Addressing Wikipedia's Gender Gaps Through Social Media Ads

Reham Al Tamime Qatar Computing Research Institute Ingmar Weber Saarland University

Abstract

The 2020 Wikimedia Strategy aims to address the gender gaps and become more inclusive. To attract skilled women to join the Wikipedia community, a survey will be designed and targeted via social media ads to determine the willingness of female participants to contribute to Wikipedia. The performance of the ad's campaigns will be analyzed to develop a blueprint of strategies for reaching potential female editors on each social media platform.

Introduction

Wikipedia suffers from a wide range of knowledge gaps, defined as underrepresentation of certain groups in content coverage, readership, and contribution [13]. One of the best-studied knowledge gaps is the gender gap, with women being minority among both readers and editors [9, 2]. The 2020 Wikimedia Movement Strategy stresses the importance of closing the knowledge gaps in terms of gender representation and to ensure that the Wikimedia platforms become more inclusive [13].

This research aims to increase the gender representation in Wikipedia by proposing to target skilled women in social media platforms. In particular, the initiative seeks to test the hypothesis: "social media campaigns bring women to Wikipedia's front door".

We will design a survey to determine whether women are willing to contribute to Wikipedia based on their skills and knowledge. Social media ads will be used to target and invite participants to complete the survey.

The outcome will be a blueprint proposing a variety of targeting strategies for reaching out to female editors on each social media platform, by better understanding their willingness. The blueprint benefits the Wikimedia Foundation's research and development team. It also benefits researchers and experts interested in tackling gender gap issues.

We aim to start the project on June 1, 2024 and conclude it by June 30, 2025.

Related work

Several studies have identified a gender gap in the users' representation on Wikipedia. This gender gap pertains to disparities in different dimensions including: 1) content covering women [10, 13, 15, 16]; 2) the number of female readers [9, 13, 15]; and 3) the number of female editors [2, 11, 13]. The gender gap has been observed in several Wiki languages [7, 12]. Women avoid contributing to Wikipedia due to various reasons [3, 7, 3, 6].

Studies have had limited discussion on approaches and techniques to encourage more women to participate in Wikipedia, with only Edit-a-thons [4, 14], workshops [8], and social media campaigns [5] have been tested as potential methods. Recently, Wikimedia researchers have experimented with Facebook ads and found that they should continue using (or expand use of) paid media to reach Wikipedia audiences¹. As a result of the findings from our

¹<u>https://www.mediawiki.org/wiki/Growth/Personaliz</u> ed_first_day/Newcomer_experience_marketing_pilot #What_kind_of_results_did_we_get?

previous study [1], we intend to test targeted social media advertisements on different platforms to locate and connect with prospective Wikipedia editors, specifically targeting women via a survey.

Methods

To achieve the research goal, we plan to follow the following steps:

- 1. **Survey:** Designing an online survey to assess willingness to read or edit Wikipedia articles aligned with skills, expertise, and domain knowledge. The survey will include questions on different constructs: demographics, skills, prior experience, willingness, and nudging techniques to contribute to Wikipedia.
- 2. **Campaigns:** Creating social media advertisement campaigns on 5 different platforms. These campaigns aim to target active users based on various traits (such as gender and interests) to invite them to participate in the survey.
- 3. **Analysis:** Evaluating campaigns' performance in terms of impressions, clicks, and survey response rate per platform.

Expected output

- 1. **Insights to inform decision making:** Suggesting insights covering blueprints of strategies to target female editors in multiple social media platforms to address the gender disparities in Wikipedia. The audience is Wikimedia Foundation's research and development team.
- 2. Scientific publications & events: Publishing in top-tier venues to showcase our findings and receive feedback. The audience is researchers interested in Wiki-related research or

gender gaps. Potential venues include: The Web Conference, Transactions on the Web, ICWSM, and Wiki Workshop.

Risks

Trial and error risks: This risk involves that the social media targeting approach may not reach the intended audience and will need to be refined at multiple iterations. Moreover, platforms' pre-launch approval may take longer than planned. These risks may result in project slippage.

We tackled these risks by conducting a feasibility test [1]. These risks could be addressed through recommendations from the Wikimedia Foundation team.

Community impact plan

The proposed research seeks to partner with stakeholders from academia, industry, and governments (i.e., UN Women) who work on gender equality issues. Besides, we aim to communicate the findings via blogs, infographics, and reports (i.e Web Foundation report on Women's Rights Online). We intend to collaborate with Wikipedia affiliates to connect with stakeholders and develop educational resources.

Evaluation

- 1. **Originality:** The project aims to experiment with a new method using social media ads to locate and contact potential female editors via targeted surveys.
- 2. **Feasibility:** The project has a clear research plan and has been previously tested for feasibility and potential limitations [1].
- 3. Success measures and impact: Success is measured by engagement with our social media campaigns through

impressions, clicks, and completing the survey. Other measures include positive feedback from the Wikimedia Foundation team and stakeholders.

Budget

Average social media advertising pricing can cost anywhere from \$450 to \$6,000 per month². Our funding will be mainly dedicated to setting up social media ads:

Platform	Ads Budget Request
LinkedIn	USD 6000
Google	USD 6000
Tumblr	USD 6000
Reddit	USD 6000
Twitter	USD 6000
Total	USD 30,0000

Prior contributions

The author's PhD thesis investigates editors' reactions to health-related Wikipedia articles during new disease outbreaks. Results have been published in top-tier venues. The author's PostDoc project aims to recruit skilled women using targeted advertising. Findings have been presented at the Wiki Workshop 2023. The project is ongoing, and we hope to experiment with and reach a larger audience with the support of the Wiki Grant.

References

[1] Reham Al Tamime and Ingmar Weber. 2023. Addressing Wikipedia's gender gaps through Linkedin ads. (2023). <u>https://wikiworkshop.org/2023/</u>papers/WikiWorksho p2023_paper_2.pdf

[2] Judd Antin, Raymond Yee, Coye Cheshire, and Oded Nov. 2011. Gender differences in Wikipedia editing. In Proceedings of the 7th International Symposium on Wikis and Open Collaboration (New York, NY, USA) (WikiSym '11). Association for Computing Machinery, 11–14. https://doi.org/10.1145/2038558.2038561.

[3] Benjamin Collier and Julia Bear. 2012. Conflict, criticism, or confidence: an empirical examination of the gender gap in wikipedia contributions. In Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work (New York, NY, USA) (CSCW '12). Association for Computing Machinery, 383–392. https://doi.org/10.1145/2145204.2145265.

[4] Núria Ferran-Ferrer, Patricia Castellanos-Pineda, Julià Minguillón, and Julio Meneses. 2021. The gender gap on the Spanish Wikipedia: Listening to the voices of women editors. (2021), e300516. https://doi.org/10.3145/epi.2021.sep.16

[5] Sneh Gupta and Kulveen Trehan. 2022. Twitter reacts to absence of women on Wikipedia: a mixedmethods analysis of #VisibleWikiWomen campaign. 49, 2 (2022), 130–154.

https://doi.org/10.1080/01296612.2021.2003100 Publisher: Routledge _eprint: https://doi.org/10.1080/01296612.2021.2003100.

[6] Eszter Hargittai and Aaron Shaw. 2015. Mind the
skills gap: the role of Internet know-how and gender
in differentiated contributions to Wikipedia. 18, 4
(2015), 424-
442.https://doi.org/10.1080/1369118X.2014.957711Publisher:Routledge_eprint:https://doi.org/10.1080/1369118X.2014.957711.

[7] Björn Helgeson. 2015. The Swedish Wikipedia Gender Gap. http://urn.kb.se/resolve?urn=urn:nbn:se:kth:diva-

<u>177493</u>

² https://www.nutshell.com/blog/cost-of-social-advertising

[8] Encina Calvo Iglesias. 2020. Preparing biographies of STEM Women in the Wikipedia format, a teaching experience. 15, 3 (2020), 211–214. https://doi.org/10.1109/RITA.2020.3008144
Conference Name: IEEE Revista Iberoamericana de Tecnologias del Aprendizaje.

[9] Isaac Johnson, Florian Lemmerich, Diego Sáez-Trumper, Robert West, Markus Strohmaier, and Leila Zia. 2020. Global gender differences in Wikipedia readership. arXiv:2007.10403 (2020). https://doi.org/10.48550/arXiv.2007.10403 arXiv:2007.10403 [cs]

[10] Piotr Konieczny and Maximilian Klein. 2018. Gender gap through time and space: A journey through Wikipedia biographies via the Wikidata Human Gender Indicator. 20, 12 (2018), 4608–4633. https://doi.org/10.1177/1461444818779080 Publisher: SAGE Publications.

[11] Shyong (Tony) K. Lam, Anuradha Uduwage, Zhenhua Dong, Shilad Sen, David R. Musicant, Loren Terveen, and John Riedl. 2011. WP:clubhouse? An exploration of Wikipedia's gender imbalance. In Proceedings of the 7th International Symposium on Wikis and Open Collaboration (New York, NY, USA) (WikiSym'11). Association for Computing Machinery, 1–10. <u>https://doi.org/10.1145/2038558.2038560</u>

[12] Julià Minguillón, Julio Meneses, Eduard Aibar, Núria Ferran-Ferrer, and Sergi Fàbregues. 2021. Exploring the gender gap in the Spanish Wikipedia: Differences in engagement and editing practices. 16, 2 (2021), e0246702. https://doi.org/10.1371/journal.pone.0246702

Publisher: Public Library of Science.

[13] Miriam Redi, Martin Gerlach, Isaac Johnson, Jonathan Morgan, and Leila Zia. 2021. A Taxonomy of Knowledge Gaps for Wikimedia Projects (Second Draft). arXiv:2008.12314 (2021). https://doi.org/10.48550/arXiv.2008.12314 arXiv:2008.12314 [cs]

[14] Matthew A. Vetter, Krista Speicher Sarraf, and Elin Woods. 2022.

Assessing the Art + feminism Edit-a-thon for Wikipedia literacy, learning outcomes, and critical thinking. 30, 6 (2022), 1155–1167. https://doi.org/10.1080/10494820.2020.1805772 Publisher: Routledge_eprint: https://doi.org/10.1080/10494820.2020.1805772.

[15] Claudia Wagner, Eduardo Graells-Garrido, David Garcia, and Filippo Menczer. 2016. Women through the glass ceiling: gender asymmetries in Wikipedia. 5, 1 (2016), 1–24.<u>https://doi.org/10.1140/epjds/s13688-016-0066-4</u> Number: 1 Publisher: SpringerOpen.

[16] Charles Chuankai Zhang and Loren Terveen.
2021.Quantifying the Gap: A case study of wikidata gender disparities. In Proceedings of the 17th International Symposium on Open Collaboration (New York, NY, USA) (OpenSym '21).. Association for Computing Machinery, 1–12. https://doi.org/10.1145/3479986.3479992

Received 20 February 2007; revised 12 March 2009; accepted 5 June 2009.