

A METHODOLOGICAL APPROACH TO RE-IMAGE THE CITY THE CASE OF GALLE CITY, SRI LANKA

THARAKA M. H. H. S.^{1*} & RATHNAYAKE R. M. S. R.²

^{1,2}University of Moratuwa, Katubedda, Sri Lanka

¹*hansisandu98@gmail.com*, ²*rohanar@uom.lk*

Abstract: ‘City Re-imaging’ is a method applied in re-establishing cities’ image by assessing diverse city impressions of the users of cities. Empirical work on ‘City Re-imaging’ is lacking, particularly in the Asian context. Also, city imaging methods thus far have given more emphasis on evaluating the physical elements of a city overlooking the importance of city impressions of the users of cities. Focusing on this gap, this research applies a methodological approach to re-establish the image of Galle city in Sri Lanka by assessing the city impressions of its users. Photo Collage Technique and Web-based Photo Identification were used as data collection methods in the study and the collected data were analysed through both qualitative and quantitative approaches to re-image the Galle City. The study demonstrates key factors that influence city impression and their interrelationship through a newly developed framework. The most recognizable elements in city impression and evaluation level of city impressions in its atmosphere also identified in this study. These findings can lead planners and urban designers to better understand cities and their image.

Keywords: *City Re-imaging, City Impressions, Galle City, Sri Lanka*

1. Introduction

Many scholars have attempted to understand the image of cities via different approaches. Kevin Lynch (1956) has examined the image of the city through five different elements: Nodes, Edges, Paths, landmarks, and Districts in his benchmark book ‘Image of the City’. In his work, he used a cognitive map survey to ascertain the image of the city. The image of the city studied and described by Kevin Lynch has been redefined through 2D and 3D isovists by Morello and Ratti (2009). Donald Appleyard (1969) examined the city image through a similar approach to Lynch’s approach through an in-depth study of the industrial city ‘Ciudad Guayana’ in Venezuela. In his study, Appleyard discusses the attributes that contribute to the image of the city such as form, visibility, and significance. Similarly, several other studies have attempted to derive the image of cities in terms of the physical aspects of the built environment. (Atzwanger and Schafer, 1999; Kostof, 1991; Rapoport, 1982, 1977; Neisser, 1978). Those studies have focused on cities in Europe, North America, and parts of Asia. Since Kevin Lynch’s seminal study in 1960, many studies have sought to investigate the ‘image of a city,’ showing that the image was a collectively held psycho-spatial phenomenon that evolved with changes in its context. (Rathnasekara & Munasinghe, 2021).

Stephan Kaplan (1987) analysed the city image through a different approach than Kevin Lynch and other scholars who mainly focused on physical elements of the built environment. Kaplan, contesting what Lynch presented, suggested that the city should be ‘interesting’ to the inhabitants rather than being ‘boring’. He came to this conclusion by analysing the city image through five significant characteristics such as the complexity, naturalness, mystery, coherence, and spaciousness. Nazzari (2007), providing mental maps of several cities, also highlighted that ‘likability’ is an important element in deriving the image of cities. In a similar attempt, Evans, Smith, and Pezdek (1982) in their work focusing on the city of Orange, California, USA, emphasizes that city image is a product of not just the physical elements of the city but also socio-political and cultural values that shaped the built environment of the city over time. In all these studies, the cognitive mapping based on physical elements of cities has been criticized, as it neglects other essential dimensions of spatial-psycho phenomena of the city image creation. In other words, most studies established the image of cities by emphasizing the structural aspect of cities while keeping impressions of diverse users of the city hidden. However, in most cases, modern urban design interventions are criticized for not addressing ground conditions. When these interventions are placed in the actual ground situation, they appear out of context. This is primarily due to the design’s lack of responsiveness to the socio-cultural conditions of the specific location. (Yogalingam, munasinghe & mariyathas)

*Corresponding author: Tel: +94 718512774 Email Address: *hansisandu98@gmail.com* FARU Journal: Volume 09 Issue 02
DOI: <http://doi.org/10.4038/faruj.v9i2.130>

A similar situation is observed in most of the Sri Lankan cities as well. Besides the already established image of Sri Lankan cities, re-imaging of new identities and unique features of cities – that have come to being as a result of ongoing socio-cultural and economic transformation of cities – has been mostly associated with the features of the built environment. It is debatable whether these re-imaging efforts have taken city impressions of users into consideration, to reflect spatial dynamics of cities, growing needs and aspirations of locals, and so forth.

No method so far has fulfilled the need to incorporate impressions of locals when re-imaging cities in Sri Lanka. However, there are a variety of opinions and approaches to identify the city identity, which are mostly subjective and incomprehensive. There has always been the doubt whether these methods can be used in Sri Lankan context and accommodate the needs and aspirations of locals. Therefore, the lack of a clear-cut method to re-image changing image of cities has been a timely requirement for planners, urban designers and other professional who see cities as economic engines.

Considering the specified gaps highlighted above, this research attempts to develop a novel method that can address the overall impression of users of cities in Sri Lanka and to provide a framework to re-image cities. The research is guided through the following question 'how user impressions can be channelled to re-image the city?' Galle city, one of the important social, cultural, and economic centres in Sri Lanka has been selected as the case study areas for the research.

2. Methodology

2.1. CASE STUDY

Galle city in the Southern Province of Sri Lanka was selected for this study as the case study area. Galle is an important economic centre of Sri Lanka and a popular destination amongst both local and international tourists due to its location and socio-cultural and historic importance. The Galle core area and the outer area of the city were selected for the study.

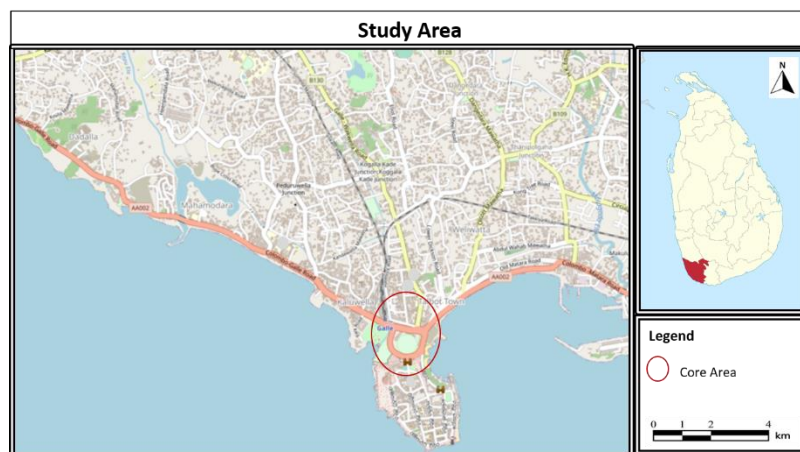


Figure 1: Study Area in Galle (Source: Prepared by Author)

2.2. METHOD OF DATA COLLECTION

Mainly, the Visual Collage Technique was also used as the data collection method for the research. In this method, a collection of photographs that covers the entire landscape of a city is used to collect impressions of diverse groups of people who act as important stakeholders of the city. The argument here is that a visual method can stimulate the thinking of people and gives a clear path to explore the object or the place presented in the visual material. According to Zaltman (1996), images can simulate thoughts and the social meanings. Photos can be used to explore how people read, understand, and value objects and place in their minds. A few studies have attempted to use Photo Collage Technique thus far in other disciplines. However, there is no evidence as to suggest this method has been used in city re-imaging.



Figure 2: A few photographs of Galle City used in the Photo Collage Exercise (Source: By Author)

In this study, approximately 50 photographs representing different objects and places of Galle city were used. A few examples of the photographs used are as in the Figure 1 below.

Overall, 10 focus groups with interest on the Galle city such as residents, merchants, students, retirees, youth, visitors, religious leaders, and professionals were used for the Photo Collage Exercise. Each group consisted of two or three members. Apart from that, a web-based questionnaire was used for the same purpose. In both cases, participants of the exercise were asked to identify the place, or the object presented in the photo and give cues as to what led them identify the object or the place presented in the photo. The web-based questionnaire is designed for getting more participants for the exercise. Figure 3 below illustrates the research methodology in more detail.

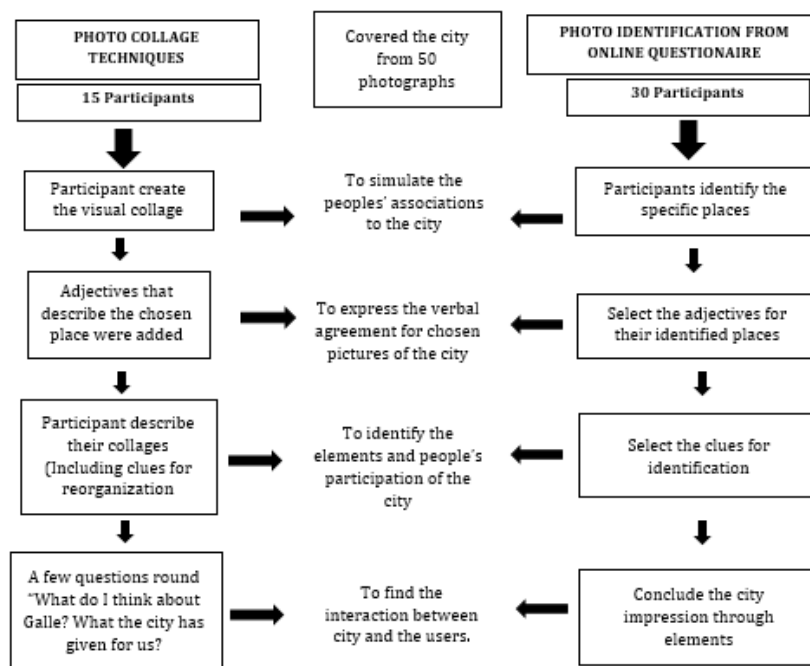


Figure 3: Methodology of the Research (Source: Compiled by Author)

2.3. METHOD OF DATA ANALYSIS: QUANTITATIVE MEASURING OF CITY IMPRESSION

2.3.1. City Impression through Elements

As per the elements identified by the focus groups during the Photo Collage Exercise, four (04) aspects/ categories of elements were identified. These categories are used in the next stages of the analysis.

- Buildings (e.g. landmark building, building characters, and building details)
- Functions (e.g. signboards, feelings, and activity)
- Roads (e.g. street furniture and signs, and roads)
- Nature (e.g. water bodies and trees)

2.3.2. Calculation of Identification Ratio and Presenting Ratio

Identification Ratio (IR) and the Presenting Ratio (PR) associated with each aspect or category (e.g. building, functions, roads, and nature) were calculated using the following formulas in this stage. These two ratios indicate the weight of each aspect or category in describing an impression of a place in Galle.

$$IR = \frac{\text{Number of times the aspect or category has been mentioned in the interviews}}{\text{Number of effective answers}}$$

$$PR = \frac{\text{Number of photos containing the aspect or category}}{\text{Number of photos}}$$

2.3.3. P-Value Calculation

It is important to discover the most recognizable signature elements which most people will take as a cue to identify what they see, whenever they appear. It can find through the P-Value calculation.

P indicates how significantly the parameter emerged as a city impression, i.e., the value of the chance to become an impression of a place. The meaning of the definition shows that the higher the P-value is, the more representative the element is, when it appears in the photo. For example, as shown below, the highest P-value belongs to function,

$$\text{P-Value} = \frac{\text{Identification Ratio}}{\text{Presenting Ratio}}$$

P-Value indicates how significantly the parameter emerged as a city impression, i.e., the value of the chance to become an impression of a place. The meaning of the definition shows that the higher the P-Value is, the more representative the element is, when it appears in the photo. For example, as shown in below section, the highest P-Value belongs to function,

2.4. METHOD OF DATA ANALYSIS: QUALITATIVE MEASURING OF CITY IMPRESSION

2.4.1. *City Impression through its Atmosphere*

Quadrant developed by Russell and Pratt (1980) was applied to analyse the atmosphere in more detail. Quadrant has been created from the chosen adjectives of the participants. In this case, the city has been considered in four dimensions. On one hand with the activation and the pleasant environment, and on the other hand with unpleasant and sleep environment. The adjectives were identified based on the online survey-based questionnaire and photo collages. The font size of the adjectives has measured through the frequency of selected adjectives by participants.

2.4.2. *Coding Process*

In addition to the quadrant, a coding process is applied to analyse the user impressions expressed in sentences. There are three stages in the coding process, as discussed below.

Stage 1: Open Coding

In this stage every single sentence (line-by-line) and paragraph that represent city impressions were analysed. Before the analysis all the impressions expressed in local Sinhalese were transcribed into English.

Stage 2: Axial Coding

To simplify the open coding process, the creation of a relationship between sub-categories and the main categories for “scenarios” were made. Analysis was done through major six elements.

Stage 3: Selective Coding

This stage is essential to link and develop the sub-categories and categories from the codes which appeared in the open coding stage. Among them, one turns as core categories having interrelationship which describe in the phenomenon of city re-imaging.

This verbal explanation analysis through coding is used to identify the main categories which have created city impressions and to develop a framework by addressing all the data collected in this study.

2.4.3. *Rich Picture Analysis Process*

The Rich Picture is created through the stakeholders, their interactions, and the environment (Sylvester at. El., 2007). It is the graphical tool for identifying the full verbal impression in case of Galle. The process has applied for the study towards a modification for the developed framework.

3. Data Analysis and Results

3.1. QUANTITATIVE ANALYSIS OF THE CITY IMPRESSION

3.1.1. *City Impression through Elements*

Through the web-based questionnaire, the respondents were asked to identify from nine elements categorization. As in the graph below, the respondents mostly identified ‘landmark buildings’. It is approximately 25% of all elements recognized by 30 participants. The next popular element is ‘Roads’, which is recorded as 16%. Therefore, it is possible to argue that these elements are the leading elements that affect the overall city impression of Galle.

‘Buildings’ is the most popular of all four aspects recognized by people. 39% of interviewees identified the buildings that were presented in the photos. It is mentioned 228 times by the 30 people and appears 161 times in the 50 photos. Within the aspect of ‘Buildings’, ‘Landmark Building’ is the most mentioned category.

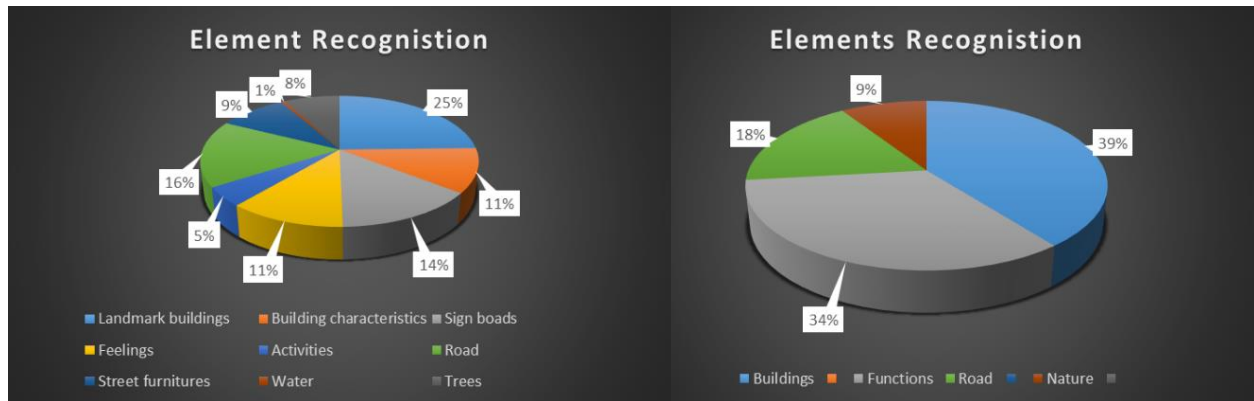


Figure 4: Element Recognition in Galle (Source: By Author)

3.1.2. Identification Ratio and Presenting Ratio

As in the graph above, 'Building' gets an extremely high value of IR. On average, each person mentions Building as a key cue during the web-based interview, which is approximately seven times. Moreover, as the orange bar shows, it appears four times on average in one single picture. A function is another strong aspect highlighted. Therefore, a clear image of readable functions helps people identify the places as well. On average, each person mentioned the 'functions' six times during the web-based interview and photo collage, and this aspect is pointed out three times in each photo.

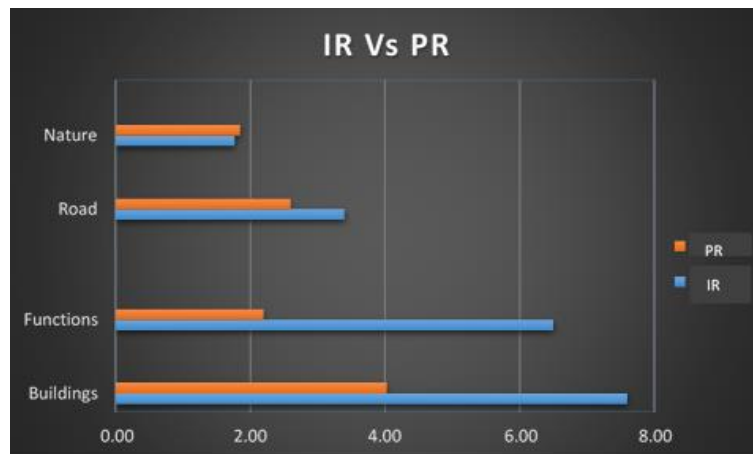


Figure 5: Identification Ratio and Presenting Ratio (Source: By Author)

3.1.3. P-Value Calculation

In the graph, 'functions' came as 2.9. It means that if elements of function appeared once, the value of becoming an identity of the city is 2.9. Although functions have the lowest PR in, it is the most noticeable feature of the city. It means that the aspect function has is absolutely a higher chance to become visual cue for people than the other three aspects. When elements of functions appear in the photo, they have the highest possibility to become a cue for people. The opposite example is Nature: this is the most unlikely item that people will take as an identification reference.

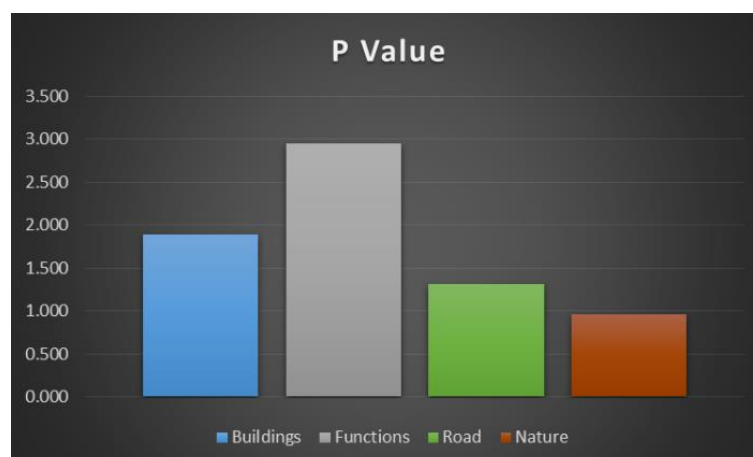


Figure 6: P-Value Calculation (Source: By Author)

3.2. QUALITATIVE ANALYSIS OF THE CITY IMPRESSION

3.2.1. City Impression through its Atmosphere

In the case of Galle city, the most selective adjective is 'crowded'. The town area of the Galle has been selected mostly by the participants with the crowded atmosphere observation. It creates an unpleasant environment for the city. Ugly, unclean, boring, and exciting observations are also evaluated by the participants and the city needs to be upgraded by reducing those observations, which are concentrated with unpleasant and sleep environment. At the same time, the valuable atmospheric condition is also evaluated by the participants by giving activation mode to the city. Beautiful, cool, and protective atmospheres were also identified by the participants which means a pleasant environment of Galle city. There is a blooming environment also which goes an unpleasant situation to the activation city mode. Most of the participants have mentioned "Karapitiya" has blooming characteristics with its new developments. It leads to creating the best impression for Galle.

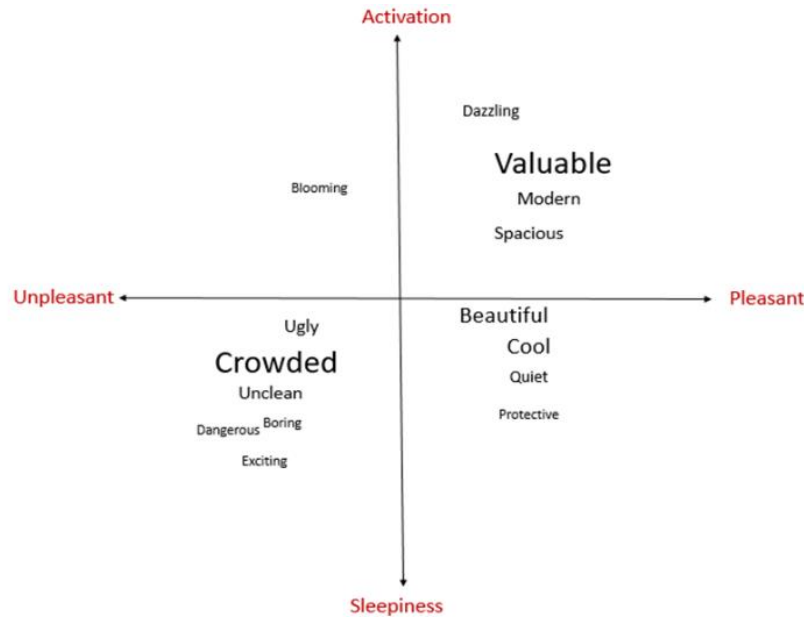


Figure 7: The Quadrant Development for Galle (Source: By Author)

The atmospheric analysis through quadrant development gives a path for city designers to reshape cities. The way that users see the city has evaluated with this and negative impressions, which lead to creating unpleasant and sleepy environment, should be omitted when the city comes to the re-imaging process. The strategies and implications must be considered by planners for that purpose. The perceptions which help to activate and create a pleasant environment should further improve to the city positively.

3.2.2. Coding Analysis

At first, in the open coding process, 34 concepts, 10 sub-categories and 5 categories were drawn as a result of investigating the attributes of categorizing and dimensioning.

Table 1: The Concepts from Coding (Source: By Author)

Concepts	Sub-categories	Categories
Interactions with people & the city	Complex urban Design	Combination of the people's perceptions and city appearance in order to the overall image of the city
Connected Place		
Distinctive characters of the city		
The environment features parallel to the city design		
Transportation features as city impression		
Provision of the facility at once	Impression of unique benefits for the users	Originality and the uniqueness of the city strengthens its attractive
Interactions between new development and income generation	Role of city history	
Background – historic features		
Spreading of culture in worldwide	City's value – city's image	
Interrelationship with building design and the city design		
Difference characters of the city impression – tangible & intangible		
Interaction between city users and the own industry		
City attractiveness through the environment	Expanded image with new characters of the city	Upgrade in order to new demands and trends
Trends of commercialization		
Expand the city opportunities & facilities		

New machinery and technology demand as city impression		
Measurers for crowd mitigation		
Transportation & local community	Infrastructure and city impression	
Waste management		
Strategy for death characters modification		
New city structural demand – more leisure	Demand for the A new experiment of city impression	
Strategies for modernization & the city behavior		
Experiment with commercialization		
The strategy based on building and its regulation		
City impression through people's participation	Communications with people & city	City identity creation by users
People & commercialization		
People one of being an element of the city		
People's behavior and actions to impress the city image		
Impression as an education brand	As Audience perceptions of the city	Vivid ideas of city impression
City symbol – city history		
City functioning – commerce and administrative		

As second step, axial coding has been done to simplify the open coding through major six elements.

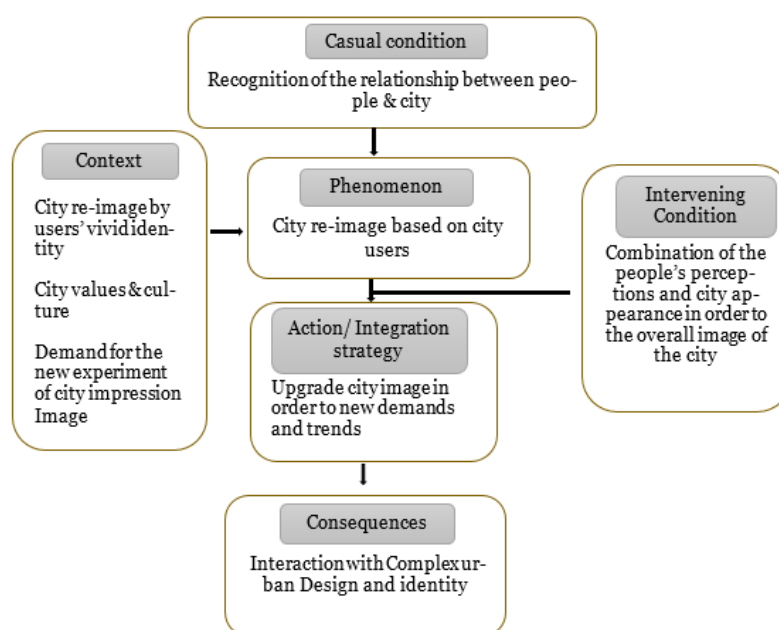


Figure 8: Axial Coding (Source: By Author)

The idea of an “impressive city” became as shown in Figure 9 which explains the categories and core categories highlighted from the analysis. After below model is developed from the previously mentioned analysis and the paradigm model in figure 8 is illustrated as a result of that to identify the relationship between those elements.

The main phenomenon in this study is a city re-imaging through city impressions. The people are the main core of the city's re-imaging process because all the functions have been raised with the people. People's participation in the city has been highlighted within this coding process. At the same time, built environment makes impressions to the city by including its value, culture and city design. The historic value of the Galle has been highlighted with its build characteristics by participants. The educational and commercial value of the city is also evaluated through the discussion in case of Galle. City design such as building arrangement and visual infrastructure acts as determinants of the built environment.

After synthesizing and integrating the categories into a core set of categories, a framework is developed by explaining the connected interactions.

City design and the identity are the main categories which affect to the city impression according to the analysis. City design is at the forefront for people and the built environment as media of remembering the city. Most of the participant has identified the city through its practical behaviors.

The city identity is another correlated aspect that is identified through this analysis. City identity gives values to the users as well. The intangible assets such as peoples' attitudes, perceptions are reasons for city impression. As

findings through this analysis, Commercial aspects are cues for the place identification in Galle and it also creates through the people that emerge overall city identity. Further, it has been identified as education center, destination place for gathering and leisure. The historic values also were impressed by users as identity. All of this identification has made a city impression in Galle.

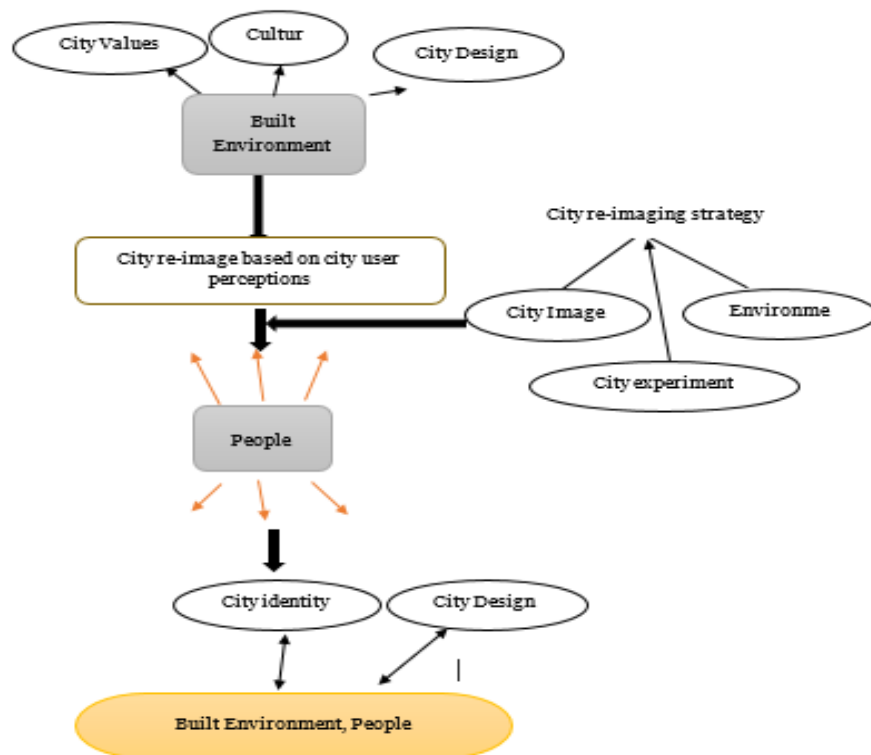


Figure 9: The Interrelationship of Categories (Source: By Author)

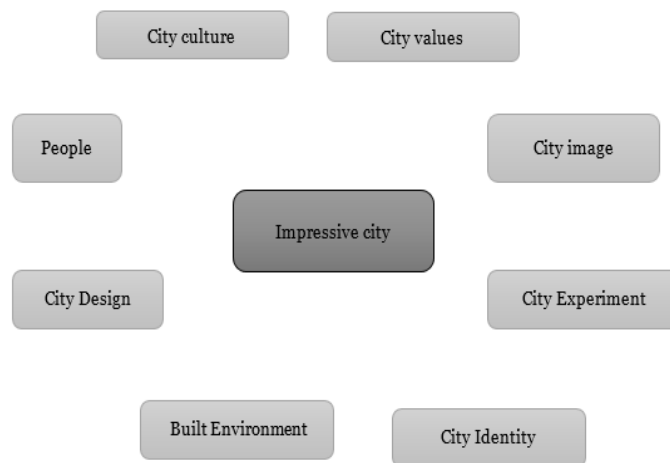


Figure 10: Main Categories from Coding Analysis (Source: By Author)

However, the people and built environment can be set up as common influencing factors for city design and city identity. All the activities have been made through people's behaviors as a significant feature of the city as city impression which help to design the city and create an identity. The built environment is another one that plays a vital role in city impression by influencing city design and city identity. The visual infrastructure of the city, arrangement of buildings, natural features play a significant role in city design. Most of the visual cues are created through the city environment.

To sum up, the city design and city identity interpret as the main categories of the city impression through this framework. Moreover, people and the built environment have been arranged in the center by acting as an influential factor for each category.

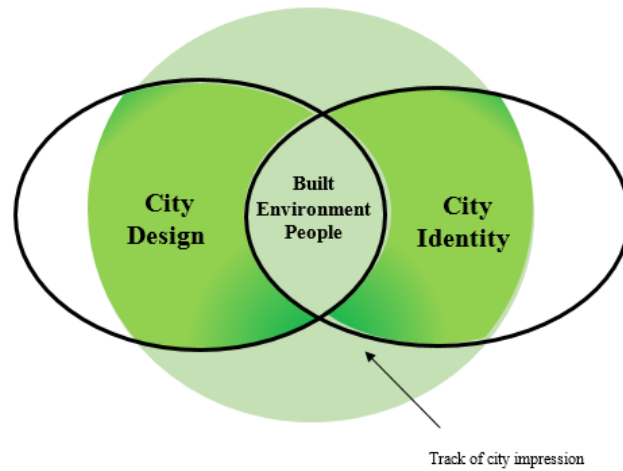


Figure 11: Interactions between categories and framework formulation (Source: By Author)

3.2.3. Rich Picture Analysis

The process has applied for the study towards a modification for developed framework. This presented rich picture is based on the photo collage techniques done by users in the city as shown in figure 12.

The key components of a rich picture are understanding the problems, route of solutions and sense of conveying the message (Yoon, 2010). In the case of Galle rich picture has presented below (Figure 12) as the effective system for identifying the negative consequences and expressing the development strategies in the process of re- imaging the city. Finally, it created as an incorporated picture of all significance impressions which evaluate through photo collage technique. However, the negative factors have been identified through the rich picture analysis. Those are positioned outside of the city impression track.

However, the negative factors have been identified through the rich picture analysis. Those are positioned outside of the city impression track

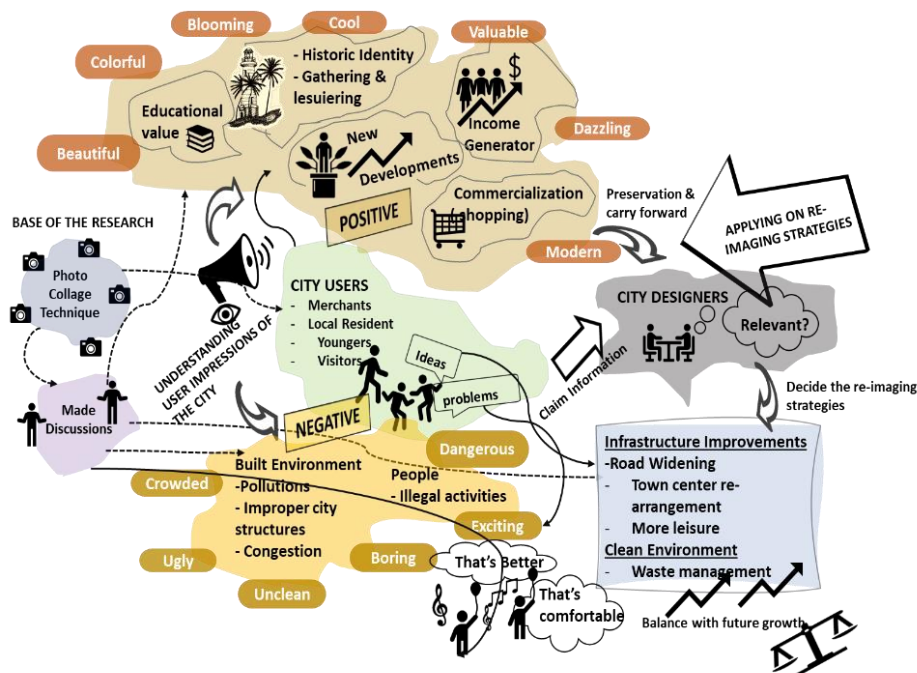


Figure 12: Rich Picture (Source: By Author)

Some participants said that the built environment of the city is unclean and unclear because of some city features. In the case of Galle, the Kunu Ela (canal) make a negative sense to the people as its unclean situation. Some participants highlighted the shop arrangement of Maha Weediya creates a bad impression for city design. And some activities of people create a bad impression to city identity. They highlight some places as dangerous place because of people's illegal activities. It leads to create a negative identity for city. Anyhow, those unnecessary factors which mean to the bad impressions of the city can remove in the re-imaging process. It will create more successful re-imaging strategies as a final result.

Therefore, the framework contributes a new insightful idea to re-image the city. And also, the infrastructure of the city included through the city design & city identity in the city impression track as rotations. It can be both negative and positive impressions. As an example, the commercial industry in Galle could be expressed by users as city design or identity and it can be expressed both positive & negative according to the scenario. It is benefited to the city as more people are fulfill their commercial needs at once and it negatively affects to the environment as crowd generation and pollution.

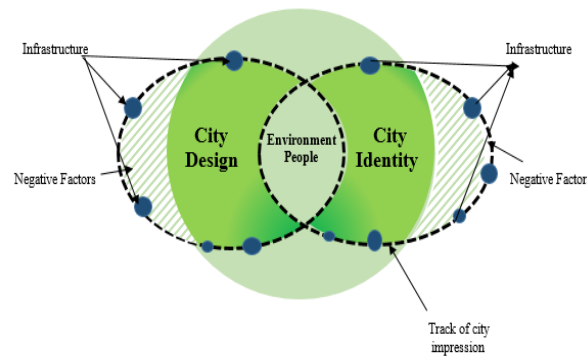


Figure 13: Negative factor identification and framework formulation (Source: By Author)

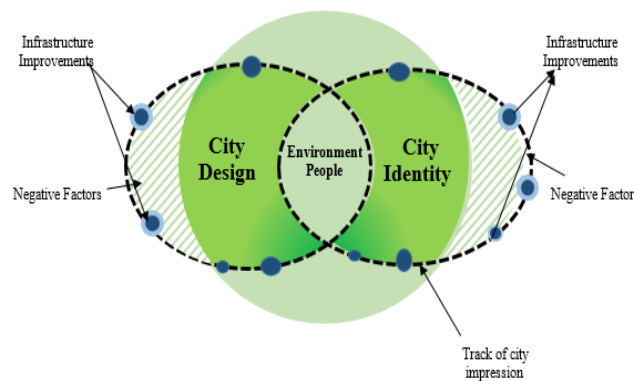


Figure 14: integrated framework by combining all coordination (Source: By Author)

As the last stage, framework has evaluated through the solutions which identified through rich picture analysis. The participant of the photo collage techniques has emerged some suggestions for reducing negative factors for overall city impression through some ideas of city users. They highlight the importance of upgrading the infrastructure facilities for the overall city impression. Road widening, facility arrangement for an upcoming population, waste management system is the main thing that they highlighted. However, infrastructure improvement has created as main aspect for overall impression of city which positively influence.

4. Conclusion

The study develops a methodological approach to re-image the cities by focusing on city impressions. As first step, city impressions have measured through the elements of the city and most recognizable elements (high visual clues), which are considered in the city re-imaging process. Further, study evaluates how city impressions channeled by users in its atmosphere level through a quadrant development. A common impression of the city has identified through both negative and positive perceptions. Finally, a framework was developed through the coding process, and it is able to identify the key factors which leads to city impression when re-imaging the city. The connections between those factors also found out through this framework. The rich picture analysis that used to modify the framework has addressed the negative factors as well. It will help the cities to identify negative impressions and create strategies to mitigate them when re-imaging the cities. The study finds that, the visual methodological approach can be utilized to identify city impressions to re-image the cities. However, the developed framework can apply for any city as a common framework for re-imaging the cities.

There are a few limitations of the method that were identified under this study. First, the limited photographs have been used because of the time limitation. In order to find out more participants to identify the elements as user impressions, the web-based photo identification survey also was done with the consideration of current crisis of the country. At the same time, more time was spent on collage creation activity, and it was a bit difficult to select random

participants for the exercise. Due to the time limitation and current crisis of the country, the study was unable to do this collage creation in focus groups and creating conversations within the same type of focus group.

Finally, this study can be extended in multiple directions. The city impression analyzed can be extended through GIS data in future research areas by combining visual and sensible factors with other digital areas. The validity of this framework can be measured by applying different case studies as an expansion of the methodology.

5. References

- Atzwanger, K., & Schafer, K. (1999). Evolutionary Approaches to the Perception of Urban Spaces. *Evolution and Cognition*, 87-92.
- Cinpoes, R. (2008). Thematic Articles-National Identity and European Identity. *Journal of Identity and Migration Studies*, Vol.2:1.
- Erickson, B., & Roberts, M. (1996). Marketing Local Identity: The Importance of the Physical Documentation on Urban Identity. *International Making Cities Livable Conferences*.
- Erickson, B., & Roberts, M. (1997). Marketing Local Identity. *Journal of Urban Design*, Vol.2.
- Glaser, B., & Strauss, A. (1980). *The discovery of grounded theory: Strategies for qualitative research*. New York.
- Goulding, C. (2000). The commodification of the past, postmodern pastiche, and the search for authentic experiences at contemporary heritage attraction. *European Journal of Marketing*, 835-853.
- Inn, K. (2004). Plan for City Identity Establishment and City Marketing, the Case of Kimpo City. 233 - 240.
- Kostof, S. (1991). *The City Shaped. Urban Patterns and Meanings through History*. Little, Brown and Company.
- Laaksonen, P., Laaksonen, M., Borisov, P., & Halkoaho, J. (2006). Measuring image of a city: A qualitative approach with case example. *Palgrave Macmillan Ltd*, 210-219.
- Levebvre, H. (2001). *The Production of Space*. Blackwell Publishers.
- Lynch, K. (1959). *The Image of the City*. London: The M.I.T. Press.
- Mariyathas, s. (2016). *An examination of the socio-cultural responsiveness of urban design initiatives in the context of sri lanka special reference to gandhi park in batticaloa city. Faru proceedings-2016*, 143.
- Morello, E., & Ratti, C. (2009). A digital image of the city: 3D isovists in Lynch's urban analysis. *SAGE journals*, 837-859.
- MOTAMED, B., & FARAHANI, L. (2017). THE EVALUATIVE IMAGE OF THE CITY THROUGH THE LENS OF . *Journal of Architecture and Urbanism*, 25 - 32.
- Rathnasekara, S. N., & Munasinghe, J. N. (2021). Sustaining the Image of the City: What Matters More? An Investigation in the City of Colombo.
- Rapoport, A. (1982). Human Aspects of Urban Form, Towards a Man-Environment Approach to Urban Form and Design. *Pergamon Press (Aust.)* .
- Russell, J., & Pratt, G. (1980). A description of the affective quality attributed to environments. *Journal of Personality and Social Psychology*, 311-322.