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Gallery walk as research method in information science

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Abstract

Introduction. This paper argues that the gallery walks, a pedagogical technique traditionally used in educational settings, is an effective qualitative data collection strategy. Its interactive format stimulates discussion and ensures active participation, making it suitable for qualitative research.

Background. Common qualitative methods like interviews, focus groups, and observations have limitations. The gallery walk technique leverages movement and interaction to deepen understanding, making it an effective tool for comprehensive and inclusive educational engagement.

Gallery walk as research method. The gallery walk enhances data collection by balancing individual and group insights, encouraging participants to use their expertise and engage in meaningful discussions. This approach captures detailed information from each participant.

Case study. We implemented the gallery walk in a study with 14 experts in satellite image analysis. Over two days, participants engaged with six thematic stations, discussing and annotating posters. The discussions were audio-recorded and transcribed, providing a rich dataset of individual and collective insights.

Discussion and Conclusion. Our findings demonstrate the gallery walk's utility as a qualitative research method. Its structured yet flexible format enhances participant engagement and data richness. The gallery walk is particularly effective for studies involving expert participants, offering a comprehensive understanding of research topics.

Introduction

In this short paper we argue that the gallery walk, a pedagogical technique developed and used in educational settings, is a highly effective qualitative data collection strategy. The gallery walk is an activity in which small groups of people rotate through a physical space, interacting with a series of artifacts, before coming together as a whole to discuss and debrief (e.g., Francek, 2006). This interactivity not only stimulates discussion but also ensures active participation from all individuals. Previous scholarship on the gallery walk highlights its efficacy in promoting dialogue and engagement in the classroom, qualities that are equally beneficial in qualitative research settings (e.g., Hakim et al., 2019).

Traditional research methods each have distinct tradeoffs: interviews provide depth but are time-consuming, focus groups enable efficient group discussion but can limit individual voices, and observations capture valuable context but lack direct participant input. We sought a method balancing these approaches - one that could efficiently gather rich data from a large group while enabling both individual contributions and observation of expert interactions. Our chosen approach combined the key advantages of interviews (detailed individual perspectives), focus groups (efficient large-group data collection), and observational methods (insight into expert dynamics).

In our research, we have adapted the gallery walk for a qualitative research context and implemented it in a study focused on understanding how experts in satellite image analysis make determinations about the trustworthiness of data, the risks associated with data use, and the broader social and political contexts in which they conduct their work. The use of the gallery walk technique allowed us to gather nuanced insights from this group, both in the form of audio recordings of their discussions as well as the annotations they left on each artifact.

Our findings demonstrate that the gallery walk method facilitates in-depth data collection and enriches participant engagement, making it a valuable addition to qualitative research methodologies. By presenting the successful implementation of the gallery walk in our research project, this paper aims to contribute to the ongoing dialogue about innovative qualitative data collection methods. We believe that the gallery walk's structured, yet flexible approach holds significant potential for various research contexts, promoting richer and more inclusive data collection processes.

Background

Qualitative data collection: interview, focus group, observation

Qualitative research encompasses a wide range of data collection and analysis techniques. Qualitative research methods literature frequently emphasizes that it is difficult to settle on a single definition of qualitative research (e.g., Rubin, 2021; Small and Calarco, 2022). Common qualitative data collection techniques used in human subject research include interview, focus group, and observation, (e.g., Creswell, 2009; Hennink et al., 2019; Rubin, 2021). Qualitative data collection can also include the acquisition of text-based artifacts such as documents or web-based content (Rubin, 2021). Qualitative data collection methods are discussed in ways that emphasize examining people's experiences and identifying '*issues from the perspective of your study participants [to] understand the meanings and interpretations that they give to behavior, events or objects*' (Hennink et al., 2019, p. 10).

Discussion- and/or observation-based qualitative data collection techniques can be highly regimented, as with interview procedures that rely on a scripted set of questions from which interviewers cannot deviate (e.g., Tourangeau et al., 2000), or open-ended, as with observations in which researchers capture information about how participants behave in a natural setting (e.g., Creswell, 2009). Between those two extremes are a range of semi-structured interventions in

which researchers have an interview or observation protocol to guide their interactions with participants, but can go off-script as needed to ensure that necessary and/or relevant topics are covered (e.g., Karatsareas, 2022).

These methods for collecting qualitative data can focus on one participant at a time, as with a one-on-one interview, or can allow researchers to bring groups of people together for a single event, such as a focus group. Research can benefit from the singular focus of an interview because researchers are able to obtain high-quality and in-depth information from a focused encounter, while focus groups allow researchers to benefit from a collective experience in which participants are able to interact with one another in addition to the researchers (Hennink et al., 2019). For interviews, the investment of time required to collect data from a large number of participants can be prohibitive, while focus groups can be efficient in terms of time but the amount of information collected from any given participant may be small.

Our research team was interested in finding a data collection method that would allow us to speak with a large group of people in a limited timeframe, while still retaining the ability to collect in-depth information from each. We also sought a data collection method that would allow us to capture interactions between experts as they discussed topics relevant to their expertise. This led us to explore an educational technique: the gallery walk.

Gallery walk

The gallery walk is most often used in educational settings. It is an active learning technique in which participants rotate through a set number of stations, discussing and/or interacting with artifacts at each.

Scholarship about the gallery walk as an instructional method includes guidance about how to implement a gallery walk in an educational setting (e.g., Francek, 2006), descriptions of particular implementations (e.g., Karlsson, 2020; Rodenbaugh, 2015), research about the effectiveness of the gallery walk as an instructional method (e.g., Chin et al., 2015; Hakim et al., 2019), and scholarship about the use of the gallery walk in professional development and teacher education (e.g., McCafferty and Beaudry, 2017; Ramsaroop and Petersen, 2020). An early publication about implementing a gallery walk provides step-by-step instructions for facilitating this type of activity (Francek, 2006). Later publications describe modifications and/or updates to this basic model (Chin et al., 2015; Karlsson, 2020; Rodenbaugh, 2015). Publications about implementing a gallery walk in K-12 education tend to focus on providing instructions (Francek, 2006), while scholarship about implementing a gallery walk in undergraduate and graduate education emphasize evaluating the effectiveness of the instructional method (Chin et al., 2015; Hakim et al., 2019; Karlsson, 2020).

Scholars and educators who have written about their experiences implementing the gallery walk method emphasize that it is particularly effective at encouraging and facilitating discussion between participants (e.g., Chin et al., 2015; Francek, 2006; Hakim et al., 2019; Karlsson, 2020; McCafferty and Beaudry, 2017; Ramsaroop and Petersen, 2020; Rodenbaugh, 2015). Many characterizations frame the gallery walk in opposition to traditional stand-and-deliver or sage-on-a-stage teaching methods, in which students are expected to listen to an instructor lecture about a topic (Chin et al., 2015; Francek, 2006; Hakim et al., 2019; McCafferty and Beaudry, 2017; Ramsaroop and Petersen, 2020; Rodenbaugh, 2015). Others describe it as a complement to traditional teaching methods rather than an alternative (Karlsson, 2020).

Several scholars have noted that participants in a gallery walk bring their own experiences, expertise, and knowledge to the activity (Chin et al., 2015; Francek, 2006; Rodenbaugh, 2015). Others have noted that the gallery walk is a particularly effective setting for exploring open-ended questions (Francek, 2006), and stress the importance of facilitators asking the right kinds of questions and/or presenting information in useful ways in order to ensure a fruitful experience

for participants (McCafferty and Beaudry, 2017). Another key feature of the gallery walk is movement. When implemented in an in-person setting, participants must literally walk around the space as they move from station to station. This is frequently described as a benefit of the activity: '*a gallery walk is a discussion technique that gets learners out of their seats and invites them to become active participants in the learning process*' (McCafferty and Beaudry, 2017, p. 49).

Some have gone so far as to argue that a key benefit of the gallery walk is that it allows participants to show off their knowledge (Ramsaroop and Petersen, 2020), and to practice their speaking skills (Hakim et al., 2019). Indeed, Karlsson explained that

> *unlike during a traditional literature seminar when perhaps only a few students are active and the teacher is the one primarily giving feedback, the gallery walk format ensures that all students actively contribute and give each other feedback that is both situated and interactive* (2020, p. 91).

For a gallery walk to work effectively, participants are not only provided with the opportunity to participate but in fact must actively participate.

Gallery walk as research method

We argue here that the features that make the gallery walk an effective instructional method also make it a promising method for qualitative research. The approach excels through its emphasis on participant preparation and structured interaction, enabling deep engagement from expert participants. Unlike traditional focus groups where some voices may dominate, the gallery walk's format ensures comprehensive participation. This creates an environment where researchers can efficiently gather rich, nuanced perspectives from large groups while maintaining the quality of individual contributions.

In conclusion, the same characteristics that make the gallery walk an effective teaching strategy—its interactivity, focus on preparation, and inclusive nature—also make it a valuable method for qualitative research. By creating an environment where participants actively contribute throughout the data collection process, the gallery walk enables researchers to capture a wide array of nuanced insights from a large group of people in a relatively short span of time.

Case study: gallery walk in information science research

We employed a gallery walk activity as a data collection event for citizen-based monitoring for peace and security in the era of synthetic media and deepfakes project in July 2024. In this implementation, we organized a two-day, in-person workshop for a group of 14 experts. The goal of this event was to examine how people with expertise in satellite image analysis make decisions about trust and risk in the course of their work with satellite data.

The gallery walk format suited our data collection needs given the event parameters and group size. It enabled participants to discuss in smaller groups rather than one large assembly, allowing our research team to gather more diverse perspectives - including from those who might have been hesitant to speak in the larger group setting.

The gallery walk and full group discussions were audio recorded and transcribed for analysis. This research was reviewed and approved by the Institutional Review Board at the first author's institution.

Participants

Gallery walk participants were selected based on their expertise and experience with satellite imagery analysis. The participants primarily had experience in peace and security (e.g., using satellite data for nonproliferation treaty verification, or to monitor the movement of refugees), or in environmental advocacy (e.g., using satellite data to monitor large-scale agricultural trends).

Participants came from a variety of professional affiliations, including academia, journalism, nonprofit/advocacy groups, government research laboratories, and satellite providers. Participants came from North America and Europe.

Gallery walk methodology

Our gallery walk implementation included four phases, with breaks throughout the 2-day event at suitable intervals: (1) introductory discussion, (2) gallery walk rotations, (3) full-group discussion, and (4) debrief. Each phase will be described in brief below.

Introductory discussion

The data collection event began with a whole group discussion. While some participants knew one another prior to this event, a round of introductions and a brief discussion allowed all members of the group to share information about their background, expertise, and interest in satellite imagery. The research team introduced the project, and explained the logistics of the gallery walk.

Gallery walk rotations

Our gallery walk featured six stations for participants to visit during the rotations. Participants were randomly assigned to small groups, and each group started at a different station. They were asked to discuss the poster at each station, which featured a topic, image(s), and brief text prompt. They were given pencils and sticky notes in different colors to annotate the posters at each station. Each group was asked to use the same color sticky notes throughout the gallery walk so that their comments could be reliably tracked by our team. Audio recording devices were placed at each station to capture participant discussions.

The posters at each station were designed by our research team to focus participants' discussion and annotations on current and outstanding issues in satellite image analysis: (1) bearing witness from afar, (2) when there is no ground truth, (3) censorship and deception, (4) synthetic and doctored images, (5) surveillance and privacy, and (6) seeing patterns of life. See Figure 1 below. Each poster was placed at evenly spaced intervals around the perimeter of a large event space.

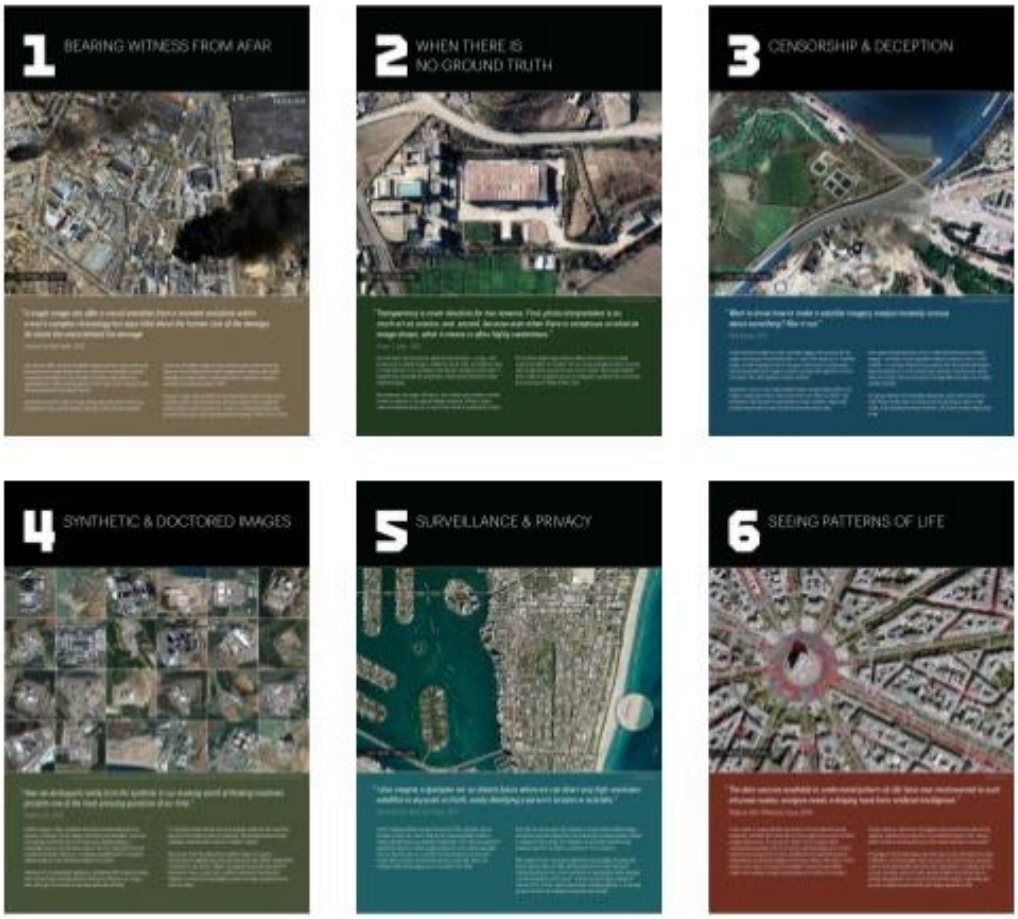

Figure 1. Images of the posters from each gallery walk station

Participants were given approximately 20 minutes at each station and rotated through all six stations in succession. In each rotation, participants were asked to discuss the poster, make annotations using their sticky notes, and were encouraged to engage with both the poster and the annotations left by the other groups. The research team answered logistical questions about the gallery walk procedures as needed, but did not provide information or clarification about the contents of the posters during the gallery walk.

Full-group discussion

Once the group went through six rotations, and every participant had visited every station, we brought everyone together for a full-group discussion. We presented each poster and asked the group that had visited that station last to summarize the topic, their discussion, and the annotations left by all groups at that station before moving into a broader discussion of the topic. The guided full-group discussion addressed a range of topics, and we allowed the participants to direct the conversation based on their insights, interests, questions, and opinions.

Debrief

After each of the six posters had been discussed at length, we held a debrief session for the participants. In the debrief, we shared more information about our research project, including a discussion about how the workshop and gallery walk fit into our work. We gave participants time to ask us questions and to discuss anything that they wanted to share but had not yet been able to discuss.

Participants asked the research team a variety of questions during the debrief. Some were focused on the broad goals of our research project, including questions about our motivation and intended outcomes. Others focused on the gallery walk activity, including questions about the design process for the posters that were placed at each station and the implementation of the gallery walk as a research method. A third category of questions focused on project outputs, including publications, presentations, and data.

We found that our answers to participant questions during the debrief led to additional insights. For example, questions about the design of the gallery walk posters led participants to share additional thoughts about some of the topics and prompts that had not yet been mentioned in either the gallery walk rotations or the full-group discussion.

Discussion and conclusion

The outcomes of our gallery walk demonstrate its potential as a qualitative data collection method. The gallery walk is a structured, interactive technique that allows researchers to collect robust data from a group of participants. It is particularly effective when working with participants who have been selected for their expertise in an area that is relevant to the research. In our case, this meant that we were able to bring together a group of experts in satellite image analysis to lead a guided discussion about issues in satellite image analysis for citizen-based monitoring and societal verification.

By creating an environment for data collection in which participants were asked to actively engage with a set of artifacts and allowing them to both discuss and annotate those artifacts, we were able to create a dynamic and inclusive data collection process in which all participants' voices were heard.

One of the primary advantages that we observed in our implementation of the gallery walk was the balance between individual and group data gathering. We captured every participant's view about each of our six artifacts, as well as the whole-group discussion in which participants were able to engage with one another and the research team. This led to the creation of a dataset that captured both individual insights and collective deliberations. This dual focus has given us the ability to examine how experts in satellite image analysis understand and navigate issues of trust and risk associated with their work.

In conclusion, our study underscores the utility of the gallery walk as a data collection method in qualitative research, particularly for studies involving expert participants. Its emphasis on preparation, interactivity, and inclusivity aligns well with the goals of qualitative research to explore complex phenomena from multiple viewpoints. By fostering an environment where participants are both contributors and learners, the gallery walk method not only gathers valuable data but also enhances participant engagement and investment in the research process. Future research should continue to explore and refine this method, potentially adapting it for use in various disciplinary and interdisciplinary contexts, to further validate its effectiveness and versatility.

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