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Wikipedia Edit-a-thons and Editor Experience: Lessons from a Participatory Observation

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Wikipedia is one of the most important sources of encyclopedic knowledge and among the most visited websites on the internet. As a peer-produced knowledge repository, Wikipedia is dependent on its community of contributors. A healthy contributor community and a steady stream of new editors from diverse backgrounds are especially vital for the platform's future in its endeavour of closing knowledge gaps and combating biases and a lack of diversity that Wikipedia suffers from. Edit-a-thons are social activities aiming to improve content and create new articles on Wikipedia with the purpose of recruitment and onboarding of newcomers. Although edit-a-thons have been facilitated and hosted for many years now, little is known how editors experience such events. In this paper, we study editors experience during a virtual edit-a-thon by applying an ethnomethodological perspective. We use a participatory observation to study incidents of motivation and frustration occurring during the collaborative online writing event. Moreover, we use Hofstede's 6D Model of National Culture to explore what influence culture has on participants' actions, expressed feelings and thoughts while interacting with the administrator and with each other. Our findings indicate that the type of motivational factors is very diverse and varies from general motivation to fill in knowledge gaps, in the beginning, to share good resources for citations at later stages of the edit-a-thon. However, participants also experience moments of frustration, especially concerning the usability of the editing interface and when navigating a complex bureaucracy of policies and procedures. Finally, our analysis shows that cultural idiosyncrasies can intensify the frustrating experience of social challenges.

CCS Concepts: • **Human-centered computing** → **Wikis; Empirical studies in collaborative and social computing.**

Additional Key Words and Phrases: Wikipedia, edit-a-thon, editor experience, Hofstede's 6D Model of National Culture

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1 INTRODUCTION

While being mostly a success story, Wikipedia and other Wikimedia projects have also been facing many challenges over time. First, as a peer-produced knowledge repository, Wikipedia is highly dependent on its online peer production community. However, Wikipedia has seen declines in the number of contributors over time and has been struggling with growing its editor base especially from the perspective of retaining new editors [4, 5]. Awareness of newcomers barriers to participation in open collaboration projects [27] have lead to the design and creation of interventions that aim to provide new editors with improved socialisation and better onboarding experience [16, 17]. While such interventions

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show promising results, a more sustainable and also diverse editor base including new forms of *contribution-beyond editing* are still open issues [39]. A second challenge that is closely related to the decline in editors is structural sexism and the lack of diversity among contributors (e.g. the gender gap) [11] which also results in biased and culturally less diverse Wikipedia content [1, 15, 31]. These issues have recently been summarized under the term *knowledge gaps* [39]. Only a platform that aims at higher diversity in contributorship and content will be able to achieve knowledge equity which is one of the most central goals Wikipedia is striving for [39].

In this paper, we argue that edit-a-thons are a possibility to make Wikipedia content less biased and more diverse by focusing on certain underrepresented topics as seen in e.g. both the *Women in STEM* and *Arts+Feminism* event series. At the time of writing, for 2021 the *Arts+Feminism* campaign lists 135 programs with 2309 editors who contributed almost 3000 new articles and edited another 13000 articles [34]. At the same time, edit-a-thons function as outreach events that allow for drawing in new contributors from many diverse backgrounds and countries.

Edit-a-thon is a portmanteau of *edit* and *marathon* and describes "1) a scheduled time where people edit Wikipedia together, whether offline, online, or a mix of both; 2) typically focused on a specific topic, such as science or women's history; 3) a way to give newcomers an insight into how Wikipedia works" [37]. While the idea of hosting such events was first proposed in 2004, the Wikimedia Foundation cites the British Library to be the first to use of the word "edit-a-thon" to describe their event in January 2011 [12]. Research shows that edit-a-thons support new forms of knowledge construction, which allow opportunities for the democratisation of knowledge, the diversification of Wikipedia's editor demographic and the spread of information on traditionally marginalised subjects [7]. As mentioned, such gatherings – be they held virtual or physical – also foster recruitment and integration of newcomers and increase Wikipedia literacy among participants [7]. However, many aspects of edit-a-thons still remain unknown. First, less is known about the actual retention rate of those who participated in an edit-a-thon and continue editing after the event has ended. An internal Wikimedia evaluation of edit-a-thons held in 2015 came to the conclusion that "about 52% of participants [who] identified as new users made at least one edit one month after their event, but the percentage editing dropped to 15% in the sixth months after their event" [33]. This stands in contrast to Farzan et al. findings, who estimate that only 1% of newcomers actually continue to edit Wikipedia after the edit-a-thon [3]. Second, although we can see a growing number of scholarly work on Wikipedia edit-a-thons, researchers argue that the body of research on this kind of events is still underdeveloped [30]. Previous studies highlight the complex interactions that are at play between motivations, strategies and values of facilitators and participants of edit-a-thons [12]. This implies that if we want to get a more holistic picture of the role that edit-a-thons play in the Wikimedia ecosystem – and ultimately what influences retention rates of new editors – additional research of edit-a-thons in varied contexts is necessary [12]. Finally, most studies on edit-a-thons and new editor experience on Wikipedia have been performed on English Wikipedia only [17].

We take this as a motivation to conduct and report on an ethnomethodologically inspired participatory observation of a GLAM edit-a-thon held by a Polish editor collective. Throughout this observation, we put special attention on the incidents of motivation and frustration that occurred during the event and how they influence the participant's experience. Earlier work on Wikipedia editor experience, helped us to develop a coding scheme to account for those incidents in our analysis [26]. Furthermore, we apply Hofstede's 6D Model of National Culture [6, 8] to find a theoretical underpinning for further contextualizing of how the participants, the host and an administrator from the Wikipedia editor community interacted with each other.

Our findings indicate that the type of motivational factors is very diverse and varies from general motivation to fill in knowledge gaps, in the beginning, to share good resources for citations at later stages of the edit-a-thon. However, participants also experience moments of frustration, especially concerning the usability of the editing interface and when

navigating a complex bureaucracy of policies and procedures. Finally, our analysis shows that cultural idiosyncrasies can intensify the frustrating experience of social challenges. We conclude our paper with recommendations for possible training programs and suggestions for future work.

2 RELATED WORK

In this section, we review relevant scholarly work related to our study. We present previous studies on Wikipedia edit-a-thons, academic research on Wikipedia community socialization strategies and work that covers Polish Wikipedia's editor community.

2.1 Wikipedia Editing and Edit-a-thons

A thorough and systematic review that describes all existing relevant work on Wikipedia editing and editor behaviour is close to impossible. Already in 2012, Okoli et al. reported on more than 200 publications that studied issues related to participation and collaboration on Wikipedia [20]. These studies cover a broad range of topics including motivational factors for participation (e.g. [24]) or cultural and linguistic effects on participation. For example, Pfeil et al., like we, use Hofstede's Model of National Culture to study the influence of culture on editing behaviour. They find a significant correlation, indicating that cultural background influences users behaviour on Wikipedia and the Internet in general [22]. However, none of the articles reviewed by Okoli et al. mention collaborative writing events like edit-a-thons. To the best of our knowledge, the first scientific reports on edit-a-thons can not be found before 2015.

Evans et al. report on the outcomes of the *Art+Feminsim* edit-a-thons held in 2015 over the weekend of International Women's Day (March 6-8). They argue that this event was especially successful as it fell directly into the trend of that time which uncovered the systematic bias and online harassment against women [2]. They see *Arts+Feminism* as a symbiotic way to close the gender gap in both content and participation on Wikipedia and support the idea of more feminism related edit-a-thons as a contribution to close the internet gender gap [2].

The majority of research on edit-a-thons, however, view the events with a pedagogical lens considering them as collaborative learning events [7, 21, 30]. Oliver investigated the use of edit-a-thons as a substitute for classroom assignments when teaching information literacy. Student's reflections in form of qualitative and quantitative data showed that they learned valuable lessons on researching information and writing, especially how to be critical about information sources [21]. Hood and Littlejohn, via the means of interviews, captured narrative learning stories of nine participants taking part in an edit-a-thon held at the University of Edinburgh [7]. The edit-a-thon was designed as an informal professional learning event that combines online activity with offline, in-person collaboration and interaction. Participants reported having learned valuable technical skills and increased their Wikipedia literacy. However, the reflections about biases and responsibilities in knowledge production and dissemination were rated highly among students [7]. In similar veins, Vetter and Sarraf, in their assessment of an *Arts+Feminism* edit-a-thon held at Indiana University of Pennsylvania, found that edit-a-thons are not only facilitators of Wikipedia literacy but foster critical thinking, digital literacy, and technical skills [30]. Farzan et al. studied the effect of *Art+Feminism* edit-a-thons on newcomers onboarding via the means of triangulating log data from Wikipedia and Twitter. Their results suggest that these events are very successful in attracting new members [3]. Moreover, they show that on-event support for editing during the event and social interactions can lead to higher retention rates [3]. However, according to their data only around 1% of participants can actually be called retained editors [3].

The presented studies had a strong focus on the events as a whole. One exception is the study by March and Dasgupta. March and Dasgupta interviewed 13 edit-a-thon facilitators to uncover their motivations for organizing these events

and the challenges they face [12]. They discover that the personal and institutional values that inspire the events go far beyond adding content and editors to Wikipedia aim at strengthening peoples information literacy and building communities that extend beyond Wikipedia’s editor community.

2.2 Wikipedia Community Socialization Strategies

Typically, collaboration on Wikipedia takes place outside of the encyclopedia’s articles in the talk pages and discussion threads. It is usually also there where newcomers learn how to navigate any number of technical and organizational obstacles when they start editing and where community involvement and editor socialization takes place [14]. Already in 2013, when the decline in new editors and editor retention has been noticed for some time, additional interventions for supporting and socializing new Wikipedia editors have been introduced [16]. Morgan et al. present the Wikipedia Teahouse, a support space designed to boost overall editor retention, bridge the editor gender gap and improve general editor experience and well-being [16]. Early results proved this intervention to be effective for community diversification and new editor retention. In 2018, Morgan and Halfaker presented further evidence for the Wikipedia Teahouse success story. In a controlled study, they are able to show increased retention for both low- and high activity newcomers. Besides the Teahouse, other community socialization strategies have been proposed and tested. Such personalized socialization opportunities included mentoring programs such as *Adopt-a-User* [18] or personalized invitations to WikiProjects. However, Morgan and Halfaker suspect, that they only appealed to new editors who were already highly likely to be retained. As such, the retention potential of edit-a-thons is still not really known.

2.3 Polish Editor Community

The Polish-language edition of Wikipedia and its community of contributors has been the focus of several studies before. Many of these studies apply social network methodology to study its editor community [9, 29, 32]. Wierzbicki, Turek and Nielek, for example, propose the use of social network analysis to evaluate teams of authors on Polish Wikipedia [32]. The created network contains the dimensions trust, distrust acquaintance and knowledge. Their main goal is to measure team quality i.e. whether a group of authors contributed to a featured article. Their initial results indicated that acquaintance and trust have a positive impact on team quality. Surprisingly, distrustful behaviour turned out to be beneficial for team quality too.

Also based on article edit history, Jankowski-Lorek et al. model the process of admin elections using multidimensional behavioural networks for discovering good admin candidates [9]. They argue that the admin community isn’t growing fast enough to sustain the growing needs of Wikipedia. However, they could not support their hypothesis that adminship is a closed circle. They propose a method based on editing history which could be a potential way forward to recommend new administrators.

Nielek et al. studied how elderly people can be involved in contributing to Polish Wikipedia [19]. Through a combination of task-based usability tests and in-depth interviews, the authors identified several challenges and barriers that prevented the participants from successfully contributing to Wikipedia. Among the biggest challenges they identified: an incoherent user interface, issues with the information architecture (labelling of buttons), lack of timely system feedback and a lack of guidance and support during the editing process. Apart from fixing usability and UX problems of the Mediawiki software, Nielek et al. suggest an online learning course supplemented by offline meetings to involve elderly editors in the community building process [19]. We argue that especially edit-a-thons seem like a perfect fit to realize this idea. Skorupska et al. build on Nielek et al. ideas and present the concept of a chatbot that could make Wikipedia editing and data verification more accessible, especially to elderly users [28].

To sum up, while we see significant research on editing and editor behaviour also from a community perspective and even within the Polish Wikipedia community, there has not been any study yet, that reported details on the experience of participants which could lead to further insights on how to improve editor socialization and working atmosphere at such writing events.

3 METHOD AND DATA COLLECTION

We now provide a brief description of our methodological choice and the setting in which we conducted our observation i.e. details about the edit-a-thon, the collective organizing it and its participants.

To investigate editor experience and how cultural context might influence it, we employ an ethnomethodological perspective. Our study follows the idea of a study of "talk-in-interaction within various 'institutional' or 'organisational' settings to investigate what types of interactional structures are specific to these settings" [25, p.151]. Our method can be best described as participatory observation, with two researchers actively participating in the edit-a-thon conversing with the participants when necessary. As we did not have any experience in editing Wikipedia before (nor did we have a relation to the Polish Wikipedia community) we took the role of newcomers joining the Wikipedia editing community for the first time as it is the case for many edit-a-thon participants. Data is collected in course of an edit-a-thon held by a Polish collective in November 2020.

The collective was founded, inspired by the *Art+Feminism* initiative, at the end of 2018 beginning of 2019, and is an informal group of women with backgrounds in cultural studies and art history that specialises in creating articles on female, transgender and LGBTQ artists in Polish Wikipedia. In 2020, the group had 61 active editors who created 542 new articles, uploaded 665 items to Wikimedia Commons and edited 37.6 K further articles resulting in a total of 63.9 K edits. The group and the edit-a-thons it organizes are supported by a Wikimedia Foundation Rapid Grant and Wikigrants.

The edit-a-thon lasted for four hours between 16:00 to 20:00 on 21 November 2020 and was a virtual event held via Google Hangouts. As in previous editions, the edit-a-thon followed the idea of adding new or extending existing articles of female Polish architects, photographers, illustrators etc. on Polish Wikipedia. A list of possible edits was curated by the community members in a publicly accessible Google doc before the meeting started to give newcomers the chance to work on an article without having to think about a person themselves. On that day, the group reflected different community members, including a Polish Wikipedia administrator, Wikipedia redactors, experienced editors, and new editors. In total, 16 participants joined the edit-a-thon at various stages. Almost all participants used a desktop PC to edit articles. Only one participant used her mobile device. Events like this usually do not have a strict agenda; the editors are free to decide whether they join the meeting only for some time or participate actively during the entire event. Some participants join only at the beginning of the meeting to confirm the article and ask questions to come back at the end of the event with the article ready for publication. Both the host and all participants share their screens when they encounter an issue or are willing to advise collaborators. Everyone is allowed to ask questions freely, and people who get distracted can mute the conversation. This format was beneficial to our study since we as observers could ask follow-up questions or get in-depth reflections from the participants. At the beginning of the edit-a-thon all participants were informed about the goal of the study, how data will be gathered, stored and analysed and informed consent was obtained verbally by all partakers. During the edit-a-thon, we took field notes and the complete edit-a-thon was recorded on video. The field notes and the transcript of the video recordings served as the basis of data analysis. During the data collection, the analysis process i.e. the coding of our data and the presentation of our findings, we followed the recommendations by Kawulich [10].

Incident	Code	Description
Motivation	Promoting myself or my work	Edits are motivated by leveraging Wikipedia's reach for promoting their work or themselves
	Achieving a goal or completing a task	Edits are motivated by smaller but tasks e.g. adding a reference or a picture
	Gaining experience or knowledge	Edits and actions are motivated by the drive to learn something new and be part of the offline community
	Fixing bugs or filling knowledge gaps	Desire to fix smaller 'common sense' errors or correcting false claims
	Sharing my knowledge	Desire to share topical knowledge or knowledge about good resources
	Contribute to the changes in society	Edits are motivated by a strong passion for addressing biases or imbalances on often controversial topics
Frustration	Unintuitive user interface	Usability issues: New editors struggle with using the visual and source editor or have problems with the UI in general
	Unclear Wikipedia's procedures and policies	Conceptual challenges: there is a lack of clarity on when and how Wikipedia's procedures and policies apply
	Unavailability of Wikipedia as a formal institution	Wikipedia seems formal, academic and authoritative, which makes new editors feel that their edits have to be perfect
	Communication challenges and issues with receiving support	New editors struggle with finding the help they need and in communicating with other users

Table 1. Coding schema inspired by [26] and applied in the data analysis process.

4 DATA ANALYSIS

In this section, we present the (1) coding scheme and (2) relevant theoretical constructs that help us with analysing and interpreting our results. Inspired by earlier work that employed ethnomethodological-inspired participatory observation, our data analysis process follows a conversation analytic approach [23]. We analyse our results in two steps: In a first step, and based on findings from earlier studies on new editor experience [26], we created a coding scheme for deductively coding the transcript on instances of motivation and frustration that participants experienced during the edit-a-thon. The New Editor Experience project focused on supporting mid-sized Wikipedias with increasing their editor base and conducted design research with new editors of South Korean and Czech Wikipedia to uncover their characteristics, behaviours and motivations as well as their key challenges [26]. As edit-a-thons are one of many aims to recruit and retain new editors, we investigated which and how many motivation incidents and challenges i.e. frustration incidents occur for participants during such a collaborative writing event.

4.1 Coding Schema

Table 1 shows the coding schema and lists all motivation and frustration incidents that got coded for. The codes and descriptions for motivations are taken from the personas published in the new editor experience project report [26, p.12]. The codes for frustration incidents and their descriptions are inspired by the summary of key challenges identified in the same study [26, p.33]. In an deductive coding process, we, whenever appropriate, applied one or multiple of these codes to a turn in the conversations among participants during the edit-a-thon.

4.2 Hofstede's 6D Model of National Culture

New editors experience during an edit-a-thon is likely to be influenced by many context factors e.g., the size of the group, the experience of editors involved, whether it is a physical or virtual event and many more. We were interested in to what extent cultural context influences the participant's behaviour and conversations. We turned to Hofstede's 6D Model of National Culture to find a theoretical underpinning for how to interpret the way our participants interacted

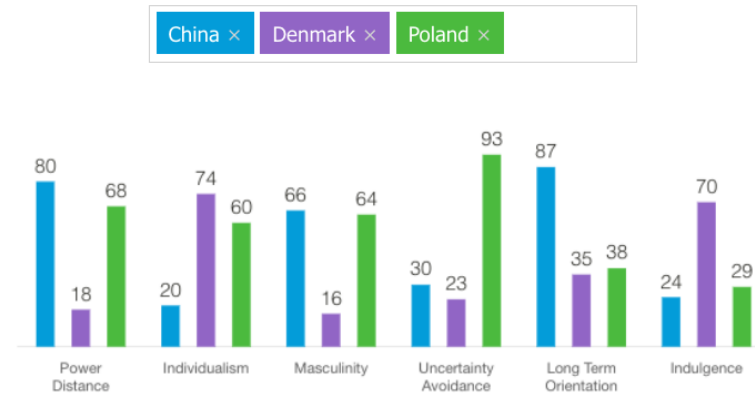


Fig. 1. Comparison of three countries, China, Denmark and Poland, along their scores for Hofstede's 6 Dimensions of National Culture. This Figure was created via a tool accessible at [8].

and conversed with each other. Hofstede's model is a common framework for describing the effects of a society's culture on the value of its members and how these affect their behavior [6]. Often, these dimensions are defined via opposing concept pairs. The first dimension, *Power Distance*, refers to the degree of how accepting less powerful members of organizations and institutions are of unequal power distributions. The second dimension, *Individualism vs. Collectivism*, describes the extent to which people feel independent as opposed to being dependent on each other as members of a larger collective. The third dimension, *Masculinity vs. Femininity* covers social role division between genders. In masculine societies, people are driven by competition, achievement and success while in feminine societies caring for others and a focus on the quality of life is more important. The fourth dimension *Uncertainty Avoidance* covers how threatened a society feels by ambiguous or unknown situations and which measures (e.g. habits and rituals) are in place to deal with the anxiety of an unpredictable future. The fifth dimension, *Long Term Orientation*, describes how welcoming a society is to societal change and how strong it maintains links with its own past. The sixth and final dimension, *Indulgence vs. Restraint*, covers how strongly people in a society follow their desire and impulses and give room to socialisation with others and leisure time as opposed to duty being the normal state of being. Figure 1 shows a bar chart that compares the three countries China, Denmark and Poland on the aforementioned six dimensions, and gives a good impression of how different cultural orientations in societies can be according to that scale.

Polish society can be characterized as an individualist society in which members mostly take care of themselves and their immediate families [8]. In individualist societies offence causes a loss of self-esteem and guilt. While highly individualistic, Polish society also has a strong need for a clear hierarchy. Following [8] high numbers in both *Individualism vs. Collectivism* and *Power Distance* causes tension in a culture. Furthermore, Poland is a masculine country in which people live in order to work and conflicts are resolved by fighting them out. "Managers are expected to be decisive and assertive" [8]. Moreover, Polish people have a strong tendency to avoid uncertainty which makes them follow rigid codes of beliefs and rules. This leads to a hard-working culture with high precision. However, innovation may be resisted. Regarding their *Long Term Orientation* Polish culture can be considered as normative (not pragmatic) with a sense for traditions. Finally, Polish society is a restrained society. Restrained societies do not put much focus on leisure time. They "feel that indulging themselves is somewhat wrong" [8]. We will use these characteristics of Polish society to interpret the role of main actors (i.e. the host and the administrator) and participants behaviour during the edit-a-thon.

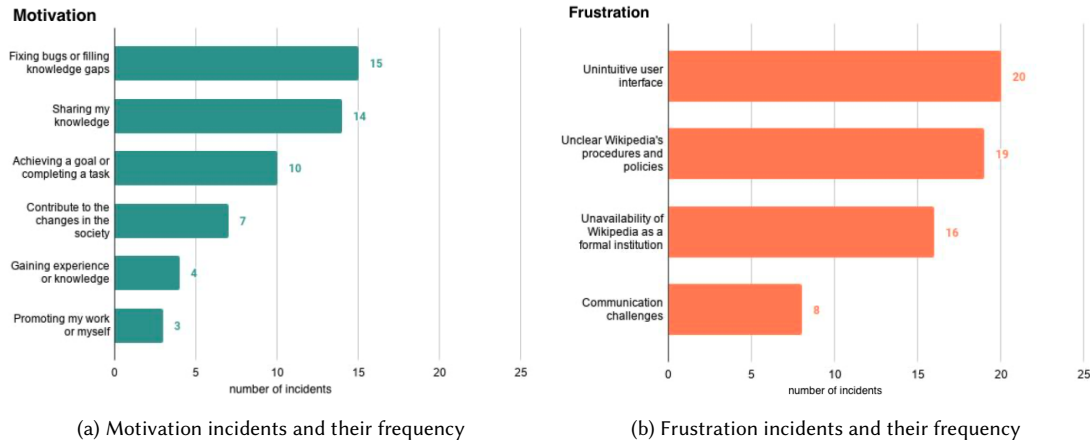


Fig. 2

5 FINDINGS

During the four-hour meeting, the group accomplished to publish eleven new articles and extend two existing ones. Observing this process and the surrounding discussions, we recorded a total of 53 motivation incidents and 63 frustration incidents. These findings are broken down in Figure 2.

Fixing bugs, closing knowledge gaps ($n=15$) and sharing one's own knowledge ($n=14$) were the most frequent motivational aspects that occurred during the session (see Figure 2). Due to the fact that the edit-a-thon followed a common goal, the number of instances in which participants wanted to promote their work or themselves was low ($n=3$). The type and frequency of motivational aspects vary depending on the phase of the edit-a-thon and the specific tasks at hand. In the beginning, participants expressed excitement for writing biographical notes about their favourite female artists and spreading knowledge about them in society via a publicly accessible Wikipedia article. At a later stage, editors were looking forward to sharing knowledge about good sources for references and strategies and how to find them. Finally, towards the end, when participants had their initial drafts published as articles, they got motivated to begin new articles out of the contentment of having achieved the task of publishing despite many hurdles and frustrating incidents. When looking at it from a time series perspective, many motivational incidents were followed by a frustration incident. The most common frustration incidents recorded were usability problems and UX issues i.e. problems resulting from an unintuitive user interface ($n=20$). On multiple occasions during the edit-a-thon participants complained about not being able to find specific functions/buttons in the publishing process e.g. for starting to edit a page, for moving an article from the draft section over to the publishing section or which functions to use to finally publish an article. This was both the case for the visual and the source editor. Another step in the publishing process that caused confusion among participants was the step of assigning articles to categories as many editors were of the impression that this is done automatically. Participants also discussed the UX flaws of experimental features like the translation tool, which none of the participants was recommending to use [13]. Moreover, the administrator condemned behavior in which articles only get translated from English to Polish. This is in line with previous observations, that especially among senior editors and administrators, the idea of rather not having an entry for an article than a 'bad' translation of an English article is widespread.

In some cases, frustration incidents were overlapping i.e. coded with multiple codes. In the case of article categorization, for example, confusion was caused by the lack of official rules regarding which and how many categories should an article be assigned to (Unclear Wikipedia procedures and policies (n=19)). Some of these cases were resolved by the host sharing her screen and sharing good technical practices or standard procedures like copying categories from similar types of articles or linking to other already existing articles. The host suggested creating red links which from her point of view hinted towards knowledge gaps and possibilities to grow smaller language editions. This was also linked to a motivation incident as one editor remarked that spotting red links motivate her to contribute more to Wikipedia and close such gaps. Another example is finding the ideal structure for a biography entry. Here, the host would advise to find a 'best article' and copy paste it's source code.

Finally, instances or episodes which reflected the unavailability of Wikipedia as a formal institution (n=16) are mostly related to situations in which the administrator decisively referred to official Wikipedia guidelines, which prevented participants from using a certain reference or writing an article about a specific person. Details on episodes like these are described further below.

The interactions and conversations among the edit-a-thon participants result in qualitative data which has the potential to provide insights into the culture of the Polish editor community. Using Hofstede's model we try to shed light on the influence of national characteristics on contribution to Wikipedia and editors experience. As mentioned in section 4.2 Poland scores high in the dimension *Power Distance* and the 6d model describes it as a hierarchical society in which people accept a hierarchical structure and top-down orders within an organization. The behaviours recorded during our observation demonstrate this characteristic. As a powerful person, the Wikipedia administrator expressed strong opinions about Wikipedia rules and policies. On multiple occasions throughout the edit-a-thon the administrator enforced rules regarding verifiability and citations, copyright of material or notability of a person very strictly which caused frustration among editors who already struggled with conceptual challenges of that kind when contributing to Wikipedia.

The second dimension *Individualism vs. Collectivism* characterises Polish society as an individualistic society, which contradicts the hierarchical order, resulting in tensions within a society that scores high on both dimensions. During the edit-a-thon, this cultural factor may have lead experienced editors to challenge administrators' rules which created tensions. During the observation, these incidents became evident when the host of the meeting or one of the more experienced editors did not agree with the policies brought forward by the administrator and shared opinions about Wikipedia being a free encyclopedia. Especially, when the administrator brought forward aspects of notability i.e. whether an artist was respected enough to have a Wikipedia article, the host and senior editors hinted towards the new encyclopedic rules for young modern female artists who do not fall into the typical rules on Wikipedia's notability criteria [36]. During the discussion, many new editors mentioned that with rigid policies in place closing knowledge gaps and overcoming biases in Wikipedia is difficult. They argued that societal structures i.e. keeping women away from award ceremonies etc. make it impossible to find the necessary sources that would document their significance and that they are *worth of notice*. While this might not be so much the case nowadays, it is a problem for historical figures. However, it is mostly articles about women that get deleted by administrators due to an alleged lack of notability.

All in all, unclear rules and a strict application of policy by the administrator often lead to this kind of articles being blocked from publications during the edit-a-thon. The Polish culture, according to the Hofstede's model, is a masculine culture, with a high drive for avoiding uncertainty and a clear long term orientation [8]. This means that society is characterised by a normative culture suspicious of change in which conflicts are being solved by fights rather than compromise. This became obvious in most discussions between editors, the host and the administrator as the

administrator did not really engage in dialogue but instead referred to the official rules blocking any real discussion. Everything that seemed unorthodox or not compliant with the official rules appeared to make him feel insecure which is probably why he insisted on the strict application of policies. This seems also counter-intuitive as one of Wikipedia's main rules is: *Ignore all rules (IAR)* [38]. Moreover, he acted decisive and assertive – as expected from managers in masculine cultures – and the tone of voice in which this dialogue was led by the administrator was rather harsh. This caused a certain tension in the group which consisted mainly of younger female editors. Following the discussion with the administrator, multiple editors complained that even on discussion pages in Polish Wikipedia, prolonged discussions are rather the norm rather than the exception and are often impossible to solve via achieving consensus. Nevertheless, one has to mention that the administrators' help has also been perceived as helpful for example when he hinted towards documentation.

Finally, the low score for indulgence for Polish culture was expressed among Wikipedia editors with the pessimism in bringing *actual* change. This became evident in two cases: first one participant mentioned that articles about women are generally rejected by administrators although they would have well-researched references and sources. Second, it became evident in the discussion at the end of the observation that participants showed uncertainty about their skills and competencies to change the rules for modern artists' publications on Wikipedia. The contributors discussed if it was more meaningful to instead create a list of possible changes and new articles and pass this list on to administrators as they did not truly believe in having the skills to do this themselves.

6 DISCUSSION AND CONCLUSION

Wikipedia needs more Wikipedians and those should ideally come from diverse backgrounds. Only by recruiting new editors with various differing ethnic, racial, geographic and cultural backgrounds holding various perspectives e.g. political beliefs or sexual orientations, the platform can achieve its goals of bridging knowledge gaps and creating knowledge equity [39]. We believe that edit-a-thons have the potential to be part of solving these problems. Despite being around for many years now, systematic investigations of how editors experience these collaborative writings events are missing to a large degree. In this paper, we reported on a participatory observation conducted during a *Arts+Feminism* edit-a-thon held by a Polish editor community in November 2020. To learn more about the participant's experience, we recorded, transcribed and coded incidents of motivation and frustration that occurred during the collaborative writing event, as well as the interaction between the participants, the host and the administrator. We used Hofstede's 6D Model of National Culture as a theoretical basis to explain the behaviour of all people involved. Our findings support the previous results by research on mid-size Wikipedias exposing communication issues and unintuitive interface as problematic aspects of editor experience [26]. While those problems have been known for several years now, especially the usability issues haven't been fixed yet.

However, in our findings, it became yet again evident that the greatest challenges new editors face are not technological but conceptual and cultural. Thus, this is a level where cultural identity measurable via Hofstede's index has a huge influence on editor experience. As new editors struggle with understanding Wikipedia policies, finding help and receiving feedback, the administrator's role and how she/he conveys policy rules, engages in discussions and frames feedback is essential. However, especially experienced editors and administrators struggle with providing personal, constructive feedback and e.g. explaining the rationals of policy rules to new editors. Previous studies found multiple explanations for this [26]. First, as experienced editors and administrators develop more advanced levels of their skills they become removed from the new editor experience and lose their competence to relate to new editors and their problems. Second, experienced editors and administrators feel that their efforts of mentoring are wasted if new editor

investment and retention rate is low [26]. It is especially in these moments that issues expressed and experienced during the edit-a-thon, such as gender bias or the organization's authoritative character, may be intensified by the characteristics of Polish culture described with Hofstede's metric [6]. Polish society is characterised as a strong male-focused society with a high *Power Distance* which we interpret as what lead the administrator to a strict application of Wikipedia policies and the unwillingness to engage in discussions and thus also the lack of contextualization and clear description of rationale behind the policies. However, this left many of the new editors frustrated and culminated to a point where they themselves were in doubt whether they could bring any change to Wikipedia and whether it wouldn't be more effective to leave possible changes to Wikipedia for the administrator to do. From our point of view, this attitude is yet again related to Polish culture which is restraining people from fulfilling existing needs.

Our study is limited to the degree that we did not conduct multiple observations in different Wikipedia communities and cultures and performed a comparative analysis of the influence of culture on new editor experience during edit-a-thons. Thus we can not be entirely sure whether the editors experience and the general climate during the edit-a-thon are a result of Polish culture, or whether it was mostly influenced by the administrators personality. Moreover, the strong gender imbalance, i.e. most editors being female and the administrator being male, could have also played a role. However, the goal of this study is not to generalize across multiple communities and events. Our aim is to contribute to research on editor experience during edit-a-thons and raise awareness of the fact that culture can have a huge impact on newcomers experience during edit-a-thons. We also believe that this sets the opportunity to improve training material that is offered for edit-a-thon hosting. The Wikimedia foundation already provides excellent material on how to host edit-a-thons and other editing events in three modules [35]. One option would be to add additional material for coaching experienced editors and administrators on how to provide meaningful feedback and mentorship to new editors while keeping potential influences of cultural dimensions in mind. This material could be tailored towards different regions and cultures depending on how they score on the 6D scale.

With this article we try to highlight the necessity of future research on edit-a-thons and what influence a communities' culture has on editor experience and editor retention. Future work should perform a comparative analysis of edit-a-thons hosted in countries with differing positions on Hofstede's scale. Finally, there is a need to investigate the influence of edit-a-thons on newcomer retention rate in greater detail in general.

REFERENCES

- [1] Ewa S. Callahan and Susan C. Herring. 2011. Cultural bias in Wikipedia content on famous persons. *Journal of the American Society for Information Science and Technology* 62, 10 (2011), 1899–1915. <https://asistdl.onlinelibrary.wiley.com/doi/abs/10.1002/asi.21577>
- [2] Siân Evans, Jacqueline Mabey, and Michael Mandiberg. 2015. Editing for Equality: The Outcomes of the Art+Feminism Wikipedia Edit-a-thons. *Art Documentation: Journal of the Art Libraries Society of North America* 34, 2 (2015), 194–203. <https://doi.org/10.1086/683380>
- [3] Rosta Farzan, Saiph Savage, and Claudia Flores Saviaga. 2016. Bring on Board New Enthusiasts! A Case Study of Impact of Wikipedia Art + Feminism Edit-A-Thon Events on Newcomers. In *Social Informatics*, Emma Spiro and Yong-Yeol Ahn (Eds.). Springer International Publishing, Cham, 24–40.
- [4] Ryan Faulkner, Steven Walling, and Maryana Pinchuk. 2012. Etiquette in Wikipedia: Weening New Editors into Productive Ones. In *Proceedings of the Eighth Annual International Symposium on Wikis and Open Collaboration* (Linz, Austria) (*WikiSym '12*). Association for Computing Machinery, New York, NY, USA, Article 5, 4 pages. <https://doi.org/10.1145/2462932.2462939>
- [5] Aaron Halfaker, R. Stuart Geiger, Jonathan T. Morgan, and John Riedl. 2013. The Rise and Decline of an Open Collaboration System: How Wikipedia's Reaction to Popularity Is Causing Its Decline. *American Behavioral Scientist* 57, 5 (2013), 664–688. <https://doi.org/10.1177/0002764212469365>
- [6] Geert Hofstede. 2001. *Culture's Consequences : Comparing Values, Behaviors, Institutions, and Organizations across Nations*. Sage Publications.
- [7] Nina Hood and Allison Littlejohn. 2018. Hacking History: Redressing Gender Inequities on Wikipedia Through an Editathon. *The International Review of Research in Open and Distributed Learning* 19, 5 (2018). <http://www.irrodl.org/index.php/irrodl/article/view/3549>
- [8] Hofstede Insights. 2021. Country Comparison. <https://www.hofstede-insights.com/country-comparison/poland/>. [Online; accessed 26-January-2021].
- [9] Michal Jankowski-Lorek, Lukasz Ostrowski, Piotr Turek, and Adam Wierzbicki. 2013. Modeling Wikipedia admin elections using multidimensional behavioral social networks. *Social Network Analysis and Mining* 3, - (2013), 787–801. <https://doi.org/10.1007/s13278-012-0092-6>

- [10] Barbara B. Kawulich. 2005. Participant Observation as a Data Collection Method. *Forum: Qualitative Social Research* 6, 2 (2005). <http://nbn-resolving.de/urn:nbn:de:0114-fqs0502430>
- [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* (Mountain View, California) (*WikiSym ’11*). Association for Computing Machinery, New York, NY, USA, 1–10. <https://doi.org/10.1145/2038558.2038560>
- [12] Laura March and Sayamindu Dasgupta. 2020. Wikipedia Edit-a-Thons as Sites of Public Pedagogy. *Proc. ACM Hum.-Comput. Interact.* 4, CSCW2, Article 100 (Oct. 2020). <https://doi.org/10.1145/3415171>
- [13] MediaWiki. 2021. Content translation — MediaWiki. https://www.mediawiki.org/w/index.php?title=Content_translation&oldid=4372284. [Online; accessed 26-January-2021].
- [14] Amanda Menking and Jon Rosenberg. 2021. WP:NOT, WP:NPOV, and Other Stories Wikipedia Tells Us: A Feminist Critique of Wikipedia’s Epistemology. *Science, Technology, & Human Values* 46, 3 (2021), 455–479. <https://doi.org/10.1177/0162243920924783>
- [15] Marc Miquel-Ribé and David Laniado. 2018. Wikipedia Culture Gap: Quantifying Content Imbalances Across 40 Language Editions. *Frontiers in Physics* 6 (2018), 54. <https://www.frontiersin.org/article/10.3389/fphy.2018.00054>
- [16] Jonathan T. Morgan, Siko Bouterse, Heather Walls, and Sarah Stierch. 2013. Tea and Sympathy: Crafting Positive New User Experiences on Wikipedia. In *Proceedings of the 2013 Conference on Computer Supported Cooperative Work* (San Antonio, Texas, USA) (*CSCW ’13*). ACM, New York, NY, USA, 839–848. <https://doi.org/10.1145/2441776.2441871>
- [17] Jonathan T. Morgan and Aaron Halfaker. 2018. Evaluating the Impact of the Wikipedia Teahouse on Newcomer Socialization and Retention. In *Proceedings of the 14th International Symposium on Open Collaboration* (Paris, France) (*OpenSym ’18*). ACM, New York, NY, USA, Article 20. <https://doi.org/10.1145/3233391.3233544>
- [18] David R. Musicant, Yuqing Ren, James A. Johnson, and John Riedl. 2011. Mentoring in Wikipedia: A Clash of Cultures. In *Proceedings of the 7th International Symposium on Wikis and Open Collaboration* (Mountain View, California) (*WikiSym ’11*). ACM, New York, NY, USA, 173–182. <https://doi.org/10.1145/2038558.2038586>
- [19] Radoslaw Nielek, Marta Lutostańska, Wiesław Kopeć, and Adam Wierzbicki. 2017. Turned 70? It is Time to Start Editing Wikipedia. In *Proceedings of the International Conference on Web Intelligence* (Leipzig, Germany) (*WI ’17*). Association for Computing Machinery, New York, NY, USA, 899–906. <https://doi.org/10.1145/3106426.3106539>
- [20] Chitu Okoli, Mohamad Mehdi, Mostafa Mesgari, Finn Årup Nielsen, and Arto Lanamäki. 2012. The People’s Encyclopedia Under the Gaze of the Sages: A Systematic Review of Scholarly Research on Wikipedia. *SSRN* October 24, 0 (2012), 1–138. <https://ssrn.com/abstract=2021326>
- [21] J.T. Oliver. 2015. One-shot Wikipedia: an edit-sprint toward information literacy. *Reference Services Review* 43, 1 (2015), 81–97. <https://doi.org/10.1108/RSR-10-2014-0043>
- [22] Ulrike Pfeil, Panayiotis Zaphiris, and Chee Siang Ang. 2006. Cultural Differences in Collaborative Authoring of Wikipedia. *Journal of Computer-Mediated Communication* 12, 1 (2006), 88–113. <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1083-6101.2006.00316.x>
- [23] Martin Porcheron, Joel E. Fischer, and Sarah Sharples. 2017. “Do Animals Have Accents?”: Talking with Agents in Multi-Party Conversation. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing* (Portland, Oregon, USA) (*CSCW ’17*). ACM, New York, NY, USA, 207–219. <https://doi.org/10.1145/2998181.2998298>
- [24] Pattarawan Prasarnphanich and Christian Wagner. 2009. The Role of Wiki Technology and Altruism in Collaborative Knowledge Creation. *Journal of Computer Information Systems* 49, 4 (2009), 33–41. <https://www.tandfonline.com/doi/abs/10.1080/08874417.2009.11645338>
- [25] G. Psathas. 1995. “Talk and social structure” and “studies of work”. *Human Studies* 18, - (1995), 139–155. <https://doi.org/10.1007/BF01323207>
- [26] Reboot. 2017. *New Editor Experience. Summary of Findings from Korean and Czech Wikipedia*. Technical Report. Wikimedia Foundation. https://upload.wikimedia.org/wikipedia/commons/0/08/New_Editor_Experiences_summary_of_findings%2C_August_2017.pdf
- [27] Aaron Shaw and Eszter Hargittai. 2018. The Pipeline of Online Participation Inequalities: The Case of Wikipedia Editing. *Journal of Communication* 68, 1 (2018), 143–168. <https://doi.org/10.1093/joc/jqx003>
- [28] Kinga Skorupska, Kamil Warpechowski, Radoslaw Nielek, and Wiesław Kopeć. 2020. Conversational Crowdsourcing for Older Adults: a Wikipedia Chatbot Concept. In *Proceedings of 18th European Conference on Computer-Supported Cooperative Work, Siegen, Germany, June 14-17, 2020*. European Society for Socially Embedded Technologies (EUSSET). https://doi.org/10.18420/ecscw2020_ep05
- [29] Piotr Turek, Justyna Sychała, Adam Wierzbicki, and Piotr Gackowski. 2011. Social Mechanism of Granting Trust Basing on Polish Wikipedia Requests for Adminship. In *Social Informatics*, Anwitaman Datta, Stuart Shulman, Baihua Zheng, Shou-De Lin, Aixin Sun, and Ee-Peng Lim (Eds.). Springer Berlin Heidelberg, Berlin, Heidelberg, 212–225. https://doi.org/10.1007/978-3-642-24704-0_25
- [30] Matthew A. Vetter and Krista Speicher Sarraf. 2020. Assessing the Art + feminism Edit-a-thon for Wikipedia literacy, learning outcomes, and critical thinking. *Interactive Learning Environments* 0, 0 (2020), 1–13. <https://doi.org/10.1080/10494820.2020.1805772>
- [31] Claudia Wagner, David Garcia, Mohsen Jadidi, and Markus Strohmaier. 2015. It’s a Man’s Wikipedia? Assessing Gender Inequality in an Online Encyclopedia. In *Proceedings of the International AAAI Conference on Web and Social Media*. <https://aaai.org/ocs/index.php/ICWSM/ICWSM15/paper/view/10585>
- [32] Adam Wierzbicki, Piotr Turek, and Radoslaw Nielek. 2010. Learning about Team Collaboration from Wikipedia Edit History. In *Proceedings of the 6th International Symposium on Wikis and Open Collaboration* (Gdansk, Poland) (*WikiSym ’10*). Association for Computing Machinery, New York, NY, USA. <https://doi.org/10.1145/1832772.1832806>

- [33] Wikimedia. 2015. *Learning and Evaluation/Evaluation reports/2015/Editathons*. https://meta.wikimedia.org/wiki/Learning_and_Evaluation/Evaluation_reports/2015/Editathons
- [34] Wikimedia. 2021. *Campagin: Arts+Feminism 2021*. https://outreachdashboard.wmflabs.org/campaigns/artfeminism_2021/programs
- [35] Wikimedia. 2021. *Running Editathons and other Editing Events*. <https://outreachdashboard.wmflabs.org/training/editathons>
- [36] Wikipedia. 2021. *Wikipedia: Notability (people)*. [https://en.wikipedia.org/wiki/Wikipedia:Notability_\(people\)](https://en.wikipedia.org/wiki/Wikipedia:Notability_(people))
- [37] Wikipedia. 2021. *Wikipedia:How to run an edit-a-thon*. https://en.wikipedia.org/w/index.php?title=Wikipedia:How_to_run_an_edit-a-thon&oldid=1010183187
- [38] Wikipedia contributors. 2021. Ignore all rules - Wikipedia The Free Encyclopedia. https://en.wikipedia.org/w/index.php?title=Ignore_all_rules&oldid=1000097319. [Online; accessed 26-January-2021].
- [39] Leila Zia, Isaac Johnson, B M, Jonathan Morgan, Miriam Redi, Diego Saez-Trumper, and Dario Taraborelli. 2019. Knowledge Gaps – Wikimedia Research 2030. https://figshare.com/articles/journal_contribution/Knowledge_Gaps_Wikimedia_Research_2030/7698245/1