

# Thinking and Feeling Matter: Utilizing Impact Assessment and Photovoice to Evaluate a Community Program

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**Background:** The benefits of adopting mixed methods have been widely recognized in evaluation studies. However, this methodological approach is criticized for its lack of rigorous epistemological concerns, or simply as aparadigmatic. Therefore, when using mixed methods, it remains uncertain how well the knowledge obtained from different approaches with varying assumptions reflects what is truly happening and how it can be applied to enhance the program.

**Purpose:** This paper aims to provide an example of how the use of a mixed-methods approach in a community program can lead to reflections on its epistemological value and possibly result in program improvements.

**Setting:** The evaluation took place on the longest cultural walk trail in urban Hong Kong.

**Intervention:** The evaluation method employed a combination of impact assessment, participant photovoice, and multiple meetings with the program managers.

**Research Design:** A mixed-methods design.

**Data Collection and Analysis:** Correlational statistical and qualitative thematic analyses were conducted.

**Findings:** The data obtained from the mixed-methods approach, along with its underlying epistemological foundations, revealed a unique experience for the participants, encompassing both cognitive evaluation and emotional appreciation of the program. Based on these findings, relevant suggestions were made to enhance the program.

**Keywords:** *mixed methods; social impact assessment; photovoice; epistemological reflection; walk trail.*

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Evaluation research has witnessed an increased focus on the use of mixed methods, which jointly employ qualitative and quantitative approaches (Tashakkori & Teddlie, 2010; Greene et al., 1989). While quantitative methods, such as statistical analysis and mathematical modeling, have traditionally held a dominant position in the field, there has been a notable rise in incorporating diverse types of qualitative practices like interviews, focus groups, and visual methods (Petrosino et al., 2018; Lambert & Loiselle, 2008). Greene, Caracelli, and Major (2005) have succinctly identified the benefits of the mixed-methods approach on four fronts:

- (1) Understanding more defensibly, with stronger validity or credibility and less known bias, as with the classic approach of triangulation;
- (2) understanding more comprehensively, developing more complete and full portraits of our social world through the use of multiple perspectives and lenses;
- (3) understanding more insightfully, with new ideas, fresh perspectives, creative concepts and meanings, as when findings diverge and thus require reconciliation via further analysis, reframing or some other shift in perspective;
- and (4) understanding with greater value consciousness and with greater diversity of values, stances and positions through the inclusion of different methods that themselves advance different values. (2005, p. 275)

Echoing Greene and colleagues, recent literature on evaluation studies that used mixed methods, suggests that the integration of qualitative and quantitative methods has resulted in methodological triangulation, the emergence of novel and multiple perspectives, and an expanded horizon in value consciousness. For instance, Lemos, Sandars, Alves, and Costa (2014) employed a mixed-methods approach, combining survey data, classroom observations, interviews, and focus groups, to evaluate student-centeredness in

undergraduate medical courses. The triangulation of findings revealed complementary perspectives on the student-centeredness of teaching and learning. In the field of development studies, White (2008) demonstrated how the integration of semi-structured discussions in the field and survey design led to unexpected findings regarding user satisfaction in an impact study of rural electrification in the Lao PDR. Bamberger, Rao, and Woolcock (2010) conducted a systematic review of the various ways in which the mixing of qualitative and quantitative methods can enhance the monitoring and evaluation of development projects. This review explored how qualitative methods can address the limitations of randomized trials and other quantitative impact evaluation methods; the importance of examining both process and impact and distinguishing design from implementation failures; and the value of mixed methods in real-time project monitoring. In the assessment of poverty reduction programs, Garbarino and Holland (2009) and Ho (2023) suggested that while quantitative methods provide data for aggregating and analyzing relationships, qualitative research provides an interpretive gaze to consider poverty as a result of mechanistic<sup>1</sup> rather than deterministic processes.

One application of mixed methods is the integration of visual methods into impact assessment (Cooke & Anagnostaras, 2024; de Oliveira, 2024). Visual methodologies, such as photovoice and photo-elicitation, have emerged as powerful tools for evaluating community programs (Hergenrather et al., 2009; Hunter et al., 2020). Photovoice involves providing participants with cameras to capture images that represent their experiences and perspectives. These photographs serve as a basis for group discussions and analysis. On the other hand, photo-elicitation utilizes photographs as prompts during interviews or focus group discussions to stimulate dialogue and elicit deeper insights. In the evaluation of community programs, visual methodologies offer distinct advantages, as de Oliveira (2024) suggests, by

<sup>1</sup> The term “mechanistic explanation” is derived from Nicholson’s concept of “causal mechanism” (2012). Due to space constraints, I will not elaborate on the nature of mechanisms and their explanations. Nicholson identifies three meanings of “mechanism” that are often conflated: “mechanicism,” which views living organisms as machines; “machine mechanism,” which refers to the internal workings of a machine; and “causal mechanism,” which provides a step-by-step explanation of a causal process producing a phenomenon (2012, p.153). Nicholson argues that causal mechanisms are crucial in scientific practice as they help identify causal relations

(2012, p.154). He distinguishes “mechanistic” explanations from “mechanicism” ones, stating that the former focus on identifying entities and activities responsible for a phenomenon, rather than detailing all causal relations needed for its production as in mechanistic explanations (2012, p.159). Thus, Nicholson’s concept of mechanistic explanation is relevant for understanding the epistemological foundations of knowledge obtained through qualitative methods in evaluation studies.

promoting dialogue, shared learning, and critical thinking. This is particularly relevant when participants have diverse cultural, literacy, or technical backgrounds, as well as varying perspectives, concerns, and priorities (de Oliveira, 2024, p. 500). By allowing participants to visually represent their experiences, visual methodologies can capture emotions, social dynamics, and contextual factors that may remain hidden or unexpressed and may not be fully captured through traditional quantitative evaluation methods.

Given the widespread application of mixed methods in evaluation studies, scholars have begun to realize that utilizing mixed methods in a utilitarian manner that emphasizes convenience may overlook the implications of its philosophical underpinnings (Denscombe, 2008; Hall, 2013). Even Greene (2007) himself questions whether some mixed-methods evaluators have adopted an aparaadigmatic stance in epistemology. Some well-known methodological scholars have criticized certain mixed-methods applications for adopting an unreflective “what-works” approach—prioritizing the identification of effective research strategies without adequately considering the underlying context of the study—which threatens the validity of findings (Denzin, 2012; Lipscomb, 2008). Among these critics, Hall (2013) has been arguably the most articulate. He draws upon Deweyan pragmatism, arguing that it enhances the questions and praxis of mixed-methods evaluation. By recognizing the importance of reflection in conjunction with empirical testing, Deweyan philosophy empowers evaluators to discover the meaning of ideas and problems, enhance the credibility of mixed-methods designs, and assess the consequential validity of their evaluative work (Hall, 2013, p. 24). In alignment with Hall’s position, I argue in this paper that evaluators need to examine the epistemological value of the knowledge they obtain through mixed-methods evaluation. This paper also adopts the Deweyan pragmatic assumption that the knowledge obtained from the evaluation is—to cite Biesta—“at the very same time constructed and real” (2010, p. 111). More specifically, I aim to examine the benefits of integrating social impact assessment and photovoice as an evaluation method in a community program by reflecting on the truth value of the different types of knowledge derived from these methods.

### *Program Description*

The Kowloon City Themed Walking Trail, hereafter referred to as the Trail, spans a length of 6.5 kilometers, making it the longest themed walking trail in urban Hong Kong. Situated within the Kowloon City district, one of the eighteen administrative districts of Hong Kong, the Trail is sponsored by the publicly financed Urban Renewal Fund (URF). Comprising five interconnected routes, the Trail has been established and operated by an NGO, Hong Kong Sheng Kung Hui Welfare Council Limited, hereafter referred to as SKH, since 2017. The entire trail was completed in December 2022.<sup>2</sup>

Kowloon City, despite being one of the most historic districts, has experienced rapid urban renewal. The establishment of the Trail was motivated by the findings of the report *Urban Renewal Plan for Kowloon City: Social Impact Assessment*, published in 2014 (Ho). The report highlighted that Kowloon City possesses a rich historical heritage, with 34 declared monuments and historic buildings, and emphasized the residents’ growing appreciation for history and their high expectations for urban renewal. According to the official website of SKH, the Trail was created to establish connections and linkages between the historical and cultural architecture and facilities within the Kowloon City district, aiming to enhance public spaces amidst the ongoing urban transformation. Through the Trail, a range of activities related to history, culture, art, and conservation are organized for local residents and international visitors, with the goal of promoting and preserving the unique character of the Kowloon City district and passing it on to future generations. And, in order to enhance the interactive nature of the tour, five types of new augmented reality (AR) panels have been installed, allowing visitors to engage with the history of Kowloon City through an interactive and enjoyable experience facilitated by the Trail’s designated mobile app.

The Trail offers participants a relatively structured program consisting of three distinct phases, each aimed at deepening their understanding of the community’s sociocultural trajectory. The first phase involves a pre-walk workshop, where participants are introduced to the historical context of the tour. An informed facilitator utilizes community picture books to illustrate the changes brought about by urban renewal, providing participants with a

<sup>2</sup> See the official website of the Trail at <https://kowlooncitywalkingtrail.hk/en/>.

comprehensive overview of the community's historical narrative. During this workshop, the facilitator also outlines the tour itinerary, highlighting points of interest and potential activities.

The second phase entails the walking tour itself, led by a volunteer guide. As participants explore the Trail, the guide offers commentaries on the historical and cultural significance of each location, drawing comparisons between past realities and present conditions. The guide—with the support of the AR panels mentioned earlier—fosters an interactive dialogue, addressing participants' questions and enriching their understanding.

The final phase involves participant evaluation. Participants are asked to complete an online questionnaire to provide feedback on their experience. Additionally, on a voluntary basis, each participant is encouraged to submit a photograph taken during the tour, accompanied by a brief narrative explaining how the image reflects the impacts of the Trail. Submissions are transmitted to the program operator via a designated WhatsApp number. Since April 2023, I have worked as a consultant with SKH to conduct an evaluation study in a more systematic manner, utilizing specific assessment tools and data collection processes to assess the outcomes and impacts of the Trail.

### Study Purpose

This reflection of practice paper is focused on the application of a mixed-methods approach to evaluate the outcomes and social impacts of the Trail, demonstrating how the divergent findings obtained from different methods have prompted deeper reflections among the researchers *and* program operators. These reflections, in turn, contribute to a better understanding of *both* the epistemological implications of the methods used *and* what can be done to improve the program provision.

### Research Design

This study employed a concurrent mixed-methods design to comprehensively assess the outcomes and impacts of the Trail. By integrating qualitative and quantitative methodologies, the research utilized a diverse array of data collection techniques, including photovoice from participants, reflective discussions with Trail managers, structured survey questionnaires, and analysis of existing data. The choice of a mixed-methods framework was

intentional, aimed at reducing the biases typically associated with mono-method approaches.

From an evaluation-theoretic standpoint, the research is classified as both collaborative and participatory (Brandon, 1998; Cullen, 2009; Cullen et al., 2011; Coryn et al., 2012). The development of the questionnaire was the result of extensive consultations between the research team and various NGOs, including the Trail managers, who played a pivotal role in shaping the evaluation framework. These stakeholders were instrumental in articulating and prioritizing evaluation questions during a prior study funded by the URF. Moreover, the collaborative and participatory nature of this study extended to the interpretation of both quantitative and qualitative findings. In subsequent sections I will elaborate further on the participatory construction of the questionnaire in the previous study and the interpretation of data in the current investigation.

### Outcome and Impact Assessment: Definition and Measurement

Conceptually, the term “outcome” in this study refers to the measurable effects or changes resulting from participation in the Trail activities. It encompasses participants' perceived satisfaction with the overall project, which serves as an indicator of the program's effectiveness. Operationally, participants were asked the following question: “Based on your participation in the Trail activities, how satisfied are you with the overall project?” Responses were recorded using a five-point scale: *very dissatisfied* (1), *dissatisfied* (2), *neither dissatisfied nor satisfied* (3), *satisfied* (4), and *very satisfied* (5).

“Social impact,” on the other hand, encompasses the changes anticipated by participants at various dimensions: individual, social (interpersonal), social (community- or territory-wide), and economic. Such an understanding of the concept is in line with established principles, particularly those based on the international principles for social impact assessment (Vanclay, 2003). These principles advocate for a comprehensive and systematic consideration of all potential social impacts, both positive and negative, to ensure sustainable and equitable development outcomes. With these global principles in mind, the next task is to identify the appropriate *set* of social impacts that arise from the Trail. In the survey, the impact assessment items were adapted from the study conducted by Yung, Zhang, and Chan (2017), which reviewed indicators for the social impacts of heritage conservation in

urban Hong Kong. Their study identified ten impact categories based on 51 variables. These indicators were deemed highly relevant to the impacts of urban renewal projects on the environment and social ties within the community, which have been of increasing concern to the Hong Kong government since the mid-1990s (Development Bureau, 2011).

It is important to note that in 2022, I was commissioned by the URF to conduct a comprehensive outcome and impact assessment of all URF-funded projects from 2011 to 2021, including the Trail. In the consultancy report completed in late 2022 (Ho, 2022; hereafter referred to as the “URF report”), I selected 21 items based on eight impact categories from the study by

Yung, Zhang, and Chan (2017), thereby constructing a validated social impact scale for evaluating 17 cultural conservation projects sponsored by the URF, including the Trail (see Table 1). To develop this questionnaire, I collaborated with the 14 NGOs involved in the study, one of which was SKH.

I used this same questionnaire in the present study. Specifically, respondents were asked to what extent they—“after experiencing the Trail”—agreed with specific impact statements, using the response options *not impactful (unhelpful) / even worse* (1), *quite impactful (helpful)* (2), and *very impactful (helpful)* (3).

Table 1. Impact Categories and Survey Items

Impact category	Survey item <i>"After experiencing the Trail..."</i>
Public awareness of local culture and tradition	I understand the importance of protecting history and culture. My community can preserve traditional industries and their history. My community has more activities relating to history and culture.
Collective memory	The surrounding environment of my community could be improved to be as good as it used to be. I have the chance to look back on memories of old times.
Cultural diversity, community development and creativity	I can protect and respect the different values, beliefs and traditions in our community. I have more chances to participate in designing and implementing community projects. My community has more platforms for cultural exchange.
Sense of community	I have come to believe that my community is special. I have more of the feelings that I am part of the community. I am more willing to make efforts for the sake of my community.
Public involvement	I think more that through collective effort, we can live in the community comfortably. I have more chances to participate in designing and implementing community projects.
Work opportunity and vitality	My community's economic activity became more vibrant (e.g., more work opportunities). My community has more opportunities for volunteer work and learning.
Social interaction and network	I could make connections with more new friends. I could have more places to gather with friends. I could maintain a close relationship with neighbours and people from the district. The surrounding environment of my community could be improved.
Awareness of urban change and gentrification	My community has more people from outside the district moving in. My community's land prices/flat prices have risen.

### *Photovoice*

As mentioned above, photovoice is a method that solicits photos and narratives regarding the impacts of projects based on participants' subjective experiences. In the present study, participants were encouraged to send to a specific WhatsApp number one photo that they felt most significantly represented the tour's impact on their well-being or the community/society. They were also asked to record their feelings about the photo(s) via text or voice messages. Since the evaluation was conducted on a voluntary basis, only about one-fifth of the participants (18.9%) submitted photovoice entries.

The same procedures for collecting photovoice data were used in the URF report mentioned before in evaluating 17 cultural conservation projects in Hong Kong.

### *Reflective Sharing with the Trail Managers*

Two research assistants and I (the research team) conducted five reflective sharing sessions with the two Trail managers from SKH, who are key individuals in the development and operation of the Trail. Each session, lasted around two hours. The first session, conducted in April 2024, primarily presented the most up-to-date findings and

analyses at the time. All attendees of the meeting were encouraged to discuss the interpretation of these findings and their potential implications for future service improvements. The four other sessions were conducted during August and October 2024. The majority of these sessions was dedicated to discussing the epistemological value of the findings obtained from the two methods and how these findings could inform revisions to future service delivery strategies.

### Samples

This study employed a nonprobabilistic, convenience sampling approach. Throughout the period from April 2023 to March 2024, all participants of the Trail were invited to join the evaluation voluntarily. The evaluation comprised two components: an online survey (available in

both digital and paper formats) and a photovoice activity that required participants to utilize their cell phone skills. Of the approximately 800 participants, 711 completed the survey, while 134 engaged in photovoice.

Some characteristics of these two distinct samples are shown in Table 2. It is important to note that the photovoice data involved a higher proportion of younger participants who were non-Kowloon City residents. One plausible reason behind this pattern is that younger participants generally possess better photo-taking and writing ability. These competencies likely enhanced their confidence in submitting photovoice data. Not being local Kowloon City residents, the participants might have felt “fresh” about the environment and, in turn, more motivated to submit their photos and voices to the Trail operator.

Table 2. Selected Profile of Survey Respondents (N = 711) and Photovoice Respondents (N = 134)

	Survey	Photovoice
Gender	Female: 70.7%	Female: 69.5%
Age	40 and below: 61.0%	40 and below: 86.0%
Kowloon City resident	Kowloon City resident: 27.9%	Kowloon City resident: 11.9%
For Kowloon City residents: <i>Length of living in Kowloon City</i>	10 years and below: 41.5%	10 years and below: 42.9%

In this study, I compare the findings from the Trail with those from the URF report, which evaluated 17 cultural conservation projects using the same methodology and sampling methods for surveys and photovoice data collection. To avoid double-counting, I excluded the Trail’s data from the URF report. After this exclusion, the remaining data consist of a survey sample of 742 participants and 152 photovoice submissions from the other 16 cultural conservation projects. This approach ensures a fair and accurate comparison between the Trail findings and the findings of the previous study.

### Analysis

I conducted correlational analyses to identify key variables predicting different outcomes and impacts, assessing the strength of these correlations using Pearson’s R, with significance set at the 95% confidence level. Specifically, analyses utilized convenience samples to explore predictors such as gender, age, residency status in Kowloon City, and duration of residence for local participants. In the analysis of the photovoice data,

I conducted thematic analyses to categorize the data interpretively into eight predefined impact domains. This approach utilized deductive coding, as the eight impact categories represent specific hypotheses derived from existing literature and a prior study. Two research assistants joined me in the categorization process, ensuring a collaborative approach to the analysis. In instances where discrepancies arose in the categorization of any single photovoice datum, debates were held until a consensus was reached.

### Findings

Almost all the participants (95.0%) expressed satisfaction with the project. Of these, 52.1% reported feeling *satisfied* and 42.9% *very satisfied* with the tour program. While this result is highly satisfactory on its own, its significance is further underscored when compared with the average satisfaction rate of 90.7% (*satisfied*: 48.3%; *very satisfied*: 42.4%) reported for the 16 cultural conservation projects evaluated in the URF report (Ho, 2022, p.49). This comparative analysis

suggests that the project not only met but exceeded the satisfaction benchmarks set by similar cultural conservation initiatives in Hong Kong.

### *Impact Assessment*

Across all eight impact categories, at least three-quarters of participants reported that the Trail was *quite* or *very* impactful. Specifically, responses indicated that the Trail largely enhanced public awareness of local culture and tradition; collective memory; cultural diversity, community development and creativity; and sense of

community, with over 95% of participants rating these categories as *quite* or *very impactful*. Table 3 presents the respective percentages for each variable. Additionally, Table 4 details the scoring for each impact category, the reliability of each category, and a comparison of these scores with those from 16 other cultural conservation projects. Furthermore, Table 4 provides further evidence of the Trail's impact, as all categorical impact scores exceeded those of the 16 cultural conservation projects documented in the URF report (Ho, 2022, p. 50).



Table 3. Impact Categories and Survey Items

Impact category	Survey item <i>"After experiencing the Trail..."</i>	<i>Very impactful</i>	<i>Quite impactful</i>
Public awareness of local culture and tradition	I understand the importance of protecting history and culture	69.2%	28.3%
	My community can preserve traditional industries and their history	66.8%	30.4%
	My community has more activities relating to history and culture	67.7%	29.3%
Collective memory	The surrounding environment of my community could be improved to be as good as it used to be	53.6%	43.5%
	I have the chance to look back on memories of old times	63.5%	33.9%
Cultural diversity, community development and creativity	I can protect and respect the different values, beliefs and traditions in our community	64.0%	34.3%
	I have more chances to participate in designing and implementing community projects	55.1%	40.8%
	My community has more platforms for cultural exchange	56.9%	39.1%
Sense of community	I have come to believe that my community is special	65.5%	32.1%
	I have more of the feelings that I am part of the community	58.6%	37.3%
	I am more willing to make efforts for the sake of my community	55.2%	41.2%
Public involvement	I think more that through collective effort, we can live in the community comfortably	60.3%	36.2%
	I have more chances to participate in designing and implementing community projects	55.2%	39.9%
Work opportunity and vitality	My community's economic activity became more vibrant (e.g. more work opportunities)	37.9%	47.5%
	My community has more opportunities for volunteer work and learning	48.9%	45.0%
Social interaction and network	I could make connections with more new friends	32.6%	52.5%
	I could have more places to gather with friends	34.0%	51.9%
	I could maintain a close relationship with neighbours and people from the district	31.7%	54.5%
	The surrounding environment of my community could be improved	45.2%	49.5%
Awareness of urban change and gentrification	My community has more people from outside the district moving in	34.2%	48.4%
	My community's land prices/flat prices have risen	34.4%	36.7%

Table 4. Impact Categories, Reliability and Comparison with URF Projects

	Trail ( <i>very impactful; quite impactful</i> )	Reliability	16 projects evaluated in the URF report
Public awareness of local culture and tradition	97.2% (67.9%; 29.3%)	0.89	90.7%
Collective memory	97.1% (58.6%; 38.5%)	0.70	87.0%
Cultural diversity, community development and creativity	96.7% (58.7%; 38.1)	0.69	88.4%
Sense of community	96.7% (59.8%; 36.9%)	0.83	90.6%
Public involvement	95.8% (57.8%; 38.0%)	0.72	88.1%
Work opportunity and vitality	89.8% (43.4%; 46.3%)	0.77	76.5%
Social interaction and network	88.0% (35.9%; 52.1%)	0.88	83.3%
Awareness of urban change and gentrification	76.9% (34.3%; 42.6%)	0.80	59.2%

Based on the top impact categories in Table 3, it was clear that the Trail was perceived as a significant contributor to certain specific social impacts. For example, the Trail was recognized as a good platform for raising public awareness of local culture and tradition, thereby fostering among the participants a deeper understanding and appreciation of the local culture. Furthermore, the high score earned for cultural diversity, community development, and creativity suggests that the Trail not only fostered an appreciation for a variety of cultural expressions but also stimulated community growth and encouraged creative thinking. Also, the strong acknowledgment of the Trail's contribution to collective memory by participants suggests that the Trail played a significant role in preserving shared historical experiences and narratives, which in turn strengthened communal bonds and identity.

The least recognized impact category was awareness of urban change and gentrification, although over three-quarters of participants still found the Trail to have a *quite* or *very impactful* contribution in this dimension. This suggests participants recognized a relatively lower impact of the Trail relating to awareness of urban changes, such as increased population influx into the district and rising land or property prices. It should be noted that this dimension was also perceived as the least impactful among the 16 previously evaluated cultural conservation projects. However, as will be apparent, this category was curiously frequently

touched upon in the photovoice data—an aspect that will be focused on subsequently.

Regarding the identification of key factors predictive of positive perceived impacts, the analysis revealed that participants' impact experiences were not statistically significant in relation to their gender, age, or length of stay in Kowloon City. The sole factor found to be sensitive to the impact categories of social interaction and network and work opportunity and vitality was self-identification as a Kowloon City resident. Self-identifying as a Kowloon City resident was associated with significantly higher perceived impacts in these two categories. The Trail thus appears to hold particular significance for local residents, enhancing social interaction, community networking, job opportunities, and economic vitality to a greater extent compared to non-residents.

#### *Photovoice and Its Corroboration with Survey Data*

Using a thematic approach, three members of the research team reached a consensus in categorizing the 134 photovoice submissions into eight impact categories. The most commonly perceived community impact area was cultural diversity, community development, and creativity (46 instances). Other main social impacts reflected in the photovoice data were awareness of urban change and gentrification (28 instances), public

awareness of local culture and tradition (26 instances), and collective memory (26 instances). The remaining four categories were either rarely or never touched upon: public involvement (6 instances), sense of community (2 instances), social interaction and network (1 instance), and work opportunity and vitality (0 instances). This distribution is shown, along with some sample photovoice submissions, in Table 5.







It should be noted that the distribution of photovoice data in the present study differs considerably from that in the 16 projects formerly evaluated in the URF report. The most commonly impacted among the sample of 152 photovoice submissions across prior projects was public awareness of local culture and tradition (39 instances). Other key impact categories reflected in past photovoice data included cultural diversity, community development, and creativity (25 instances); sense of community (21 instances); public involvement (20 instances); social interaction and network (20 instances); and “collective memory” (18 instances). The remaining two categories, attended to the least, were work opportunity and vitality (5 instances) and awareness of urban change and gentrification (4 instances; Ho, 2022, p. 13). This indicates the Trail possesses distinctive characteristics from participants’ subjective experiential perspectives that diverge from other conservation community initiatives in Hong Kong. Compared to other conservation programs, the Trail specifically stands out as eliciting a comparatively heightened sense of awareness of urban change and gentrification among participants but with less emphasis on sense of community and collective memory.

Another noteworthy observation is that the impact categories evident as impactful based on the photovoice data exhibit certain discrepancies with those indicated in the survey data for the present study. This is intriguing, as qualitative data is typically expected to corroborate quantitative data, through either triangulation or confirmation, as mentioned in the introductory section. Moreover, this discrepancy did not align with the findings from the URF report, which stated:

After coding and analysis, it was found that the ... [social] impacts which active project users expressed as impactful in their photovoice narratives were largely the same as those which survey respondents (above 80% of them) considered quite or highly impactful. (Ho, 2022, p. 13)

In contrast, across five of eight impact categories, this study observed obvious discrepancies between survey (quantitative) and photovoice (qualitative) responses regarding impact frequency and sometimes prioritization. For the impact categories of sense of community, public involvement, work opportunity and vitality, and social interaction and network, survey responses reflected far higher perceived impacts of the Trail (nearly or over 90%) than did photovoice data. Conversely, for the impact category of awareness of urban change and gentrification, participants articulated more perceived impacts in photovoice (one-third of all responses) than in the survey (see Table 6).

Table 5. Impact Category, Number of Photovoice Instances, and Photovoice Samples

<p>Cultural diversity, community development and creativity (46 instances)</p>			
	<p>... The people of Chaozhou make a living by fishing and they portray their own unique characteristics through the colorful paintings in their shops. ... This adds different colors and values to the old community. ...</p>	<p>... Passing by often, but entering 13<sup>th</sup> Street for the first time was a truly special experience. ... This street represents a diversity of the community. ... It is something really different with a unique tradition. ...</p>	<p>... The cowshed showcases a harmonious blend of old and new elements. I never imagined that from the old cowshed until now, there would be such an artistic atmosphere. ... It is such a creative idea. ...</p>
<p>Awareness of urban change and gentrification (28 instances)</p>			
	<p>... I believe that the design of this bench brings a lot of convenience to residents in the neighborhood. Through social surveys, the government or other NGOs can better understand the needs of the residents and how to update the facilities in the area to cater for more people moving in. ...</p>	<p>... This photo captures the perfect juxtaposition of the old and the new, with a greater presence of the new. I believe that one day, most of the old buildings will be cleared away. ... increasing property prices means many cannot afford old building anymore. ...</p>	<p>... The existence of these buildings, which are slowly disappearing, serves as a reminder that the old elements in our community are not obstacles to its development. ... Many people from outside have moved in. ...</p>

Public awareness of local culture and tradition (26 instances)



... While the craftsmanship of terrazzo is still there, it is becoming increasingly rare to see it on the streets due to current development plans and methods. This evokes a sense of nostalgia and regret as we realize its diminishing presence in our urban landscape. ...



... Deepening our understanding of the tradition of this community, we discover that each district has its unique history and charm. ...



... Authentic and distinctive signage that captures the traditional local flavor. ...

Collective memory (26 instances)



... The seven-story tall buildings are a distinct feature of old Hong Kong and old Kowloon City. These old and collective memories are worth commemorating. ...



... Traditional signage and shops have become increasingly valuable. They recall people's old memories. It is hoped that government policies will be put in place to conserve them. ...



... Since I was young, I have always been fond of red brick walls. This wall evokes childhood memories for me. ...



Public involvement (6 instances)



... It's indeed an interesting tour experience. I am interested to participate more in this kind of community activity in the future ... [in order to] make my community better. ...



... The exhibition at the Visitor Center along the walking path is incredibly captivating! ... The photos capture the collective efforts to keep our place special. ... I feel happy to have been involved in it. ...



... I really enjoy the photo exhibition, especially when I see some photographs of places I used to be familiar with. ... I am motivated to understand more and help out in the future. ...

Sense of community (2 instances)

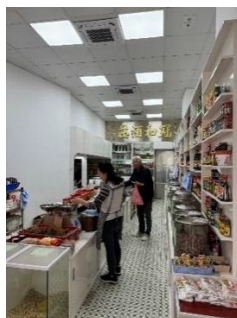


... I really like this distinctive building. Discovering its historical background today has sparked my curiosity to explore more about my community. ...



... This photo was taken next to Pao Cheung Street, and the building above bears witness to the legacy of the firecracker industry, further deepening my understanding of my home place. ...

Social interaction and network (1 instance)



... People and things constantly change in the same place, but the photograph still evokes a sense that I have made many friends surrounding me in the community. ...

Work opportunity and vitality (0 instances)

Table 6. Comparing Survey and Photovoice Data

Impact category	Survey (N = 711)	Photovoice (N = 134)
Public awareness of local culture and tradition	97.2%	26
Cultural diversity, community development and creativity	97.1%	46
Collective memory	97.1%	26
Sense of community*	96.7%	2
Public involvement*	95.8%	6
Work opportunity and vitality*	89.8%	1
Social interaction and network*	88.0%	0
Awareness of urban change and gentrification*	76.9%	28

 impact category expressing discrepancy between the survey and photovoice data

These findings catalyzed subsequent in-depth discussions between the research team and the two Trail managers. The first discussion centered on sharing both the quantitative and qualitative results. All attendees concurred that the statistical analysis of survey responses and categorization of photovoice data were appropriately conducted. The initial meeting also reached a consensus that the discrepant findings identified in Table 5 were *not* due to unavoidable physical constraints of the data collection process. For example, the lack of photovoice data on the impact categories of public involvement, sense of community, social interaction and network, and work opportunity and vitality did *not* stem from the absence of relevant visual contents that supported the photovoice method during the walk. With this understanding, subsequent discussions probed deeper into the nature of the knowledge obtained via the mixed-methods approach and began to discern the epistemological value of the findings based on the distinct data collection approaches. It was ultimately confirmed through the discussions that while the survey aimed to capture cognitive awareness of program impacts regarding the eight predefined categories (based on responses to 21 predetermined survey items), the photovoice sought to capture the free-flowing, subjective impressions of respondents about program impacts without an externally imposed structure. In pragmatic terms, these two approaches refer to two different realities experienced by respondents. The managers were asked to reflect on how these distinct realities might have emerged from how Trail participants experienced the tour and data collection. Based on these sharing sessions, all attendees concurred that the two realities were both valid but appealed to two distinct sources of sensation—cognitive recognition for the survey and

emotional appreciation for photovoice. While both datasets represent knowledge with truth value, the discrepancies sparked an in-depth discussion of what these dual realities meant for Trail participants.

The discussions—and, occasionally, debates—among the research team and the two Trail managers culminated in the following consensus on the *raison d'être* of the discrepant findings: The survey data represented participants' cognitive evaluative awareness of the Trail's impacts. Respondents expressed high value of the Trail's contributions to sense of community, public involvement, work opportunity and vitality, and social interaction and network. This cognitive awareness likely emerged from participants' autobiographical experiences and exposure to the pre-walk workshop facilitated by an informed trainer. In contrast, the photovoice data often entailed the impact category of awareness of urban change and gentrification with regard to the tour experience. Participants' responses here probably reflected more immediate, ad hoc feelings that were potentially shaped by briefings from the volunteer tour guide during the tour. Therefore, the divergent response patterns encapsulated two realities—both considered valid by participants. From the researchers' and managers' perspective, ideally these two knowledge sources should have converged. Therefore, rather than viewing the discrepancies as program deficiencies, they were recast positively as opportunities for program improvement. Specifically, the pre-tour, on-tour, and post-tour program elements could be optimized to better *synchronize* the perceived impacts based on participants' *both* cognitive awareness *and* subjective appreciation gained from the experience.

Subsequent to this consensus, the sharing sessions eventually formulated certain recommendations to revise the current program. For example, facilitators were advised to emphasize in the pre-walk workshop how the Trail was deliberately designed to showcase transformations within the community, with a focus on the possible impact of urban renewal on the community's cultural and social fabric due to the influx of residents from outside as well as rising land and property prices. Facilitators would also promote discussion among participants regarding implications of these changes for local inhabitants, encouraging reflection on broader social and economic consequences of urban development. The aim is to provide participants with a deeper, objective understanding of the complex dynamics of urban change and gentrification in Kowloon City, which the survey data least indicated as an area impacted by the Trail.

Recommendations were also formulated for the volunteer tour guides. They were advised to enrich walks by sharing more interesting local stories, memories, and experiences to help participants feel more connected with community history and inhabitants. Brief, informal interviews between participants and residents along the route would be encouraged. During the tour, the participants could also be told of how new businesses, public art projects, and community events had been organized to encourage civic engagement and social interaction. These recommendations to highlight how different community members and organizations actively work to improve the neighborhood aim to foster deeper emotional connections to impacts less represented in the photovoice data.

Further discussions between the two Trail managers and responsible pre-walk workshop facilitators and volunteer tour guides regarding the above recommendations were met with initial positive support. Participants believed the recommendations held great potential to enhance the perceived impacts of future tours by providing clearer direction. The two Trail managers also agreed, subject to resource availability, to continue employing a mixed-methods approach to monitor outcomes once the optimized program elements were implemented. They believed that ongoing evaluation utilizing both survey and photovoice tools could offer valuable insights into whether proposed modifications successfully synchronized divergent knowledge gained from participants' cognitive and affective experiences.

## Discussion

Prior research supporting the mixed-methods use of surveys and photovoice has typically found results from the two approaches to provide corroborating rather than divergent findings (e.g., Lemos et al., 2014; Lo et al., 2022). However, the present study demonstrates how discrepant findings spurred valuable epistemological reflection among researchers and program practitioners. This helps practitioners more deeply understand participant experiences and inform subsequent program adjustments. The Trail managers' interest in continuing mixed-methods evaluation following modifications implies that they view the evaluation process itself as integral to ongoing program improvement. The key lesson learned from this study is that discrepant findings yielded by mixed methods could become a crucial element in evaluation studies. Specifically, divergent priorities participants expressed in their ratings of program impacts via survey versus photovoice granted evaluators novel insights into program betterment.

Adopting a pragmatic perspective that emphasizes reality as constituted by contextualized experiences, researchers and practitioners contemplated how divergent findings arose from specific Trail program elements. These included the pre-walk workshop, the guided tour itself, and the evaluation exercise. During the multiple meetings, the research team invested considerable time assisting the two Trail managers in understanding the evaluation instruments and their underlying epistemological assumptions. From a pragmatic viewpoint, the meetings functioned as sites where actions were hypothesized and collaboratively agreed upon through democratic processes.

Outcomes of these collaborative meetings demonstrated that the mixed-methods approach was a successful means of inquiry to facilitate exchanges between evaluation researchers and program practitioners. Discussions illuminating the epistemological worth of elicited data and implications for improvement underscored this. Joint reflection suggested surveys captured participants' cognitive awareness of the Trail through quantifying ratings, while photovoice revealed emotional, subjective appreciation during tours via participatory qualitative inquiry. Together with researcher-practitioner dialogue, this mixed approach enabled the whole team to (1) develop a richer understanding of how participants perceived intended outcomes and impacts; (2) provide the Trail operators actionable intelligence to optimize the program accordingly; and (3) offer researchers



and practitioners a means to engage in metacognitive reflection on findings and continue monitoring the program. These benefits possess good potential to foster increasingly sophisticated conceptualizations among different stakeholders involved in community program outcome and impact evaluation studies.

There are, however, a few limitations to this study. Firstly, the small photovoice subsample versus larger survey group precludes generalizing findings to all participants. More comprehensive mixed-methods research including all users would provide a more robust view of the program. Secondly, only a single open-ended photovoice prompt was used to capture participants' experiences, rather than a series of prompts based on different impact categories. This might result in limited insight into the photovoice data obtained. However, if a series of prompts were used instead, there would be problems of overburdening the participants and detracting from their enjoyment of the tour. Finally, photovoice has proved useful here but poses implementation challenges. While younger participants in general smoothly adopt the cell phone-based protocol, concerns remain regarding effectively training older adults in photovoice's technology-mediated process.

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