

Why and how is the Zentralbibliothek Zürich involved in citizen science?

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In its strategy, the Zentralbibliothek Zürich (ZB) has set itself the goal of promoting citizen science based on a participatory concept of open science. This paper outlines why the ZB is involved in citizen science and gives an overview of its various approaches to citizen science.

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1. Introduction

The Zentralbibliothek Zürich (ZB) has been the cantonal, city, and university library of Zurich for over 100 years. It is one of the largest libraries in Switzerland and, thanks to its predecessor institutions, has considerable historic holdings. Today, new acquisitions focus on the humanities and social sciences as well as Turicensia (works from and about Zurich). This paper describes why and how the ZB is involved in citizen science, taking up the motto of the conference “Citizen Science – why not (actually)?”.

2. Why is citizen science an issue for the ZB?

In its current strategy, the ZB has set itself the goal of raising its profile as a partner in research. At the same time, as a cantonal and city library, it has always been a core task of the ZB to mediate between science and the public. In its dual function as a public and a university library, the ZB is predestined to make new forms of interaction between citizens and scientists possible and to put citizen science into practice in the humanities and social sciences. Therefore, one of the ZB’s strategic initiatives includes engaging in citizen science projects, developing its own activities for this purpose, and seeking partnerships based on a participatory concept of open science [1].

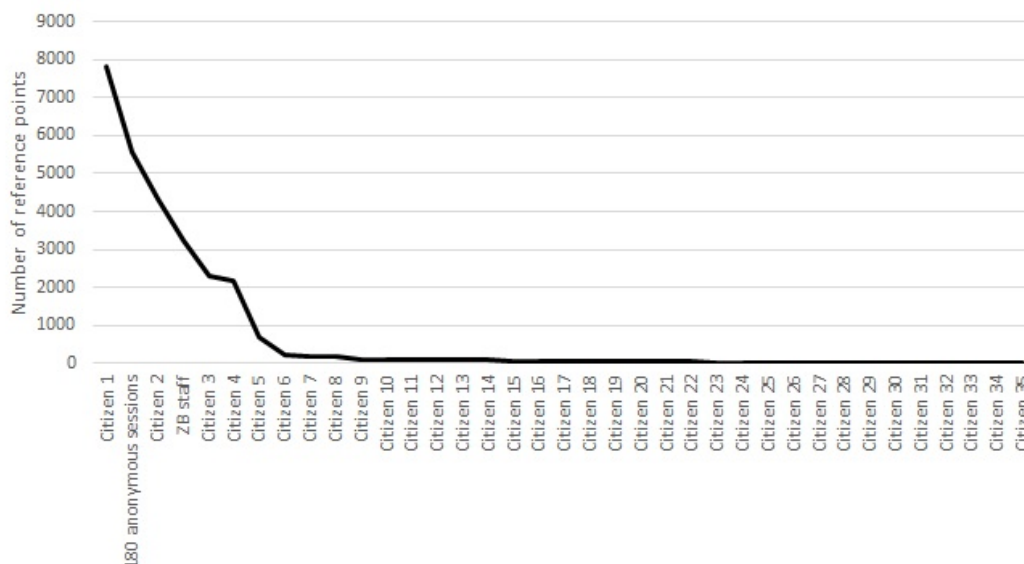
The more concrete goals of the ZB’s citizen science activities include making holdings accessible (improving metadata through crowdsourcing), raising the visibility of selected (digitized) holdings, as well as retaining customers and acquiring new ones.

3. How is the ZB involved in citizen science activities?

The ZB has decided to approach citizen science in the form of a project with two levels [2]. On the one hand, the project team will work on the topic for four years, acquire competencies, conduct campaigns with a coherent marketing concept to build a community of citizen scientists, and maintain systematic contacts with other relevant institutions. On the other hand, in sub-projects with a shorter duration [3], the team will carry out concrete citizen science activities and gain experience with different approaches and project designs.

3.1 Georeferencing

In the first type of activities, citizen scientists georeferenced old maps, which allowed a comparison with modern ones. The sub-project “Through Space and Time [Durch Raum und Zeit]” was very successful. In just seven weeks, the citizen scientists indexed all 2,509 maps that had been made available on the georeferencer platform [4]. It also revealed the so-called skewed distribution of participation typical of crowdsourcing projects: a few people did most of the work. The most active person alone set 7,813 reference points (almost 28%), and the four most active registered citizen scientists together set 16,634 reference points (about 60%) (ill. 1).



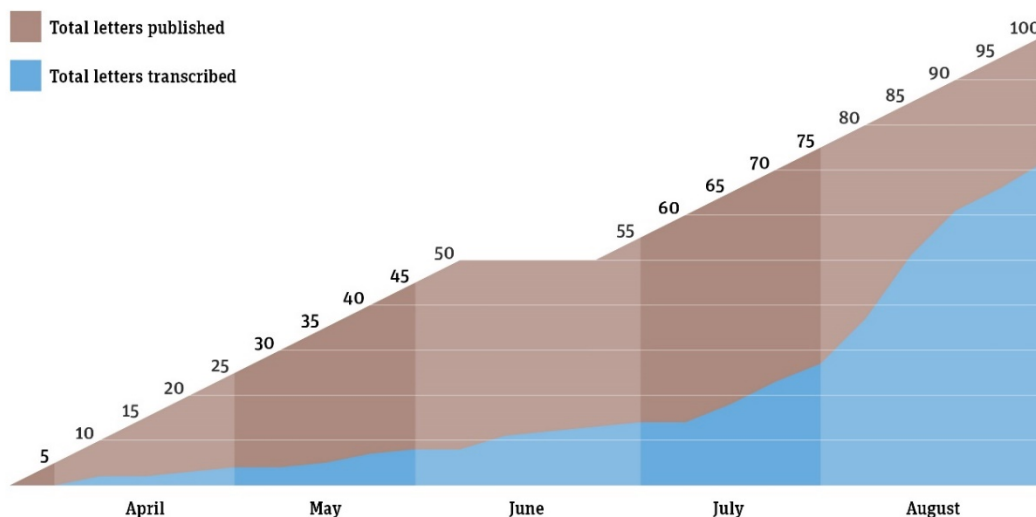
Ill. 1: Reference points set by citizen scientists in the sub-project “Through Space and Time” (absolute numbers).

3.2 Transcribing

Several sub-projects deal with the transcription of historical documents using the transcription tool of e-manuscripta, the digital platform for manuscript material from Swiss libraries and archives [5]. In one sub-project, citizen scientists transcribed letters from and to the writer and statesman Heinrich Zschokke (1771-1848). The image scans of 260 such letters were already online on the e-manuscripta platform when the campaign began. What was missing, however, was a machine-readable full text. Experience has shown that the initial hurdle for transcribing is high. Therefore, the project team selected a rather small but important collection for the first campaign. Two face-to-face events were held at the ZB in order to provide a community experience and to familiarize the citizen scientists with the handling of the IT tool.

The other transcription projects have the same technical foundation but differ in their campaigning strategies and target groups. In one sub-project, a central but unique reference work only available in handwritten form [6] is to be completely transcribed by citizen scientists. This sub-project targets the well-organized and highly committed community of genealogists. With the task of transcribing the correspondence of the founder of Swiss art history and cultural heritage preservation, Johann Rudolf Rahn (1841-1921), the sub-project addresses lecturers in art history and professionals in the field of cultural heritage preservation. In order to provide access points into the more than 10,000 pages of copied outgoing letters, ZB staff transcribed the index of recipients created by Rahn himself. The project team chose a different approach to the correspondence of the Zurich music publisher, composer, and music educator Hans Georg Nägeli (1773-1836) and his son Hermann (1811-1872). The citizen scientists are invited to process only 100 letters preparing the so-called ground truth for a hand-written text recognition model. In this sub-project, the gamification element motivating the citizen scientists is a fixed publication rhythm of five letters per week and the challenge to transcribe the selected letters in a short time. The progress of the joint effort is reported in an area chart (ill. 2).

POS (ACSC2022) 004



Ill. 2: Motivating citizen scientists by visualization of progress in the Nägeli sub-project.

3.3 Open educational resources

The “Educational (Time) Travel [Schul(zeit)reisen]” sub-project offers teaching materials in digital form. The teaching units focus on original documents from the ZB. They consist of a worksheet for pupils and separately published explanations for teachers published under a Creative Commons license. Since March 2021, 24 teaching units have been released, including on topics such as “Life during a pandemic – Zurich 1918”, “Switzerland and the slave trade”, and “Girls’ education in 18th and 19th century Zurich”. Teachers from 25 Zurich schools were invited to comment on these materials and to propose topics. Interaction with teachers is key to the success of the sub-project. After all, the trick is to meet the teachers’ needs, as determined by the curriculum, with the ZB holdings.

3.4 Collaborative writing

“Zurich Film goes Wikipedia” went beyond crowdsourcing, too. In the fall of 2021, the project team organized a writing workshop using a participatory format from the Wikiverse. The background of this sub-project is the fact that Zurich is a central site for Swiss filmmaking and that the ZB has relevant holdings, in particular a collection of screenplays and scripts that is unique in Switzerland. The event started with a panel discussion with a well-known Zurich film director. Afterward, an experienced member of the Wikipedia community gave an introduction on how to contribute to Wikipedia. As a result of this long weekend, 16 new Wikipedia articles on Zurich filmmaking were written on site and six existing ones were improved.

4. Conclusion

The ZB does not conduct one individual research project in the form of a citizen science project, as is typical for research groups at universities. Rather, it understands citizen science as a field of action that leads to a variety of interrelated and coordinated activities. In carrying these out, the ZB is gaining experience with various forms of citizen science in the field of humanities.

Opportunities particularly arise from the local focus of the Turicensia, as it is motivating to citizen scientists that they can share their specific local knowledge, make it available to research, and feel recognized for their work [7]. With high-level digitization, the ZB allows citizen scientists

to participate in projects regardless of time and place. However, face-to-face events are important for community building and ensuring a lasting commitment. So, the citizen scientists are regularly invited to the ZB, for example to share results and to accept thanks for the work they have done. In addition, one of the ZB's great strengths as a library is the stability of its infrastructures. Unlike research projects, whose funding is time-limited and whose staff need to look for a new job at the end of the project, the ZB as a commemorative institution can guarantee the longevity of the results of its citizen science activities.

After 18 months, the ZB observed a positive outcome: The project team succeeded in creating new participatory formats and opening up a dialog with the library users in a novel way.

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