu.org/courses/Georgetown_University/Equity_in_Occupational_Health_(Spring))

Articles Edited

Change in Structural Completeness

Filters:

New and Existing ▾



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Words Added [?]

References Added [?]

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[Occupational safety and health](#)

[\(history\)](#) | [\(article development\)](#)

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[Social determinants of health](#)

[\(history\)](#) | [\(article development\)](#)

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[14180](#)



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[Equity in Occupational Health - Articles Edited \(wikiedu.org\)](#)

Roofer

*For someone who rides the roof of a train, see [Atapper](#).
"Roofers" redirects here. For the album, see [Roofers \(album\)](#).*

A **roofer**, **roof mechanic**, or **roofing contractor** is a **tradesperson** who specializes in **roof** construction. Roofers replace, repair, and install the roofs of **buildings**, using a variety of materials, including **shingles**, **bitumen**, and **metal**. Roofing work can be physically demanding because it involves heavy lifting, as well as climbing, bending, and kneeling, often in **extreme weather** conditions.^[1] Roofers are also the most vulnerable to falls from heights due to often working on slanted surfaces and at elevated heights. However, various safety systems are required by OSHA to address this concern and can be used at the discretion of the employer. Curled or rotten shingles, missing shingles, and blistering are all signs that roof needs attention and the service of roofers to fix.

Global usage

According to the U.S. Bureau of Labor Statistics (BLS), with

Roofer



A German roofer installing a **reed roof** (he is wearing the tradition

Occupation

Occupation type **Vocational**

Activity sectors **Construction**

Description

Bringing all together

Morata et al. *BMC Public Health* (2024) 24:2646
<https://doi.org/10.1186/s12889-024-20105-8>

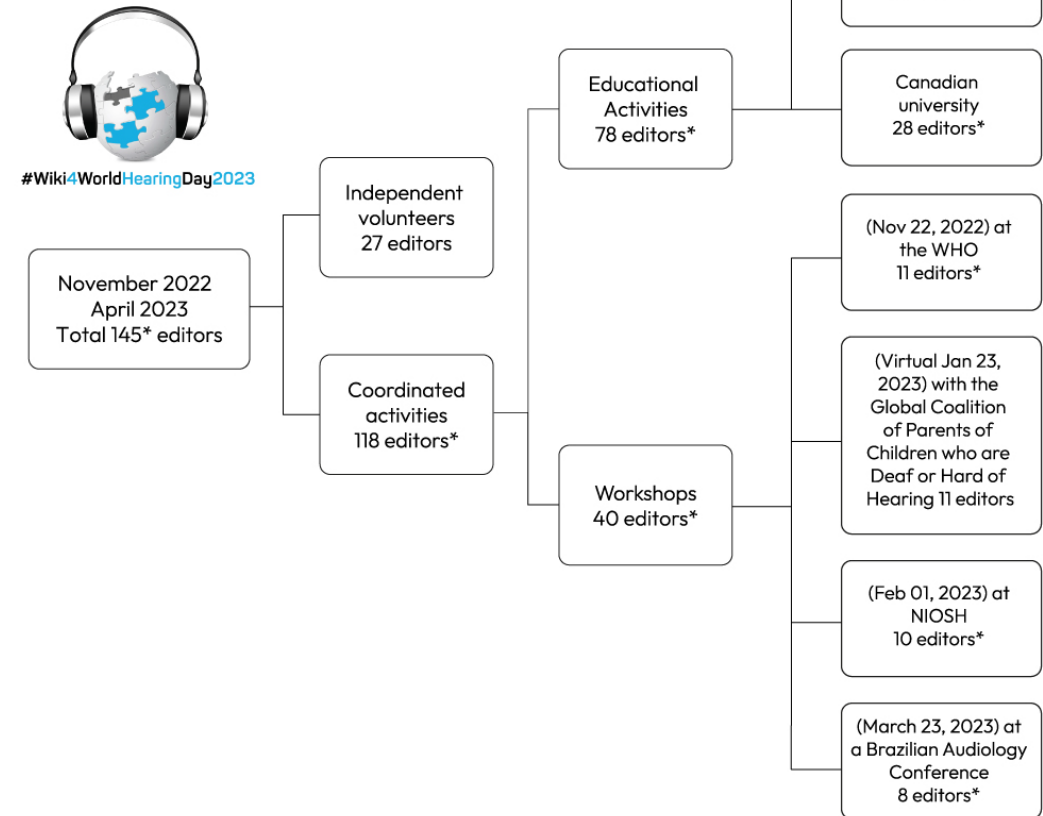
BMC Public Health

RESEARCH

Open Access



Strategies for crowdsourcing hearing health information: a comparative study of educational programs and volunteer-based campaigns on Wikimedia



Strategies for crowdsourcing hearing health information: A comparative study of educational programs and volunteer-based campaigns on Wikimedia

THAIS C. MORATA ET AL.

1

KEY MESSAGE



Wikipedia editing as part of coursework was more effective in increasing the availability of quality, plain language health information on hearing conditions and hearing care when compared to a volunteer-based Wikipedia outreach global campaign.

2

METHODS



Study design

We coordinated improvements in hearing health content in Wikimedia platforms through educational programs and compared with contributions of others who participated in the global campaign Wiki4WorldHearingDay2023. We evaluated the feasibility and implementation of the different strategies.

Participants

78 students from speech pathology and audiology university programs in Brazil and Canada and 67 volunteers from different countries. Both participated in the Wiki4WorldHearingDay2023 campaign.



3

MAIN RESULTS

Results can be seen at:

https://outreachdashboard.wmflabs.org/courses/World_Health_Organization/Outreach_Wikipedia_Edit-a-thon_4_World_Hearing_Day_2023

39 Articles Created	283 Articles Edited	1.67K Total Edits	145 Editors
155K Words Added	258 References Added	16.5M Articles View	140 Commons Upload

Those enrolled in educational activities contributed 70% of the edits during the global campaign. The approaches taken were feasible, and its components (outreach efforts and educational activities) were mutually beneficial.



Experiment

We examined the number of views of the edited articles, the extent of the edits (in number of words added), by the 2 groups of participants as well as whether the contributions were accepted by Wikipedia.



Systematic academic documentation



**Wikipedia at the university:
Active learning methodologies for
teaching in Audiology**

EDITORIAL

Make Quality Hearing Health Information Available to All

By Thais C. Morata, PhD, and Shelly Chadha, PhD

Over six percent of the world's population has disabling hearing loss.¹ Across the globe, it can take years for those with hearing problems to seek care. Even when care is sought, the prescribed interventions are not often adopted.² This issue has motivated the World Health Organization to coordinate World Hearing Day (WHD), an annual event that aims "to raise awareness on how to prevent deafness and hearing loss and promote ear and hearing care across the world."³ The Centers for Disease Control and Prevention argues that "plain language makes it easier for everyone to understand and use health information,"⁴ emphasizing its commitment to making high-quality information freely accessible to the public.⁵ As health articles on Wikipedia are collectively read more than 150 million times per month,⁶ one approach the National Institute for Occupational Safety and Health is taking to communicate research findings involves improving health content on Wikipedia.⁷ That includes the adoption by university programs of the Wikiducation Foundation⁸ platform to train students in Wikipedia editing. Through this mechanism, students contribute

evidence-based content to Wikipedia as a class assignment.⁹ This year, NIOSH proposed and developed the online event Wiki4WorldHearingDay2019¹⁰ to facilitate the improvement of Wikipedia content related to hearing, hearing health services, hearing testing, and preventive and rehabilitative interventions. The platform provided guidance and allowed anyone with access to a computer and the internet to participate in the campaign. Several institutions joined by either promoting the event or contributing content to Wikipedia, including the National Center for Environmental Health, the National Center on Birth Defects and Developmental Disabilities, the Hearing Center of Excellence, the French National Research and Safety Institute for the Prevention of Occupational Accidents, the International Society of Audiology, the Acoustical Society of America, the American Academy of Audiology, and Hear in Cincinnati. Participants from Cochrane,



Cochrane Ear, Nose and Throat, and university programs in the United States, Canada, United Kingdom, Brazil, and South Africa also contributed



Dr. Morata, left, is a research audiologist at the National Institute for Occupational Safety and Health and Health and Safety Institute for the Prevention of Occupational Accidents, the International Society of Audiology, the Acoustical Society of America, the American Academy of Audiology, and Hear in Cincinnati. Participants from Cochrane,

INQUIRY: The Journal of Health Care Organization, Provision, and Financing

Case Study

Expanding Reach of Occupational Health Knowledge: Contributing Subject-Matter Expertise to Wikipedia as a Class Assignment

Diana M. Ceballos, PhD^{1,†}, Robert F. Herrick, ScD¹, Tania Carreón, PhD^{2,3}, Vy T. Nguyen, ScD¹, MyDzung T. Chu, PhD¹, John P. Sadowski, PhD⁴, Helaine Blumenthal, PhD⁵, and Thais C. Morata, PhD⁶

INQUIRY: The Journal of Health Care Organization, Provision, and Financing
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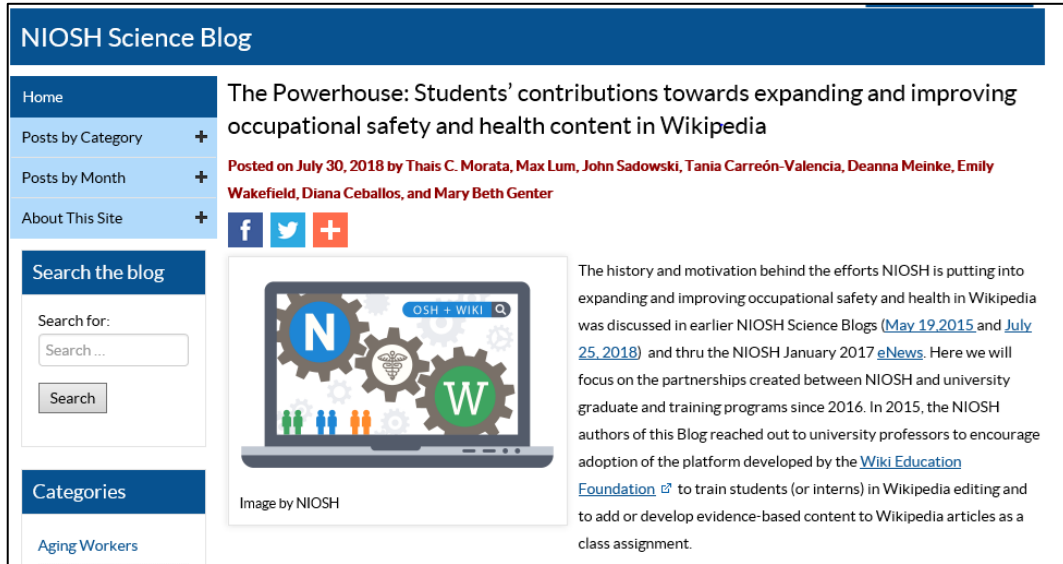


Research Idea → Published in: Research Ideas and Outcomes

Developing a scalable framework for partnerships between health agencies and the Wikimedia ecosystem

Daniel Mietchen, Lane Rasberry, Thais Morata, John Sadowski, Jeanette Novakovich, Heilman

Dissemination of the work in various environments



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The Powerhouse: Students' contributions towards expanding and improving occupational safety and health content in Wikipedia

Posted on July 30, 2018 by [Thais C. Morata](#), [Max Lum](#), [John Sadowski](#), [Tania Carreón-Valencia](#), [Deanna Meinke](#), [Emily Wakefield](#), [Diana Ceballos](#), and [Mary Beth Genter](#)

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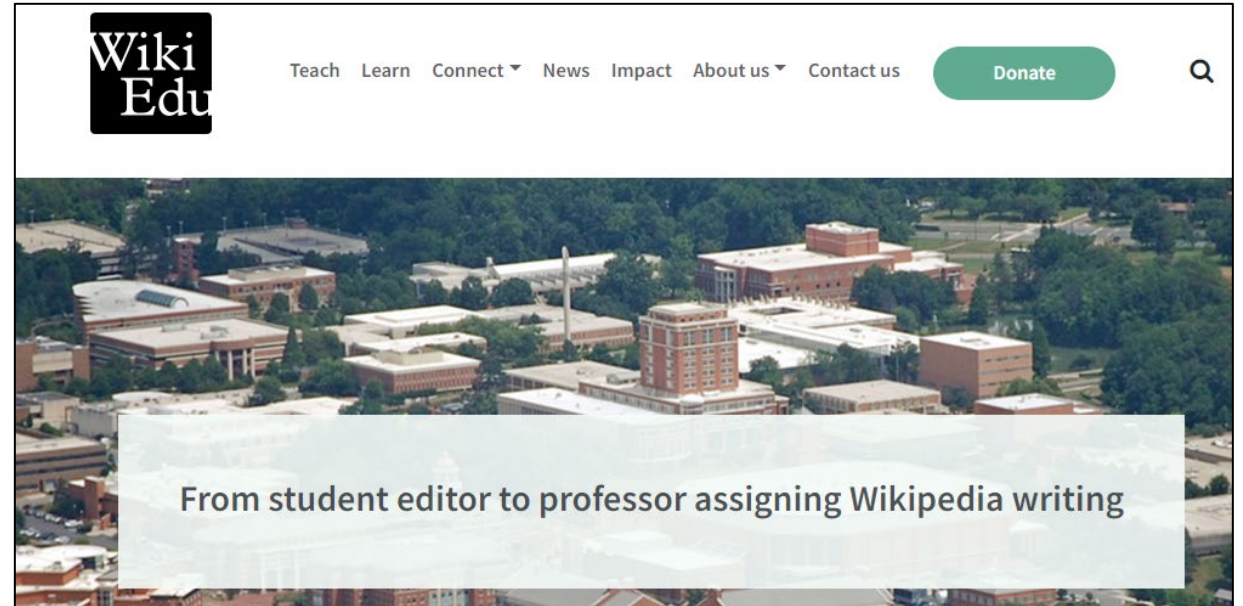


Image by NIOSH

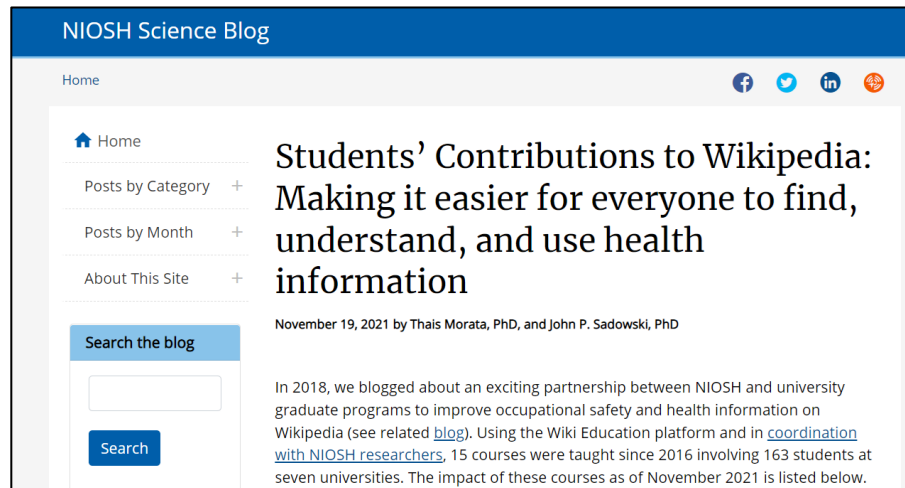
The history and motivation behind the efforts NIOSH is putting into expanding and improving occupational safety and health in Wikipedia was discussed in earlier NIOSH Science Blogs ([May 19 2015](#) and [July 25 2018](#)) and thru the NIOSH January 2017 [eNews](#). Here we will focus on the partnerships created between NIOSH and university graduate and training programs since 2016. In 2015, the NIOSH authors of this Blog reached out to university professors to encourage adoption of the platform developed by the [Wiki Education Foundation](#) to train students (or interns) in Wikipedia editing and to add or develop evidence-based content to Wikipedia articles as a class assignment.



Wiki Edu

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From student editor to professor assigning Wikipedia writing



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Students' Contributions to Wikipedia: Making it easier for everyone to find, understand, and use health information

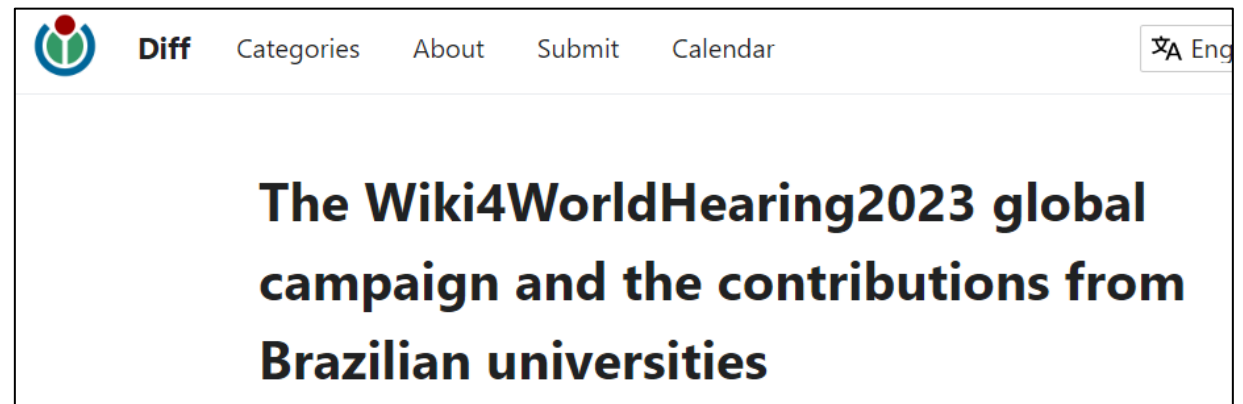
November 19, 2021 by [Thais Morata, PhD](#), and [John P. Sadowski, PhD](#)


In 2018, we blogged about an exciting partnership between NIOSH and university graduate programs to improve occupational safety and health information on Wikipedia (see related [blog](#)). Using the Wiki Education platform and in [coordination with NIOSH researchers](#), 15 courses were taught since 2016 involving 163 students at seven universities. The impact of these courses as of November 2021 is listed below.

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The Wiki4WorldHearing2023 global campaign and the contributions from Brazilian universities

Elements to broaden and strengthen efforts in translation

- Multi-component strategy
- Articulation other groups that share interests in your area
- Connection with local affiliate
- Use of a technical infrastructure that gives us metrics and coordination mechanisms
- Seek resources, they exist
- Systematic academic documentation
- Dissemination of the work in various environments

