Learning by Wikipedia's NPOV principle:
an online dynamic experience

Claudia SERBANUTA, Mihai CONSTANTINESCU

Fagaras Research Institute, Fagaras, Romania,
claudia.serbanuta@gmail.com, constantin.mihai.escu@gmail.com

Abstract: *Wikipedia projects are available in many languages and they contribute to learning programs by using digital content and peer learning practices. The Neutral Point of View (NPOV) is a fundamental principle of Wikipedia. As such, it is influencing the on-boarding process for new editors and the quality of contributed articles. The authors have been training new editors for Wikipedia in Romanian and coordinating a research project inquiring about NPOV within Wikipedia and its learning community.*

This article is an exploratory study on better understanding the process of learning about NPOV practices and its potential to create learning and teaching opportunities. The authors will present a literature review documenting the learning approaches within Wikimedia projects that contribute to more balanced and comprehensive Wikipedia texts from the NPOV perspective. Looking at the relation between the community of editors and the quality of NPOV editing, the authors will focus on the Romanian Wikipedia project. They will map the NPOV tagged Wikipedia articles and start a discussion about the online group dynamics and learning contexts for editors. The analysis will look at how the size and diversity of a Wikipedia community contributes to improved articles adhering to the NPOV.

Keywords: Wikipedia, Neutral Point of View, Online learning, Online communities, learning with Wikipedia, Teaching with Wikipedia.

1. Introduction

The global Wikipedia project is unique in its approach and goals. An online encyclopaedia edited by volunteers, it is now "both the largest and most widely used encyclopaedia in history" (McDowell & Vetter, 2021). Moreover, the project, available in 329 languages, is kept alive and developed continuously by a community of volunteer contributors (Wikipedia, 2022a). All the contributors go through a process of learning about the project and how to contribute to it and then contribute to it based on their available time and interest. This makes Wikipedia

not only a resource for learning but also a learning platform for anyone interested in developing digital skills, critical thinking, and documentation abilities.

Wikimedia Education is a project that was developed precisely to promote Wikipedia as a learning tool and project. Among the abilities and knowledge recognized as being enhanced by contributing to Wikipedia are: reading, writing, critical thinking, information literacy, literature review, collaboration, community of practice, citation, copyright, coding, online etiquette, and online citizenship (Wikimedia, 2022). Multiple teaching projects, curricula and analyses have already looked at the impact contributing to Wikipedia can have for the learning process of children, young adults or seniors (Brailas et al., 2015; Johansson & Lindberg, 2019; Vetter & Moroz, 2019). The connection between learning processes and programs and Wikipedia, even though recognized, is underused especially in smaller Wikipedia projects like the Romanian language one.

This article is presenting the initial phases of an exploratory study that looks at the potential the ro.wikipedia.org project (WikiRo) can have for supporting learning and teaching processes in formal but also informal learning settings.

1.1. Context

As new editors are constantly joining Wikipedia projects around the world (in October 2022, the number of registered editors was over 44.4 million), their process of learning and adhering to the norms of Wikipedia communities in various languages takes some effort and time. The Wikimedia Foundation and affiliated organisations encourage the participation of new editors through campaigns, activities, but also courses. One direction of activity is training librarians, primarily from public libraries, to edit Wikipedia articles on local history (Vershbow, 2022).

Wikimedians of Romania and Moldova User Group (WMROMD) is an affiliated group of the Wikimedia Foundation. Since 2017 WMROMD organises the #1lib1ref (one librarian, one reference) campaign in Romania; thus, librarians became a group of potential new users for editing WikiRo. Previously, the user groups that were trained and encouraged to contribute to WikiRo were mainly students and professors (Popovici, 2022). For a couple of years, the #1lib1ref events were organised following the method used in similar events around the world (Wikipedia, 2022b) and did not gather many new users. The approach changed in 2019 when WMROMD, in partnership with Goethe Institute Bucharest and the National Library of Romania, organised an editing workshop for public librarians. The invited guest was Antje Theise from the Hamburg University Library and she presented how her university library was benefiting from connecting history, research, and digitization library projects to Wikimedia projects (Theise, 2017). Wikipedia and other Wikimedia projects (like Wikimedia Commons or Wikidata) can bring visibility to the information held by libraries. In the process of contributing to Wikipedia, Theise suggested there is great potential for librarians to contribute to more informed and educated communities. The workshop was followed by two regional one-day trainings of public librarians in

Arges and Galati counties. The participants identified ways in which they could promote their communities' local history, while the WMROMD organisers observed the need for a more sustained learning process to empower librarians to fully contribute to Wikipedia.

The 2020 pandemic forced the WMROMD to stop physical training events. At the request of libraries, WMROMD started to offer online courses for librarians from Arges and Brasov counties. The interest to support online learning became central for volunteers from WikiRo. The results of the 2020 online training were significant given the time and efforts invested (Wikimedia, 2021).

Encouraged by these results, WMROMD members started to look for other online learning opportunities. The Learning Circle methodology implemented through an Erasmus project in Romania was the opportunity to revise how new editors could onboard the Wikipedia project. Learning Circle is a methodology for adult learning that is built upon peer learning and regular meetings of the group invested in learning together (Makowska & Koszowska, 2020). Peer2Peer University is empowering learning circles around the world and hosted two rounds of Learning Circles on editing WikiRo. In 2020-2021 Claudia Serbanuta developed an online course for learning how to edit Wikipedia and facilitated the Learning Circles on this topic for 23 public librarians, that created 10 new pages, improved 156 pages, and uploaded over 400 media files.

The results were encouraging but in the process of requesting feedback and discussing what made editing Wikipedia hard, the participants –besides understanding that time commitment for adult learning is mandatory, that digital skills need to also be developed when learning Wikipedia–, confessed that The Neutral Point of View (NPOV), one of the core principles of Wikipedia, was difficult to understand and implement. The ability to author articles that respect the NPOV standard might seem like a Wikipedia-only skill but if we look closely at what NPOV requires (neutrality, ability to distinguish between facts and opinions, presentation of the different points of view regarding a subject, a neutral tone etc.) we see that NPOV adherence is a fundamental ability for anyone. Writing almost any high-school level or higher essay requires (at least partially) some sort of NPOV-related skills. Moreover, mastering these abilities is relevant in a world in which individuals are subjected to false information on a regular basis. That is why NPOV training has potential to contribute to educational tools, and we have chosen to focus our study on NPOV status in Romanian Wikipedia. This will inform on constructing better country-specific NPOV training tools and programs.

Starting from the learning experiences organised in the past few years for that community, the authors, supported by a grant from the Wikipedia Foundation, are looking for new ways of engaging and learning online. This article includes a literature review on learning through editing Wikipedia and an analysis of the literature for learning about one of the five core principles of Wikipedia, The Neutral Point of View (NPOV), in projects in English.

1.2. Methodology

This exploratory study focuses on looking at the community of contributors to the Wikipedia project in Romanian language and identifying ways to better equip new editors to become contributors to this project. The literature review on how Wikipedia is used in learning contexts and the role NPOV has in facilitating or making it hard for new editors to learn and contribute to this project is mostly based on English speaking communities. The exploratory study is looking at the dynamic of the community of editors from WikiRo.

The creation of free content on Wikipedia is supported through discussions that take place on talk pages throughout the project. In fact, in the case of WikiRo, the total number of pages for articles is less than the number of pages where discussion takes place. The clarifications related to the content on the main article, the suggestions of improvement as well as the disputes are documented on these talk pages. For this exploratory phase of our study, we started mapping the community actions in addressing the ways in which the NPOV was dealt with.

We started with the list of articles marked by the community as disputable with respect to the NPOV guidelines (Categorie: Dispute PDVN - Wikipedia). We excluded several articles that had no identifiable NPOV problem in the talk section and then took a close look at each article's talk page. This initial analysis allows us to map the types of conflicts NPOV creates and that will help future work on what is missing from the learning to edit perspective.

The article will conclude with this initial analysis and suggest ways to continue analysing but also plan for learning to edit Wikipedia in more effective ways.

2. The NPOV and the learning opportunities

When talking with librarians engaged in learning to edit Wikipedia during the 2021 Learning circles WMROMD sessions, the facilitator observed the efforts they were making in keeping a neutral tone and allowing multiple perspectives on a topic to be presented and linked to proper documentation in Wikipedia articles. Librarians were confused about the position they were expected to take as Wikimedians, as that neutral tone and approach was not something practised often in their everyday work. This made the authors interested in exploring how NPOV was understood by new Wikipedia editors, and what type of experiences related to NPOV tagging and improving articles existed already within the community of WikiRo editors.

Wikipedia has been the subject of numerous scientific studies, some focusing on its accuracy as an Encyclopaedic project (Giles, 2005), others using it as a corpus of data for diverse types of studies (Gleim et al., 2006). In fact, a search using the term Wikipedia in the Web of Science Core Collection (similarly in Scopus) resulted in over 6000 results (as of 24 October 2022). However, the number of results for articles analysing the NPOV in Wikipedia declines dramatically.

The Web of Science Core Collection search yields between 28 (if using both "Wikipedia" and "Neutral Point of View" as topic) and 14 items (if using "NPOV" as an added topic). Scopus offers two items when adding "NPOV" as a keyword and four results when searching with "Neutral Point of View"). These articles fall under one of the following categories: articles that offer a general description of NPOV (Pavalanathan et al., 2018), articles that analyse different biases (Koerner, 2019), and articles that analyse linguistic differences between Wikipedia editions (Góngora-Goloubintseff, 2020).

O'Neill (2017), in her discussion with Irish Wikimedians, presents the view of practitioners as Oliver Moran, who believes that, while the neutral point of view should always be paid attention to, the focus of editors should remain on information being accurate and verifiable. Matei & Dobrescu (2011, p. 41) argue that in the policies that the Wikipedia community adheres to, there is a degree of ambiguity that, even though normal for "the pluralist and non-hierarchical values of the culture that brought Wikipedia to life", contribute to a way of solving conflicts related to meaning (like NPOV conflicts) in ambiguous ways. So, the dynamic between information and ambiguous solutions is accompanying NPOV discussions on Wikipedia.

Bias is another element very present in language used in Wikipedia and related to the NPOV principle. As Kackie Koerner (2019) states: "Bias can appear in many areas like Wikipedia's policies, practices, content, and participation.". Given the large corpus of data Wikipedia produces, the ways to research biases are also suitable for quantitative data analysis. Hube & Fetahu (2018, p. 1785) propose a semi-automatic approach to detect biased statements in Wikipedia. Focusing on language bias, they constructed a bias word lexicon in English, and used it to accurately identify biased statements in Wikipedia.

The research on NPOV is focused on identifying biased language but also on finding ways to improve the quality of articles. A core role in this process is played by the Wikipedia editors whose work can be made better through discussions, training, and shared good practices. A result that illustrates the complexity of this process was obtained by Pavalanathan et al (2018) as they were analysing articles and talk pages tagged by NPOV in English Wikipedia. Once a talk was started after identifying biased language on a page the content on that page improved as the biased language was addressed by various editors. However, for individual editors who used biased language, there was no meaningful change in how they used the language in a way that would improve their contributions. The list of "words to watch" and dedicated lexicons used were helpful in identifying improvement of content after NPOV marking and discussions but they were not as successful in helping editors better internalise the need for unbiased and factual information required by the NPOV Wikipedia pillar.

Another way of looking at how Wikipedia articles can be improved is by applying theories from software and crowd contributions. Linus's Law –"given enough eyeballs, all bugs are shallow" (Raymond, 1998)– is used primarily in the

software world to imply that progress in locating a problem is improved through a larger number of contributors. This law has also been used in relation to Wikipedia's NPOV by Greenstein & Zhu (2016), while analysing a corpus of texts from the English Wikipedia. This article tries to verify the hypothesis that (1) a larger number of contributions and contributors to a NPOV article leads to a better article from a NPOV perspective and (2) a more diverse base of contributors would lead to better NPOV. The authors only find evidence for hypothesis (1) at best and no support for hypothesis (2).

While identifying the NPOV non-compliant articles in Wikipedia is of interest to researchers and the editing community, what needs more attention is how we can help editors fully adhere to the requirements of NPOV in each language. This can happen through learning and having access to quality learning materials.

3. Learning within the WikiRo community

The WMROMD group continues to train new editors in 2022-2023 through the "Editing Wikipedia Together" program, supported by Wikimedia Foundation through the Wikimedia Community Fund. The authors' research interest shifted towards understanding how new editors can be helped to work and improve their writing and editing skills to be able to put NPOV guidelines into practice. This exploratory study takes the experiences and observations from larger communities, like the English Wikipedia, and looks at ways to apply and learn in a Romanian language context. As a starting point, this article presents observations on the NPOV tagged pages and discussions in WikiRo. This will help with seeing what arguments and instruments are used for improving the content, what is the dynamic and the drive for making these changes, and whether we can contribute to the learning processes for new users. As editing Wikipedia is also a learning experience, editing WikiRo has the potential to help Romanian language editors improve their skills and editing abilities.

3.1. Data gathering and analysis

The marking of articles as non-NPOV-compliant is done by members of the community observing that some content in articles is not respecting the NPOV requirements; once an article is marked, it is automatically added to the list of NPOV - marked articles. WikiRo had, on the date of our data collection (11 October 2022), 157 NPOV-marked articles out of over 430.000 articles in total. When searching the Discussion pages, we found that 19 articles lacked any discussion and 24 lacked any NPOV-related discussion. Furthermore, seven articles were not real NPOV articles but Wikipedia articles related to principle. This brings the total of actual NPOV-related articles down to 107 as seen in Figure 1 NPOV - marked articles.
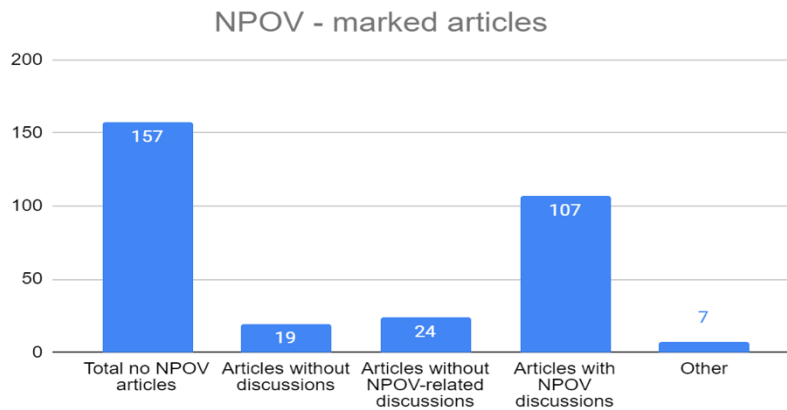
NPOV - marked articles

Figure 1. NPOV marked articles

The total number of NPOV-related contributions (initial conversation starter and replies) in the 107 articles is 572, or about 5.34 per article. This average, however, is extremely skewed: 121 articles have at most five contributions leaving only 29 with over five contributions, as seen in Figure 2 Contributions per article. Most articles have either zero or one contribution (43 each) and the top discussed article has 62 contributions. Only 17 articles have at least ten contributions and even in that case not all contributions are part of one actual continuous debate but sometimes part of several small dialogues or even monologues.
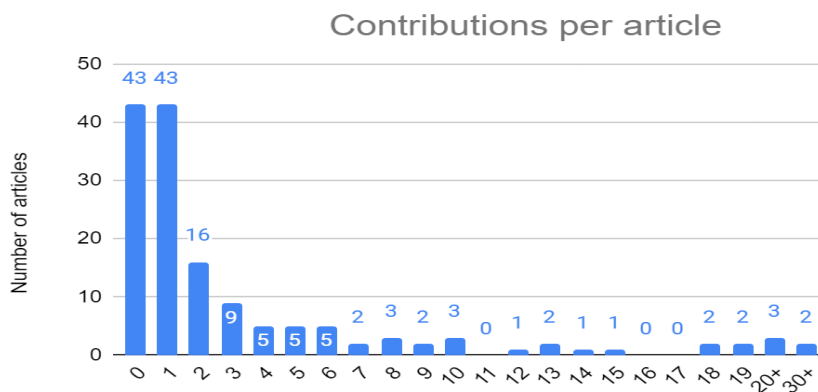
Contributions per article

Figure 2. Contributions per article

So, the NPOV was more like a final mark given by a more experienced Wikimedian to an article than an invitation to a debate. Certain topics ignited more active debates. The dynamics of these discussions was more like a series of angry replies from fixed positions than actual debates with logical arguments, responses, and a civilised tone. A constant problem was, in many cases, the continuous usage of sources that lacked verifiability by some editors (even after being informed

about the verifiability issues of their sources by other Wikipedia editors). This kind of issues arose not only in the case of anonymous users but also in the case of registered users that had previous experience editing Wikipedia and should have been, in theory, able to identify and use reliable sources. Another issue encountered in our analysis is the usage of Wikipedia as a publicity instrument, both by companies and individuals. These articles are easily identifiable by the language used (highly positive) or, as was the case in a politician's Wikipedia page, by the fact that the creation and editing of the page was done by a single person that had no previous (and has had none since) Wiki edits.

From a topic perspective, when considering only the articles with at least ten contributions to the Talk page, the data shows that subjects such as Politics and History are conducive to lengthier discussions, as shown in Figure 3 *Contributions per topic*, having a total of 228 contributions out of the total 572 contributions among all topics and from all the articles (regardless of how many contributions the article had). This accentuates the skewed perspective and clearly indicates not only the appetite for discussion on certain topics (a handful of articles) but also the lack of any proper discussion in the case of most articles. However, lengthy discussions do not necessarily translate into fruitful debates - as evidenced by the presence of political and historical subjects in the Wikipedia NPOV list.
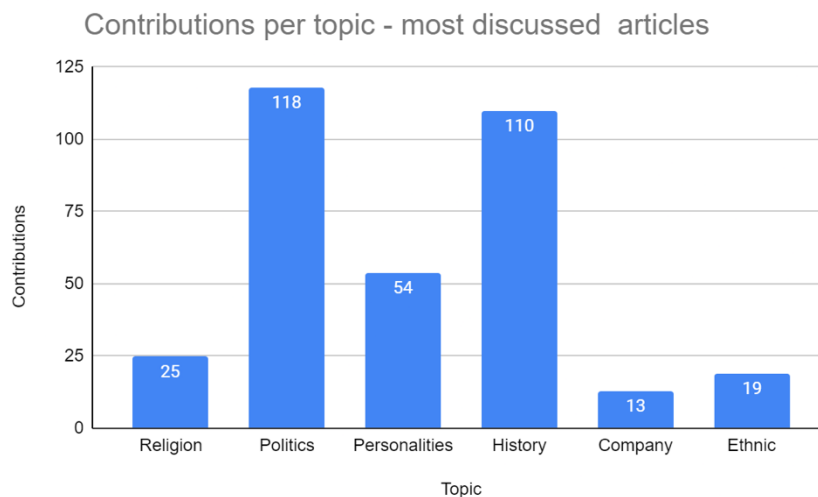

Figure 3. Contributions per topic

When considering Linus's Law, we observe that even the topics that ignited significantly longer discussions (20 plus replies) lacked a substantial number of contributors (most had under ten), besides lacking the number of contributions to the discussion (only five had over 20 contributions). This reality makes unattainable any attempt to extract a relationship between the NPOV and number of contributions/contributors in the manner proposed by Greenstein and Zhu (2016), based on the lack of a statistically significant population size.

4. Discussion

Learning cannot happen without interaction, and this is also true in the community of Wikipedia editors. By design, the Wikipedia community is based on interaction, and learning is an important part of being an editor - regardless of language and size of the project. The quality of the content in a community-based project like Wikipedia is not the responsibility of a few but of everyone involved. As such, learning is a dynamic process dependent on the community (its componence, practices, objectives and dynamics). As we have seen in the literature, the potential of using Wikipedia articles and selected corpuses to investigate community practices has a great potential in helping paint a more complete picture of the editing community.

In the Romanian-speaking community of Wikipedia editors the learning process is based on individual motivation and perseverance but until now it is unclear how much of it is also influenced by other members of the community and to what degree these influences are positive or negative. The mapping of the NPOV tagged articles, the discussion they created and the editing history is only the beginning of this analysis.

4.1. NPOV as co-learning process

Working on a Wikipedia article is a shared process, involving both learning and sharing knowledge. The peer-to-peer learning method used in Learning circles by WMROMD facilitators to induce new editors produces reasonable results. This method might also be useful for editors interested in improving their skills in relation to the NPOV. However, this assumes that people are ready to recognize their need to better their skills as they agree to participate in a learning program. This assumption needs to be verified through future interviews.

NPOV tagging is done by one editor and it signals a need for improvement of the quality of the content. The signal is sent to the whole community, not only the main contributor of that article so there is a potential of co-editors joining in the improvement process however the analysis did not yield any obvious signs in this direction. The small number of participants in discussions is a sign that there are even fewer people willing to contribute to NPOV improvements. More editors could mean more chances of people engaging and contributing to better content, more people present and active in the learning process.

Pavalanathan and her colleagues observed that editors who used biased language, even after discussing the issues and, with the help of the community, improved the articles, did not change their approach right away (Pavalanathan et al., 2018). In smaller communities like the Romanian speaking community of editors, this change is even harder as the size of the community limits the availability of peer-to-peer learning opportunities.

4.2. Limitations

This study's limitations ensue from the size of the NPOV contributing community in WikiRo. Although the small number of discussions related to the NPOV articles makes applying an instrument such as Linus's Law inefficient, it also points towards the first step for a better NPOV standard in the WikiRo community: involving more editors in the discussions, thus ensuring, if not a more diverse community from the start, at least a greater possibility of attaining such a community in the long term, as a small community of contributors (as is the case in the NPOV interested community) has a smaller probability of a diversity of points of view.

4.3. Future investigations

Wikipedia is "de facto global reference of a dynamic knowledge" (Graham, 2011, p. 269) and the references that document the diversity of cultures in this world come from Wikipedia editors around the world. WikiRo is developed by a small community of volunteers but to develop it needs support. And this can come only from better understanding the community of learners. Understanding and helping with addressing the NPOV requirement in this community can open the door for more effective peer to peer learning practices and community development. The authors plan to inquire about this issue and interview editors about their NPOV related practices.

Because NPOV is a principle that benefits (at least in theory) from a larger number of participants, the low activity in WikiRo regarding NPOV makes attaining different perspectives less likely and thus reduces the chances of fruitful NPOV talks. Of course, the number of contributors is, by no means, a sufficient condition for attaining NPOV but it does seem to be a necessary basis on which to build a possible, future, neutral status of Wikipedia articles. Therefore, we consider that a first step in our future work regarding NPOV Wikipedia should be focused on trying to get more Wikipedia editors involved in the neutrality-principle discussions.

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