

Documenting the gender gap in Indian Wikipedia communities: Findings from a qualitative pilot study

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Abstract

This article presents a pilot study to address the issue of gender gap in participation on Wikipedia in India. We carried out semi-structured interviews with 16 Wikipedians across various linguistic communities using the snowball sampling technique. The responses corroborated with the existing literature on gender gap in Wikipedia with respect to issues of Internet access, lack of discretionary time, psychological barriers and institutional harassment. The personal narratives also revealed unique problems faced by Indian women which relate to existing socio-cultural norms creating barriers for participation by women. Our findings show that the limits to accessing the Internet and technological devices are experienced by women irrespective of their educational degrees and technical skills, because of the patriarchal mindset that pervades both at home and in the society at large.

Contents

[Introduction](#)

[Discussing the gender gap on Wikipedia](#)

[Digital gender divide in India](#)

[Aim and scope of study](#)

[Method](#)

[Findings and discussion](#)

[Concluding remarks](#)

Introduction

In October 2018, multiple international news outlets such as the *Guardian* [1], *Independent* [2] and *Washington Post* [3] (to name a few prominent ones) carried provocative pieces about how Donna Strickland, a prolific scientist who had just been named as one of the recipients

of that year's Nobel Prize in Physics, was not notable enough to have a biography article on her on Wikipedia. While this was remedied shortly after, the instance sparked a rigorous debate also inside the Wikimedia [4] community. The reasons for Strickland being left out of Wikipedia were: Wikipedia's rigorous criteria for notability of academics, lack of reliable sources related to female academics in media and systemic bias on Wikipedia both in its content and against people who write it. Katherine Maher, CEO of the Wikimedia Foundation responded to the controversy by saying that the lack of coverage of women's achievements was responsible for this omission, and that Wikipedia was a reflection of the biases that existed (and exists) in world media [5]. Interestingly, several years before the Strickland controversy appeared, already around 2010, the Wikipedia community had started addressing the issue of gender gap on Wikipedia both in terms of its content and content creators [6].



Discussing the gender gap on Wikipedia

Wikipedia is the free online encyclopedia that “anyone can edit” [7]. It is open for anyone interested in open collaboration, to share information in an encyclopedic format [8]. Wikipedia is the most popular of the several projects that is maintained by the Wikimedia Foundation, a non-profit headquartered in the U.S. [9] The global community of contributors to the projects run by the Wikimedia Foundation is sometimes referred to as the ‘Wikimedia movement’ [10], and the contributors are called ‘Wikimedians’. The growth of Wikipedia on the Internet has been remarkable, to say the least, as it is the only non-commercial Web site to reach the list of the 10 most visited sites on the Internet within the first 10 years of it being digitally born [11] (Laurent and Vickers, 2009). Today, it acts as one of the first points of reference and information on wide-ranging topics, even though the academic community continues to debate its content because of the freedom of anonymous content creators to edit texts, as they are not always subject experts (Chakraborty, 2018). More importantly, there have been persistent complaints that the content creators are overwhelmingly male.

The proportion of Wikipedia editors who identify themselves as women is between 9–22 percent (Beyer, 2015). Women face many barriers to discovering and editing on the platform such as lack of Internet access, lack of discretionary time, lesser Internet skills (Hargittai and Shaw 2014), diminished self-confidence (Hinnosaar, 2019; Bear and Collier, 2016; Protonotarios, *et al.*, 2016), real or perceived harassment, lack of role models, inability to withstand Wikipedia's polemical culture and double standards meted out to women editors (Lam, *et al.*, 2011).

At the same time, women on Wikipedia have also been found to be more diligent and more positive than their male counterparts (Amichai-Hamburger, *et al.*, 2008; Iosub, *et al.*, 2014). They also make fewer article revisions and edit different types of articles than men [12] (Antin, *et al.*, 2011). Despite these favourable qualities, women are hindered from contributing to Wikipedia because of gender-based hostility, stress and harassment (Menking and Erickson, 2015).

The gender problem exists not only in women's participation on Wikipedia, but it spills over to Wikipedia's content as well. Women and men are presented differently in Wikipedia's articles in both overt and subtle ways (Wagner, *et al.*, 2015). Wikipedia's articles have been

found to suffer from inadequacies where articles about men are disproportionately more focused on their work and careers than those about women (Graells-Garrido, *et al.*, 2015). Marriage and family related content are more frequent in women's biographies (Graells-Garrido, *et al.*, 2015). The same article showed that women's biographies make up only 15 percent of the total biographies in the English Wikipedia (Graells-Garrido, *et al.*, 2015). It would be of interest to study whether lower participation of women is the leading cause for poor quality of content related to women on Wikipedia.

Despite these multiple barriers, women continue to actively contribute to Wikipedia. Understanding what motivates the editors, both men and women, to contribute to Wikipedia is interesting for researchers, Wikipedians and policy-makers, as it will help in focusing outreach activities seeking to actively recruit women participants to create content. The English Wikipedia alone has approximately 132,000 active editors per month [13]. Wikipedians themselves have reflected on this issue which has resulted in a Wikipedia essay titled "Why to contribute" [14]. Some of the motivations listed by Wikipedians themselves are that it is fun, free, social, educational, altruistic and intellectually stimulating. Many editors enjoy contributing to Wikipedia because it offers them a sense of accomplishment and belonging to an online community, all the while being able to work with exceptional freedom (Kuznetsov, 2006). Some editors are motivated because of the learning and personal growth offered during the process of editing Wikipedia (Kuznetsov, 2006). A study from Chinese Wikipedia shows that a main motivator for contributing to Wikipedia is social benefits: the magnitude of impact that one can make for the readers. When Wikipedia was blocked in mainland China, there was a significant reduction in contributions, also from editors who were not affected by the censorship (Zhang and Zhu, 2011). Although Wikipedia editors don't get credited for their work, some editors are motivated by the fact that their work is recognized by their fellow editors (Forte and Bruckman, 2005). There is sparse data related to the motivations of women to contribute to Wikipedia, but it is likely that many of the reasons applicable for Wikipedians in general, apply to women Wikipedians as well.

Why study the gender gap issue in Indian Wikipedia communities?

In 2017, Rosie Goodknight, an American Wikipedian carried out the first global gender mapping project for Wikipedia, where she interviewed 65 women Wikipedians from around the globe (representing 29 countries and 26 languages). From her research, the following themes emerged: gender is culture-specific; issues of inclusion and gender fluidity are complex; implicit biases exist in society and they create a false sense of neutrality; importance of acknowledging various degrees of participation and not creating a hierarchy; centering women's voices and countering narrative bias [15]. Two Indian women Wikipedians' responses were also recorded in this study. Such a project also showed that it was necessary to conduct country-specific and area-specific research on this topic.

In the Indian Wikipedia community, the gender problem is not well studied. Wikipedia editions exist in 17 languages spoken in India [16]. According to a 2012 editor survey by the Wikimedia Foundation, only three percent of Wikipedia editors from India were women [17], the lowest among surveyed countries. As discussed earlier, the gender gap in participation on Wikipedia spills over to the gap in content as well. This is also true in the Indian language Wikipedias. [Table 1](#) shows the percentage of biographies about women on various Indian language Wikipedias.

Table 1: Percentage of biographies about women on Indian language Wikipedias.

Note: Generated from Wikidata, the sister project of Wikipedia containing structured data, accessed 6 October 2020.

Wikipedia language	Total biographies	Female biographies	Percentage of female biographies
Hindi	19064	4533	23.77
Bangla	20240	6468	31.95
Malayalam	15979	5228	32.72
Tamil	24710	4510	18.25
Telugu	6006	1553	25.86
Punjabi	9748	3859	39.59
Tulu	176	37	21.02

Since 2012, no follow-up survey has been done specifically on Indian women contributing to Wikipedia. The 2014 ‘Global South User Survey’ of Wikimedia users, including contributors and readers which tracked aggregate results of global south women users showed that 15 percent of the users are women [18]. However, this does not provide India-specific data.

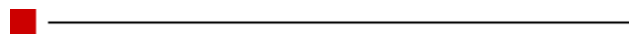


Digital gender divide in India

The low percentage of women contributors can be considered in the light of the persistent digital gender divide that exists in the country. Multiple academic studies and policy reports have been published, dealing with this issue (see, for example, Kini, 2018). While recognizing the role of information and communication technologies (ICTs) in empowering women to participate in digital economy and society, Singh, *et al.* (2019) reflected on women’s low level of access and use of ICT as compared to men due to socio-economic, structural, psychological and institutional barriers. Focusing on the socio-economic aspect, Bala and Singhal (2019) commented on the multiple ways in which these barriers manifest themselves, including lack of availability of devices, reduced access time and use of the Internet for women *vis-à-vis* men. Researchers have pointed out that concerning Internet usage, women across all age groups lag behind their male counterparts in developing countries. However, the more educated the women are, the more likely they are to use the Internet at par with men (Antonio and Tuffley, 2014).

According to Kaka, *et al.* (2019), this digital divide between men and women is further propelled by unequal access to mobile and smartphones, which are crucial technologies that led to the massive surge of India’s Internet usage in the last five years. While mobile and

smartphone penetration has increased and continues to increase rapidly, it hasn't automatically translated to gendered digital inclusion. In their study on mobile phone usage in North India, Doron and Jeffrey (2013) found the marked distinction between a man's mobile, which he had unlimited access to, and the household mobile, which the entire household could use. A 2018 UNESCO study entitled "Designing inclusive digital solutions and developing digital skills" reported that women in South Asia are 38 percent less likely than men to own a mobile phone (Vosloo, 2018). Thus, we can argue that in India, and indeed in South Asia, the digital divide problem also has to be addressed through the lens of gender as deeply patriarchal societal norms restrict women from accessing the Internet with the freedom that men possess.



Aim and scope of study

The purpose of conducting this preliminary study on gender gap in Indian Wikipedia was two-fold. Firstly, it was inspired by the existing literature on gender gap in Wikipedia and especially the 2017 gender mapping project as presented in the previous sections. Secondly, the authors were intrigued by the data and discussions on gendered digital divide in the context of the ongoing large-scale digitization of Indian society. Starting from this interest in exploring the intersection of digital technology, gender and society, the authors decided to conduct a short ethnographic study, in which they sought to represent voices of Indian Wikipedians on the issue of gender gap in the community. In-depth, semi-structured interviews with 16 Wikipedia contributors from India constitute the empirical data used in the paper.

The debates and data on gendered digital divide in South Asia (and India in particular) along with articles on gender gap in Wikipedia communities which emerged during the literature survey helped us formulate the following sets of study questions (each of which led to a further set of questions). These formed the basis of the semi-structured interviews we carried out.

Q1: What are the motivations for Indian women to contribute to Wikipedia?

Who are they and what are their educational backgrounds? Are there topics that they are passionate about? Do their gendered subjective positions influence their choices when contributing to Wikipedia?

Q2: What are the real and perceived barriers to participation for women in the Indian context?

Do they have time to contribute? Do they have access to devices such as laptops and smartphones? Does their educational background help them in contributing to Wikipedia? Do they face

institutional harassment? Are the challenges to contribute limited to online harassment?

Q3: Is the community addressing issues of gender gap? What are the efforts to bridge the gap? What courses of action can be taken to improve female participation and representation?

Here we would also like to point out that while we familiarised ourselves with the literature on gender gap in content, for this study, we decided to focus on the participation gap. The study has been envisioned as an initial attempt to gather responses of sixteen Indian contributors to the Wikipedia project on the issue. We do not claim any generalizations regarding the experiences of the Indian Wikipedia community, especially because many users are anonymous, and they do not feature in this paper. This study has been carried out to help frame some of the problems and issues that the community faces with regards to gender and participation. Further data (including a mix of qualitative and quantitative) will have to be collected to provide clearer answers to the study questions.



Method

As mentioned already in the previous section, in-depth semi-structured interviews constitute the primary data collected for writing this paper. One of the authors of the study is a Wikipedian herself and has been working on gender diversity on Wikipedia for the past 10 years. She reached out to her personal contacts and networks, and recruited the participants for this study. Care was taken to recruit a diverse group of respondents: age, level of experience on Wikipedia, occupation, disciplinary background (notably, all respondents except four have had scientific and/or technological education), geographical location, language spoken, topics of interest on Wikipedia, participating in a wide range of activities (editing, writing, organizing outreach, contributing images, carrying out specific projects), participants in touch with the global Wikimedia community and those who work individually, those who hold formal positions (employee of the Wikimedia Foundation, board member of a Wikimedia affiliate). To have a comprehensive overview on this issue, we recruited both female and male respondents. With regards to male respondents, all are active organizers of gender diversity projects. We had over-representation of male participants from one region in South India (four participants out of six).

It is also important to note here that for the purposes of this study, we refer to male and female genders. While the question of LGBTQ+ representation came up in some of the interviews, those respondents mentioned that such discussions are at a nascent stage in the Indian context.

We interviewed ten women and six men: over Skype and in person, over a one-year period between November 2017 and November 2018. Although most of the interviews were done in English, some interviews were also conducted in Malayalam and Bengali, the Indian languages in which the authors are fluent. The length of the interviews varied between 30 minutes to one hour. They were semi-structured and free flowing, with the participants

talking about themselves and their experiences around volunteering for Wikipedia. We then asked about their motivations to contribute to Wikipedia, what they felt were the barriers for women to contribute and how to address this issue. In case of the women respondents, we used the snowball sampling technique: the recruitment of new participants ended when past ideas recurred and new ideas were few, and thematic saturation was reached. Finding male respondents was significantly difficult because of the sensitive nature of the subject. Hence, we acknowledge that the study could have been more balanced if we were able to perform the same sampling technique for the men.

We transcribed the interviews almost immediately after carrying them out. While interviewing, we had also maintained our own notes with comments which were considered as primary data in drafting the next section, namely findings and discussion. Each interviewee was assigned a number from 1 to 16. Interviewees 3, 10, 13, 14, 15 and 16 are male respondents.

Ethical concerns

In compliance with our agreements with the respondents, all participant names and their responses were anonymized. Furthermore, as we interviewed non-anonymous users/contributors, we decided against quoting them *verbatim* as it could lead to easy identification, since many of the respondents are known to each other. In fact, in a few cases the respondents mentioned the same, and we assured them that no data would be quoted *verbatim*. The participants were asked to electronically sign the consent forms and the primary data gathered was accessible only to the authors of the study.



Findings and discussion

After transcribing the interviews, we coded the data following the questions which guided the study. Interview data was tabulated using the following codes: motivations to participate; barriers to participation; and bridging the gender gap. Under each code, we could identify a set of themes into which we could categorize the data further, as provided in the [Table 2](#).

Table 2: Codes and themes emerging from collected data.		
Barriers to participation	Motivations to participate	Bridging gaps in participation
<ul style="list-style-type: none"> • Familial barriers • Socio-economic factors • Cultural norms • Technical reasons • Organizational/Structural issues • Psychological issues 	<ul style="list-style-type: none"> • Linguistic reasons • Honing writing skills • Research • Sharing cultural facts 	<ul style="list-style-type: none"> • Technological upgrades • Infrastructural support • Organizational support • Targeted outreach

	<ul style="list-style-type: none"> • Gender and regional representation • Adherence to Wikipedia's mission 	<ul style="list-style-type: none"> • Structural reforms
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In the next subsections, we discuss in detail data identified under each of the initial codes.

Barriers

One of the most pervasive barriers that emerged from the interviews of our women respondents was family; specifically, the patriarchal norms that many Indian families uphold in their daily practices. Interviewees 1, 2, 4, 5, 7 and 8 spoke about the lack of discretionary time for Indian women as many are housewives who are in charge of the household chores and have very little leisure time to do anything else. All these interviewees stressed the fact that many housewives lack family support to pursue goals other than housework.

Interviewees 4, 5, 8 and 12 identified time as a barrier also for married working women as they have the double responsibility of their jobs and household chores. Some of them spoke from their lived experiences of how after work and household duties, contributing to and volunteering for Wikipedia was a third job.

For younger unmarried women, the scenario is not significantly different. As interviewees 1 and 8 mentioned, parents of young women limit their Internet use to educational and research purposes strictly connected to their academic career. Interviewee 1 narrated how her parents were against her participation and involvement with Wikipedia, which they saw as a waste of time since they felt all her time should be devoted to the university syllabus. Strong familial control and pressure, especially for young women who continue to stay with their parents until they get married, implies that they have less discretionary time online, keeping them from participating in platforms like Wikipedia. Interviewees 1, 3 and 7 also pointed out that young women face restrictions in traveling, especially during the night and to locations far from their hometown, which keeps them away from conducting and participating in outreach events aimed at women. Travel restrictions make it difficult for many women to attend outreach events out of town which are ironically aimed at gender inclusion.

Socio-economic factors and cultural norms in India also result in unequal access to the Internet (Interviewees 1, 2, 3 and 4). Many women, regardless of their age, do not possess devices such as laptops and mobile phones compared to men of similar age groups and socio-economic status. Interviewees 2, 4, 5, 6 and 7 talked about how many women have to share laptops with male members of their families, indicating a complete lack of autonomy over use of devices. When a shared device is present in the household, the use of it is mostly dictated by an older male family member, and oftentimes male members get to use it more frequently than females. Interviewee 7 specifically mentioned how she used her husband's laptop to write and edit Wikipedia articles. The major barrier to overcome, as succinctly put by Interviewee 8, is the patriarchal mindset of the society, which women who choose to participate need to constantly combat.

Deeply rooted patriarchy also causes psychological barriers for women. As Interviewee 4 observed, women in Indian society are not encouraged to think, to write, to express themselves as much as men. They are also told that science and technology is not their domain which results in them being less comfortable with technology (Interviewees 2, 3, 8, 12 and 13). Due to their upbringing where men are preferred over women in the family for allocating shared resources, several women have less self-confidence. This in turn creates an internal barrier for editing Wikipedia, where women constantly question their editing skills, despite their knowledge on the subject. Confidence, in fact, came up as a recurring word in the interviews, with Interviewees 2, 5, 11 and 12 mentioning that many women do not feel confident enough to edit. This problem is further compounded by the fact that women's edits [19] are challenged more. If they protest, they are often patronized (Interviewees 5, 6 and 7).

In a male-dominated society, where women have less access to laptops and other ICT devices when compared to men, it is also evident that there are fewer women in digital spaces, leading to the perception of such spaces as predominantly male. This is also true about the Indian Wikipedia community, and it acts as a barrier for women to participate as active contributors. Since there are only a handful of women Wikipedians and even fewer who take up leadership positions in outreach activities or have higher administrative roles, there are fewer role models to which newcomers can relate (Interviewees 2, 6 and 7). The organizational culture of bitter polemics on discussion boards of Wikipedia also often results in instances of online harassment (Interviewees 3, 5, 6 and 9). Interviewee 5 provided instances of being harassed by notable members of the community, sometimes including use of threatening and intimidating language. As she explained, the emotional labour involved in pursuing the fight against misogyny, even on a platform whose mission is to promote free knowledge, can be draining. Interviewee 11 mentioned the difficulty in trying to represent marginalized figures from lower castes or religious and sexual minority groups, as such articles tend to get deleted easily citing lack of prominence. Interviewee 9 observed that even the outreach activities tend to bypass rural women and those living in smaller centers where digital infrastructure is quite poor. So, the problem of diversity of voices also lies in the great rural-urban digital divide in the country.

It was interesting to note the differences and divergences in responses of men and women on the issue of barriers to participation. Except Interviewee 3 who acknowledged the role of pervasive patriarchy in creating barriers to contribution to the community, most others were oblivious to such problems. Interviewees 14, 15 and 16 mentioned that barriers to participation for women exist not only on Wikipedia but the technology field in general. Interviewee 14 at length discussed the lack of adequate support for typing tools, poor maintenance of fonts in Indic languages and the higher learning curve required to type in Indian languages. But these are not barriers particular to women.

A couple of male respondents recognized socio-cultural factors such as restricted access to outreach, which they identified more as safety issues rather than patriarchal norms. Two of the male respondents acknowledged harassment (Interviewees 3 and 10) with Interviewee 10 mentioning how women newcomers are often harshly criticized by existing editors if they do not like the way an article has been expanded. However, according to him, women are also more sensitive to criticism than men, thereby somewhat diluting the argument that harassment is a serious problem in the community. Interviewee 14 said that he had experienced no instances of harassment and does not know of any. He also mentioned the instance of the Tulu language community, where almost 25 percent of contributors are

women. He was quick to caution us against generalizing saying that each Indian region is different and the data on women's participation are also varied.

Motivations

Notwithstanding multiple barriers, the female respondents we interviewed evinced a strong passion and commitment to Wikipedia's founding principle of democratizing knowledge. Interviewee 5 mentioned that she was drawn to Wikipedia's goal of promoting open knowledge. The other recurring motivation that came across through the various narratives was more representation of women and of India on Wikipedia. Each respondent had a unique personal story regarding how she started seriously engaging with Wikipedia. Interviewee 11, for example, had read about the gender gap problem in an article in *The Hindu*, one of the main English daily newspapers published in India, and contacted the author of the article to find out how she could help. Interviewee 12, on the other hand, had heard about Wikipedia outreach programs and edit-a-thons through feminist groups. Interviewee 9 wanted to explore her interest in natural history and she started by editing articles about national parks, butterflies and reptiles. Interviewees 1, 2 and 5 were excited about possibilities of sharing knowledge in different formats such as adding photos and audio clips to articles or contributing to the images' repository, Wikimedia Commons. Interviewee 4 was of the opinion that Wikipedia was a trial ground where people could hone their writing skills.

Interviewees 1, 5 and 8 all agreed that Wikipedia is a unique network of communities deeply passionate about sharing knowledge. Interviewee 4 pointed out that there is a great satisfaction in sharing one's own knowledge on certain topics which would then be available for anyone online. She, in fact, was drawn to editing Wikipedia for advancing women's rights by contributing to articles related to gender violence. Interviewee 11 mentioned that she exclusively contributed to increasing the number of women's biographies and writing about forgotten women in history such as women sports persons from the 1960s and 1970s. She emphatically commented that the day when she will find articles on Wikipedia about all the women about whom she wishes to write, her task will truly be done. Interviewees 1 and 12 discussed how they focus on adding more material in existing articles about women.

Linguistic and cultural representation emerged as two of the other major motivations for women to contribute. Sharing knowledge in their mother tongue, which they perceived as useful for people who cannot understand the English language version of Wikipedia, was mentioned by multiple respondents as a strong trigger (Interviewees 1, 2, 4, 8 and 9). Interviewee 5 mentioned how knowledge from the global south is mostly oral, resulting in a shortage of written histories. She said her aim was to increase the proportion of articles on India and bridge the gap in knowledge from the global south. Interviewee 7 echoed her passion on representing local cultures and India-specific stories.

Bridging gaps: What can be done?

Multiple interviewees emphasized that misogyny is common in technological spaces, which are largely inhabited by men. (Interviewees 5, 6, 7 and 9) These respondents mentioned the need for sensitization and training within the community to be a more inclusive space. As already mentioned in an earlier section, harassment was identified as one of the main barriers to participation by the female respondents. In fact, even Interviewee 10 who is a man acknowledged that instances of harassment are disproportionately high against women. He

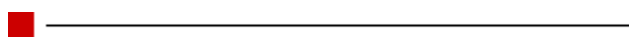
opined that strict actions should be taken against those who are found harassing, stalking or otherwise spreading negative behavior on Wikipedia.

Several interviewees agreed that editing workshops (or ‘edit-a-thons’) and similar outreach events are a good way to attract women editors. While there can be editing workshops aimed at newcomers, more experienced editors can organize regular meetups to edit together on topics of shared interest. Interviewee 5 was skeptical of the efficacy of outreach events organized to gain more women writers and editors as she felt that often they were glorified PR (public relations) exercises which did not translate into retaining women editors. She said that often these ended up as events for solidarity for a cause, rather than for recruiting and sustaining women contributors. Outreach activities in general need to be followed up and strictly evaluated with metrics regarding participation (Interviewees 5 and 6). Interviewee 3 mentioned that there is a need to train more women to become leaders at Wikipedia’s various events. They should ideally be led by women, so that newcomers can identify female role models, guides and mentors. For existing editors, online and off-line support groups would be a good solution for keeping them active in the community (Interviewees 5 and 6). Such support groups would also be useful for intervening in cases of harassment.

Many of our respondents (Interviewees 2, 12, 13, 14, 15 and 16) underscored the importance of targeting university students to participate in edit-a-thons and workshops as part of their curricular activities. Interviewee 13 pointed out that when they conduct general wiki edit-a-thons, participation of women is very low. However, when it was an activity done at the university level with teachers instructing the students to do so, lots of women participated.

Two of the male respondents, namely interviewees 15 and 16, exclaimed that the community needs to start thinking of early recruitment of volunteers, already in schools, because of the social realities in India. Once women marry and settle down in family lives, many stop contributing. Probably one of the more creative solutions for bridging the gender gap came from interviewee 4 who explained that many mothers use Wikipedia for helping their children with their homework, as the task of child rearing, much like other household chores, falls mostly on the woman. Interviewee 4 was positive about the unchanneled potential of Indian mothers, many of whom are well educated but give up their jobs once they get married. She felt that this is a section of the society which could be encouraged to contribute and give back to the Wikipedia community, as it is a resource they use.


Finally, some respondents also mentioned technical solutions such as making the editing interface simpler, less cluttered and easy to navigate through (Interviewees 4, 13 and 16). A couple of respondents (Interviewees 6 and 7) who mentioned donation of laptops to women as an incentive to continue editing and also resolve the infrastructural deficit that women acutely face. In fact, interviewee 7 who was earlier using her husband’s laptop to edit articles benefited greatly from the hardware donation by Wikimedia as it helped her in continuing to contribute.



Concluding remarks

Our findings corroborate with the existing literature of gender gap in Wikipedia with respect to issues of Internet access, lack of discretionary time, psychological barriers (especially lack of confidence) and institutional harassment. The responses we gathered also highlight unique problems faced by Indian women which relate to existing socio-cultural norms which create barriers for women's participation.

The study highlights the need to read women's participation in Indian Wikipedia alongside the data and literature on gendered digital divide in India and South Asia. Our findings also show that the limits to access are experienced by women irrespective of their educational degrees and possession of technical skills because of patriarchal mindset that pervade both at home and in the society at large. The family itself, as seen in multiple cases, acts as a barrier rather than an enabler for women to pursue their interests. Such structural and normative barriers are indeed difficult to overcome; and, in fact, as we see especially from the data on bridging the gender gap, the respondents (especially the male respondents) suggest solutions taking into consideration the unequal structures in the society where married women and especially housewives are unable to spend time on Wikipedia. For example, when they say that outreach activities could be focused to recruit girl students from schools as they have more discretionary time than those in universities who will get married soon after. Our male and female respondents have divergent views on barriers to participation. While substantial time was devoted by women in their narrations to list and explain the barriers which they felt are direct result of the patriarchal norms and social mores, the men were largely oblivious to such problems.

In conclusion, we would add that while this study is by no means a comprehensive picture of gender mapping with respect to participation in Indian Wikipedia communities, it highlights some crucial reasons why Indian women write and edit less on the platform. It opens a formal discussion about the challenges they face in the pursuit to bridge the gender divide; and suggests some possible steps to redress the problem. This pilot study is intended to help frame further research on the gender gap issue in Indian Wikipedia and in digital/tech communities in the country. Finally, it contributes to the ongoing global conversation on gender gap in Wikipedia, as well as provides empirical data which seeks to inform and enrich the discourse on digital divide in India and the global south. 

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Acknowledgements

The authors are thankful to all the participants of this study for their time and valuable insights.

Notes

1. <https://www.theguardian.com/science/2018/oct/03/donna-strickland-nobel-physics-prize-wikipedia-denied>, accessed 3 October 2020.

2. <https://www.independent.co.uk/voices/nobel-prize-winner-physics-2018-donna-strickland-wikipedia-entry-deleted-sexism-equality-a8572006.html>, accessed 3 October 2020.

3. <https://www.washingtonpost.com/outlook/2018/10/08/why-nobel-winner-donna-strickland-didnt-have-wikipedia-page/>, accessed 3 October 2020.

4. Wikimedia is the umbrella term used for all the projects that are run by the Wikimedia Foundation. Some of the projects run by the Wikimedia Foundation are Wikipedia, Wikimedia Commons and Wikidata.

5. Wikimedia Foundation published a blog post on its official blog to clarify the Donna Strickland controversy: <https://wikimediafoundation.org/news/2018/10/04/donna-strickland-wikipedia/>.

6. Rosie Stephenson-Goodknight, a long time Wikimedian undertook a project to map the gender diversity of Wikipedia's participants in 2017: https://meta.wikimedia.org/wiki/Gender_Diversity_Mapping.

7. <https://www.wikipedia.org/>.

8. The Five Pillars which form the basis of all editorial policies of Wikipedia: https://en.wikipedia.org/wiki/Wikipedia:Five_pillars.

9. Wikimedia Foundation is the non-profit that runs Wikipedia and its sister projects: <https://wikimediafoundation.org/>.

10. https://en.wikipedia.org/wiki/Wikimedia_movement.

11. Wikipedia has consistently maintained its position in the top 15 Web sites in terms of userviews as ranked by Alexa: <https://www.alexa.com/topsites>.

12. Similar findings were presented by Paul Schrijver's 2016 Bachelor thesis, entitled "Gender gap on Wikipedia: Visible in all categories?" at <https://arno.uva.nl/cgi/arno/show.cgi?fid=638722>.

13. Statistics from Wikipedia's data dump: <https://stats.wikimedia.org/EN/Sitemap.htm>.

14. https://en.wikipedia.org/wiki/Wikipedia:Why_to_contribute.

15. https://meta.wikimedia.org/wiki/Gender_equity_report_2018.

16. https://en.wikipedia.org/wiki/List_of_Wikipedias.

17. <https://blog.wikimedia.org/2012/04/27/nine-out-of-ten-wikipedians-continue-to-be-men>.

18. See page 53 of

https://upload.wikimedia.org/wikipedia/commons/8/8a/Global_South_User_Survey_2014_-_Full_Analysis_Report.pdf.

19. An editor or contributor to Wikipedia has to create a profile and username. This is how it is often possible to identify a woman user since the username sometimes reveals that information.

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Editorial history

Received 16 October 2020; accepted 21 December 2020.



To the extent possible under law, this work is dedicated to the public domain.

Documenting the gender gap in Indian Wikipedia communities: Findings from a qualitative pilot study

by Anwesha Chakraborty and Netha Hussain.

First Monday, Volume 27, Number 3 - 7 March 2022

<https://journals.uic.edu/ojs/index.php/fm/article/download/11443/10613>

doi: <https://dx.doi.org/10.5210/fm.v27i3.11443>