

ทัศนคติของชุมชนต่อการปรับทางเท้า ภายใต้โครงการออกแบบปรับปรุงสภาพแวดล้อม  
ทางกายภาพในเขตเทศบาลเมืองนครสวรรค์ ประเทศไทย

The Community Attitudes Toward a Redesigning Pedestrian Walkway for  
Urban Redesign Project in Nakhon Sawan City Municipality, Thailand

ธีรายุ ชุมสาย ณ อยุธยา<sup>1\*</sup> จิล ฟรานซ์<sup>2</sup>  
Thirayu Jumsai na Ayudhya<sup>1\*</sup> Jill Franz<sup>2</sup>

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### บทคัดย่อ

บทความนี้อธิบายการศึกษาเชิงคุณภาพ ในการวางแผนกลยุทธ์ของโครงการออกแบบปรับปรุงสภาพแวดล้อมทางกายภาพของเมืองที่ดำเนินการโดยเทศบาลเมืองนครสวรรค์ เพื่อปรับปรุงพื้นที่เชื่อมต่อระหว่างสวนสาธารณะหนองสมบูรณ์และบริเวณริมฝั่งแม่น้ำเจ้าพระยา เพื่อรองรับการเข้าถึงและการใช้งานพื้นที่สาธารณะดังกล่าว เพื่อการออกกำลังกายและการสันทนาการ งานวิจัยครั้งนี้ศึกษาความต้องการในการใช้งานของผู้พักอาศัยและกลุ่มผู้ใช้งานกลุ่มอื่น ๆ ที่เข้าใช้พื้นที่ เพื่อเข้าใจทัศนคติของผู้ใช้พื้นที่ ต่อโครงการออกแบบปรับปรุงพื้นที่ บทความนี้นำเสนอข้อค้นพบผ่านกรอบการศึกษาสองส่วนคือ 1) การสำรวจสภาพพื้นที่เชิงกายภาพของพื้นที่ และ 2) การศึกษาประสบการณ์และทัศนคติของผู้พักอาศัยในพื้นที่จำนวน 32 คน ผ่านกระบวนการสัมภาษณ์โดยใช้รูปภาพที่ผู้ให้สัมภาษณ์เป็นผู้ถ่ายร่วมกับกระบวนการสัมภาษณ์เชิงลึก และการวิเคราะห์ตีความเชิงปรากฏการณ์ ผลการศึกษาดังกล่าว แสดงออกมาใน 3 ประเด็นหลักคือ 1) ข้อขัดแย้งในการครอบครองพื้นที่ 2) ความลังเลของผู้พักอาศัย และ 3) การประนีประนอมซึ่งกันและกัน บทสรุปทั้ง 3 ประเด็นดังกล่าวได้รับการนำเสนอต่อเทศบาลเมืองนครสวรรค์ เพื่อใช้ในการวางแผนเชิงกลยุทธ์สำหรับโครงการปรับปรุงพื้นที่เมืองต่อไป

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การวิเคราะห์ตีความเชิงปรากฏการณ์ การออกแบบปรับปรุงเมือง

### Abstract

This paper describes a qualitative study undertaken to inform strategic planning for an urban redesign project by the Nakhon Sawan City Municipality. The project involved the redesign of an area of the municipality connecting a park and the riverfront to improve access to and use by all users of these public facilities for exercise and recreation. Associated with the success of such a project was the perceived need to engage with residents and other people using and moving between the spaces to better understand the nature and diversity of access needs and specific attitudes held about the proposed redesign project. This paper reports on the findings of the user engagement study undertaken in two stages; 1) a survey of the physical conditions of the site and 2) an exploration of community experiences and attitudes from 32

<sup>1</sup> คณะสถาปัตยกรรม ศิลปะและการออกแบบ สถาบันเทคโนโลยีพระจอมเกล้าเจ้าคุณทหารลาดกระบัง

<sup>1</sup> School of Architecture, Art, and Design, King Mongkut's Institute of Technology Ladkrabang, Thailand

<sup>2</sup> Faculty of Engineering, Queensland University of Technology, Brisbane, Australia

\*Corresponding Author email: thirayu.ju@kmitl.ac.th

residents using participant-produced photographs (PPP) with in-depth interviews with the data of which were analysed using Interpretative Phenomenological Analysis (IPA). Reported in the form of three ‘super-ordinate’ themes, including 1) conflict of occupancy, 2) resident skepticism and 3) mutual compromise, the findings have been adopted by the Nakhon Sawan City Municipality to inform the strategic plan for the proposed urban redesign project.

**Keywords:** Community Attitudes, Photo-elicitation Interview, Photovoice, Interpretative Phenomenological Analysis, Urban redesign.

## 1. Introduction

### Nakhon Sawan Municipality Urban Redesign Project

The Royal Thai Government designated Nakhon Sawan province in 2019 to revamp its current public spaces and infrastructure, such as roads and pedestrian walkways, with the aim of enhancing accessibility and ensuring the widest possible range of users can benefit from them (Nakhon Sawan Provincial Government, 2020). In response, in 2020, the Nakhon Sawan Municipality established the project named “Nakhon Sawan, the city for all” informed by the key strategies of building opportunity and social equity as well as enabling residents to spend more time outside. A critical aspect of this urban design project is the link between Nong Somboon Park and other public spaces in Nakhon Sawan Municipality (NSM) such as the Chaopraya river waterfront. According to the initial onsite survey, Nong Somboon Park is considered a major recreation park and landmark attracting different types of users. In this park, there are small gardens and green areas, lakes, jogging tracks, bike lanes, basketball and volleyball courts, and exercise courtyards scattered around the park. All these areas are used for recreational activities and outdoor exercise. However, for elderly people and people with disabilities, access to some of these spaces and facilities is restricted due to the poor condition of existing conditions of pedestrian walkway pavement; changes in the level of pedestrian walkway surfaces; permanent obstacles, such as electrical poles or post boxes; and temporary obstacles, such as flowerpots. Intent on responding to these restrictions in a meaningful way for those experiencing or likely to experience difficulties a key part of qualitative inquiry for the Nakhon Sawan Municipality’s urban redesign project was gathering in-depth information in-situ from real users. This collaborative approach that also involves people living nearby the project acknowledges research that has found that building mutual understanding between local government sectors and the public contributes to the success of public projects such as the urban design project (Alipour & Galal Ahmed, 2021; Ghanbaripour, Sher, & Yousefi, 2020; Owolabi, Oyedele, Alaka, Ajayi, Akinade & Bilal, 2020; Simon, Jefferies, Davis, & Newaz, 2020). The success of redesign in the urban context requires not only consideration of the physical aspects of built environments but also a strategic plan for the project that articulates its goals and actions. User participation and attitudes are considered as highlighting key values for informing the strategic plan of a project, especially public facilities, and public service projects (Altay & Demirkan, 2014; Barki & Hartwick, 1994; De Siqueira & Al Balushi, 2020; Mulligan, Calder, & Mulligan, 2018). Successful involvement of users depends in the first instance on providing them with relevant project information, including both pros and cons. In addition to developing effective strategic plans, user involvement is also

critical for determining functional requirements, spatial organization, and construction details (Hussain, McKellar & Policy, 2020).

Public hearings are a prerequisite for Thai provincial government sectors at the early stage of a government project. Unfortunately, there is a lack of evidence revealing how people's attitudes are gathered and interpreted. This article will describe the qualitative study undertaken to understand users' attitudes toward the redesigning of existing public space projects at the initial stage of Nakhon Sawan Municipality's urban redesign project. As will be outlined, the study involving user attitudes followed a study of the physical conditions of Vilai Sawan Road and Vimarnman Road in Nakhon Sawan municipal district to identify a potential route between Nong Somboon Park and Chaopraya river waterfront area. This initial study provided the focus for the engagement of the local community and then subsequently detailed information to inform the project strategic plan.

## 2. Objectives

The research objectives are;

- 1) Explore potential linkages between Nong Somboon and Chaopraya River waterfront.
- 2) Understand residents' attitudes toward urban redesign projects, especially in Nakhon Sawan City Municipality.
- 3) Apply emerging themes as part of the strategic plan for the proposed urban redesign project for Nakhon Sawan City Municipality.

## 3. Theoretical framework and literature review

### 3.1 Identification of Attitude

For the Nakhon Sawan Municipality's urban redesign projects information required for developing design and strategic planning can be categorized into two different types of data: objective data; and qualitative data. Objective data were gathered by assessing the existing physical conditions of pedestrian walkways and streets in the Nakhon Sawan Municipality area to identify the potential routes between Nong Somboon park and Chaopraya river waterfront. In terms of qualitative data for this project, comprised of user points of view, including attitudes, feelings, perceptions, opinions, and concerns (Shatu, Yigitcanlar & Bunker, 2019). In this respect, there is compelling evidence of the relationship between positive attitudes of people toward public projects and services and success in developing new public projects and services (Louis, Sønsterud, Junuzović-Žunić, Tomaiuoli, Del Gado, Caparelli & Heitmann, 2016; Valente, St. Louis, Leahy, Hall & Jesus, 2017; Wang, Li & Wu, 2019).

Identifying people's attitudes is not easy, and it is even more complicated to understand how attitudes change. One of the main aims of identifying attitudes is to see order and consistency in what people say, think, and do, and use this for predicting people's future behaviours. An attitude is not something we can measure and examine in the same way as we examine physical things but rather is revealed through individuals' words and actions (Richardson, 1996). In this research, people's attitudes were identified through interviews where they reflected on photographs, they had taken of their everyday experience of the project sites.

Before undertaking the attitudinal study, it was important for the researchers to identify their roles either as summative evaluators or as formative evaluators. As a summative evaluator, a researcher aims to produce a summary statement; an overview used to help evaluate project achievement. For this reason, summative evaluators will focus on the articulated objectives of the project, and in the case of attitudes how they relate to achieving project objectives (Henerson, Morris & Fitz-Gibbon, 1987). Alternatively, a formative evaluator plays the role of helper and advisor for planners or developers. The formative researcher may be asked to look out for potential opportunities/problems, identify what the project needs to improve, monitoring the project activities and attitude changes toward the project (Robinson & Shaver, 1976). In this research, formative evaluation was undertaken wherein people's attitudes were identified to inform the urban context's direction, development, and redesign in response to the concept of "the city for all".

In addition to establishing the purpose of identifying people's attitudes, there is also the need to decide on how attitudinal data are to be collected. One approach is where people self-report their attitudes. This can be through interviews, surveys, or polls in both oral and written form, questionnaires, attitude rating scales, logs, journals, diaries, and so forth. Self-reporting produces the most direct and authentic data in the context of individuals' self-awareness, beliefs, feelings, and abilities. A second approach is collecting information from persons who closely relate to the research participants. This type of data collection uses interviews to capture participants' feelings, beliefs, or behaviours as conveyed by a person who has a close relationship with the participant.

In this research, the approach of directly involving people living in Nakhon Sawan Municipality area was considered to produce information of the most value to the project. Associated with this approach was the need to alleviate participants' concerns and anxieties by providing them with detailed information about the urban redesign project, why they were being invited to participate in the research for the project, how they would be involved, and how their responses would be analysed and used. With these considerations, it was decided to use participant-produced photographs (PPP) as the focus in face-to-face interviews with the participants.

### 3.2 Photo-elicitation (PE)

A qualitative research method in which photographs are an integral aspect of the inquiry process has its origins in the work of John Collier, *Photography in Anthropology: A Report on Two Experiments*, in 1957 (Collier & Collier, 1986). This approach labelled "photo-elicitation" (PE) uses photographs as a medium; participants interpret their photographic media for the researcher during the interview (Loeffler, 2004; Torre & Murphy, 2015). Photographs can offer the possibility for the researcher to observe the research participants' life experiences, and they can create communicational links between strangers for a specific issue or subject (Collier & Collier, 1986). The advantage of integrating photographs into the interview process is that photographs provide an alternative representation to written and spoken language (Shaw, 2013). Using a photo-elicitation method in the interview process, compared with word-only-interview, was found to evoke more in-depth thoughts, attitudes, and opinions from research participants during the interview. Photo-elicitation also allows the researcher to obtain in-depth information with fewer participants than with other methods (da Silva Vieira & Antunes, 2014).

There are two types of photo-elicitation that have been widely adopted. Traditional photo-elicitation is a method in which the researcher takes the photographs used in the interview; researcher-produced photographs (RPP). Another type, the auto-driven interview requires participants to take their photographs or asks participants to select photographs used for the interview. The traditional method, normally, is considered appropriate for a deductive research approach, but the auto-driven interview method is useful for an inductive research approach (Clark, 1999). The auto-driven photo-elicitation, with participant-produced photographs (PPP), allows research participants to lead the interview in an open explorative manner (Clark-Ibáñez, 2004; Collier & Collier, 1986; Hurworth, 2003; Loeffler, 2004; Taylor, 2002; Winddance Twine, 2006).

Photo elicitation, especially with participant-produced photographs, has also been adopted to study people's perceptions and experiences of architecture, built environments, landscapes, and urban design and planning. In architecture, applying photo-elicitation with participant-produced photographs (PPP), Imamoglu (2000) studied architecture and non-architecture students' assessments of different traditional and modern house facades in Turkey. In urban design and planning, photo-elicitation interviews were used as a participatory tool to inform urban planning and decision-making processes about peoples' concerns (Sinclair, Diduck & Duinker, 2014).

Furthermore, photo-elicitation can shed light on people's experiences of the lack of built environmental units. For example, if the research focuses on urban planning, participants might discuss the absence or insufficiency of parks, green spaces, or community facilities in their neighborhoods. Using photographs, individuals can visually communicate their perspectives on the impact of such deficiencies and how they perceive and navigate their surroundings.

By employing photo-elicitation, researchers can gain a deeper understanding of people's subjective experiences and perspectives, which are not always evident through quantitative measures or surveys alone. This method provides a richer context for examining the complexities of human perceptions, as well as the factors that contribute to agreement or disagreement and the consequences of lacking certain built environmental units.

When it comes to people's perceptive domains, photo-elicitation allows researchers to explore the degree of agreement or disagreement among participants. By presenting a series of photographs to individuals and asking them to express their opinions or reactions, researchers can gauge the level of consensus or divergence in their responses. This technique helps reveal the range of perspectives and allows for a more nuanced understanding of people's perceptions (Boy, 1996).

For example, imagine a study exploring public opinions on a controversial social issue. Researchers can show participants different photographs related to that issue and ask them to discuss their reactions. By analyzing the responses, researchers can identify patterns of agreement or disagreement, understand the underlying reasons for these opinions, and gain insights into the factors influencing people's perceptions (Egan, 2011). Photo-elicitation can also be employed to address the lack of built environmental units of discussion. The built environment refers to the human-made surroundings, including buildings, streets, parks, and other physical structures. While discussing the built environment solely through verbal

descriptions can be challenging and prone to subjective interpretation, photographs can provide a concrete and visual reference for participants to discuss and analyze (Nisbet & Markowitz, 2014).

As mentioned above, adopting photo-elicitation in the research of architecture, design, and other related fields can provide researchers with in-depth reflections on participants' thoughts, experiences, and attitudes toward a specific phenomenon. In this research, photo-elicitation with participant-produced photographs (PPP) was embraced as the key method for collecting in-depth comprehensive information from the research participants; real users in the Nakhon Sawan Municipality area and residents who live on Vimarnman road. It complemented an initial on-site survey to identify potential roads linking Nong Somboon Park and Chaopraya River waterfront area.

### 3.3 Interpretative Phenomenological Analysis (IPA)

In qualitative research, data retrieved from research participants represent highly valued information. This data can be retrieved by different methods, such as observation, and interview. Interview data, among these methods, are considered primary verbal information obtained from the research participant. To reveal embedded meaning that retains its richness, data then need to be interpreted systematically and rigorously that aligns with the qualitative nature of the research and the intent of the project. With its focus on the evaluation participant residents make and the beliefs they hold about the physical conditions of their urban environment and the proposed urban redesign project, implicitly as well as explicitly, the research project employed Interpretative Phenomenological Analysis (IPA) as the underpinning methodology (Smith, Flowers & Larkin, 2009).

In IPA, the study commences with a primary question with a minimum preconception or prior theoretical input (Smith et al., 2009). IPA aims to retrieve rich data and subject it to detailed analysis case-by-case. With such a focused thorough process, it is considered reasonable to have a small participant pool purposefully selected (Smith & Osborn, 2007). In this research, participants were limited to two groups; 1) residents who live along the selected road, Vimarnman Road, and 2) participants who are main users of Nong Somboon Park. Data collection in IPA focuses on data that are likely to elicit detailed experience. Therefore, an in-depth interview, a conversation with purpose, is normally adopted to derive participants' information. Participants and researchers reciprocally engage in the interview with an initial set of questions, with the inquiry developing to allow contingent interesting areas to emerge. The researcher's role is to encourage and guide participants through the interview. Unanticipated stories are an asset likely to reveal unanticipated outcomes (Smith et al., 2009). Interview data are collected with recording devices and then transcribed verbatim.

The first stage of IPA analysis involves reading and re-reading to immerse and familiarize the researcher with the data. Moreover, the rereading process allows the researcher to develop further suitable interview questions and interview strategies. The second stage of IPA focuses more on details and requires more time. This stage is named free textual analysis, focusing more on the content and participants' use of language. The IPA analytical approach involves 1) descriptive comments about the content of participants' responses, 2) linguistic comments which focus on the use of language, expression, repetition, degree of fluency, and metaphor, and 3) conceptual comments involving engaging with data at a conceptual interpretive level, as well as with feelings and emotions (Smith et al., 2009). Essentially, the task is to reduce

details while keeping the essential complexity of meaning and to match or group relevant connections and patterns to facilitate the emergence of themes that when considered collectively across participants may produce super-ordinate themes. In a large group of participants, looking for reoccurrences among participants is a vital step. However, there is no rule to identify reoccurrence. The final step is to identify the set of criteria for the recurrence themes (Smith et al., 2009).

## 4. Method

### 4.1 The 1<sup>st</sup> Phase of the Research: On-site Survey and Measurement

In addition to user input, the success of the Nakhon Sawan Municipality project also depends on how the project can optimize such factors as budgets, construction utility, and construction times. The identification of a route connecting Nong Somboon Park to the Chaopraya River waterfront presents numerous obstacles, but utilizing both walkways and roads will assist the Nakhon Sawan Municipality in successfully accomplishing the project within a constrained budget and timeframe. The initial stage of data collection was the on-site surveys conducted in situ to explore potential linkages between Nong Somboon and Chaopraya River waterfront. Existing obstacles on the pedestrian walkways and physical conditions on selected roads were assessed. Figure 1 shows two potential linkages: Vimarnman Road and Vilai Sawan Road.



**Figure 1** Potential roads; 1) Vimarnman Road (red line) and 2) Vilai Sawan Road (blue line), satellite image modified from Google map

The first phase was divided into two steps. The initial step involved conducting an on-site survey to explore potential obstacles on two specific roads: 1) Vimarnman Road, which spans 500 meters (identified as number 1 in Figure 1), and 2) Vilai Sawan Road, which extends over 600 meters (marked as number 2 in the Figure). These two roads are located at the heart of Nakhon Sawan City Municipality area. The aim of this research was to assess the current physical conditions and elements present on pedestrian walkways

and road surfaces that may pose challenges for all users who regularly utilize or walk on these paths. Possible obstacles were noted, sketched, and photographed by the researcher and experts in inclusive design. The walk-through surveys on two selected roads were also recorded in the video as a way of recording additional data (Figure 2).



**Figure 2** Excerpt scenes in video recording from the on-site surveys

The second step involved on-site measurements to locate possible obstacles and to measure dimensions of those possible obstacles, for example, pedestrian width, varying levels of pedestrian surfaces, location of electric poles, fire hydrants, street telephone junction boxes, flowerpots positioned at the front of some residential units, and so forth. The measurements were conducted in 20-meter-length intervals along the pedestrian walkways on either side of the two selected roads.

Existing conditions and possible obstacles on the two selected roads were included in the comparison, with the assessment criteria adapted from UD principles and design for all concepts, to identify the potential for existing conditions and possible obstacles to cause difficulties for users. Each assessor, the researcher and UD experts, presented individual measurements in a comparative table; an excerpt is shown in Figure 3. Each assessor placed photographs, notes, and sketches in the assessment table, and they also gave scores from -2 to -10 points for each obstacle (Figure 3). The more negative points allocated to each road, the greater the difficulties that users were likely to experience while they used or walked on existing pedestrian walkways. The comparative results were then used to identify the potential road linking Nong Somboon park and Chaopray River waterfront. The on-site surveys and measurements continued from December 2018 to the end of April 2019. A comparative analysis was undertaken in June 2019. To finalise the analysis, individual researchers and expert analyses were brought together in a group discussion culminating in the selection of a link between Nong Somboon park and Chaopraya river waterfront.


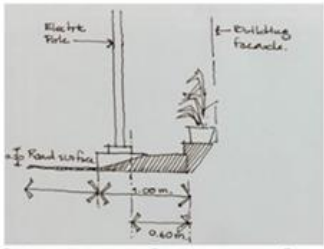
Interval distance (Meter)	Item	Possible obstacles	Dimensions (cm)			Measurement Sketches Plans/Sections	Difficulty levels				Total	
			Width	Length	Height		-2	-4	-6	-10		
0-20	1	Electrical pole 1 	25	25	12000	 This is one of major obstacles. There is not enough space. The width is too narrow. Flowerpots also block the way.			✓			-6

Figure 3 An excerpt from the on-site survey and measurement

The result from the first phase of research identified Vimarnman Road, shown with number 1 in Figure 1, as having the potential to be the linkage between Nong Somboon Park and Chaopraya River waterfront. In the second phase, photo-elicitation with participant-produced photographs (PPP) was adopted as the key data collection method. The research participants, in this phase, were divided into two main groups; 1) residents and business owners whose housing and commercial units were located on Vimarnman Road and 2) the users from Nong Somboon Park.

#### 4.2 The 2nd Phase of the Research: Photo-elicitation Interview and Interpretative Phenomenological Analysis (IPA)

The recruitment of the first group was implemented purposefully by recruitment flyers disseminated to every single residential and commercial unit on Vimarnman Road; 45 units in total. 27 units replied with 32 persons willing to be participants and to undertake photo-elicitation activities. In some units, more than one person living in a unit chose to participate in photo-elicitation activities and interviews. For the second group of participants, the users of Nong Somboon park, the recruitment was conducted using random sampling. The recruitment flyers were distributed, on weekdays and on the weekend, randomly to users in Nong Somboon Park. Through this recruitment approach, 28 persons were willing to participate in photo-elicitation activities and interviews.

In the recruitment flyers, research participants were given an overview of Nakhon Sawan urban design and development project, and they were also given details of photo-elicitation activities. For the photo-elicitation activities, the first group of research participants; residents and business owners on Vimarnman Road, were asked to take photographs representing their reflections on key questions such as, ‘How is your place/house/unit represented a part of the community?’ and ‘How is your place/unit represented as its territory?’. Another key question was ‘If there was an urban design and development project in Nakhon Sawan Municipality area what would be the key issues for its success or failure?’

The second group of participants they were asked to take photographs when they were doing activities, running, jogging, and exercising, in Nong Somboon park. They were told their photographs should represent their reflections on key questions such as, “What are your key activities in the park?” and “What are the main obstacles causing difficulties for using/walking/running/doing exercises within the park?” They were also asked to choose the most preferred route linking Nong Somboon park and Chaopraya River

waterfront with such questions as, “If you want to go to Chaopraya River waterfront, which route will you take?”, “Could you take pictures along the selected route?”, and “What are the pros and cons/good and bad points you find along the route?”

In photo-elicitation activities, all key informants (participants) were asked to take at least 20 photographs, with no maximum limit. Then, all participants were asked to choose and submit, via e-mail to the researcher, at least 15 photographs which strongly represent and respond to the key questions guiding the photo-elicitation activities. Participants’ photographs, from two groups of participants, were digitally prepared by the researcher for use in the elicitation interviews. Interview appointments were made with each participant individually by their availability. All key participants were also asked to sign the consent form allowing the researcher to use their photographs and interview data only for this research and educational purposes. The interview activities took approximately 45 minutes to one hour and twenty minutes. During the interview, participants’ photographs were presented on the computer screen. Participants were asked to respond to semi-structured questions about the prompt questions used to guide the photo-elicitation activities All photo-elicitation activities and interviews were conducted from May 2019 to the end of July 2019. By IPA, all interview conversations were initially transcribed word-by-word and transposed to the IPA analytical table. The interpretation process began with initial coding. In this step, each sentence retrieved from the interview transcription was read, reread, and initially summarized, retaining key meanings and important linguistic contexts from the original transcriptions. In the second step, subordinate themes were identified by grouping key meanings and issues from the initial coding and creating summative keywords or sentences with a higher level of interpretative abstraction. In the final step, superordinate themes were generated at an even higher level of abstraction. The superordinate themes were then used along with an architectural experience theoretical framework generated from previous research by the researcher to determine a concept and direction for Nakhon Sawan Municipality urban design and development project. This process occurred from August 2019 to December 2019.

## 5. Results

### 5.1 The Result from 1st Phase of the Research: The On-site Survey and Measurement

The comparative assessment scores given by each assessor individually were averaged. The results showed that with -56 points Vilai Sawan Road has more negative points than Vimarnman Road, at -24 points. Therefore, the results in the first phase verify that Vimarnman Road had the most potential to become the linkage between Nong Somboon Park and Chaopraya River waterfront. In addition, the result also reveals that possible obstacles along the two selected roads can be categorized into two main types. The first type is the immovable obstacle elements, including 1) varying levels of pedestrian pavement and 2) public facility elements; for example, electrical poles, telephone junction boxes, traffic signs, damaged manhole covers, and parking ramps (Figure 4). The second type is an impermanent obstacle. This type included movable street elements; for example, stone tables and chairs, flowerpots, wooden decks, and food street kiosks (Figure 5).



Figure 4 Examples of permanent obstacles on Vimarnman Road



Figure 5 Example of impermanent obstacles on Vimarnman Road

## 5.2 Results from 2nd Phase of the Research: Photo-elicitation Interview and Interpretative Phenomenological Analysis (IPA)

In the study, there were two photo-elicitation activities, the first involving residents living along Vimarnman Road and their experiential perceptions toward Nakhon Sawan Municipality’s redesigning and development project. Analysis of the data emerging from this activity produced findings encapsulated in three super-ordinate themes labelled: conflict of occupancy; resident skepticism; and mutual compromise.

### 5.2.1 Conflict of Occupancy

Along Vimarnman Road owners in some residential units illegally occupy pedestrian areas in front of the units for their purposes including everyday living, dining, and gatherings with family or neighbours. As explained by one of the participant residents about the footpath in front of their unit; “Oh, this is my personal space. In the morning after I finish my routine housework, I come here to take a rest and sometimes have chats with my neighbours. We share this space.”

Along Vimarnman Road stone tables, chairs, and flowerpots are used to define the space appropriated by residents in front of their units. About the question about the presence of flowerpots on the pedestrian walkway, a participant responds:

“Yes, I and my family did all these. There are only a few people walking past my front door during the daytime, and only a few in the evening. I have been

trying to keep this area tidy and clean. We can take care of this area by ourselves. I think it would be better than letting Nakhon Sawan Municipality take care of this road. Waiting for them is like it will never happen. It is the front of my house, so I think it is my right to take care of this space”. (Participant 06)

From the interview transcriptions, it was found that some residential-unit owners argued that their occupancy of this public space was not illegal. They also added that Nakhon Sawan Municipality seldom conducts maintenance along Vimarnman Road, so they insisted that it was their right to take care of the front of their residential units. In addition, normally during the daytime, few people are using the pedestrian walkway on Vimarnman Road. This attitude is exemplified in the following responsibilities relating to the use of a ramp to facilitate car parking at the house. In the participant’s words:

“Oh, yes, three years ago. We built it because we could not park our car on the road. So, I tried to park our car in our house.”

Researcher: “It is a permanent ramp, isn’t it?”

Participant 18: “We tried to build a movable steel one, but we lost it. It was stolen. So, we always keep watch on our front door. It is our responsibility. In that case, no police or local officer was coming and checking what happened. We believe that this is our task to take care of this area. People in public never care much about our front door.”

### 5.2.2 Resident Skepticism

Another super-ordinate theme to emerge from the data analysis is labelled “resident skepticism”. This theme relates to how residents along Vimarnman Road, especially owners of the residential units, perceive the proposed redevelopment. Most of the owners supported the Nakhon Sawan Municipality’s project; however, some of them were either not aware of Nakhon Sawan Municipality’s intention of implementing this project and, as such, the advantages of being a part of the project, or did not believe that the project would be implemented. Several participants indicated that resident skepticism could cause difficulties and obstacles to the success of the project. From the interview data, it was revealed that being given information about Nakhon Sawan Municipality’s project, both advantages and disadvantages, could increase residents’ trustworthiness and willingness to be a part of the project. This is reflected in the following extract in response to a question from a resident participant about their knowledge of the proposed project.

“I have heard about this project for a while, let’s say. Two years ago, I heard that there were a group of researchers from a nearby university conducting a survey, but they did not survey this road. The survey was conducted in another part of the city. I guess on the southern part of the city. So, at this time, I was not sure whether this project would happen on this road because they also gave us only a briefing on the project. There were no such clear details; for example, prospective benefits this project would contribute to our community, advantages, any concerns regarding

the project, and what the Municipality would provide for us during the construction period. So, I am not sure if they are going to work on this project or not.” (Participant 9).

The uncertainty about whether the project would eventuate is captured in the following response to a question enquiring about how long a resident has lived on Vimarnman Road.

Participant 5: “Oh, at least 30 years since my parents moved from Pichit province. My mom told me that this road used to be covered by laterite, and there was only one lane. It was such a very small road. I cannot believe that they [Nakhon Sawan Municipality] will have any plan to act on this road again because now it is a concrete road already.”

When provided with some information about the proposal and how it might enliven the area, Participant 5 remained skeptical about how his family could participate in the project.

“Well, the road might be more alive, with more people walking around. Commercial units along this road may appreciate that. However, I am not sure what I and my family can be part of the prospect. It seems that our family often stays inside our home. So, I am not sure how can we be a part of this project.” (Participant 5).

### 5.2.3 Mutual Compromise

This theme describes a key finding to emerge from analyzing data collected from users of Nong Somboon Park. The super-ordinate theme apparent from this set of data is mutual compromise. The key aspect of this super-ordinate theme refers to sharing information between people and the local government at the initial stage of the project. Although this group of users believed that they would potentially gain advantages from Nakhon Sawan Municipality’s urban design and development project, they considered that the project cannot begin without discussions and sharing of information and requirements between the government sector, Nakhon Sawan Municipality, and residents living along Vimarnman Road. This group of key participants also believed that sharing would increase the chance of success of the project. Excerpts from original interview data reflecting the meaning of this emergent theme are as follows:

Researcher: “How often you do come here for running and exercise?

Oh... and how far do you live from here?”

Participant 2: “Oh... I come here quite often, at least two or three times a week. I am living not too far from here. I take only 15 to 20 minutes riding my bicycle.”

Researcher: “Have you ever heard about the coming project for redesign and development of the park and roads as the connection between Chaopraya waterfront and the park? The project will begin around 2022.”

Participant 2: “Actually, I heard about this project for a while... ah... I think two or three years ago, but they did not mention the linkage at that time. Last time, I heard that people did not believe the Municipality about the success of the project. They might not get enough information about the project. They might be worried about the expropriation, or they are afraid that they may lose their right to their property. So, at that time, people

did not collaborate with the Municipality. At the beginning of the project, there were arguments between the Municipality and the people in the public. I think they [the Municipality and the people] both had their own needs or requirements. They could not reach an agreement. I think, at this time, they can end arguments with mutual compromises.”

In conclusion, the analysis of the interview data utilizing Interpretative Phenomenological Analysis (IPA) revealed three overarching themes: 1) conflict of occupancy, 2) resident skepticism, and 3) mutual compromise. These themes encapsulate the fundamental attitudes and requirements of key user stakeholders towards the proposed urban design and development project.

## 6. Discussion

Since the beginning of the urban design project, gathering information from all groups of stakeholders, including users and residents of the proposed redevelopment site, has been considered one of the most important steps for the success of the project. Research affirms that understanding users’ attitudes and requirements is one of the key elements contributing to the success of public projects (Ghanbaripour et al., 2020; Owolabi et al., 2020). This project comprised two stages of research: firstly, a survey and expert assessment of the site’s physical conditions, and secondly, an examination of community experience and attitudes through participant-produced photographs (PPP) combined with in-depth interviews. The resulting data were analyzed using Interpretative Phenomenological Analysis (IPA). This resulted in findings reported under three super-ordinate themes, 1) confusion over walkway ownership, 2) resident skepticism, and 3) mutual compromise. These three themes then informed the project framework and strategic plan for Nakhon Sawan Municipality’s urban design and development.

The three cornerstones of belonging include history, place, and people (Peters, Stodolska & Horolets, 2016). People’s sense of belonging is built up through familiarity with a thing or place developed over time (Martin, 2012; Ritchie & Gaultier, 2020). Meanings held by people for their everyday places are constructed through their physical and psychological interaction with these places (Bigard, Thiriet, Pioch & Thompson, 2020; De Montis, 2013; Mondragón-Ixtlahuac, Cortés-Martínez & Delgado-Hernández, 2017). This is apparent in the attitudes comprising the first emergent theme, “conflict of occupancy”; attitudes related to resident encroachment and occupation of the defined boundary between residential units and the public pedestrian walkway. Interview data revealed how some residents legitimized this because of the failure of the Municipality to undertake appropriate maintenance of the public pedestrian walkway going so far as to argue they could take care of their front door better than the municipality could. What these responses convey is distrust and lack of confidence in the Municipality’s desire and capacity to provide amenable urban environments for residents and users. This belief, along with the actual occupation of the road by some residents, conflicts with the Municipality’s goal to redesign existing public spaces and infrastructure, including roads and pedestrian walkways, to enhance accessibility and use for all. Strategically, this revealed the need for greater communication between the Municipality and the residents of the redevelopment site, particularly Vimarnman Road as the preferred route between Nong Somboon Park and Chaopraya river waterfront area. As previously conveyed, research has shown that one of the factors for success in public

facility projects is collaborating with all relevant stakeholders (Ahmadabadi & Heravi, 2019; Koops, Bosch-Rekvelde, Coman, Hertogh & Bakker, 2016). Necessary and relevant information about the prospective public project, including both pros and cons, is required by stakeholders for making their individual decisions to support the project (Volden, 2018). From original interview data in this research, it was found that not only conveying positive information about the project would potentially enhance stakeholders' support, but also explaining negative impacts of the project, such as difficulties that people may encounter during the construction period and at the completion of the project. The need for this in helping to address residents' lack of awareness of the project and in some cases skepticism regarding the project was conveyed most notably through the super-ordinate theme of "resident skepticism". This thematic outcome also reinforced the need for user involvement and for feedback such as comments, requirements, and suggestions to be sought from stakeholders. This is also understood to provide benefits for the public project (Ahmadabadi & Heravi, 2019).

The mutual sharing of information does not guarantee an agreeable outcome for all parties. In the words of one of the resident participants and conveyed through the superordinate theme of "mutual compromise, "mutual compromise" is required. The success of the public project can be reached through agreements from both the local government and people in the public (Bac & Raff, 1997). In this project, project objectives and the requirements retrieved from owners living in residential and commercial units on Vimarnman Road were examined. Conflicts and arguments between local people and Nakhon Sawan Municipality office were influential factors causing miscarriages in other previous Nakhon Sawan Municipality public projects. Empirical evidence, shown in related research, suggests that local governments can ease problems and difficulties of social infrastructure projects by merging people's requirements with project objectives (Frolova, Rogach, Ryabova, Morozov & Sciences, 2020). Reciprocal concession refers to the emergence of ideas, requirements, and opinions retrieved from both the persuader (in this case the Municipality) and the respondent (residents and users), and it is considered an effective negotiation technique (Feeley, Anker & Aloe, 2012).

## 7. Conclusion and Recommendation

The conclusion and recommendations of this research highlight the critical factors influencing the success of government or local government urban design and development projects. One such influential factor is the need to comprehensively understand user concerns regarding the project (Antunes, March & Connolly, 2020). Empirically, this research resulted in the selection of Vimarnman Road as the preferred connection path between Nong Somboon and Chaopraya River waterfront. The findings also identified three overarching themes: 1) confusion over walkway ownership, 2) resident skepticism, and 3) mutual compromise. These themes can serve as a basis for developing a strategic development plan for Nakorn Sawan City Municipality's projects. To address confusion over walkway ownership, it is recommended that Nakorn Sawan City Municipality issue local regulations and an operational plan to clearly define the boundaries between residential units and public pedestrian areas. Although a public hearing was conducted prior to the commencement of the urban redesign project, it is suggested, in line with the second theme of resident skepticism, that key information such as project objectives, design proposals or schematics,

proposed construction period, and anticipated public benefits should be explicitly communicated during the public hearing process, particularly in the most recent one. The third superordinate theme, mutual compromise, is identified as crucial for fostering collaboration between local government sectors and residents. Moreover, for future urban redesign projects by Nakorn Sawan City Municipality, it is recommended to include a broader range of user groups, such as short-term and long-term residents, as well as visitors. The research methods employed in this study, including photo-elicitation interviews and Interpretative Phenomenological Analysis (IPA), can be considered effective tools for conducting in-depth investigations and exploring real user attitudes and requirements in future public projects.

To develop a strategic plan for urban redesign in Nakornsawan Province, Thailand, a comprehensive understanding of the current situation, objectives, and desired outcomes is essential. The involvement of local stakeholders, government officials, urban planners, and experts is crucial to ensure that the plan aligns with the specific needs and context of Nakornsawan Province. The strategic plan for Nakornsawan Province, as discussed with the Nakornsawan municipality office, encompasses six stages;

1) Situation Analysis; at this stage, there are assessments of the current state of urban development in Nakornsawan Province, including population growth, land use patterns, infrastructure, transportation, and environmental factors. Identify the strengths, weaknesses, opportunities, and threats (SWOT analysis) related to the urban landscape in the province. Review existing policies, regulations, and plans related to urban development and assess their effectiveness. At this stage, three themes retrieved from this research were considered as key approaches that Nakornsawan municipality, 2) Vision and Goals, 3) Prioritization and Focus Areas, 4) Urban Design and Development Strategies, 5) Implementation Plan, and 6) Monitoring and Evaluation.

## References

- Ahmadabadi, A. A., and Heravi, G. (2019). The effect of critical success factors on project success in public-private partnership projects: a case study of highway projects in Iran. **Transport Policy**. 73, 152-161.
- Alipour, S. M. H., and Galal Ahmed, K. (2021). Assessing the effect of urban form on social sustainability: a proposed 'integrated measuring tools method' for urban neighborhoods in Dubai. City, **Territory and Architecture**. 8(1), 1. <https://doi.org/10.1186/s40410-020-00129-4>
- Altay, B., and Demirkan, H. (2014). Inclusive design: developing students' knowledge and attitude through empathic modelling. **International Journal of Inclusive Education**. 18(2), 196-217.
- Antunes, B., March, H., and Connolly, J. J. T. (2020). Spatializing gentrification in situ: a critical cartography of resident perceptions of neighbourhood changes in Vallcarca, Barcelona. **Cities**. 97, 102521.
- Bac, M., and Raff, H. (1997). A theory of trade concessions. **Journal of International Economics**. 42(3-4), 483-504.
- Barki, H., and Hartwick, J. (1994). Measuring user participation, user involvement, and user attitude. **MIS Quarterly**. 18(1), 59-82.
- Bigard, C., Thiriet, P., Pioch, S., and Thompson, J. D. (2020). Strategic landscape-scale planning to

- improve mitigation hierarchy implementation: an empirical case study in Mediterranean France. **Land Use Policy**. 90(5), 104286.
- Boy, G. (1996). The Group Elicitation Method: An Introduction. In Shadbolt, N. et al. (Eds.), **Advances in Knowledge Acquisition Lecture Notes in Computer Science**. (pp. 290-305). Nottingham: Springer.
- Clark-Ibáñez, M. (2004). Framing the Social World with Photo-Elicitation Interviews. **American Behavioural Scientist**. 47(12), 1507-1527. <https://doi.org/10.1177/0002764204266236>.
- Clark, C. D. (1999). The Auto-driven interview: A photographic viewfinder into children's experience. **Visual Sociology**. 14(1), 39-50. <https://doi.org/10.1080/14725869908583801>.
- Collier, J., and Collier, M. (1986). **Visual anthropology: Photography as a research method**. New Mexico: University of New Mexico Press.
- da Silva Vieira, R., and Antunes, P. (2014). Using photo-surveys to inform participatory urban planning processes: Lessons from practice. **Land Use Policy**. 38, 497-508. <https://doi.org/10.1016/j.landusepol.2013.12.012>.
- De Montis, A. (2013). Implementing strategic environmental assessment of spatial planning tools: a study on the Italian provinces. **Environmental Impact Assessment Review**. 41, 53-63.
- De Siqueira, G., and Al Balushi, A. (2020). Co-designing the pedestrian revolution in Muscat. **Journal of City and Territory**. 7(1), 1-15.
- Egan, P. J. (2011). Public Opinion, the Media, and Social Issues. In Edwards G. C. et al. (Eds.), **The Oxford Handbook of American Public Opinion and the Media**. doi:10.1093/oxfordhb/9780199545636.003.0038.
- Feeley, T. H., Anker, A. E., and Aloe, A. M. (2012). The door-in-the-face persuasive message strategy: a meta-analysis of the first 35 years. **Communication Monographs**. 79(3), 316-343.
- Frolova, V. E., Rogach, V. O., Ryabova, M. T., Morozov, Y., and Sciences, A. (2020). Political and economic autonomy of local self-government as a factor of social infrastructure development in Russia. **International Journal of Advanced**. 7(3), 64-74.
- Ghanbaripour, A. N., Sher, W., and Yousefi, A. (2020). Critical success factors for subway construction projects—main contractors' perspectives. **International Journal of Construction Management**. 20(3), 177-195.
- Henerson, M. E., Morris, L. L., and Fitz-Gibbon, C. T. (1987). **How to measure attitudes**. London, UK: Sage Publication.
- Hurworth, R. (2003). Photo-interviewing for research. **Journal of Social Research Update**. 40(1), 1-4.
- Hussain, S., McKellar, J., and Policy. (2020). Exploring the Success of Social Infrastructure Public Private Partnerships: The Complex Case of Bridgepoint Active Healthcare in Ontario, Canada **Journal of Public Works Management**. 25(3), 259-280.
- Imamoglu, Ç. (2000). Complexity, liking and familiarity: architecture and non-architecture

- Turkish students' assessments of traditional and modern house facades. **Journal of Environmental Psychology**. 20(1), 5-16. <https://doi.org/10.1006/jevp.1999.0155>.
- Koops, L., Bosch-Rekveltdt, M., Coman, L., Hertogh, M., and Bakker, H. (2016). Identifying perspectives of public project managers on project success: comparing viewpoints of managers from five countries in North-West Europe. **International Journal of Project Management**. 34(5), 874-889.
- Loeffler, T. A. (2004). A Photo Elicitation Study of the Meanings of Outdoor Adventure Experiences. **Journal of Leisure Research**. 36(4), 536-556. <https://doi.org/10.1080/00222216.2004.11950035>.
- Louis, K. O. S., Sønsterud, H., Junuzović-Žunić, L., Tomaiuolo, D., Del Gado, F., Caparelli, E., and Heitmann, R. R. (2016). Public attitudes toward stuttering in Europe: within-country and between-country comparisons. **Journal of Communication Disorders**. 62, 115-130.
- Martin, C. (2012). **Theatre of the real**. London, UK: Palgrave Macmillan.
- Mondragón-Ixtlahuac, M. M., Cortés-Martínez, J. C., and Delgado-Hernández, D. J. (2017). A strategic planning model for the passenger rail implementation process: the case of Mexico. **Transport Policy**. 55, 29-37.
- Mulligan, K., Calder, A., and Mulligan, H. (2018). Inclusive design in architectural practice: experiential learning of disability in architectural education. **Disability and Health Journal**. 11(2), 237-242. <https://doi.org/10.1016/j.dhjo.2017.08.009>.
- Nakhon Sawan Provincial Government. (2020). **Nakhon Sawan provincial development plan (2020-2025)**. Nakhon Sawan: Nakhon Sawan Provincial Government.
- Nisbet, M., and Markowitz, E. M. (2014). Understanding Public Opinion in Debates over Biomedical Research: Looking beyond Political Partisanship to Focus on Beliefs about Science and Society. **PLOS ONE**. 9(2), e88473. doi:10.1371/journal.pone.0088473.
- Owolabi, H. A., Oyedele, L. O., Alaka, H. A., Ajayi, S. O., Akinade, O. O., and Bilal, M. (2020). Critical success factors for ensuring bankable completion risk in PFI/PPP megaprojects. **Journal of Management in Engineering**. 36(1).
- Peters, K., Stodolska, M., and Horolets, A. (2016). The role of natural environments in developing a sense of belonging: A comparative study of immigrants in the U.S., Poland, the Netherlands and Germany. **Urban Forestry & Urban Greening**. 17, 63-70. <https://doi.org/10.1016/j.ufug.2016.04.001>.
- Richardson, V. (1996). The role of attitudes and beliefs in learning to teach. In Sikula J. (Ed.), **Handbook of research on teacher education**. (Vol. 2, pp. 273-290).
- Ritchie, A., and Gaultier, A. (2020). Dancing towards belonging: the use of a dance intervention to influence migrant pupils' sense of belonging in school. **International Journal of Inclusive Education**. 24(4), 366-380.
- Robinson, J., and Shaver, P. (1976). Measures of social psychological attitudes. **Journal of Contemporary Sociology**. 5, 507.
- Shatu, F., Yigitcanlar, T., and Bunker, J. (2019). Objective vs. subjective measures of street

- environments in pedestrian route choice behaviour: Discrepancy and correlates of non-concordance. **Transportation Research Part A: Policy and Practice**. 126, 1-23.  
<https://doi.org/10.1016/j.tra.2019.05.011>.
- Shaw, D. (2013). A new look at an old research method: photo-elicitation.  
**TESOL Journal**. 4(4), 785-799.
- Simon, L., Jefferies, M., Davis, P., and Newaz, M. T. (2020). Developing a theoretical success factor framework for the tendering phase of social infrastructure PPPs. **International Journal of Construction Management**. 20(6), 613-627.
- Sinclair, A. J., Diduck, J., and Duinker, P. N. (2014). Elicitation of urban forest values from residents of Winnipeg, Canada. **Canadian Journal of Forest Research**. 44(8), 922-930.  
<https://doi.org/10.1139/cjfr-2014-0016>.
- Smith, J. A., Flowers, P., and Larkin, M. (2009). **Interpretative Phenomenological Analysis: theory, method and research**. London, UK: SAGE Publications.
- Smith, J. A., and Osborn, M. (2007). **Interpretative Phenomenological Analysis**. In **Qualitative psychology: A practical guide to research methods**. London, UK: SAGE Publication.
- Taylor, E. W. (2002). Using still photography in making meaning of adult educators' teaching beliefs. **Studies in the Education of Adults**. 34(2), 123-139.  
<https://doi.org/10.1080/02660830.2002.11661466>.
- Torre, D., and Murphy, J. (2015). A different lens: changing perspectives using photo-elicitation interviews. **Journal of education policy analysis archives**. 23, 111.
- Valente, A. R. S., St. Louis, K. O., Leahy, M., Hall, A., and Jesus, L. M. T. (2017). A country-wide probability sample of public attitudes toward stuttering in Portugal. **Journal of Fluency Disorders**. 52, 37-52. <https://doi.org/10.1016/j.jfludis.2017.03.001>.
- Volden, G. H. (2018). Public project success as seen in a broad perspective: lessons from a meta-evaluation of 20 infrastructure projects in Norway. **Evaluation Program Planning**. 69, 109-117.
- Wang, Y., Li, H., and Wu, Z. (2019). Attitude of the Chinese public toward off-site construction: a text mining study. **Journal of Cleaner Production**. 238, 117926.
- Winddance Twine, F. (2006). Visual ethnography and racial theory: Family photographs as archives of interracial intimacies. **Ethnic and Racial Studies**. 29(3), 487-511.  
<https://doi.org/10.1080/01419870600597909>.