
Designing Open Government Data Portals for the Universal Access and Effective Use of Ordinary Citizens

Briane Paul V. Samson
De La Salle University
Manila, Philippines
brianepauls@acm.org

Abstract

As citizens around the world clamor for more transparency and accountability from their national governments, we can see a steady increase in published open data and freedom of information laws being passed. The Philippines is spearheading this movement by encouraging more agencies to publish open government data and more recently, responding to Freedom of Information (FOI) requests. However, it is still far from achieving universal participation because most of their implementations focus on use cases for data workers and scientists. This leaves the data they host not maximized to their potential and with no guarantee if available data can address people's information needs. Here, I argue that there is a need to improve the usability and inclusiveness of open government and freedom of information data portals that will allow for more universal access, without explicit need for data literacy and experience.

Author Keywords

Open Data, Open Government Data, Information Seeking, Sensemaking

CCS Concepts

•**Human-centered computing** → **Human computer interaction (HCI)**; *Empirical studies in HCI*;

Paste the appropriate copyright statement here. ACM now supports three different copyright statements:

- ACM copyright: ACM holds the copyright on the work. This is the historical approach.
- License: The author(s) retain copyright, but ACM receives an exclusive publication license.
- Open Access: The author(s) wish to pay for the work to be open access. The additional fee must be paid to ACM.

This text field is large enough to hold the appropriate release statement assuming it is single spaced in a sans-serif 7 point font.

Every submission will be assigned their own unique DOI string to be included here.

Introduction

The term "*open government*" was first used in the 1950s and was generally used to refer to making previously confidential government information public with the goal of having a government be more politically transparent [16]. Under this umbrella movement, governments have employed either one of two popular options to promote transparency and accountability: voluntarily publish them as open data and or provide citizens with a "right-to-know" process. Most of these open government initiatives started with the United States right after the World War [16]. But in 2011, countries from all over the world gathered together and formed the Open Government Partnership (OGP) with the goal of promoting "*accountable, responsive and inclusive governance*" [12]. Being a founding member of the OGP, the Philippines launched Open Data Philippines (ODPH) in 2014 as one of its key commitments [1]. Unlike the open data movement, lobbyists of freedom of information seeks for governments to establish constitutional guarantees for a "right-to-know" process. In the absence of publicly available government data, a passed FOI law ensures a data requester that they will get a response within a specified number of days. However, it is still the discretion of the government agency whether they will provide the data or not.

While we are still far from having truly open governments, we are already witnessing small successes of open government and FOI data being used for policy, research and civic innovations. For example, projects like Citygram¹ in the USA allows citizens to get updated with recent reports in their area while GoodGuide² in the EU lets users check how healthy grocery items are. Several technology companies like Sakay.ph³ that provides commute routes in the

¹<https://www.citygram.org/>

²<https://www.goodguide.com>

³<https://sakay.ph/>

Philippines and Rentlogic⁴ that grades apartment buildings in New York got started with open government data as well. Aside from these, open government datasets are mainly accessed by data workers who use them for research and data analysis. In countries with more advanced open data catalogs, citizens are able to do statistical analyses [5] and build visual analytic tools to explore the given open data [11, 14]. However, Choi and Tausczik (2017) found that most data work are limited to shallow analyses such as descriptive and exploratory analysis even though there is potential for these data sets to be used for inferential or even predictive analysis. Governments have so far focused on the needs of an expert subset of the population, with access to advanced tools and grand ideas that can definitely drive economic development and promote societal changes. However, these datasets also contain valuable information for ordinary citizens that they cannot readily access and use because of a need for high technical expertise. That said, open government data have yet to achieve universal participation, especially among sub-national governments and ordinary citizens where they can have the most impact [4]. Thus, it is critical for the success of these initiatives that they expand their reach and explore other ways that citizens can make use of these rich data sets without any barrier to entry and high learning curve.

Despite the extensive usage of civil society organizations and the private sector, open government data still suffers from low utilization which suggests a disconnect between the published data and the information needs of the citizens [8]. With some data publishers merely "*dumping*"⁵ their data, they seem to be unaware of the potential and relevance of their data to those can potentially benefit from

⁴<https://www.rentlogic.com/>

⁵<https://www.stateofopendata.od4d.net/chapters/regions/seasia.html>

them. On the other hand, citizens are unaware of the published open data [2]. The Freedom of Information initiative could be a way for data publishers to understand demand through its requests for data access but the current disconnect with the open data initiative does not allow publishers from either sources to get hold of this information. Currently, datasets are spread across multiple sources with inconsistent to non-existent links between them. For example, there is a National Crime Statistics dataset for 2013 in the Open Data portal⁶ and there are several successful requests for the same data in the FOI portal⁷. This makes it relatively challenging for users seeking the right answer to fulfill their information needs.

Philippine Open Data Systems

As one of the pioneering members of the Open Government Partnership in 2011, the Philippines has taken steps to disclose data to the public through the Full Disclosure Policy [3]. Since then, the Philippines has launched various portals containing OGD [3, 6, 15]. In this study, we focus on two specific portals: Open Data Philippines (ODPH) and the Electronic Freedom of Information (eFOI). These portals cover the two ways citizens can gain access to OGD: government-led publication of data and citizen-led request of information. ODPH⁸ hosts data provided by different agencies and allows users to search, preview, and download these without any restrictions. In the dataset preview, users may also create exploratory graphs with the fields available in the file. On the other hand, eFOI⁹ serves as an online tracker of citizen requests for government information that has not yet been published. eFOI requires citizens to

register and to provide a valid proof of identity before making a request. Requests must be filed to the correct agency otherwise it gets rejected. An email would be sent notifying the requester of the status after submission. Other citizens may also browse through existing requests. Each request shows a conversational thread of the FOI officer and the corresponding agency.

Initial Findings

We conducted a needfinding survey of 119 respondents to understand the information needs and awareness of Filipinos regarding the open government data portals provided by the Philippine government. We also investigated the information seeking behavior of 13 lay citizens and 8 data workers to compare the behavior of both groups. In addition, we also conducted usability tests and semi-structured interviews with these 21 participants to identify gaps in the design of the two portals. In terms of the information seeking behavior of citizens, regardless of data experience and level of personal involvement, participants from both studies still relied heavily on Google to find needed data or information as seen in previous studies [10]. Although some participants believed that some of the available data from the portals are useful and relevant, most of the available data were mostly incomplete and outdated. This could be mainly attributed to the pace of digital transformation of the Philippines and the capability of the government to adapt to new technology to better manage and publish data. To address this issue, strict policies on data management and awareness campaigns are needed. We believe that design improvements could also be made to the current open data portals as majority of our participants shared common design and interactivity concerns with both portals. Both our results and previous literature [9] suggest that existing search techniques from web searches do not apply to data search. Although some of the participants were able to

⁶<https://data.gov.ph/dataset/national-crime-statistics>

⁷<https://www.foi.gov.ph/requests?status=&search=crime+statistics>

⁸<https://data.gov.ph/>

⁹<https://www.foi.gov.ph/>

adapt to the search engine, we believe that an **improved search engine** would enable faster and more efficient searches. As spatial and temporal keywords were common in search queries, we recommend that the search engine looks through the metadata of uploaded data. However, this would require proper documentation of published data which may only be controlled by the data provider. Our results also show that regardless of data experience, citizens prefer a straightforward answer when seeking information. To support this, we emphasize the need for **descriptive visualizations** to communicate the content of the data. The majority of our lay participants expressed interest in visual aids to help them understand what the values in the data mean. Although storytelling and visualizations have been determined effective in communicating data [7], further research is needed to understand how Filipinos perceive data visualizations. Citizens need to be able to know how to read graphs and visuals presented. As previous literature suggests, there are various factors that affect the attitude and perception of individuals about visualizations [13].

REFERENCES

- [1] Victor Barreiro Jr. 2014. Data.gov.ph launches: Open data for good governance. (16 01 2014). <https://www.rappler.com/nation/48101-open-data-philippines-data-gov-ph>
- [2] Jorn Berends, Wendy Carrara, and Heleen Vollers. 2017. Analytical report n6: Open data in cities 2. (2017).
- [3] Michael Canares, Dave Marcial, and Marijoe Narca. 2015. Enhancing Citizen Engagement with Open Government Data. *Open Data Research Symposium* (2015). <http://www.opendataresearch.org/dl/symposium2015/odrs2015-paper15.pdf>
- [4] Michael Canares and Satyarupa Shekhar. 2016. Open Data and Subnational Governments: Lessons from Developing Countries. *The Journal of Community Informatics* 12, 2 (Jun. 2016). <http://www.ci-journal.net/index.php/ciej/article/view/1260>
- [5] Joohee Choi and Yla Tausczik. 2017. Characteristics of Collaboration in the Emerging Practice of Open Data Analysis. In *Proceedings of the 2017 ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW '17)*. ACM, New York, NY, USA, 835–846. DOI: <http://dx.doi.org/10.1145/2998181.2998265>
- [6] Ian Nicolas P. Cigaral. 2016. EO on freedom of information takes effect today: Palace. (Nov. 2016). <http://www.bworldonline.com/content.php?section=Nation&title=eo-on-freedom-of-information-takes-effect-today-palace&id=136876>
- [7] Sheena Erete, Emily Ryou, Geoff Smith, Kristina Marie Fassett, and Sarah Duda. 2016. Storytelling with Data: Examining the Use of Data by Non-Profit Organizations. In *Proceedings of the 19th ACM Conference on Computer-Supported Cooperative Work & Social Computing (CSCW '16)*. ACM, New York, NY, USA, 1273–1283. DOI: <http://dx.doi.org/10.1145/2818048.2820068>
- [8] Ana Martha Galindes and Marco Angelo S. Zaplan. 2018. Open Research in the Philippines: The Lessons and Challenges. (Apr 2018). <https://blog.okfn.org/2018/04/24/open-research-in-the-philippines-the-lessons-and-challenges/>

- [9] Emilia Kacprzak, Laura Koesten, Luis-Daniel Ibáñez, Tom Blount, Jeni Tennison, and Elena Simperl. 2019. Characterising dataset search - An analysis of search logs and data requests. *Journal of Web Semantics* 55 (2019), 37–55.
- [10] Laura M. Koesten, Emilia Kacprzak, Jenifer F. A. Tennison, and Elena Simperl. 2017. The Trials and Tribulations of Working with Structured Data: -a Study on Information Seeking Behaviour. In *Proceedings of the 2017 CHI Conference on Human Factors in Computing Systems (CHI '17)*. ACM, New York, NY, USA, 1277–1289. DOI : <http://dx.doi.org/10.1145/3025453.3025838>
- [11] Constantine Kontokosta, Christopher Tull, David Marulli, Maha Yaqub, and Renate Pinggera. 2015. Web-Based Visualization and Prediction of Urban Energy Use from Building Benchmarking Data.
- [12] Open Government Partnership. (????).
- [13] Evan M. Peck, Sofia E. Ayuso, and Omar El-Etr. 2019. Data is Personal: Attitudes and Perceptions of Data Visualization in Rural Pennsylvania. In *Proceedings of the 2019 CHI Conference on Human Factors in Computing Systems (CHI '19)*. ACM, New York, NY, USA, Article 244, 12 pages. DOI : <http://dx.doi.org/10.1145/3290605.3300474>
- [14] Aare Puussaar, Ian G. Johnson, Kyle Montague, Philip James, and Peter Wright. 2018. Making Open Data Work for Civic Advocacy. *Proc. ACM Hum.-Comput. Interact.* 2, CSCW, Article 143 (Nov. 2018), 20 pages. DOI : <http://dx.doi.org/10.1145/3274412>
- [15] Mara Warwick. 2017. Philippines: Open Data Launch. (March 2017). <https://www.worldbank.org/en/news/speech/2017/03/02/open-data-launch>
- [16] Harlan Yu and David Robinson. 2012. The New Ambiguity of 'Open Government'. *UCLA law review discourse* 59 (02 2012). DOI : <http://dx.doi.org/10.2139/ssrn.2012489>