CHAPTER 13

CHANGING THE WAY STORIES ARE TOLD: ENGAGING STAFF AND STUDENTS IN IMPROVING WIKIPEDIA CONTENT ABOUT WOMEN IN SCOTLAND

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Abstract

The University of Edinburgh was the first UK university to employ a Wikimedian-in-Residence (WiR) to support students and staff across the whole university. Over the last five years, the project aimed to develop information literacy and digital research skills and to address the gender disparity of editors and participants in the community. The project has demonstrated the University of Edinburgh's commitment to foster staff and student engagement as active digital citizens of the world and was awarded the 2019 Herald Higher Education Award for "Innovative Use of Technology in the Curriculum."

The residency also focuses on addressing the content on gender gaps and improving coverage of women in science, technology, engineering, and mathematics (STEM). Our first Wikipedia edit-a-thon in 2015 was based on "the Edinburgh Seven"—the first women to study medicine at the University. The WiR collaborated with the University archives team to develop an exhibit celebrating

Scotland's Suffragettes and facilitated a student internship that was awarded the Digital Humanities Award for Best Data Visualization 2019 for the Wikidata Map of Accused Witches in Scotland.

This chapter will showcase stories of student engagement and collaboration inside and outside the curriculum, providing exemplars of how students have engaged with, and been intrinsically motivated by, researching and publishing their scholarship online in a real-world application of their learning. This chapter will also outline why employing a Wikimedian-in-Residence, alongside other learning technologists and digital skills trainers, is a worthwhile return of investment for universities.

Keywords

University of Edinburgh, Wikimedian-in-Residence, Gender gap, Digital skills, Information literacy.

So [in Wikipedia] we've created the greatest creation of the 21st century and we talk about open, we talk about open a lot. And yet, we've created a place where a group of people, who are *not* a minority . . . Hands up anyone who has met a woman? Any in their families? . . . Wikipedia seemed such an amazing opportunity to democratise information and for everyone to participate but we're already at a place where we've created a place where women are choosing not to spend time or contribute . . . We need to be doing more. (Highton, 2015)

Introduction

Founded in 1582, the University of Edinburgh is one of Scotland's ancient universities and the sixth oldest in the English-speaking world. Its mission is the creation, dissemination and curation of knowledge and it aims to make a "significant, sustainable and socially responsible contribution to Scotland, the UK and the world" (Vision and Mission, 2016)

In 2014, a national debate was taking place in Scotland about how to make a fairer, better, more inclusive society in the run up to the

referendum on Scottish independence (Libby Brooks, 2014). This was also the year that the students' association encouraged the University's senior managers to explore how learning materials could be made open, not only for students within the university but across Scotland and the wider world. Student engagement and co-creation have been fundamental aspects of open education resources (OERs) work at the University of Edinburgh ever since.

Open Edinburgh

The University's OER vision, championed by Assistant Principal for Online Learning, Dr. Melissa Highton, sought to meet the modern-day challenges the university faced in terms of scale, sustainability, and reuse. This vision was backed by an OER policy (approved by the Senate Learning and Teaching Committee in 2015) which articulates that the creation of open knowledge and open educational resources is fully in keeping with the institutional vision, purpose and values—"to discover knowledge and make the world a better place, while ensuring that our teaching and research is diverse, inclusive, accessible to all and relevant to society" (About – Open.Ed, 2016). To implement the OER policy, a new OER Service was created to help advise and support academic colleagues, along with the role of Wikimedian-in-Residence, to further embed open practice at the university.

"You Can't Afford Not To"

The value proposition for the new OER policy had to be something that senior managers could say "yes" to. One of the most compelling reasons for investing in open educational resources at the institutional level is the concept of "copyright debt" (Highton, 2015). This concept looked at creating and using OERs as an important way to ensure longevity of access to course materials, which can benefit staff, students and the university itself. The reason being that if you don't get the licensing right first-time round, it will cost more to fix it further down

the line. And the cost and reputational risk to the university could be significant if copyright is breached.

Senior managers also have budget lines earmarked to support key institutional commitments, so the Wikimedian-in-Residence role was closely aligned with these. Employing a Wikimedian therefore represented value for money for the University as there would be a manifest return of investment. The reason being that the kind of activities Wikimedians support are ones which evidence institutional commitment to a multitude of the key priorities currently challenging the UK higher education sector. Namely, supporting the information literacy and digital skills needs of staff and students and meeting strategic commitments to open knowledge, open science and gender equality (Gender Equality, 2020).

Promoting Knowledge Equity and Twenty-First-Century Skills

Hosting a Wikimedian at the university is a vehicle to deliver on these commitments and to promote knowledge equity, through sharing "histories and perspectives that may have been excluded by structures of power and privilege" (Wikimedia, Promoting Knowledge Equity, 2020).

In 2014, biographies about women on English Wikipedia, the largest OER in human history, stood at a mere 15.53 percent (Mathewson, 2020). Surveys have indicated that only 15–20 percent of editors are female with one particular 2011 survey suggesting that around 91.5 percent of editors were male (Balch, 2019; Wikimedia, 2011). The residency was a way to inspire women through celebrating women role models and making them visible on Wikipedia, the most public of digital platforms, and to recruit a *diversity* of Wikipedia editors to help address content that was skewed or less than fulsome. A way to "do more." Particularly where Edinburgh had a rich story to tell.
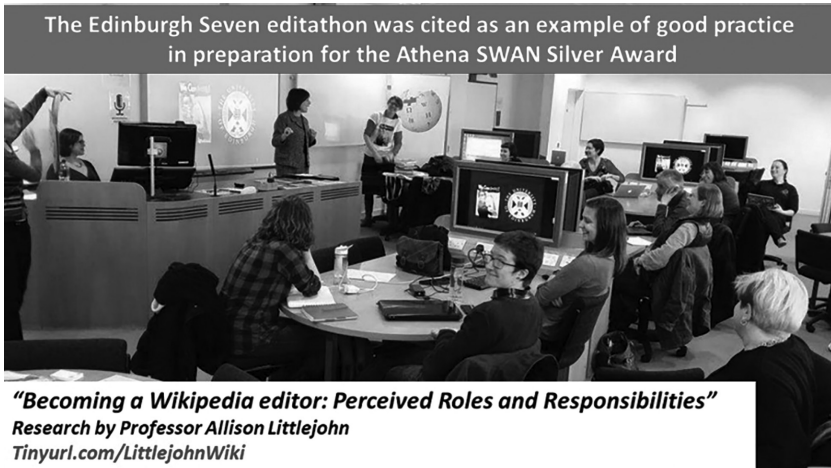
Figure 1 The Edinburgh edit-a-thon, February 2015. (McAndrew, 2019).

The Edinburgh Seven

The very first University of Edinburgh Wikipedia editing event, or edit-a-thon, took place in February 2015, with the aim of increasing female involvement in Wikipedia editing. Melissa Highton was interested to see how colleagues would take to these editing events, what their impact could be, and whether they could support teaching and learning.

The theme was "Women in Science and Scottish History" (Women, Science and Scottish History editathon series, 2015), and the event ran over four days, with visiting Wikimedian-in-Residence, Dr. Ally Crockford from the National Library of Scotland and Dr. Sara Thomas from Museums and Galleries Scotland. They facilitated the training of new editors to create Wikipedia pages about "the Edinburgh Seven." Led by Sophia Jex-Blake, the Edinburgh Seven were the first group of matriculated undergraduate female students at any British university when they began studying medicine in 1869. This theme was apposite in that it allowed participants to consider both the culture of the University, then and now, and the culture of Wikipedia—in terms of women "breaking into an area where they weren't welcome" (Highton, 2015). Beyond this, participants had to consider how to tell this story for a global audience; how best to honor the struggle of the Edinburgh

Seven and their refusal to accept the stories *they* were told—that university education was not for women. And how to communicate their legacy and the positive strides made since; where female undergraduates now form the majority enrolled at the University of Edinburgh (University factsheet, 2020).

Participants came together at the university's Appleton Tower and were guided each day to create, improve, and illustrate pages on Wikipedia with a focus on people and places relating to Edinburgh's role in the history of medicine. Professor Allison Littlejohn helped evaluate what was happening during the Edinburgh edit-a-thon and her published research revealed there was formal and informal learning occurring at these editing events, contributing to the formation of networks of practice and social capital (Rehm et al., 2018). Participants considered the edit-a-thon an important part of their professional development and workplace learning of digital skills. A second paper examined the process of becoming a Wikipedia editor through quasi-ethnographic interviews with edit-a-thon participants (Hood & Littlejohn, 2018). Bringing these stories to light was seen by participants as a form of knowledge activism. Particularly, in addressing areas of underrepresentation, as there was a realization among participants that when learning becomes personal it triggers forms of agency (Littlejohn, 2019).

Balance for Better—The Edinburgh Residency

> If you put your Wikimedian alongside your digital skill trainers and learning technologists, their impact can be significant.
>
> —Melissa Highton, February 2017.

Professor Littlejohn's research evidence from the Edinburgh Seven edit-a-thon helped cement the business case for hosting a Wikimedian-in-Residence to support staff and students across the institution as part of the university's digital skills agenda. The residency commenced in January 2016 and was immediately positioned as a centrally available resource within the Information Services Group (ISG), a converged library and information technology service, which acts to support the work of the University's three teaching colleges.

The resident, Ewan McAndrew, worked with course teams to quickly generate real examples of technology-enhanced learning activities appropriate to the curriculum. As a result, students in a variety of disciplines benefit from learning new digital and information literacy skills appropriate for the modern graduate. The published outputs of their learning have an immediate public impact in addressing the diversity of editors and diversity of content shared online. For example, World Christianity postgraduate students wrote new pages about women in religion and on topics such as Asian Feminist Theology, and Reproductive Biology undergraduate students, where each year ~90 percent of the cohort are female, worked collaboratively to create missing articles related to reproductive health.

Many of the training workshops facilitated by the residency focused on addressing underrepresentation of topics on Wikipedia and encouraging more women to become editors. Student societies have been motivated to initiate collaborations with the residency and have designed and lead edit-a-thon events focused on such topics as Women in Science, Technology, Engineering and Maths (STEM), LGBT+ History Month, Black History Month, Mental Health Week, and Edinburgh's global alumni.

Between 2016 and 2020, the residency has worked with over a dozen course programs, facilitated over 200 training workshops along with 100 edit-a-thon events celebrating: International Women's Day; Ada Lovelace Day; Gothic Writers; Feminist Writers; Women Architects; Contemporary Scottish Artists, Scottish women authors; Women in Anthropology, Women in Chemistry, Women in Law and Global Health; Women in Engineering; and Women in Espionage. A thousand students and 500 staff have now been trained to edit Wikipedia, with an estimated 3,500 articles created and improved. Stories that may not have been shared otherwise are now discoverable and being read, added to and improved, as OERs shared with the world for the benefit of all.

Women in Red Workshops

Wikipedia has a gender problem. In considering the diversity of editors and content, "the "overwhelming majority of contributors are male" and the vast majority of biographies (81 percent on English

Wikipedia) are about men (Ford & Wajcman, 2017). This means there is *clear* gender bias in terms of the stories being disseminated online, the choices being made in their creation and curation and who is writing these stories (Allen, 2020).

Yet, 69 percent of participating editors at the University of Edinburgh have been women, demonstrating that Wikipedia editing does not *have* to be the preserve of "white, college-educated males" (Wikimedia, 2011). Addressing systemic bias and underrepresentation online has consistently been a key motivator for staff and students at the University—working toward building a fairer, more inclusive Internet and society.

The residency has facilitated monthly "Wiki Women in Red" workshops for the last four years and created a supportive setting where students and staff can come together to learn a new digital skill. Attendees research a notable woman not yet represented with a page on Wikipedia (a red hyperlinked article title on Wikipedia indicates people or topics without a Wikipedia page . . . yet), then apply their new skills by turning this red link "blue" through writing and publishing a brand-new page as a blue clickable link as a tangible outcome they can be proud of. As a result of the success of this approach, Wikipedia Women in Red edit-a-thons are now included in the University's Athena Scientific Women's Academic Network (SWAN) charter plan to highlight female achievement in science, technology, engineering, and mathematics (STEM) to encourage and inspire new STEM careers.

The Map of Accused Witches in Scotland

The Data Visualization Internship was organized through Equate Scotland Careerwise—an initiative that arranges paid placements in industry for women working in STEM subjects. Geography undergraduate Emma Carroll spent three months working with the residency, learning new digital and data literacy skills, in order to add coordinate positions for all the locations cataloged in the landmark Survey of Scottish Witchcraft database to Wikidata (The University of Edinburgh, 2003).

Figure 2 Screengrab of the Wikidata-driven map of accused witches in Scotland. University of Edinburgh, CC-BY-SA Available at: witches.is.ed.ac.uk.

At project completion, the places of residence for 3,141 men and women accused of witchcraft in Scotland (85 percent of them women) were geolocated on a Wikidata-driven map website so that anyone in Scotland can find out about the accusations of witchcraft that happened near them. The map succeeds in highlighting the sheer scale and intensity of the Scottish witch hunts to a modern audience, as well as in localizing and humanizing the individual stories of the women who were persecuted. Additionally, "Women in Red" editors at the University created pages for over twenty notable women accused of witchcraft in Scotland. One of which includes Lilias Adie, the only accused witch in Scotland for whom we can put a face to, thanks to forensic artists at the University of Dundee digitally reconstructing her face and then sharing this image to her newly created Wikipedia page (Younger, 2017).

Since the map website launched in September 2019, this project has gained worldwide media coverage, stimulating interest in these stories and Emma has since presented on her work at the second "Remembering Scotland's Accused Witches Conference" in November 2020. The conference is part of growing grassroots movement to memorialize what happened to these women and the Wikidata map is viewed as an important resource in furthering this aim and for uncovering more of these women's stories.

Scotland's Suffragettes

In recognition of the centennial celebration of the Representation of the People Act of 1918, which ensured the right to vote for women who were over thirty and met minimum property qualifications, the resident facilitated three Wikipedia editing events for the university's Festival of Creative Learning, International Women's Day, and Processions 2018. Participants researched, published, and illustrated new Wikipedia articles about Scotland's suffragettes. These newly published open educational resources are an act of solidarity and celebration so that the stories of these extraordinary women's contributions to women's suffrage will be read, added to, and remembered.

In total, staff and student volunteer editors surfaced 34 new biography articles on Wikipedia about Scotland's suffragettes and improved 220 more articles so that people could discover all about the important contributions these women made in the fight for women's suffrage, individually and collectively. Images of these women help make their stories more impactful, more real, and more human. Editors identified images and contacted libraries, archives, and museums to ask if they would consider sharing these images openly as a gift to the cultural commons. Many were only too happy to help illustrate these new pages, and, by extension, help bring these stories to a modern audience through the creation of a new interactive timeline of women's suffrage in Scotland.

An Interactive Timeline of Women's Suffrage

A hybrid exhibition, showcasing both digital and physical artifacts, was created by the residency in collaboration with the Library and University Collections team in November 2018. The exhibition unveiled a bespoke Histropedia digital timeline of women's suffrage in Scotland (Vote 100—Histropedia Timelines, 2018) allowing the newly created Wikipedia pages on Scotland's suffragettes to be explored collectively via an interactive website, accessible online and on a smart table in the library foyer.

The physical artifacts illustrated how some of the University of Edinburgh's first female graduates advocated for equal

Figure 3 Screengrab of the women's suffrage in Scotland Navbox, specially created to add at the foot of each of the Scottish suffragette's Wikipedia pages. CC-BY-SA.

enfranchisement in the United Kingdom and focused on the three students who demonstrated at the House of Lords in November of 1908: Chrystal MacMillan, Margaret Nairn, and Frances Simson (University of Edinburgh's suffragettes fight for the right to vote, 2018). The exhibition was praised by Students Association vice president for education, Diva Mukherji, who connected this historical event to the present moment when speaking about how inspiring the women were for students today, showing that students had fought for their rights and for equality.

New navigation templates (figure 3) have also been created to pull all these women's stories together so that when reading about one of Scotland's suffragettes, it is also possible to navigate easily to other related stories, through hyperlinks grouped and organized in a box at the foot of the page. So that all these stories can be more easily discovered, navigation boxes were also created and added to each of the Edinburgh Seven's pages, every page about an accused witch in Scotland and all nineteen of the extraordinary women chemists who petitioned the Chemical Society for Fellowship in 1904.

Conclusion

Representation matters. Learning about these stories matters. Gaps in our shared knowledge excludes the vitally important contributions of many within our community. Universities can help remove barriers and kick open more doors. They have access to knowledge and information and, with that, an ethical responsibility to share that knowledge for the greater good. These edit-a-thons, or 'diversithons', are one way to start nudging the door open.

Diversity matters because gender inequality in science and technology is all too real (Women in STEM | Percentages of Women in STEM Statistics, 2021). Increasing the visibility and diversity of topics and inspirational role models online can not only encourage more into STEM careers but also help inform and shape our physical environments to be more inclusive spaces.

> Meanings are projected not just by the buildings themselves, but by how they are furnished and decorated. And where almost every image—portrait, photograph, statue—of academic achievement and leadership is masculine (and nearly always white middle-aged), the meaning is clear: to be a successful leader, gender and ethnicity matter. (Spiller & Moffat, 2017)

The Edinburgh Seven have now finally been awarded their degrees posthumously at a special ceremony (Edinburgh gives female medical students their degrees—150 years late, 2019). A blue plaque was erected, marking the Seven's rightful place in history. It's impossible to know exactly how many people have walked past it, or stopped to read it. But we know their Wikipedia pages are being found, with over 78,000 page views for Sophia Jex-Blake's page and 52,000 page views for the Edinburgh Seven page.

While there is no known image of all seven women together, a new portrait by photographer Laurence Winram (figure 4) has been commissioned by the University of Edinburgh's Medical School, which now hangs in its Sophia Jex-Blake common room, to commemorate them. The new portrait draws inspiration also from the present-day students featured in the portrait, who collected the posthumous

Figure 4 The Edinburgh Seven. A reimagining of a Rembrandt painting from 1632 called "The Anatomy Lesson of Nicolaes Tulp." Those featured are the students who collected the posthumous degrees on the Seven's behalf: Simran Piya, Megan Cameron, Ella Crowther, Caitlyn Taylor, Izzie Dighero, Mei Yen Liew, Sorna Paramananthan, Liam Parkinson—cadaver, and Alethea Kelsey—teacher. Photographer Laurence Winram. Copyright University of Edinburgh.

degrees on the Seven's behalf and who are now forging their own careers in medicine.

> Their acts opened up a door to a university education which remains open for thousands of students today. (Kelly, 2019)

There is something very "real and tangibly useful" in doing this work and surfacing these women's stories, something that remains after the publishing of a page (Seery, 2017). There's a lasting sense of pride, satisfaction, and achievement that these stories are out there in the world. And that others will discover them, learn from them, be provoked by them. These pages will have a life of their own as OERs released into the world and will grow, change, and spark ideas. They may very well even outlive us.

The lives and contributions of extraordinary women are recorded in various sources. It's about choosing to write their stories on Wikipedia. There is a labor to this work, undoubtedly. But it's worthwhile work. And while the size of the challenge is massive, we have the numbers to rise to it—Wikipedia is a website that anyone can edit after all—but only if we choose to undertake and *value* this work. And only if we acknowledge that committing to equality and diversity is a collective responsibility we all should shoulder. It isn't only for women to write about the women who came before them. And we shouldn't have to wait 150 years to remember extraordinary women either. There are brilliant women doing brilliant work today. Extraordinary stories to be told and learn from today.

So many are entirely absent from our search results and we could do more to challenge and combat this. Women are not a minority and we can't accept the paucity of stories and role models currently available online that try to tell us that message. We can change the way stories are told and make different, better choices. We can empower new content creators, create new heroes, and inspire readers all around the world. Gender equality should be a key institutional commitment and a Wikimedian placed alongside your digital skills trainers and learning technologists is a tangible and impactful way of demonstrating this commitment.

Universities have privileged access to knowledge and can play a pivotal role in choosing to value this work. It is a choice after all. Work that could and should be prioritized, funded, and facilitated. These stories of pioneering women are too important to remain hidden. Search is the way we now live (Hillis, Petit and Jarrett, 2012) and what is right or wrong or missing on Wikipedia affects the entire internet (Wadewitz, 2014). Given Wikipedia's undoubted reach and influence, the importance of encouraging a diversity of editors to engage with Wikipedia editing is crucial in terms of increasing the visibility of female role models online to, in turn, encourage, inspire and empower the next generation of dangerous women who can continue to kick doors open and shape our world for the better.

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