



## Free sound knowledge: how you (or your students) can contribute to [Wiki4YearOfSound2020](#)

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### ABSTRACT

The International Year of Sound (IYS 2020) is a global initiative to highlight the importance of sound in all aspects of life. Wikipedia is an important media to share science information with the public. The National Institute for Occupational Safety and Health partnered with several acoustical societies in organizing an online event to facilitate the improvement of Wikipedia content related to acoustics. The [Wiki4YearOfSound2020](#) platform (available in several languages) provides guidance on how to identify topics, improve, or translate existing articles. Educational programs can count on the platform to train students on how to contribute high-quality content to Wikipedia as part of their class assignments. Throughout 2020 the Wikimedia [outreach dashboard](#) tracks progress, individual contributions, and their reach. This campaign aims to help make content in acoustics one of the better-developed areas within Wikipedia, while providing quality information to everyone in the world - where they are actually looking for it.

### 1. INTRODUCTION

The International Commission on Acoustics held the inaugural ceremony kicking off the [International Year of Sound](#) (#IYS2020) on January 31, 2020. This global initiative aims to highlight the importance of sound and related sciences and technologies for all in society. Many of the events

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that were planned for 2020 have been postponed or extended to 2021, due to the COVID-19 pandemic. One of the activities that is still ongoing is the year-long effort to add sound-related content to the on-line encyclopaedia, Wikipedia.

The scientific community often seeks ways to communicate science to the public and expedite the implementation of the best existing evidence by those who would benefit from it. This task is not often easily achieved, especially in this era of information overload. The National Institute for Occupational Safety and Health (NIOSH) uses several platforms to communicate research findings to the public. As more and more people are turning to Wikipedia for information [1, 2], NIOSH's communication efforts includes a [multicomponent strategy](#) to [expand and improve content related to occupational safety and health](#) in many of the projects that are part of the Wikimedia umbrella. This initiative is relevant not just for NIOSH's and professional associations' science communication efforts, but also to society at large [3-5].

The online platforms developed by NIOSH facilitates the improvement of Wikipedia content for all topics related to sound. It makes it possible for individuals as well as organizations to contribute to the campaign and track its progress and reach. One can participate by promoting the project, suggesting a topic that should be a Wikipedia article, and improving or translating existing articles. Educational programs can count on Wikipedia training and tools to train students to contribute high-quality content to Wikipedia as a course assignment [6,7].

## 2. BACKGROUND

### 2.1. Previous Campaigns: World Hearing Day 2019 and Wiki4WorldHearingDay2019

This effort builds on the success of a previous campaign. NIOSH, in collaboration with the World Health Organization (WHO), organized [Wiki4WorldHearingDay2019](#) to improve the Wikipedia content related to hearing, hearing health services, hearing testing, and preventive and treatment interventions [8]. The effort tracked the contributions of participants during January and February 2019 (see summary at the [WHO report on World Hearing Day 2019](#)). A few of the highlights were the development of an expanded article on tinnitus, and another on hearing protection fit-testing. One can access exactly which Wikipedia articles were edited and when, the number of views of the edited articles, and review the extent and the text of the actual edits. One can also observe whether others engaged to further develop the page. This effort provided us with information on the topics that interest the public in general.

### 2.2. Current Campaign: International Year of Sound 2020

The International Year of Sound 2020 is an outreach campaign and its main goal is to raise awareness throughout the world of the important role that sound plays in all aspects of society. It consists of coordinated activities on regional, national, and international levels. These activities aim to stimulate the understanding of scientific content from a wide range of subdisciplines of acoustics, including aeroacoustics, audio, signal processing, architectural acoustics, bioacoustics, electro-acoustics, environmental noise, musical acoustics, noise control, hearing and psychoacoustics, physical acoustics, speech, ultrasound, underwater sound and vibration. This effort also contributes towards understanding the importance of controlling noise in nature, in the built environment, and in the workplace. Activities and events are regularly updated at <https://sound2020.org/>.

## 3. WIKI4YEAROFSOUND2020

As part of the IYS2020 activities, NIOSH took the lead in designing the online event to facilitate the improvement of Wikipedia content related to acoustics. The [Wiki4YearOfSound2020](#) platform (available in 17 languages) provides guidance on how to identify topics, improve, or translate existing articles. The institutions which joined Wiki4YearOfSound2020, by either promoting the

event or contributing content to Wikipedia, include the International Institute of Acoustics and Vibration, the International Commission for Acoustics, the Acoustical Society of America, the International Society of Audiology, the European Acoustics Association, the *Federación Iberoamericana de Acústica*, the *Asociación de Acústicos Argentinos*, the *Associação Brasileira para a Qualidade Acústica*, American Academy of Audiology, the Centers for Disease Control and Prevention, HEAR in Cincinnati, the National Hearing Conservation Association, and the WHO Make Listening Safe initiative. The [Wiki4YearOfSound2020](#) platform was officially launched at the 178<sup>th</sup> Meeting of the Acoustical Society of America, which took place in December 2019 [5].

Some of the participants used training and tools available through Wikipedia or the [Wiki Education Foundation](#), so that Wikipedia editing is one of the course assignments. Using their platforms does not require instructors to become a proficient Wikipedia editor, and it does not add much time to the instructors' workload. Instructors can remain focused on the subject matter of their course and rely on the existing resources (assignment management software, tutorials, public review) to help students with the mechanics of writing for Wikipedia [6, 9].

### 3.1. Mid-year Results of the Wiki4YearOfSound2020 Campaign

The [Wikimedia outreach dashboard](#) allows anyone to monitor contributions and reach, with great level of detail and accuracy. Tracking started on November 4, 2019 and will continue until December 31, 2020. At the time this article was submitted for publication, the Wikipedia pages related to sound had received more than 49 million views (see Figure 1).

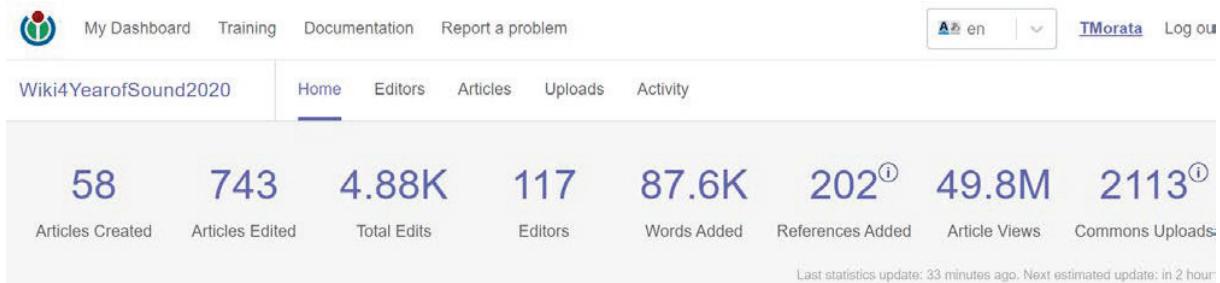


Figure 1. Screen capture of Wikimedia outreach dashboard which tracks contributions to the Wiki4YearOfSound2020 campaign, June 24, 2020.

So far (on June 20, 2020) tracking indicated that over 87,000 words were contributed to 743 existing and 58 new Wikipedia articles and 2113 media files were donated to the open access repository [WikiCommons](#). Articles are being created or expanded in several languages, including English, Portuguese, Spanish, Italian, Chinese, and French. Please keep in mind that as individual articles were edited at different times during the campaign, there was a longer time-period for tracking articles edited earlier in the campaign. The topics that attracted the most attention are listed on Table 1.

Table 1. Number of views of the top ten (by number of views) in Wikipedia articles which were expanded during the first half of the 2020 campaign

Wikipedia article	Number of views since campaign started
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<u>Noam Chomsky</u>	1,442,488
<u>Hindi</u>	963,482
<u>Chinese language</u>	598,878
<u>Speed of sound</u>	558,873
<u>Scots language</u>	336,154
<u>Microcephaly</u>	329,421
<u>Decibel</u>	296,480
<u>Structuralism</u>	226,021
<u>Linguistic relativity</u>	222,946
<u>Hindustani language</u>	213,348
<b>TOTAL</b>	<b>4,966,070</b>

#### 4. CONCLUSIONS

Crowdsourcing of expertise and knowledge is relevant for science communication. The transparent approach to editing Wikipedia and improving articles provide opportunities for experts to address concerns they might have over participation in this event. The heightened level of review that takes place on each Wikipedia article is only possible due to the generous dedication of Wikipedia editors, who are often themselves health professionals and experts, and collaborative ventures with scientific associations and agencies [10, 11].

Many are the reasons to take time to expand the scientific content into Wikipedia. These include the ability to provide a public service, contribute solid, verifiable knowledge about a discipline to the public, and eliminate misinformation. Those who are interested in science communication benefit from having access to metrics on the number of page views and the interaction with other Wikipedia editors. It is also an opportunity to learn about which topics within a discipline attract public interest.

Halfway through the course of the campaign, a great interest by the public in topics related to sounds has been demonstrated. Participation continues to be encouraged until the end of 2020. The success of this effort will become greater as organizations and individuals consider this approach and help expand and improve the Wikipedia pages related to acoustics. The breadth and accuracy of the Wikipedia coverage in science varies widely. We see campaigns like this as unique opportunities to make acoustics content one of the better-developed areas within Wikipedia, while providing quality information to everyone in the world.

#### 5. ACKNOWLEDGEMENTS

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#### 6. DISCLAIMER

The findings and conclusions in this article are those of the author and do not necessarily represent the official position of the National Institute for Occupational Safety and Health, Centers for Disease Control and Prevention. Mention of any company or product does not constitute endorsement by NIOSH, CDC. In addition, citations to websites external to NIOSH do not constitute NIOSH endorsement of the sponsoring organizations or their programs or products. Furthermore, NIOSH is not responsible for the content of these websites. All web addresses referenced in this document were accessible as of the publication date.

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