

# **A STUDY ON CHILDREN'S PERCEPTION OF THEIR LOCAL LIVING ENVIRONMENT**

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February, 2013

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#### DISCLAIMER

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To children who adapt to their environments everyday  
and one in particular...

my sister Shaima,  
a child who perceives her environment with abundant curiosity.



## ABSTRACT

One of the groups that represent a large portion of society is the children. It is argued that their perceptions and experiences are entirely different than those of adults. The fact of the matter is that due to the heterogeneous nature of these perceptions, they are not always easy to capture, but when captured and incorporated in the spatial representation, this information enables a connection to be formed between the large scale urban phenomena and the small micro scale of the individual and his/her experience in their living environment. This link becomes essential in shedding a light onto what constitutes a positive quality and what constitutes a negative quality of the living environment.

This research focuses on examining the social and physical qualities that are important to children by adopting the framework of Louis Chawla and her revival of the Growing Up in Cities (GUIC) project. This is done by employing qualitative methods that accounts children as active participants including participatory mapping, Focus group discussions, interviews, guided tours, and photo-voice. The study was conducted in two phases: the first with a group of international children (28 children) examining the city centre area of Enschede and the second with a group of Dutch children (39 children) examining their own neighbourhoods.

Using GIS and Atlas-ti to analyze the collected data, the findings are analyzed and presented in a manner that enables a connection to be formed between the different contextual information, the photographs, and the spatial maps. This provides a better idea about the perceptions of these children, and gives a detailed insight into why certain perceptions occur and what are the physical and social qualities that are associated with these perceptions (both positive and negative qualities)

Many of the social and physical qualities of the original framework appear in these studies as well, with the introduction of new qualities that emerged in this context (i.e.: smart technologies, natural elements, old/ugly features, bike lanes, and coffee shops). Differences between the two contexts (the city centre and the neighbourhood) start appearing when they are further analyzed and dissected to different themes.

The process and the findings presented in this study are communicated to two local planners in Enschede and they carry the possibility of incorporation into the planning process to better aid policy related decisions.

**Keywords:** children, perception, living environment, physical qualities, social qualities, positive qualities, negative qualities, qualitative methods.

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God Bless...

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# 1. INTRODUCTION

*The purpose of this chapter is to present an overview of the general components of this research. This is started by laying out general background information about the research's main theme: The perception of the living environment. This is followed by the definition of the research problem and the justification for carrying it out, the research's main objectives and sub-objectives, the conceptual framework that guides this research, and finally the structure of the following chapters is laid out in the last section of this chapter.*

## 1.1. Background information

As static and constant the built environment appears to be on a map, it is very much a dynamic entity that influences the people inhabiting it in various ways. These inhabitants perceive their surroundings from their own vantage points. In other words: we as humans construct the city in our minds and consequently, we get affected by this image we hold in the way we inhabit and experience the space (Lynch, 1960). Nevertheless, this generalization of the human perception rarely occurs; the fact of the matter is that people do not all belong to a homogenous group; they are individuals that vary across a number of different dimensions, some of which are: gender, age, ethnicity, and sexual orientation... etc. This means that the way individuals perceive their surroundings and the implications that perception has on their everyday activities changes from person to person.

One of the groups that represent a large portion of society is the children. Around 25% of the population in western nations are under the age of 18 and it is evident that the preferences, needs, and experiences of these children are different than those of the adults (Frank, 2006). These preferences, needs, and experiences stem directly from the perceptions the children hold of their surroundings; therefore, understanding how children perceive and relate to the physical and social construct of their surrounding is central to respond to these needs in the planning process.

It is important to realize that it is difficult to understand these perceptions and even more difficult to capture and reflect them in the planning process because it is subjective (Celea, 2006). In her studies, Kwan (2002) approaches the subject from a feminist geography standpoint where seeking to understand these perceptions often involves explaining accounts that are not accessible through conventional methods and it also seeks to empower the group – in Kwan's case the women - that is involved in the research . In order to illuminate these perceptions, the conventional quantitative information needs to be complemented with contextual qualitative information (Cope & Elwood, 2009). When displayed and incorporated in the spatial representation of space, this contextual information enables a connection to be formed between the large scale urban phenomenon and the small micro scale of the individuals.

In effect, attempting to understand the children's perception of their environment and trying to get insights into their experience of their local neighborhood context involves a great deal of research and investigation. This study will attempt to look into capturing these perceptions as a preliminary step into understanding the implications of these perceptions on their experiences, needs, and preferences.

**1.2. Research probelm and justification**

Despite the recognition of the importance of children’s input in creating settings that will promote a healthy environment for their living, urban planners have failed to address the needs and opinions of children in their planning efforts. The few instances where children’s insights were considered were mainly in child oriented projects such as playgrounds and schools which does not reflect the many other ways these children interact with the city (Simpson, 1997). But researches have concluded that children perceive the space and inhabit it differently than adults which results in different experiences and needs (Talen & Coffindaffer, 1999) and when planners fail to address these needs, the result is a city where these children feel alienated and excluded (Gleeson & Sipe, 2006). This has been documented in several researches that registered the children’s perception where the alienation can be evident in the limited independent mobility of children in urban environments (Broberg & Fagerholm, 2011), The reduction of walkability and general physical activity (De Vries et al., 2010; Wridt, 2010), and the exclusion of the children from the public spaces within their urban environment (Laughlin & Johnson, 2011).

Some researchers have realized the importance of children’s input on their environment. A pioneer in that is Lynch (1977) and his Growing Up In Cities project (GUIC) that was initiated in the 1970s in collaboration with UNESCO. This project was launched to involve children and adolescents in evaluating their local environment. In Lynch’s opinion, it was necessary to understand how the children perceive and use their space so that the findings can be used to better the quality of life and improve the urban environment for children (Lynch, 1977). He used multiple methods including use of demographic and census data, observation of children use of their community, interviewing groups of children, guided tour led by the children, and interviews with adults including parents and policy makers. This project was later revived in 1996 motivated by the Convention on the Rights of the child and it’s reaffirmation in Agenda 21. It focused on documenting improvements or deterioration by comparing the 1970s findings with the new gained results in the same cities and by establishing new baselines at new cities (Chawla, 2001). This resulted in developing indicators of local environmental quality based on the evaluation of the children themselves. Table 1 presents a list of these qualities divided into physical and social qualities both positive and negative. According to Chawla (2001) indicators are ranged along positive and negative poles of social and physical axes of place identity; see Fig 1 – Conceptual Framework - for further explanation.

Table 1 - Indicators of Local Environmental Quality

<b>Living Environment Qualities</b>	<b>Positive</b>	<b>Negative</b>
<b>Physical Qualities</b>	<ul style="list-style-type: none"> <li>• Green Areas</li> <li>• Provision of Basic Services</li> <li>• Variety of Activity Settings</li> <li>• Freedom from physical Dangers</li> <li>• Freedom of Movement</li> <li>• Peer Gathering Places</li> </ul>	<ul style="list-style-type: none"> <li>• Lack of gathering places</li> <li>• Lack of carried activity settings</li> <li>• Lack of basic services</li> <li>• Heavy Traffic</li> <li>• Rubbish/Litter</li> <li>• Geographic Isolation</li> </ul>

<b>Social Qualities</b>	• Social Integration	• Sense of political powerlessness
	• Freedom from social threats	• Insecure Tenure
	• Cohesive community identity	• Racial Tensions
	• Secure Tenure	• Fear of harassment and crime
	• Tradition of community Self-help	• Boredom
		• Social Exclusion and stigma

Source (Chawla, 2001)

The above discussion illustrates the importance of urban settings that respond to the needs of children. These urban settings are essential in a healthy physical, psychological, and social development of the children inhabiting them. For that to happen, planners need to consider the children as essential stakeholders in the process. A preliminary step for researchers and planners would be to understand the role of a neighbourhood context in shaping children's perception and to get insights into children's experience and use of their neighbourhood. There are researchers that suggest that children are experts in their environment and they are well suited to identify issues that matters to them and suggest solutions that best address these issues (Laughlin & Johnson, 2011; Lynch, 1977; Talen & Coffindaffer, 1999). A continued disregard to their voices and needs may run the risk of planning neighbourhoods and cities where the children are isolated, bored, and inactive.

Following in the footsteps of Lynch (1977) and his Growing Up in Cities (GUIC) project and Chawla (2001) and her revival of the initiative, this research will focus on involving children in the research process by capturing their perception of their local environment in the city of Enschede. Capturing the perception of these children serves as an initial step in understanding the needs and preferences of the children with respect to their living environment. These perceptions hold the possibility of being carried further and eventually become incorporated in the planning process. The research will focus on school children between the ages of 11 to 16 since children at that age are more able to communicate in writing, speech, and/or drawing and also have higher awareness of their surrounding since the spatial extent of their activities would be larger than those of the younger children.

### 1.3. Conceptual framework

In her revival of The Growing Up in Cities project, Chawla (2001) developed indicators of children's satisfaction or dissatisfaction with the quality of their living environment. These indicators as shown in Figure 1 reflect the socio-physical characteristics of the local environment according to the evaluation of children themselves. They are ranged along positive and negative poles of social and physical axes of place identity. As illustrated, this results in four quadrants: the first one includes both physical and social qualities that are positive; followed by a quadrant where both physical and social qualities are negative; a quadrant where the physical qualities are positive, but the social qualities are negative; and finally, a quadrant with positive social qualities and negative physical qualities.

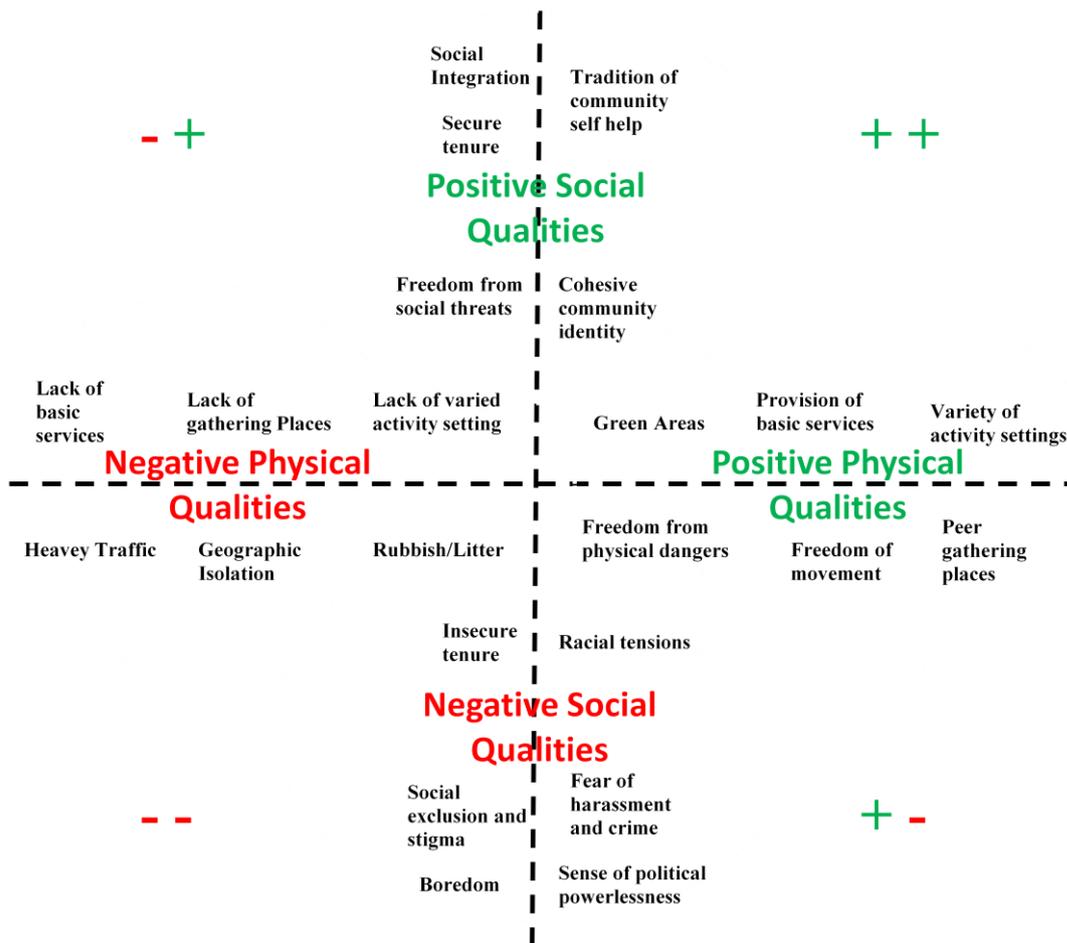


Figure 1 - Conceptual Framework

Source: (Chawla, 2001)

These indicators are based on the evaluation of 10 to 15 year old children at Growing Up in Cities (GUIC) sites which included: Buenos Aires, Argentina; Melbourne, Australia; Northampton, UK; Bangalore, India; Trondheim, Norway; Warsaw, Poland; Johannesburg, South Africa; and Oakland, CA, USA. It can be noted that some of these sites are in developed nations and some are in developing ones, as a consequence these indicators may not appear in all sites and some might be more relevant in some cities more than other. For example, children in the low-income cities may experience more the negative physical qualities; while the children in the high-income sites might report more on the other qualities. Therefore, this will serve as a preliminary framework and it will be further refined and developed to be adapted to the context of the case study area in Enschede, The Netherlands

## 1.4. Research Objectives and Research Questions

### 1.4.1. Main Objective

The main objective of this research is to investigate the local living environment of children by working with the children themselves and looking at their perceptions of their local context.

### 1.4.2. Sub-objectives and Questions

- To identify the key elements in the living environment from the perspective of the children.
  - *What are the important physical qualities of the living environment?*
  - *What are the important social qualities of the living environment?*
  - *Which of the identified qualities are applicable for the city of Enschede?*
  
- To understand the perception of the children of their local living environment and identify patterns and regularities of these perceptions.
  - *What are the available methods that are best suited to capture the perception of the children?*
  - *What are the children's perceptions of the physical qualities?*
  - *What are the children's perceptions of the social qualities?*
  - *What are the identified patterns of the captured perceptions?*
  
- To reflect on the potential value of the process and information collected to planning policies.
  - *What are the benefits -if any- of children's perception to the general planning policies?*
  - *What method of collecting information from the children is most useful to planners?*

## 1.5. Thesis Structure

This research will be done in four phases. In the first phase the indicators both physical and social will be investigated further and elements that are relevant to the children in general will be identified. This will be done through a review of relevant literature. Simultaneously, a focus group will be conducted with the children. The purpose of the focus group will be to further determine -according to the children in the case study area- the specific qualities that are most important and relevant to them. Additionally, a review of relevant literature will also be conducted to identify the suitable and most effective methods to conduct the second phase of the research which will focus on accurately capturing the perception and experience of the children in their neighbourhood.

After identifying the relevant elements and the methods to measure the perception of these elements, the second phase will be focused on collecting primary data in the field. This will begin by working with children from two schools and by getting consent and ethical permission from the guardians and the children themselves. The methods here will include interviews, guided tours with the children, mapping exercises, and photography to identify the spatial extent of each indicator identified in the first phase.

Following data collection, the third phase will mainly focus on data analysis and identifying patterns and regularities in the registered perceptions. This will be done by looking at the mapped locations of the children and layering them in an attempt to identify possible spatial clusters and patterns. The second part will look at qualitatively analyzing the interviews using coding methods in order to get more insights into the registered perceptions and to identify patterns and trends that may surface with gender of the child for example.

The fourth phase will be mainly a reflection of the outcomes of the research and their benefits in identifying the positive and negative qualities; furthermore, the possibility of incorporating them in the planning process will also be reflected on. This phase will look into relevant literature to identify the benefits and limitations in taking children's insights into account in the planning process. Interviews with planners will be conducted to document the benefits and limitations of the conducted research in Enschede.

Chapter 1: *Introduction*. This chapter gives a short introduction about the research.

Chapter 2: *Literature Review*. This chapter reviews key literature that will inform the subsequent chapters of the research.

Chapter 3: *Study Area*. This chapter gives a general overview of the specific case study undertaken in this research.

Chapter 4: *Data collection: Approach and Methodology*. This chapter includes a detailed description of the methods adopted in the data collection and data analysis

Chapter 5: *Results and Discussions*. This chapter presents the research findings of the main case study and the analysis of these findings.

Chapter 6: *Supportive Case Study* This chapter presents the supportive case study conducted and summarizes the findings of it.

Chapter 7: *Reflection of the Results*. This chapter reflects on the process and results and the possibilities of including them in the planning process

Chapter 7: *Conclusions and Recommendation*. This chapter presents conclusions and recommendations based on the findings and the reflection of the findings.

## 2. CHILDREN, THEIR ENVIRONMENT, AND METHODS TO INCLUDE THEM IN RESEARCH

*This chapter gives a broad overview of the topic of children and city planning. It starts by laying out the general reason why children's insights are important by discussing their population in urban areas and the implications of living in cities have on their lives. This is followed by a chronological summary that looks at the international initiatives that were established in recognition of the children's rights and needs to a healthy living environment. Finally, a section on planning for children and why planning urban settings that responds to children's needs is of importance is introduced. This leads to the main focus of the research, introducing the Growing Up in Cities initiative and its indicators that Chamla (2001) developed as a result of working with children in different cities.*

### 2.1. Children in the city

As the world's population increases every year and the migration of people to the cities is on the rise, more than 50% of the urban population is under the age of 19 in many cities in the world (UNICEF, 2012). As a consequence of this, children are expected to enjoy access to educational, medical, and recreational facilities; but nevertheless, a large number of them (mostly in developing countries) are still denied these essential services despite the fact that they may live within close vicinity of them. In the developed countries even though children may not suffer extensively of the same issues their counterparts experience in the developing world, children who live in an urban setting have a different set of challenges as safety issues, lack of green areas, and lack of spaces to enjoy various activities among other constraints are limiting their daily mobility and activities (Pacione, 2005).

In the western city -and in particular after the Second World War and after the development of the transportation system- the lives of children have been significantly impacted. In fact, Gleeson and Sipe (2006) suggest that with the planner's persistence in zoning and with the prioritization of cars over people, a divisive city is created. There is a separation between home and places of schooling, leisure, and recreation and the neighbourhood is no longer the place where these activities occur which leads to environments where the children are increasingly marginalized and excluded.

### 2.2. International recognition of children's rights

#### 2.2.1. Children's right to participate

In 1989, the Convention on The Right of The Child was established by the United Nations and ratified by 140 countries. A child -in this case is any individual under the age of 18- was made a clear independent subject with rights to a voice in matters than concerns him/her (UNICEF, 1989). In fact, there is a very general call for children's participation: "States parties shall assure to the child who is capable of forming his or her own views the right to express those views freely in all matters affecting the child, the views of the child being given due weight in accordance with the age and maturity of the child." (UNICEF, 1989, Article 12). It goes further suggesting that: "The child shall have the right to freedom of expression; this

right shall include freedom to seek, receive and impart information and ideas of all kinds, regardless of frontier, either orally, in writing or in print, in the form of art, or through any other media of the child's choice" (UNICEF, 1989, Article 13).

In 1992 Agenda 21 came into action in order to meet the new challenges of urban development and the environment which incorporated a comprehensive plan of action to be taken globally, nationally and locally to achieve sustainable development (United Nations, 2009). In chapter 25, it has been deemed imperative that the youth must be involved in environment and development decision making and in the implementation of the program's goal to ensure the long-term success of Agenda 21 (United Nations, 2009, Article 25.1).

Unfortunately, even though most member countries are signatories, not all countries have applied these guidelines of child participation especially in the case of municipal governance. In the Netherlands, youth participation is getting more and more attention. The "opportunities for all children" framework states that youngsters aged 13 to 25 years old should be able to participate in local civil society and have a say in local policy issues that concern them. (Netherlands Youth Institute, 2012). How and to what extent this participation takes effect is determined by the local municipalities.

### 2.2.2. The child friendly city Initiative

In 1996 during the International United Nations Habitat II conference, a workshop was organized in response to a recognition that there has been insufficient attention given to issues of safe, secure, and healthy living conditions for children. It was declared then that: "The well-being of a children is the ultimate indicator of a healthy habitat, a democratic society and good governance" (UNICEF, 1996). This led to an initiative that was launched by the UNICEF to help guide cities in promoting children's rights and including them as a key component of their policies. A child friendly city is defined as a city committed to fulfilling children's right, including their right to influence decisions about their city, express their opinion on the city they want to live in, participate in family, community and social life, receive basic services, drink safe water, have access to proposer sanitation, be protected from violence, walk safely in the streets on their own, meet friends and play, have green spaces, live in an unpolluted environment, participate in cultural and social events, and be an equal citizen of their city with access to every service, regardless of ethnic origin, religion income, gender, or disability. (UNICEF, 1996).

### 2.3. Participatory research with children

Participatory planning with citizens has grown in recent years since the important effect planning cities has on the lives of the people inhabiting these cities has become universally acknowledged. But these demands for participation in urban planning do not always propose that children are considered in the process; in fact, children are considered "invisible" due to some views about who would have

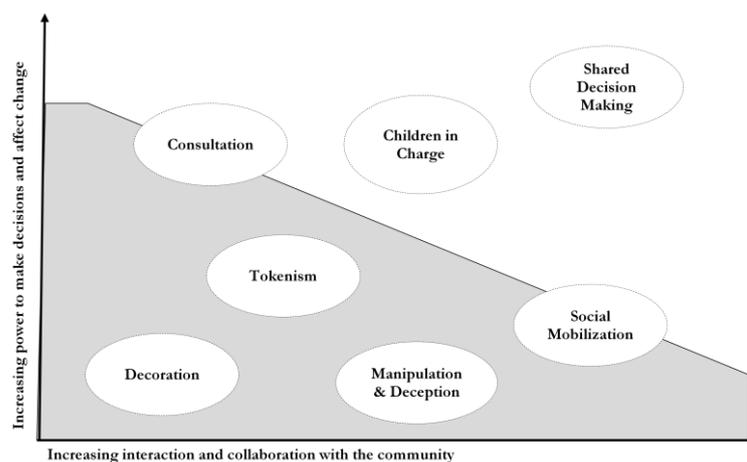


Figure 2 - Dimensions of young people's participation

Source: (Hart & Centre, 1992)

interests in planning, and to certain laws that controls the use of spaces by the children (Simpson, 1997). Even when the children are included, the participation is not always meaningful and is often misdirected. This was fully illustrated by Hart and Centre (1992) who provide a framework for children's participation as illustrated in Figure 2. Based on the two dimensions shown in Figure 2, the different forms of interaction between adults and children can be described. These include: *Manipulation and deception* which is when adults consciously use children to achieve their own ends without informing them; *Decoration*: which is when the children are used to promote a cause without prior knowledge of what they are doing or why they are doing it; *Tokenism*: which is when the children seem to be participating but have little choice about the subject or the process they are involved in; *Consultation*: which is when adults ask children for their opinions and they are given serious consideration; *Social mobilization*: which is when children are involved in carrying out a project that is determined by adults; *Children in charge*: which is when children initiate the project and make decisions; Shared decision-making: which is when every member of the community has a chance to be involved in the process of decision making (Hart & Centre, 1992).

A research where the perceptions of children regarding their cities are investigated usually falls under consultation, According to Driskell (2002) as long as the children understand why they are being asked to take part in the research, have a choice of not participating, and are informed about the results, the research can be considered as a meaningful form of participation even though children are not directly given a chance in decision making per se.

## **2.4. Qualities of the living environment**

As discussed earlier, the indicators that form the conceptual framework of this research developed by Chawla (2001) as a result of her revival of GUIC was a product of the evaluation and experience of 10 -15 year olds in low or mixed income urban districts in eight different cities. The general consensus among the children who participated in the GUIC as to what constitutes good or bad places even though they came from different countries, cultures and different generations (considering the children involved in the initial project in 1970), implies that these indicators or qualities extend beyond the project's boundaries. This can be reflected and seen in researches carried out in Australia and North America (Homel & Burns, 1987; Spilsbury et al., 2009; Vliet, 1981). These physical and social qualities that pertain to the children who live in an urban context and that have appeared repeatedly in the different researches are discussed below in further detail. It is worth noting that even though the qualities may repeatedly appear in different contexts as noted in the Growing up in Cities project, they don't have to all be applicable within a certain context; specifically in this case: The city of Enschede.

### **2.4.1. Significant Physical Qualities of the Living Environment**

The physical qualities of the living environment that affect the experience of place of the children inhabiting it can be divided into positive qualities and negative qualities. According to the children in several Growing Up in Cities sites the physical indicators or qualities of a living environment include the following:

*Green Areas*: according to Chawla et al. (2002), green areas can be any green spaces with trees, whether formal or wild, extensive or small. These spaces should be available to children in one form or another; whether in the form of green fields for sports, overgrown wild areas, or tree shaded parks. Even though this physical quality may not always be present, it is always valued by children. In Norway and in

England Children were using the overgrown lots or the banks of the river and its flood plain (Percy-Smith, 2002; Wilhelm, 2002). And even when these kind of green areas were not easily accessible like in the case of some Australian cities, children still extensively used the few courtyards with shaded trees in the vicinity of their neighbourhood (Malone & Hasluck, 2002). These green areas are arguably important for a people's health and psychological well-being. In a study conducted in Sweden Gidlöf-Gunnarsson and Öhrström (2007) conclude that it is essential to provide easy access to green areas in order to get relieved from daily environmental stress. This becomes more important for children as these green areas provide an opportunity for play, discovery, and physical activity.

*Freedom of Movement:* Children should be able to roam around freely, meet friends, and find interesting things to do in their local area. They should be able to rely on the protection of the adults around them to range safely within their local area and in order for that to happen there should be a general sense of safety (Chawla et al., 2002). This does not mean that all areas where children hang out are risk-free, but children learn to negotiate their space and avoid areas of high risk due to their local knowledge of the place. This quality ties closely with other physical qualities; namely: *Freedom from physical dangers* and *Heavy Traffic*. Heavy traffic is when streets and public areas are taken over by cars (moving or parked), this makes it hard for people and specifically children to move around and create major barrier for their independent mobility. Several researches have looked at the extent of the independent mobility of children and what physical or social barriers constrict their range of movement (Broberg & Fagerholm, 2011; Christensen, 2003; Kytä, 2004; Leonard, 2007). Physical dangers (including heavy traffic) make even the places adjacent to the streets unpleasant for children to hang in which affect their use of it; this immediately ties to the quality: Peer gathering places.

*Peer gathering places:* Children strive for the need of places where they can meet friends. These places need to be safe and accessible to them within their community. The ability of children to claim corners and spaces where they can play and socialize with their friends is very important. These places can be anything from a street corner, a local park, a cafe, a store, a playing field, a community centre, or an empty parking lot depending on the context of the living environment. These places provide a space for these children to be "themselves". There should also be a *Variety of activity settings* for these children to play informal games, play sports, shop, and be away from adult supervision. When there is a lack of these settings, the children perceive their environment as isolating and boring as proved by many children in the different Growing Up in Cities sites and other cities too (Chawla et al., 2002; Laughlin & Johnson, 2011).

*Rubbish/Litter:* Children consider trash and litter as a sign of adults neglect to their environment, infact according to O'Brien (2003) children are more sensitive to that because they are more likely to be closer to the ground due to their smaller size.

*Geographic Isolation:* This happens when the local living environment of the children is geographically isolated (by a way of a mountain, a river, a valley) than other communities.

*Provision of basic services:* Basic services (clean water, food, shelter, waste collection and access to sanitation) should be provided to all children. The lack of these basic services increases the chances of diseases among the children and it also results in more work for them (fetching water, or working to provide for their families) (Chawla et al., 2002)..

#### 2.4.2. Significant social qualities of the living environment

The qualities that determine the experience of place for children are not limited to physical ones, but extend further to include social qualities. According to Chawla et al. (2002) these social qualities are as follows:

*Social Integration:* It is very imperative for the children to feel welcome in their community in public and semi-public places. It is important that they interact and mix with other age groups and not feel excluded. Exclusion can happen due to economical reason (if the child is associated with poverty), or due to a societal reason (children feel unwelcomed and harassed in public places or shops), or due to racial background which is referred to as *Racial tension* (where the children experience stigmatization based on their race or ethnic background), or even due to a political reason (children are not allowed to gather either officially or unofficially and they are mistrusted by adults) (Klasen, 1998). This means that the children need to be *Free from social threats*. Children also need to have a sense of being valued members of their communities in order to feel integrated.

*Fear of harassment and crime:* This quality ties closely with some physical qualities that are discussed above like for example freedom of movement. Due to violence and crime in the community, children are restricted in their movement and use of spaces.

*Boredom:* children express high levels of boredom and alienation. This again ties to physical qualities like variety of activity settings and trash/litter. For example, if these places are not interesting, featureless or littered, children will probably feel bored in them even if they were specifically intended for children's use.

*Cohesive community identity:* Children are aware of their local community's history and take pride in its accomplishments and history. The community has a positive identity that is expressed through activities like art and festivals where the children are active participants in its festivals and cultural lives. One way of building this positive identity of the community is through *Tradition of community self-help* where the children are aware of their community building itself through volunteer organizations and/or progressive local initiatives for improvements.

*Sense of political powerlessness:* This quality can be defined in two ways; one of them is the inability of children to have the confidence in their opinions resulting in doubting the values of their ideas and insights. This is usually a reflection of their local environment at large where their community doubts its ability to make positive changes and/or doubt the effectiveness of the political system and feel like they are powerless victims of it.

*Secure Tenure:* Families of the children should have legal rights of the properties they live in whether it is through ownership or through secure tenant agreement. Failure to have that causes anxiety and fear of being evicted by the families which is often transferred back to the children.

#### 2.5. Participatory methods – Adapting it to research with children

In order to measure the socio-physical qualities and the children's perception of them which is highly subjective, rich and contextual information needs to be collected; this leads to the use of qualitative

methods in nature. Dennis (2006) suggests that youth participation using qualitative GIS holds a lot of promise, but with a variety of tools and methods that can be worked with, it is imperatively important to choose ones that will be effective in accessing children's knowledge about their local environment.

One important method to get an understanding of children's perception, use of space, and experience of place is participatory mapping. Participatory maps can be viewed as any product that depicts local knowledge and information; it doesn't necessarily have to comply with formal cartographic conventions (Corbett, 2009). It can be a drawing done by a child representing his/her environment, marks on aerial map that represents input from participants about their local perception, or internet-based mapping where the information is easily translated into formal planning datasets. In his report Corbett (2009) presents a matrix of the different mapping tools that can be used in a participatory process along with their idea users, strengths, and weakness. These include but not limited to ground mapping, sketch mapping, scale mapping, participatory 3-D modelling, GPS mapping ...etc. And as discussed earlier, children are capable of understanding and interpreting spatial data, but even though this method provides the researcher with insights about the spatial perception of the children, it doesn't provide enough insights into explanatory variables of certain perceptions or experiences and that's why it's always useful to use it in addition to other complementary methods.

Among the methods that can be used is group discussion or what is formally known as focus group discussion. Bryman (2012) defines a focus group discussion as a form of group interview where "there is an emphasis in the questioning on a particular fairly tightly defined topic; and the accent is upon interaction within the group and the joint construction of meaning". In that context the researcher gets an insight and understanding as to the reasons why participants have particular opinions through allowing them to interact with each other and to probe the reasons some of them have regarding a particular view. This specifically happens because unlike interviews, the moderator relinquishes some of his authority and act as a mere guide to facilitate the discussion among the group. This unstructured process allows the researcher the chance to make an inference about the way individuals make a collective understanding of a trend, an incident, or a phenomenon. To be able to track this interaction, the literature suggests that the size of the group should typically range between six and ten participants (Bryman, 2012; Driskell, 2002) and it is preferable that the session is recorded and transcribed for a later in depth analysis of the what was exactly said, by whom, and what was the role of the process of interaction in forming the collective opinion of the groups.

Of course to adapt focus groups discussions to the younger audience special considerations should be taken into account. Namely, focusing the agenda prior to the discussion by making sure of the use of a child-friendly language that is easily understood and to make sure the questions posed are meaningful enough for the children to respond with relevant answers (Driskell, 2002). Reducing the distance between the researcher and the children is also very important in focus group discussions to ensure full participation by the children; for that Morgan et al. (2002) suggest setting the scene initially by making sure that the seating arrangement is as informal as possible, stressing that there are no right or wrong answers, and using first names to address the moderator. They also suggest that the discussion is broken up by including different activities like drawings or photographs or writings. But with all the above taken into account, there are still limitations to the use of focus groups like the possibility of more than one participant speaking at the same time, or the possibility of group influence on the stated opinion, the limited control the moderator has over the process, and the difficulty to analyze the large amount of data produced (Bryman, 2012). These limitations can be addressed by the use of one on one interviews.

In qualitative research interviews are usually semi-structured with open ended questions that serve as a guide in the process. The interviewer might add questions as the process is going on as he/she picks on things said by the respondent (Bryman, 2012). Driskell (2002) refer to these interviews as “child-led conversations” and he notes that these conversations help to build trust between the adult and the child and provides a deeper understanding of children’s experiences and perceptions. Sometimes these interviews can be supplemented with aerial maps or photographs of the area providing a base for asking the children about their spatial perceptions about specific places on the map (Malone & Hasluck, 2002). Unstructured interviews can take place in many forms, a “walking interview” whether guided by the interviewer or the interviewee is one form that is gaining popularity in qualitative research (Evans & Jones, 2011). Not only do these walking interviews allow for a maximum interaction between the interviewee and the surrounding which would give insights to a deeper understanding of their perception and experience, but also (and specifically in the case of children) it allows the researcher the opportunity to directly observe how they use the different spaces (Driskell, 2002). It also allows the opportunity to take photographs of the area. These “research-driven” visual images as Bryman (2012) calls them can be taken by either the researcher or the children and they can be used in “photo-elicitation” where they are used as a focus for discussion on what they represent. When taken by children, these photographs provide a very valuable tool to get insights about their environmental perceptions which complements the information that might be gathered by different methods. (Rasmussen & Smidt, 2003) have effectively used this method to engage eighty-eight Danish children in communicating their daily activities and surroundings.

Many researchers have tried to deploy different qualitative methods to work with the children. Celea (2006) investigated using methods like focus groups, walks that are guided by the children, Photographs taken by the children, and drawings made by the children in her attempt to understand how Swedish and English children experience and use the space in their neighbourhoods. Kytta (2004) have also used interviews to find out the extent of the children’s independent mobility in their environment. Some researchers have studied the potential of utilizing technology in researching with the children. One of these researches trained minority children to use technology to collect and analyze data and taught them how to create maps with computers so as to register their perceptions of their neighbourhood (Santo et al., 2010). While Berglund and Nordin (2005) developed a method for children to map and write in a child-friendly computerized GIS to facilitate the process of bringing their insights to the official planning process.

## **2.6. Summary**

This chapter gave the overview of the main qualities that will be investigated in this study, it also gave an overview of the different methods that can be used to effectively collect the children’s perceptions of these qualities. The findings of the reviewed literature will serve as a key point of reference in the coming chapters as the data collection, analysis, and results are presented.

### 3. CASE STUDY AREA

*This chapter presents an overview of the case study area. This includes a general view of the city of Enschede, and a general view of the city centre area in Enschede which will serve as the main focus for this research.*

#### 3.1. The city of Enschede

Enschede is a small municipality located in the Province of Overijssel in the eastern part of the Netherlands (see Figure 3). It consists of five districts, these districts are Noord, Oost, Zuid, West, and Centrum which are made up of the main town and the villages surrounding it including Boekelo, Glanerbrug and Lonneker and comprise a total of 68 neighbourhoods (Gemeente Enschede, 2012). Historically, the city was a centre for a booming textile industry in the 20<sup>th</sup> century, but later on the industry moved to other parts of the world leaving the city to be one of the poorest municipalities in the Netherlands. Decades of renovation work took place in different parts of Enschede in order to revitalize the city turning it into a service industry based town and more recently into a knowledge intensive industry based town with the presence of many higher international educational institutions. These institutions attract people from different parts of the world which makes the city home for many international residents. These residents are part of more than 158,000 inhabitants with the population that is aged between 0 -14 making up about 16% of the total figure at about 25,548 (Buurtmonitor Enschede, 2012).

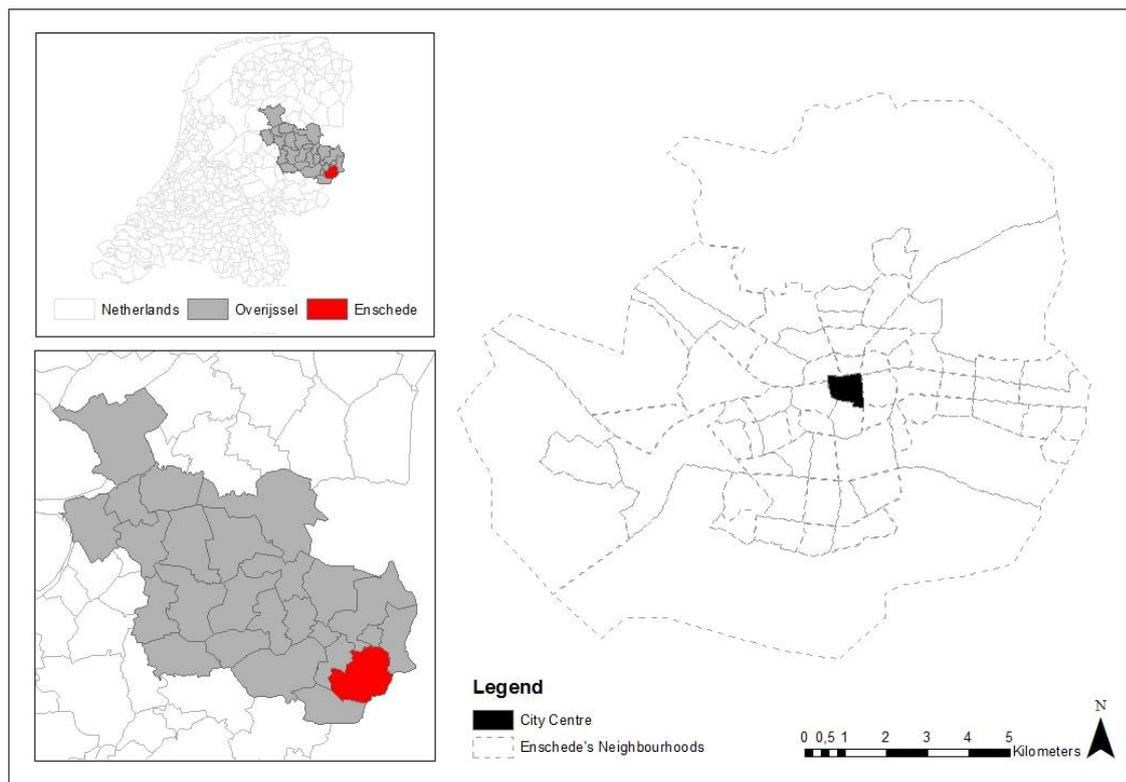


Figure 3 – The city of Enschede

This study is divided into two case studies. The first and main case study was mainly conducted in one neighbourhood which is the city centre area of Enschede shown in Figure 3 and explored further in section 3.2. The second part of the study took part in the neighbourhoods of the children that participated in the study. These were nine neighbourhoods in Enschede including: Hogeland, Deppenbroek, Wesselerbrink, De Bothoven, Stadsveld, 't Ribbelt, Velve, Stroinkslanden and Tweekelerveld. Due to the small number of participants in the different neighborhoods, the spatial component was only explored in the first case study. A brief overview of the city centre area is presented in the following section.

### 3.2. The city centre of Enschede



Figure 4 – The city centre of Enschede

As Figure 4 shows, the city centre of Enschede is surrounded by four major roads but in itself is rendered a car-free zone which makes it more pedestrian friendly and bike friendly. Like many European cities, the centre includes an open square that surrounds the old church which is called the Oud Markt. Many public services surround the area including a bus station, train station, underground car parking area, and bike parking area, right beyond the car-free zone there is also a hospital, a hotel and many other services. The city centre in itself offers a variety of services with modern shopping centres, department stores, restaurants, bars, theatres, a casino and a music centre most of which surround the Oud Markt and another open plaza that is called the Van Heekplein. The centre is host to many activities including a weekly open Market in the Van Heekplein and many other festivities and concerts with the Oud Markt and Van Heekplein acting as a venue for these events.

Figure 5 below shows an aerial photo map of the city centre to provide a better understanding of the area. As it can be seen, the centre is very dense with a lot of narrow streets which is a host for many weed selling stores and bars. The centre does not offer specifically designed green areas as can be seen from Figure 5 and the buildings in the area are not very new with the exception of a number of buildings that surround the Van Heekplein, the music centre, and the Casino.

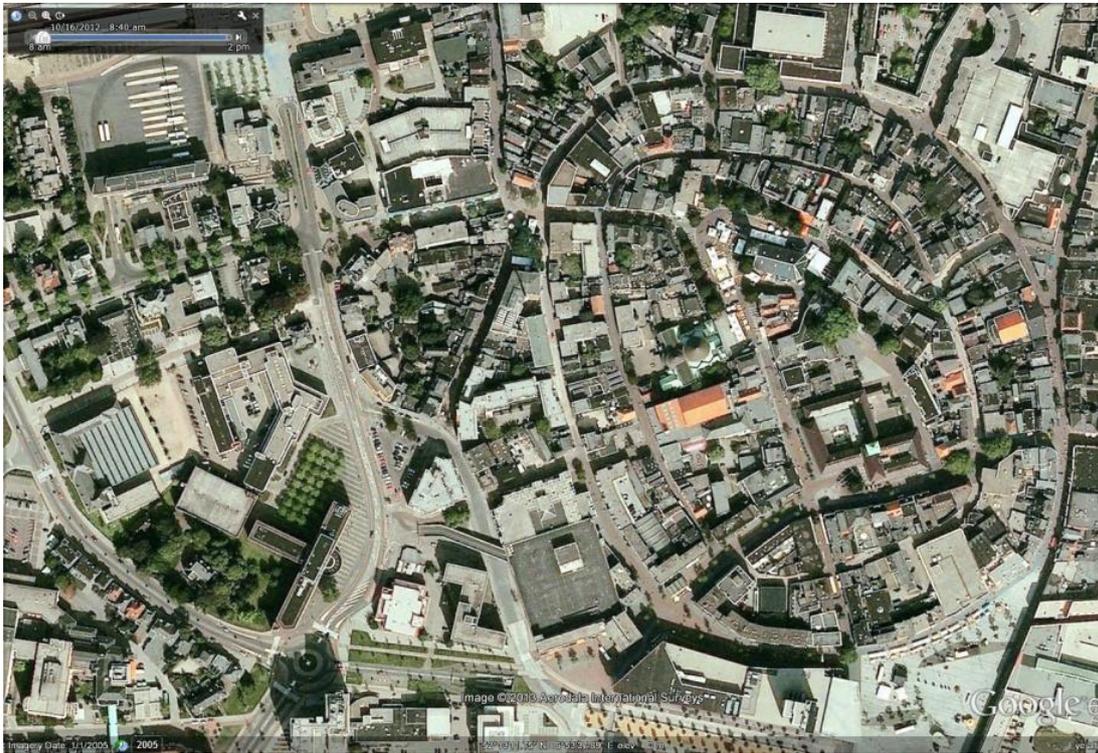


Figure 5 – Aerial map of the city centre

This study area was chosen since most of the children did not reside in one neighbourhood, but rather lived in different parts of Enschede and in nearby cities. And so after consultation with one of the teachers, the city centre seemed the most suitable location to conduct this study to ensure the children had familiar grounds where their perceptions and experiences are informed by their familiarity of their surroundings. Also this allowed the opportunity for the international children who just moved to the city to experience the centre and to familiarize them with the area and the main landmarks of the city as a way of opening up the city to them.

## 4. CAPTURING PERCEPTION – APPROACH TO DATA COLLECTION AND ANALYSIS

*This chapter provides an overview of the approach and methods that were utilized to collect the data needed to answer the specific research questions and the methods that were used to analyze these data. It starts by laying out the general research design that was employed to carry out this research; this is followed by detailed specific accounts of the activities that were carried out in the fieldwork to collect the data, and finally a description of the methods for data analysis is also described.*

### 4.1. Research Design

The research was designed to ensure that the research questions will be addressed and answered effectively. Table 2 provides the research design matrix including the needed data, the sources of the data, the method of data collection, and the method of data analysis. Following the literature review in the previous chapter and after identifying the physical and social qualities of the living environment that are relevant to the children and identifying the methods that are best suited to capture the perception of children, The fieldwork was commenced to start fulfilling the last two sub-objectives of the research.

Table 2 – Methods and data requirements

Question	Needed Data	Source of Data	Method of Data Collection or Analysis
What are the important physical qualities of a living environment?	Literature on physical qualities of neighbourhoods (positive)	Scientific Databases	Literature Review
What are the important social qualities of a living environment?	Literature on social qualities of neighbourhoods (positive)	Scientific Databases	Literature Review
Which of the identified qualities are applicable for the city of Enschede?	Relevant social and physical qualities for the city of Enschede	Scientific Databases Primary Source	Literature Review Focus Group
What are the available methods that are best suited to capture the perception of the	Literature on methods that works with the	Scientific Databases	Literature Review
What are the perceptions of the physical qualities?	Perceptions of the children of the physical qualities	Primary Source (Participating Children)	Semi-structured Interviews supported with photo-voice Participatory Mapping
What are the perceptions of the social qualities?	Perceptions of the children of the social	Primary Source (Participating Children)	Semi-structured Interviews supported with photo-voice Participatory Mapping
What are the identified patterns of the perceptions?	Perceptions information	Primary Sources (Participating Children)	Spatial Analysis Coding

<b>What are the benefits -if any- of children's perceptions to the general planning</b>	Literature on the benefits of children's participation	Scientific Databases	Literature Review Structured Interview with policy maker
<b>What method of collecting information is most useful to planners?</b>	Literature on the participatory methods	Scientific Databases	Literature Review Structured Interview with policy maker
<b>Who are the beneficiaries of the collected information?</b>	Literature on the benefits of children's participation Input from policy maker	Scientific Databases	Literature Review

#### 4.2. Access to the field

The field work was conducted in collaboration with two schools: the secondary department at The International School Twente and Al-Ummah School in the city of Enschede. When conducting the main study with The International School Twente, two things were taken into account: a personal prior acquaintance with the school's principal and more importantly; the easy communication which will be enabled between the researcher and the children since English is the main language of the school. Access to the field in both schools was gained through setting a meeting with the school principal and one of the teachers. An information leaflet was prepared prior to the meeting where the main purpose of the research was introduced, this was discussed and negotiated to provide value to both parties; as a result, the research took place as part of the geography/humanity sessions of the school's program. This meeting was followed by deciding on the agenda of the research and setting a work plan that would accommodate the timetable of the participating children to collect the empirical data for the research. The research involved a total of 67 children. In the International School Twente children were compromised of the younger children aged 10-11 and the older group which included children up to the age of 17 with the total number of participating children at 28 (19 boys and 9 girls). In Al-Ummah School the children ranged in age between 10 and 11 and were 39 in total (18 boys and 21 girls).

#### 4.3. Ethical considerations

Besides following the key ethical principals in conducting the study, this research paid special consideration to ethical issues since the participants were part of vulnerable groups i.e.: children. Ethical considerations in doing research with children should be taken into account in access, processes, and methods (Hill, 2005). The practical implications in this research can be traced in the different phases of the data collection and in the phase after data analysis. Generally speaking, the objectives of the research and the purpose of each task that was taken with the children were communicated with the school's principal, the involved teacher, and the participating children. To ensure the transparency, the first step after getting the formal access into the international school was to ensure having the informed consent of the legal guardian of each child and the informed consent of the children themselves to participate in this study. Also, on the first day of working with the children a general presentation was done to communicate to the children the general concept of planning and how this specific study falls within that, the benefits of participation, the process of steps that was going to be followed during data collection along with examples of similar studies that were carried out in different cities. This was followed by explanatory presentations before each session took place to go over the process and/or the expected outcomes; all of

which were communicated in a child-friendly language. The following subsections will discuss the ethical considerations that were taken in each phase to ensure the integrity of this research, the rights of those involved in the study and the wellbeing of them.

#### 4.4. Data collection methods

The field work where the data collection was conducted took place for a duration of two weeks from the 5<sup>th</sup> of October 2012 until the 19<sup>th</sup> of October 2012 at the International School Twente and for a duration of 1 week at Al-Ummah School. The data collection took place in four stages and was comprised of five main methods. The first stage started by conducting a mapping exercise with the children to identify the spaces they liked or disliked in the city centre area. This was followed by a focus group that was used to initiate the discussion with the children in identifying the main physical and social qualities of the living environment that are relevant to them in the context of the city centre of Enschede. To get a deeper understanding of the perception of these children, guided tours were conducted with the children through the study area and the children were asked to take their own photographs of what they observe. Semi-structured interviews were conducted later on to get a detailed personal account of each child's own perception and experience of place. Below a detailed account of each method is explained further. Due to the limited time and communication barrier at Al Ummah School, the only method that was employed was photography. This will be discussed further in chapter 6.

##### 4.4.1. Participatory mapping

The participatory mapping was conducted in a 60 minute session following an introductory session about participatory mapping, its application, and its benefits to planners and to participants. This exercise was designed to get preliminary perception of the children of the city center area in Enschede. Taking into account the distance between the researcher and the children (Driskell, 2002; Hill, 2005), participatory mapping was conducted as a first exercise in order to allow the children the opportunity to work with their peers in communicating their spatial knowledge without relying much on their ability to verbally communicate their ideas to the researcher.

Scale mapping was chosen as a tool because it's low cost, easily facilitated, it provides relatively accurate data for the purpose of the exercise (Corbett, 2009), and because of the previous familiarity of the children with Google maps. Aerial maps of the city center area were acquired from Google Earth, printed on A3 papers, labeled with street names and main features, and overlaid with transparent sheets before distributing them to each child. The children utilized the desktops in their school to access google maps and utilize the street view function to familiarize themselves with the area better. After the children were oriented on the maps, they were provided with green and red adhesive circular stickers and were asked to point out areas in the city center that they liked and disliked using these stickers. The researcher along with the involved teachers were around helping the children and ensuring reliable point entry by them as shown in Figure 6. The children were then asked to state reasons for the red and green points on their maps; in other words they were asked to associate qualities to the spaces they pointed out. These pre-given qualities were derived from the main conceptual framework and translated in easy, child-friendly terms. They consisted of the following:

**Positive qualities: Safe, fun, clean, hanging with friends, beautiful, good air to breath, and other.**

**Negative qualities: Dirty, Boring, Dangerous, Dark, Ugly, bad air to breath, and other.**

These qualities that were pointed out on the maps gave a general idea about the children's perception, but they were still not specific enough to derive the social and physical factors that affect this perception; that is why the participatory mapping on its own was not enough to get the needed data and was complemented with other methods. The maps produced by the children were used in the later phases of the field work as will be discussed further.



Figure 6 - The children in the participatory mapping session

The exercise was carried out in small groups of five to six children and the researcher along with the involved teachers were assisting the children and helping them when needed. Taking Wridt (2010) as an example, at the end of the session the transparency sheets were overlaid on top of each other to give the children an immediate opportunity to see how their layered maps would look like after further analysis and hence, give them an idea about what their group as a whole pointed out in the city center area. This was important to give them an indication that there were hot-spots on the maps and to set the tone for

the next session that would include discussions about the maps and the important qualities as will be discussed below.

#### 4.4.2. Focus group discussions

Following the participatory mapping, and after the children became more familiar with the researcher and their maps, the focus group discussions took place the following week and were designed to get a discussion initiated about the important social and physical qualities of the local living environment and specifically in the city center area of Enschede with the children. As Bryman (2012) illustrated, an ideal size of a group would range between six to ten members with preferably smaller groups when the researcher is interested in the participant's personal accounts. For these purposes there were two focus group discussions that were held; one for the younger children aged 10 – 12 comprising of 11 children and one for the older children aged 13 – 16 comprising of a total of 17 children. Even though the number of participants in the second group was larger than the ideal number suggested in the literature, the group was not divided further because of limited time and resources on both fronts (the researcher's and the children's school time). This did not pose a big challenge for the research since the discussion was later on supported by one on one interview that focused on each participant.

As Bryman (2012) and Driskell (2002) suggest, In both sessions the discussion took place in an open space with an informal setting to allow for maximum interaction between the children themselves and with the moderator as shown in Figure 7. Also, each session lasted for 60 minutes and were both voice and video recorded to allow for transcription later on and for further investigation on the group's interaction.



Figure 7 - The setting of the focus group discussions



Figure 8 - The use of visual aid in the focus group discussions

The sessions started by the moderator explaining the purpose of the discussion and by laying the guiding rules of the discussion including informing the children that the session is taped, that the discussion is open for all and there are no wrong or right answers, that the information acquired will be combined with their maps ...etc. After that, the transparencies produced in the participatory mapping session were shared with

the children and they identified the hotspot areas. The maps were then given back to the children and they were asked to look at the qualities they listed for these hotspots and a discussion started among the children about the important qualities positive and negative, social and physical. The moderator opted to take notes about how the children went about ranking the priorities of the different qualities.

The Focus group discussion was aided with visual aid (shown in Figure 8) as the moderator started showing pictures asking the children to associate them positively or negatively. These pictures covered different areas of the city center area and were representative of many of the qualities illustrated in the framework. This was done in order to engage the children in an in-depth discussion (Driskell, 2002). Eventually, the physical and social qualities that were repeatedly mentioned in both discussions were recorded and listed for further analysis.

#### 4.4.3. Guided tours

The guided tours came as a third step in order to reveal the children's experience of place. This method was central in understanding the interaction of children with the spaces through allowing the researcher to observe the way the children experience the spaces and interact with objects and/or people they pass by. Conversations between the researcher and the children can also be triggered by the surroundings which may reveal more of the children's experience of place. Taking Celea (2006) as an example, these walks followed a predetermined route even though the researcher allowed the children to extend the walks away from that route if they wanted. The route was selected after looking at the maps of the children and determining the points which they liked and they disliked and incorporated them as much as possible.

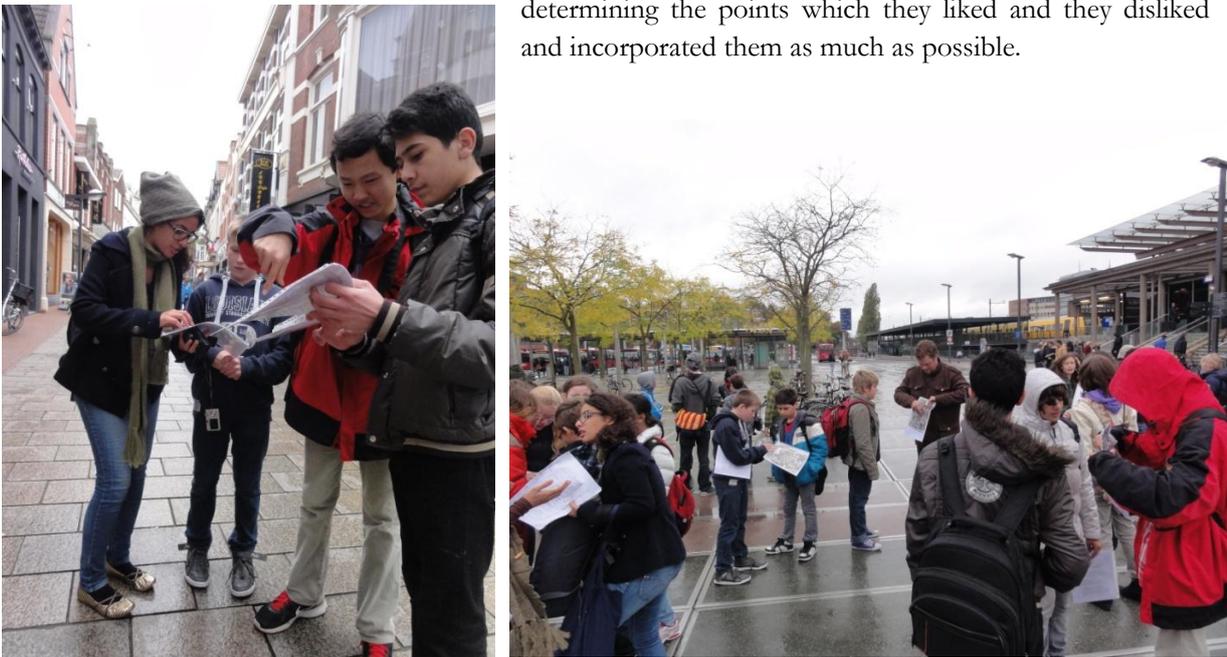


Figure 9 - The children during the guided tours

The children were introduced to this exercise a day before through a brief presentation and a detailed instruction sheet of the purpose of the transit walk, the tools to be used, the time it will take and what is expected of them was provided to each child. The consent of the legal guardians were obtained through the school a week earlier and there were some parents that chose to not let their child participate for safety reasons. Additionally, a couple of the children chose not to participate because of their prior

engagement with school activities. On the day of the guided tour, the children were divided into 6 groups of 4 to 5 children and each group was accompanied by a group leader/adult and an instruction sheet was given to the group leader of what is expected of them during the walks including taking notes and pictures of the children's experience. Each group was carrying a GPS held device and a map with the predetermined route. Within the different groups, each child was asked to utilize a digital camera that was either their own or was provided to them in order to take pictures of positive areas and negative areas they come across during the walk along with a picture that best represented the city center area in their opinion. They were also provided with maps and small stickers to be able to "geo-locate" the pictures they take on their maps as shown in Figure 9. The exercise took a total of three hours after which the children were asked to bring back their cameras and maps to school the next day.

#### **4.4.4. Semi-structured interviews supported with photo-voice**

The semi-structured interviews were carried through in the last phase of the fieldwork. By that time the children accumulated the knowledge and experience, were more familiar with city center area and were more familiar with the researcher which enabled an easy and friendly discussion. Conducting the interviews as a final step allowed the opportunity to get an overview of each step that proceeded in the research and allowed the children the opportunity to reflect back and to add and/or remove points from their maps especially after the transit walks. The interviews took place over 4 days, were held on one on one basis with each child that participated in the study, and were recorded with the permission of each interviewed child for later analysis. The interviews were composed of both close and open ended questions and took approximately 15 minutes to carry out with each child. the questions were partially adapted from Chawla et al. (2002) and included general themes including the following:

- *Residential history*
- *General perception of the city center area*
- *Questions regarding the maps including:*
  - *Favorite places*
  - *Problem places*
  - *Place ownership*
  - *Place changes*
- *Photographs taken during the transit walks*

The questions were designed to get a detailed personal account of the perception and experience of each child. In the last part of the interview each child provided the photographs they took in their walks and they were given a chance to go through them and chose five photographs in total: two positive, two negative, and a single photograph that represented the city center area from their perspective. They then provided explanation of why they took certain photos and what these photos represented to them. For the question guide used in the interviews please refer to the appendices. as Wang and Burris (1997) suggest, these photographs gave children the creative opportunity in capturing elements that are important to them by themselves. Accompanied with the children's explanations, the photographs become what is called: Photo-voice and they provides a textual narrative of the children's perception and experience of the area.

#### **4.4.5. Semi-structured interviews with planners**

A semi-structured interview was conducted with planners after the data collected by the children were analyzed and presented to them. This was done in an attempt to reflect on the possibilities of incorporating the process of working with the children and the information they provided into the planning process. For the question guide used in the interviews please refer to the appendices.

### **4.5. Data analysis methods**

After the field work was finalized and finished, the data collected was grouped in three different categories: spatial maps from the participatory mapping exercise, textual data that came from the focus group discussions and the answers to the open ended questions and notes from the transit walks, and photographs that were taken by the participating children. Each category of data was entered and analyzed in a manner that allows the researcher to address the research questions. Below is a detailed description of the analysis methods carried through.

#### **4.5.1. Spatial analysis**

The maps produced in the participatory mapping were translated into a GIS database for spatial analysis. In order to do that, each child was given a unique mapping ID which was linked to their demographic information such as their age and gender that, after that the points created by the children were digitized with reference to the aerial maps utilized in the participatory mapping session using the editing tool in Arc Map and new feature classes were created in the database, such as a point ID, child mapping ID and place name. The qualities associated with each point mapped were entered into a separate database accompanied by the point ID and child mapping ID to allow possible joining of both tables and further analysis of the spatial distribution of the qualities.

Like Wridt (2010), The use of a spatial database enabled the researcher to create graduate symbols for the number of children identifying the same location and hence, creating hotspot maps of their perception and also it enabled the researcher to explore a variety of mapping outputs and layering options which will be discussed further in the next chapter. More importantly, this way of spatial analysis will enable easy communication of results with policy makers and also it will enable easy comparison with conventional planning datasets if it is required at a later stage of this research.

#### **4.5.2. Textual analysis (coding)**

The answers provided by the children to the open ended questions were transcribed and entered into ATLAS-Ti, a software that enables labelling and sorting of the information into themes and codes (Hwang, 2008). As discussed earlier, coding is a very important step of qualitative research that entails categorizing the data into different themes or codes (Bryman, 2012). The codes were derived from the main conceptual framework and included positive and negative social and physical qualities of the environment that emerged in the text. This helped in interpreting the text and finding trends and relationships in the registered perceptions of the children. Moreover, the geo-coding feature of ATLAS-Ti was utilized to support the statements that are transcribed and coded in the textual data. In order to do that, google earth maps of the study area were embedded into the ATLAS-Ti document allowing marking

up of any area of interest and linking it to a certain perception or statement in the text (refer to the appendices for a screen dump). Photographs that were taken by the researcher in the walks and photographs that were discussed in the focus group discussions were also geo-coded and attached to the textual perceptions.

#### **4.5.3. Photography themes (coding)**

The photographs that were taken by the children were categorized into the three main categories: positive qualities, negative qualities, and representative qualities. Different themes were then produced based on what qualities of the living environment were represented in the picture and based also on the information the children provided about the photograph. These themes were then coded like the textual information, using the qualities of the conceptual framework as a main guide. Additionally the photographs were geo-coded and attached to the maps which enabled analysing if there is any association between the hot-spots produced in the spatial analysis and the qualities the children chose to photograph.

## 5. AN INSIGHT INTO CHILDREN'S PERCEPTION - RESULTS AND DISCUSSION

*This chapter provides an overview of the outcome of the conducted main study; namely, the perception of the children of the city centre area of Enschede. This begins with a general overview of their perception which identifies the main physical and social qualities; this is followed by a detailed account of these qualities, their spatial distribution, and detailed insights into why these qualities are considered important for the children. The discussion and analysis of the findings are also presented in this chapter. It is important to note that the results discussed below can not be generalized for the city of Enschede and the perceptions are not expected to be representative of an average Dutch child since the study was conducted with a special group of children (International students).*

### 5.1. General perception of the city center

The perception of the city centre was generally positive. The initial descriptions came in positive terms as the children described it as a place that is safe where they can hang out, with various activities where they can hang in with their friends and family. However, still many of them made a divide in their perception and clearly identified areas which they did not specifically like and reported on negatively. Some children also included a temporal dimension when they created that divide in the perception of positive vs. Negative, where the time of the day or the season had an influence on their perception. These difference perceptions can be inferred from some of the answers the children gave when asked to describe the city centre in their own words:

*“I would describe it as different on different days. Because when they have the market it literally kind of explodes with people, but more than anything it is actually quite a nice place and it's mainly safe as long as you don't go down late or do the wrong things.” (Girl, 17)*

*“I would say it is a little bit chaotic! Because there are really nice places but there are really places I don't like and it's a little bit weird ... it has a lot of the little streets.” (Boy, 12)*

*“Actually it depends on what part of the centre you go to ... hmmm ... there are a lot of coffee shops, a lot of good shops, a lot of dirt in the streets, and a lot of activities.” (Boy, 12)*

For the purpose of generally understanding the perceptions the children hold of the city centre, the children were asked to describe the city centre through a semantic differential scale when the one on one interviews were conducted. A semantic differential is a scale composed of a pair of contrasting adjectives which is used to measure attitudes towards certain concept as these concepts can have different meaning to different people (Lewis-Beck et al., 2003). This scale is usually composed of 5 or 7 points to allow the subject to chose a middle point. In this case, the scale was originally composed of 5 points but it was adapted to 3 points (1= positive extreme, 2= Depends, 3=negative extreme). This was done to accommodate the children after a number of them repeatedly tended to chose these 3 points. Figure 10 illustrates this scale with 7 pairs of adjectives that were given to describe the city centre; it shows the frequency of responses (illustrated by the grey dotted curves) with the thick black curve going through the adjectives that appeared the most in the responses.

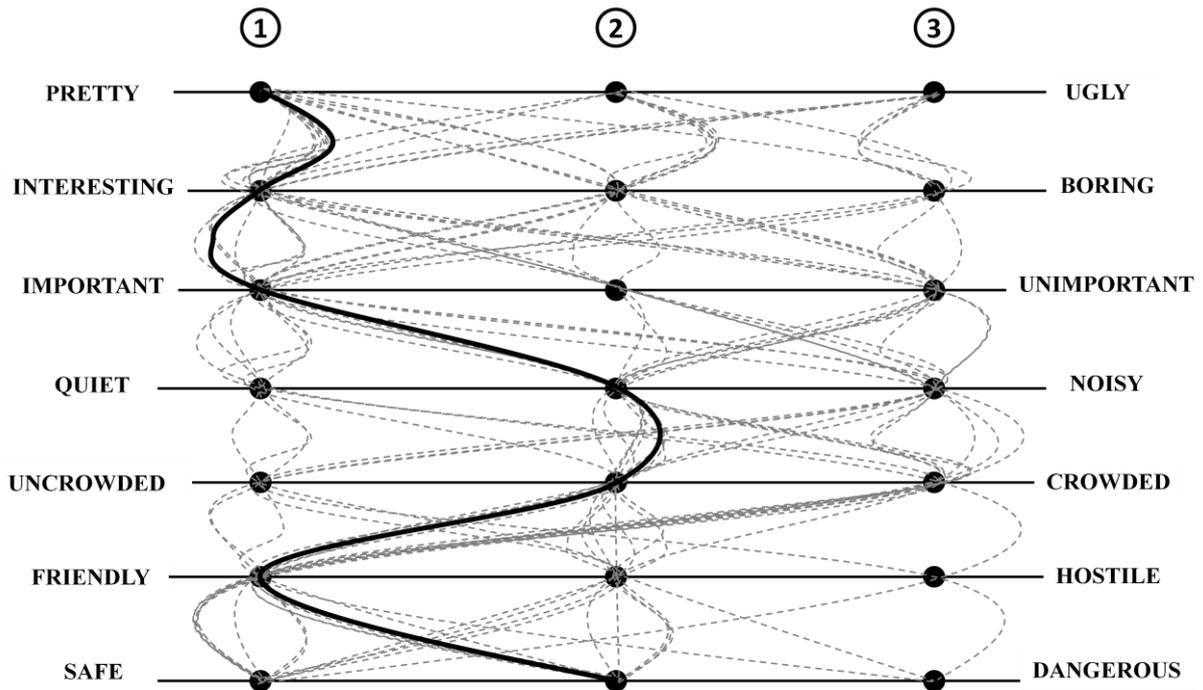


Figure 10 – General perception of the city centre - frequency of responses (N=28)

The frequency of the responses demonstrates the overall positive image the children hold of the city centre as they were inclined to describe it with the positive adjectives. In the instance of the pairs (Quiet – Noisy) and (Crowded – Uncrowded); most of the children associated a temporal dimension to the two qualities stating that that Saturdays and Tuesdays are generally crowded and noisy because of the open market (a market where temporary stalls are set up in the open square to sell fresh food products) taking place in these days. In the instant of the pair (Safe – Dangerous), most of the children were very clear in identifying areas where they didn't feel safe and areas where they did and in some instances children also associated the feeling of safety with time:

*“I think it is safe where, but it depends really ... There are dangerous spaces but obviously I don't go there.”* (Girl, 14)

*“After 6:00 pm it is dangerous, before 6:00 pm in winter it is also dangerous, but in summer it is always ok because if you have light it is ok.”* (Boy, 12)

The forms of danger the children referred to in their narratives were numerous and were divided between physical and social kind of danger. This will be discussed further in detail in section 5.3.1 when the emergent qualities are introduced.

The variation in responses between the boys and the girls and between the different age groups has been explored further and illustrated in the radar charts in Figure 11. This shows the average of the general perception each group holds of the city centre; where one radar chart illustrates the differences between boys and girls and the other illustrating the difference between the different age groups (younger: 11-13 yrs & older: 14-17 yrs).

When looking at the variations based on gender, both were similar in their evaluation with the most highlighted differences appearing in the adjectives: 'pretty' and 'friendly'. In both instances, the boys

scored more positively than the girls. In the question of whether the city centre was pretty or ugly, the girls tended to use words like: 'grey, dull, dead, no colour' whereas the boys did not. This was also noticed in the photographs the children reported back where many of the girls tended to take many pictures of shop vitrines and describe it as pretty whereas the boys' photographs came of the different physical features including the buildings, the street art, and the natural elements. The girls perceived the city centre less friendly as well as they reported being harassed by gangs and being uncomfortable walking through some areas because of the unwanted attention.

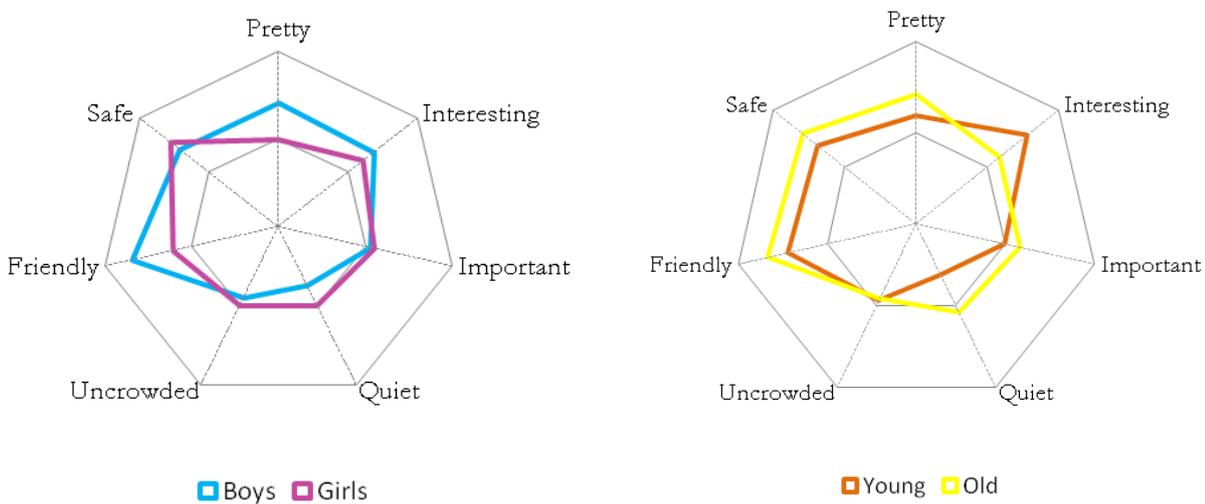


Figure 11 – Variations in the average general perception (Gender and Age)

When looking at the variation based on the age group, the older children's perception scored slightly higher on all qualities except 'interesting'. This was expected since the older children displayed a better negotiation ability of the different spaces and they knew what spaces to avoid and what spaces to go to. In the instance of 'quiet', the difference appears larger as the younger children were more sensitive to noise especially on market days and on festivals that take place in the open square, whereas the older children enjoyed these festivities. The younger children however, scored higher in the 'interesting' quality as many of them enjoyed the spaces in the city centre including the video game shops, the candy stores, ice cream shops, and fast food restaurants.

The discussion above gives a general idea of the way the children describe the city centre, but this is not enough to get an understanding of their perception. Even though the perception tended to be more positive, there were still negative perceptions and experiences that the children expressed. The following sections will start looking deeper into these different perceptions by first investigating the spatial distribution of the positive and negative areas, and then exploring further the qualities that start emerging in these different spaces.

## 5.2. Spatial distribution of the perceptions

The children mapped a total of 235 observations in the city centre area. These were either positive or negative observations depending on the perception of the individual child. When these observations were entered into the database and superimposed together it produced 75 locations in total. These locations fell into three categories; the first is a location where all the children mapped positively, the second is a location where all the children mapped negatively and the third category is a location where the perceptions of the children varied which resulted in a location with a mixed perception (both positive and negative). As described in chapter 4; when mapping, each child associated some qualities to each of their observation. Qualities that were frequently associated with the positive locations included: safe, fun, clean, good air to breath, while the negative locations were associated with qualities like: dirty, noisy, dangerous, and ugly. In the case of a mixed location the children mostly had experiences to report on that influenced their perception.

Of course the number of children associated with each location varies which results in concentrated clusters around certain areas. This is explored further in the form of spatial cluster maps with graduated symbols for the negative and positive locations alike. The locations with the mixed perceptions are also presented separately to provide more insights into the reasons behind the mixed perceptions. These maps along with the functions of the locations and the preliminary qualities that were associated to them by the children are presented in the following section.

### 5.2.1. Positive spatial clusters

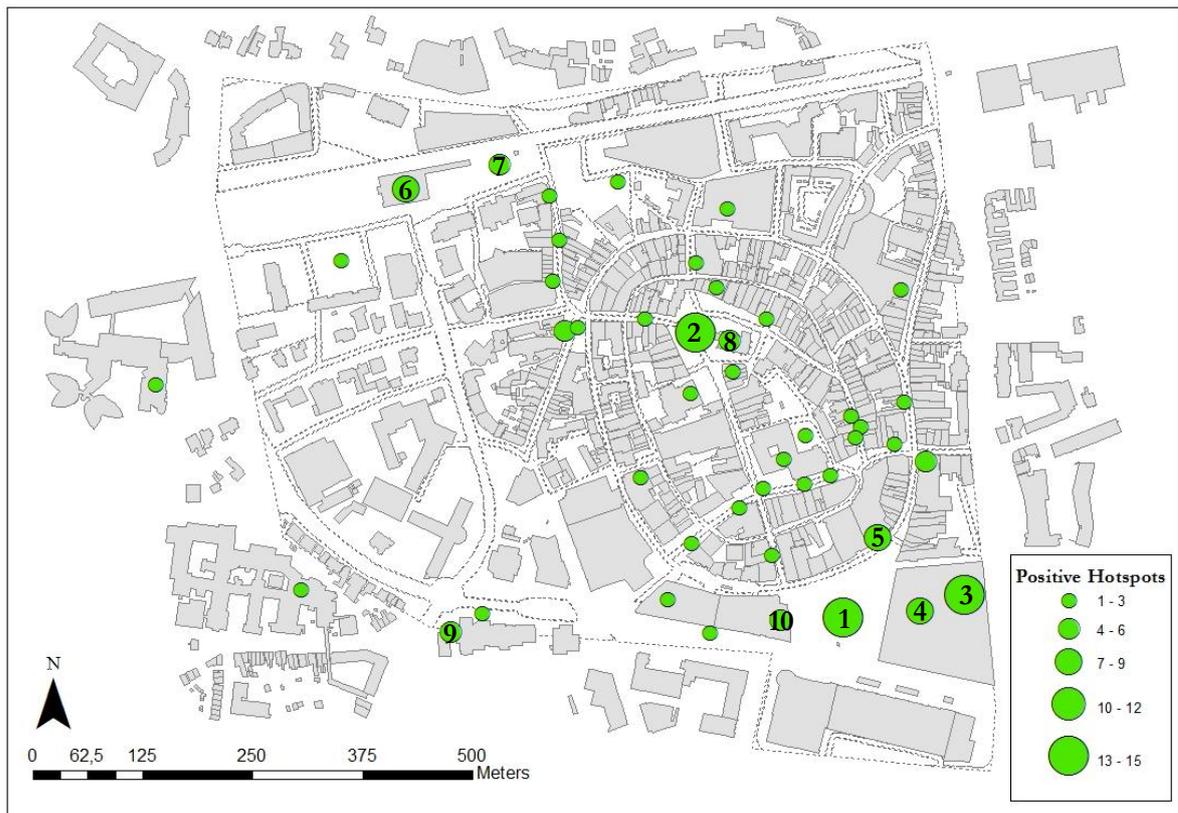


Figure 12 - Positive spatial clusters

The locations in the city centre that were mapped positively are shown in Figure 12. These positive clusters include outdoor spaces, indoor spaces, public spaces, private spaces and spaces with different activities. As shown on the map, some of the locations were more popular than others and that was attributed to qualities that are either part of the physical environment (open plazas with attractive physical features, historical buildings, modern buildings, locations offering variety of activities ...etc) or part of the social environment (freedom of social threat). A list of the locations that ranked high (with a larger number of children mapping them) appears in Table 3 below.

Table 3 - A list of the spaces ranking positively high

Location	Function	No. of Children	Reasons Given	Company(if any)
1	Open Plaza	15	Fountain Play Shop Safe	Alone With parents With friends
2	Square	13	Restaurants Activities Festivals	With parents
3	Electronics store	12	Play Hang with friends Shop	With parents With friends
4	Small Shopping Mall	7	Shop Eat Safe	With friends
5	Restaurant (fresh prepared food)	6	Eat Hang with friends Use Free Wi-fi	With friends With family
6	Train Station	6	Travel Meeting Point	Alone With parents
7	Open Plaza	5	Hang with friends Watch skaters Play	With parents Alone
8	The old Church	4	Old Historic Beautiful	With parents
9	Hotel	4	Play Hang with friends	With friends
10	High-end department store	4	Shop Eat	With parents

The table presents the ranked locations along with their functions, the number of children who mapped them, the reasons they give for the positive association and the company they had in these location. The ranking numbers correspond to the numbers displayed in the map in Figure 14 which gives the opportunity to spatially identify the locations. As it can be seen many of the locations were mapped for the different activities they offer (including shopping, eating, and playing), some for the presence of natural elements, and some for their historical value. Many of the locations offered the children an opportunity to hang with friends, including stores and restaurants which meant the children were

welcomed in these places. Among the other locations that don't appear in Table 3 are different restaurants, different stores, the bus station, and the hospital. These locations will come up again in the next sections and when the qualities are explored in depth. For a complete list of the locations and the number of children who have mapped it, refer to the report in the appendices.

A further spatial exploration is done to examine whether there is a variation in the positive clusters among the different genders and the different age groups. Figure 13 and Figure 14 illustrates this exploration by presenting 4 maps (one for each gender and one for each age group) showing the positive spatial clusters for each group and singling out the locations that were exclusively mapped by the specific group.

Locations that remain as prominent clusters include an open plaza (location 1) and that is probably attributed to the various activities that take place there. The girls mentioned the stores and restaurants that surround the plaza including a mall (Location 4), a high-end store (Location 10) and a restaurant (Location 5) as main reasons for liking this area. On the other hand, the younger male children mention the water fountain where they can play in the summer and the open market that take place in that plaza. Similarly, The Square (Location 2) appears in the 4 maps for the various restaurants and activities that surround it. It is a location where the older children reported hanging out with friends in and the younger children reported hanging out and playing while their parents would be sitting at one of the cafes or restaurants which made them feel safe. The train station (Location 6) is another location that is recognized by the children because some of them used the train to travel back home from school every day, while some others used it to travel back to their hometowns in the school vacations. The old church (location 8) also appears in the 4 maps.

When looking at the differences between the two genders, one can notice that girls map out locations that are mainly shopping stores; the cinema appears in their maps as well for a place to hang out with friends along with a theatre because three of the girls perform there. On the other hand, major clusters including location 3 and location 7 are not mentioned at all. When this finding is combined with the spatial clusters for the different age groups it can be noticed that the younger boys are the ones favouring these locations mainly because these spaces provided them with different forms of play (skateboarding, biking, skipping stones, and video-gaming). The girls on the other hand, report location 7 as an area where "weird people hang" and they didn't feel like it is a safe place to be. Location 9 again is a major cluster that mainly appears in the maps of younger boys as they reported it as a place to hang out and play table tennis.

Other areas that are mapped by boys (especially the younger ones) include natural features like the different fountains. The hospital also appears for the boys as a positive location (mainly mapped as safe) while it does not appear at all for the girls. The younger boys also reported the music centre and an open space where concerts for children their age are held as positive spaces mainly because of the activities that take place there. The other positive points in their are mainly restaurants and cafes including fast food joints, candy shops, ice-cream shops, and cafes where the children reported going there with friends or with their own families. The qualities the children associated with these places were numerous including: food, good company, and hospitality of people working there, and safety as they were surrounded with the people they know. It is also interesting to note that the younger children liked location 10 because they enjoyed sitting in the upper floor cafe and watching over the open plaza from up there. Many of the locations mentioned appear for the older group as well.

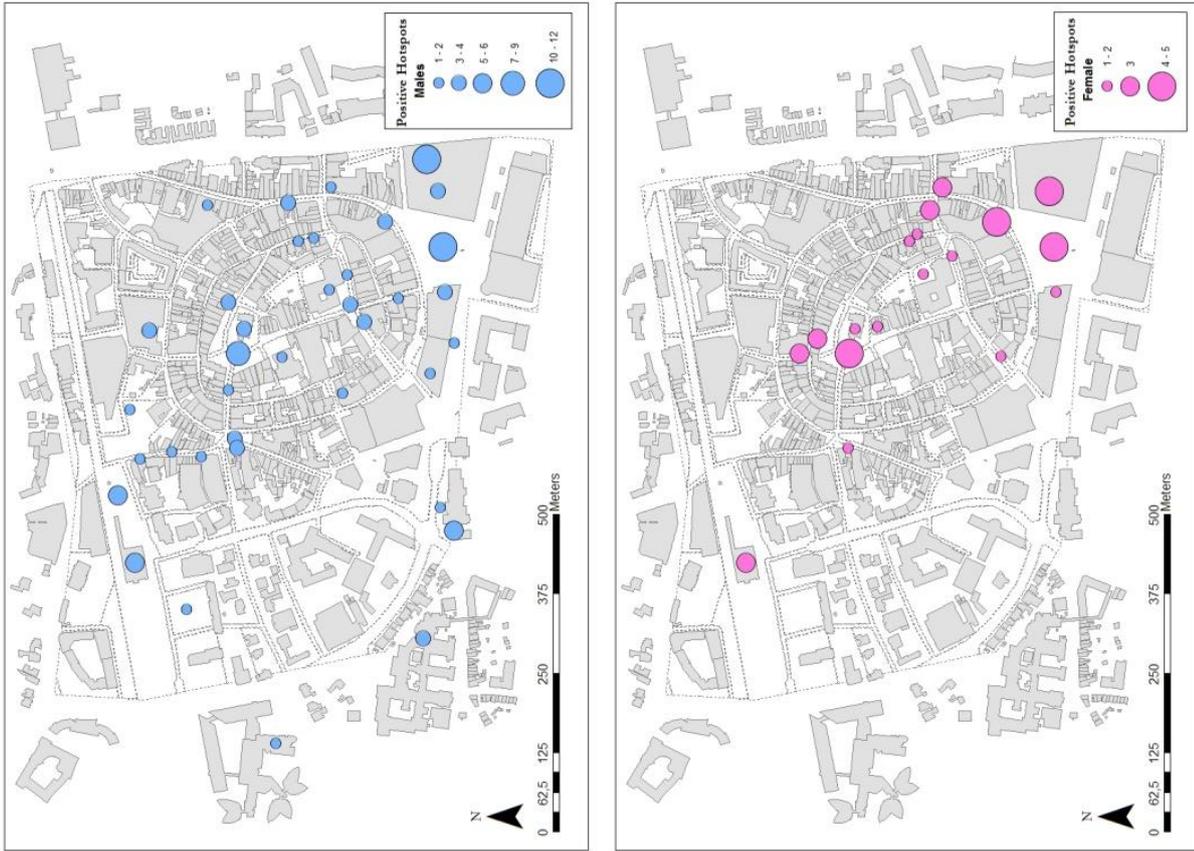


Figure 14 - Gender-based positive clusters

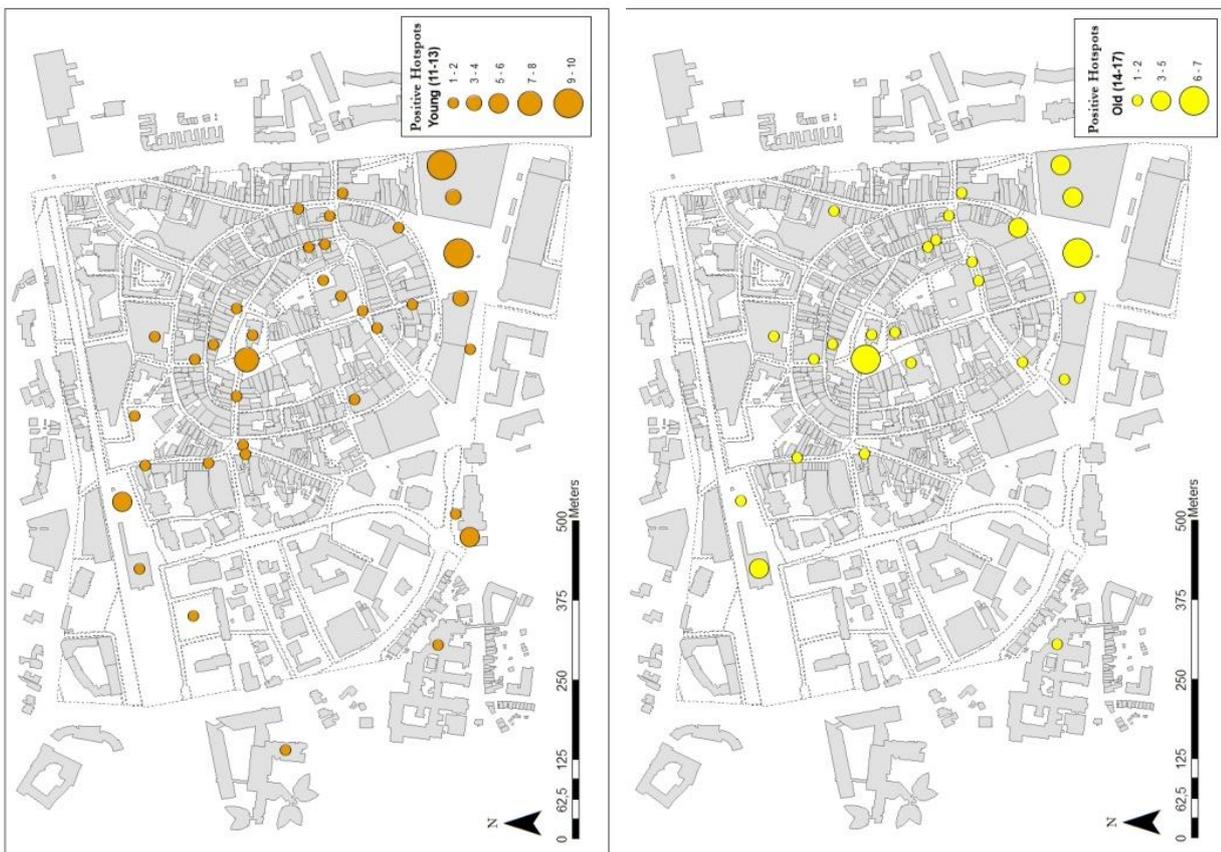


Figure 13- Age-based positive clusters

### 5.2.2. Negative spatial clusters

The locations in the city centre that emerge as negative clusters are shown in Figure 15. Among these clusters are the hospital, the dentist, an alley with a lot of coffee shops which sell weed, the casino, and the train station. A detailed list of the locations that ranked negatively high, along with their functions and the main reasons for mapping them as negative locations appear in Table 4. Again the ranking numbers correspond to the numbers appearing in the map of Figure 15 to allow for spatial identification of these locations. One can immediately notice that some of the locations that have been mapped before as positive appear here again as negative clusters. These locations will be introduced again in the next section where mixed perceptions are discussed. For a list of all the locations and the number of children that mapped them please refer to the report in the appendix.

Among the top reasons the children gave for perceiving a location negatively were dangerous and dirty. Dangerous here refers to many forms of threats (both physical and social) including fear of harassment and crime, physical danger, and heavy traffic. Dirty as well was associated with many features like litter and trash, graffiti, and animals. Other reasons are associated with the children's senses like noisy, ugly, and crowded, smelly. All of these reasons become clearer once the other layers (pictures and narrative) are added to the maps which add rich contextual information. This will be explored further in the following chapters when the emergent qualities are discussed in detail.

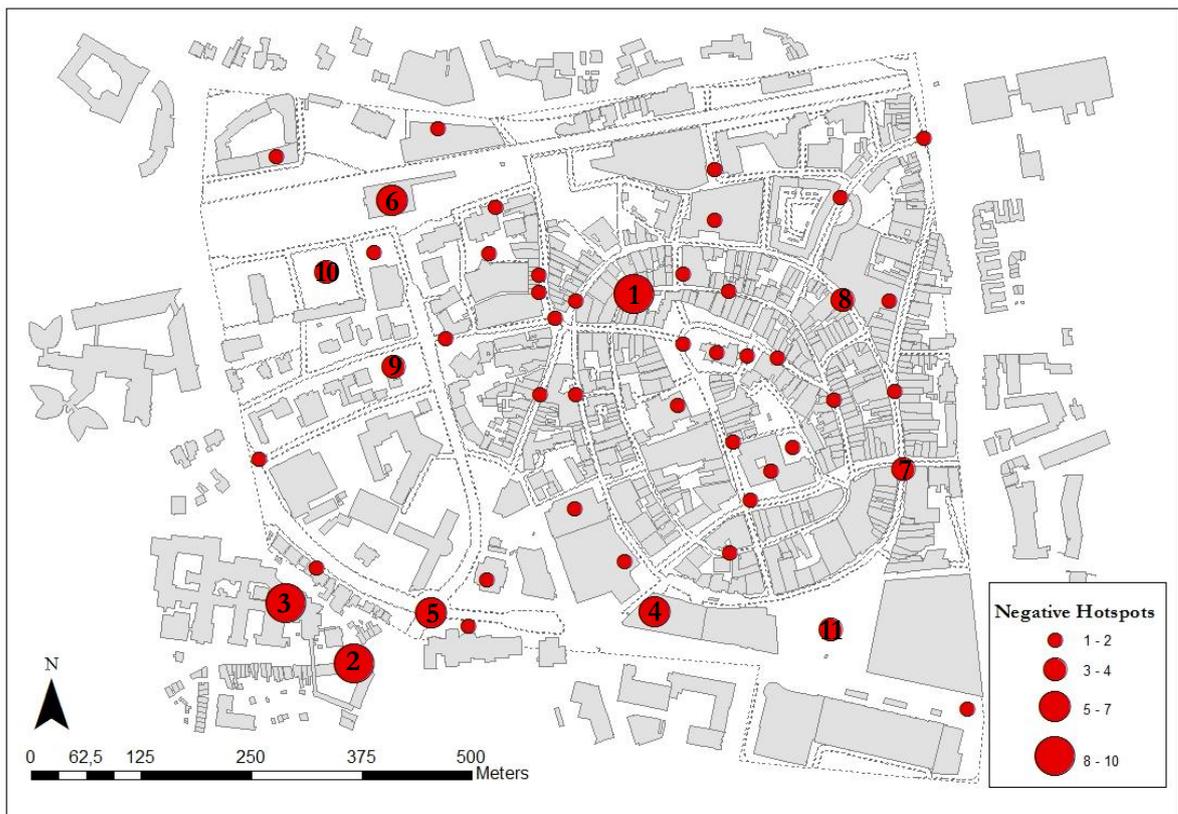


Figure 15 - Negative spatial clusters

Table 4 - A list of the spaces ranking negatively high

Location	Function	No. of Children	Reasons Given	Company(if any)
1	A back street with coffee shops	10	Dirty Dangerous Smelly	/
2	Dentist	9	Dangerous	With parents
3	Hospital	8	Dangerous Ugly Old	With parents
4	Casino	6	Dangerous Boring	/
5	Road Intersection	6	Dangerous Noisy	With parents
6	Train Station	5	Dirty Dangerous Boring	Alone With parents
7	Street	4	Noisy Crowded Ugly	Alone With parents
8	Street	4	Old Dirty	With parents
9	Bank	4	Boring Bad Service	With Parents
10	Bus Station	4	Dangerous Bad Air	Alone With parents
11	Open Plaza	3	Dangerous Dirty Noisy	Alone With friends With Parents

Again, the variations and similarities between the different genders and the different age groups are explored in the forms of 4 individual maps presented in Figures 16 & 17. Clusters that are common in all four maps include the alley with the coffee shops (Location 1), the dentist (Location 2), and the hospital (location 3). The coffee shop alley got very similar descriptions from the children regardless of their gender and/or age as they perceived it as a dirty area with a lot of unpleasant smells (specifically weed), they also thought of it as dangerous as some of them didn't like the narrowness of the alley and some of them feared the kind of people who hang around there. On the other hand, although the hospital and the dentist were both disliked by many children, the reasons behind disliking differed. Some reported negatively on the physical quality of the building itself describing it as 'ugly' and 'old', while some reported on their fear of doctors and needles and their fear of sickness and diseases.

Among the other locations that appear in the maps are Governmental offices like the City Hall as the children have experienced boredom when going to process papers. Boredom has also been a reason for a number of children to map a Bank (Location 9) as they reported going there with their parents and waiting for long periods of time with nothing to do. The train station (Location 6) and the bus station (Location 10) were reported as dirty and dangerous locations especially by the younger children while the older children had different reasons for disliking the bus station as they reported that buses are bad for the

environment. Areas like the open plaza and the square have also been associated with some children negatively because of the presence of some threat (in the form of strangers, thief's, and/or drunk people) or some litter and trash.

When looking at the variations among the children, the casino (location 4) appears as a larger cluster in the younger group than in the older group as the younger children associated the act of gambling as negative and hence the people going there as dangerous. The roundabout (Location 5) is also a location that appear in all maps (except the in the girls' map) as children felt threatened and reported difficulty in crossing the road since the cars were too fast and the drivers were not careful. The girls start mapping buildings that look old or dirty, and streets (especially back streets) where they have experienced fear or discomfort for different reason as will be discussed later.

The rest of the locations appearing in the maps for all children are mostly streets and alleys where the children have experienced threat or fear for different physical reasons (old, dark, smelly, dirty) or social reasons (fear of threat or harassment and crime). These qualities along with the previously mentioned qualities will be discussed further in the following section.

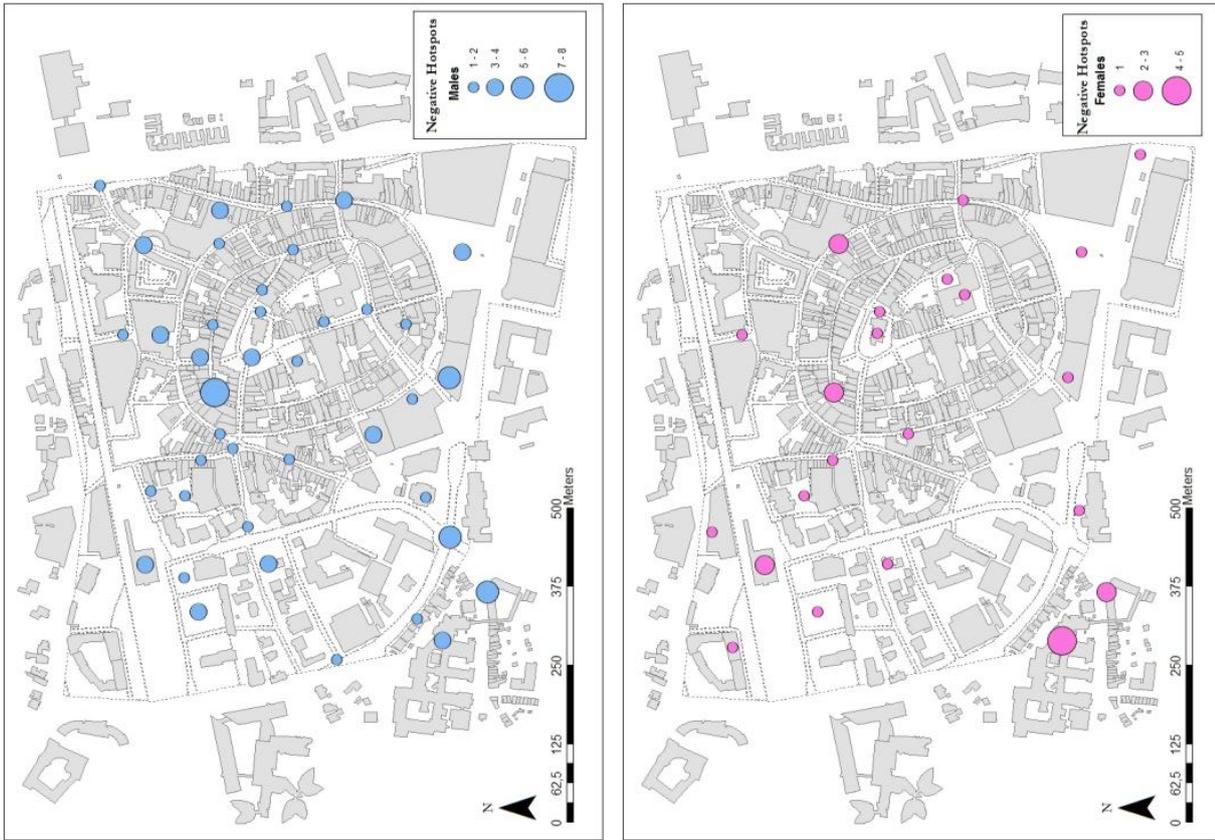


Figure 16 - Gender-based negative clusters

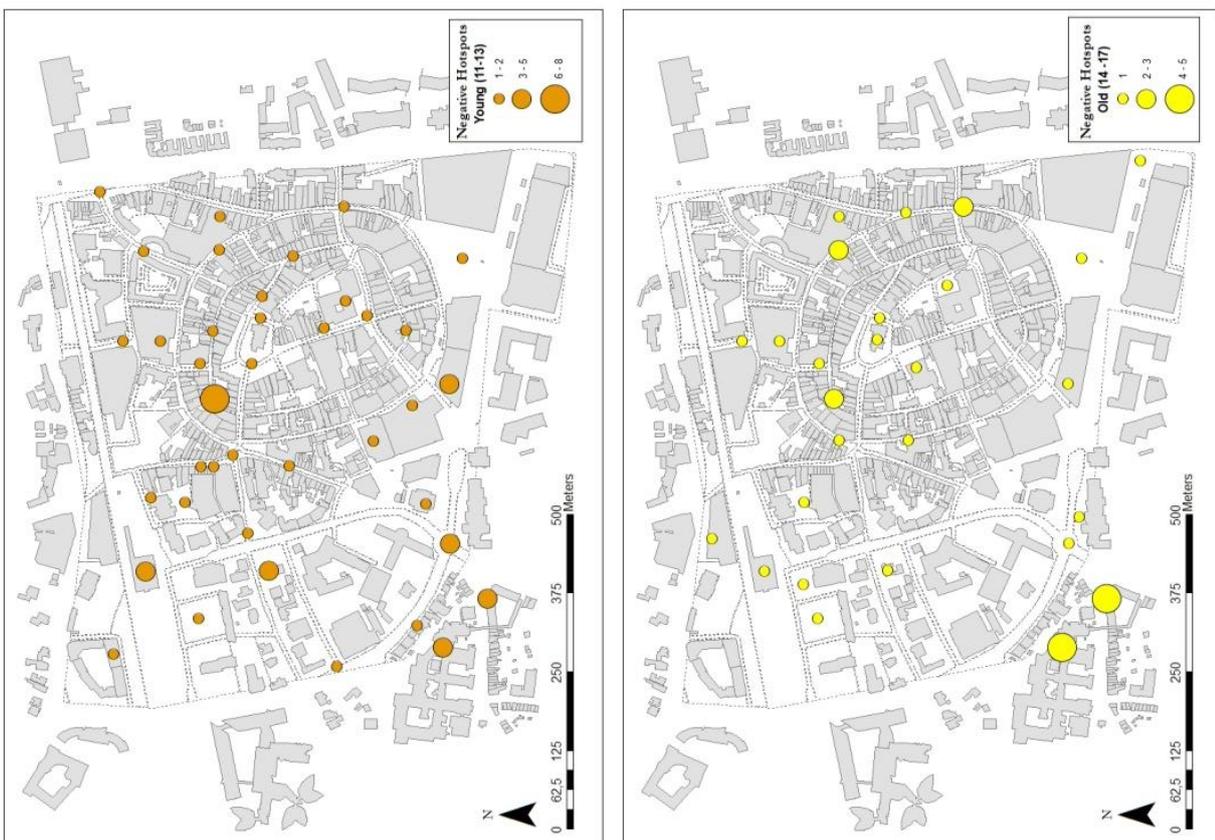


Figure 17 - Age-based negative clusters

### 5.2.3. Locations with mixed perceptions

The discussion about the positive and the negative clusters in the previous sections included locations that appeared in both sections. Figure 18 shows these locations with pie charts that illustrate the percentage of children perceiving each location negatively and positively. Prominent examples of the locations that were majorly positive included the open plaza, the square, the old church, and the train station. The reasons for mapping them as positive locations were discussed in section 5.2.1; as for the negative reasons, they included negative experiences by the children (harassment or theft) and reasons like dirty, ugly, and dangerous. The locations that were prominently negative included the hospital, the casino, the bus station and a supermarket. The other locations include a church, an empty area behind City Hall, the cinema, the music centre, and a busy street near the roundabout. These locations have not all been discussed in depth as they have been mapped by 2 children at most and were not major clusters. Table 5 gives a brief overview of each of the major locations along with the number of children who perceived it positively or negatively and the reasons they associated their perceptions with.

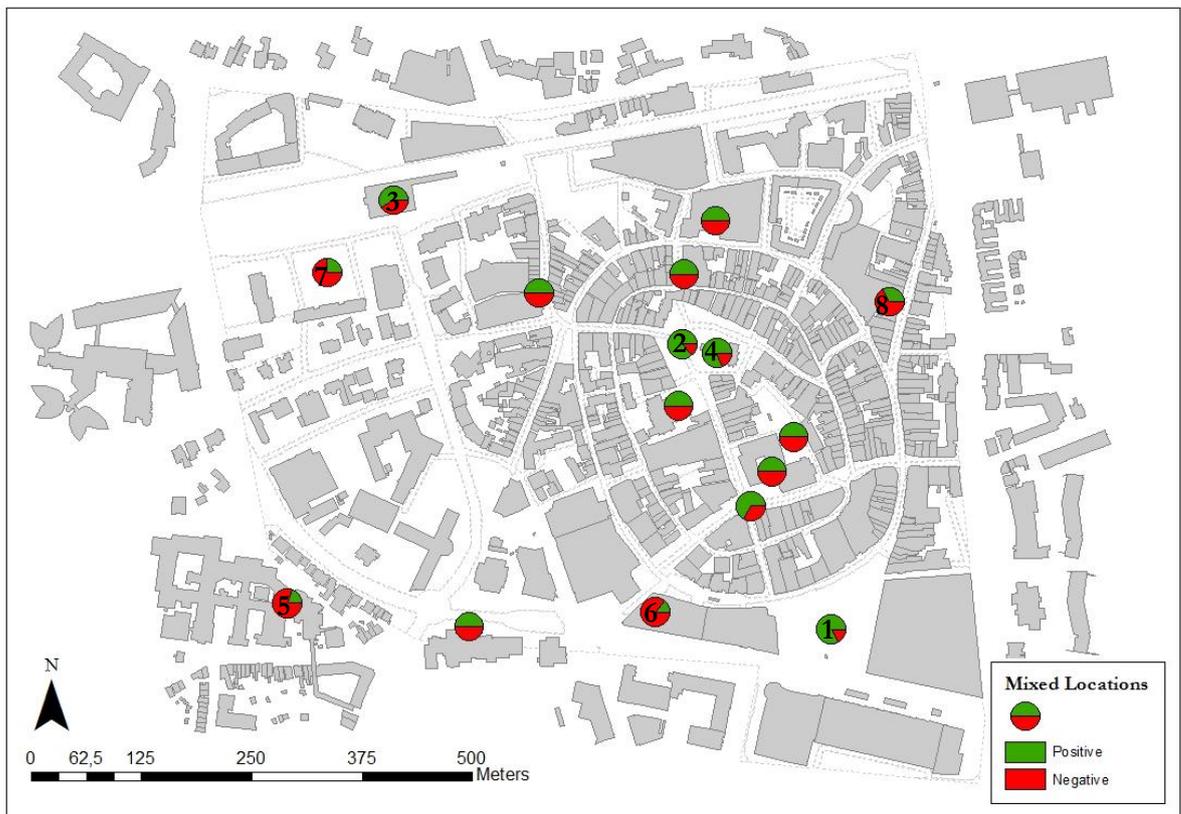


Figure 18 – Locations with mixed perceptions

Table 5 – Locations with mixed perceptions

Location	Function	No. Of positive perceptions	Positive Reasons	No. of negative perceptions	Negative Reasons
1	Open Plaza	15	Fountain Play Shop Safe	3	Dirty Theft Strangers Noisy
2	Square	13	Restaurants Activities Festivals	2	Dirty Harassment Noisy
3	Train Station	7	Travel Meeting Point	5	Dirty Dangerous Boring
4	The Old Church	4	Old Historic Beautiful	1	Religion
5	Hospital	2	Safe	8	Dangerous Ugly Old
6	Casino	1	Modern	6	Dangerous Boring
7	Bus Station	1	Go home	3	Dangerous Bad Air
8	Supermarket	1	Shop	2	Old Untaken care of

### 5.3. Summary

The above sections gave an overview of the general perceptions the children held of the city centre. That was followed by an exploration of the spatial distribution of these perceptions which was explored in three sections; the positive clusters, negative clusters, and locations with mixed perceptions. All of these perceptions were associated with different positive and negative qualities that were also introduced. Once these initial mapped qualities were combined with other forms of data including narratives and pictures, they could be easily grouped under the four different categories set by Chawla (2001) . These categories are positive physical qualities, negative physical qualities, positive social quality, and negative social qualities. This will be introduced in the next section where detailed accounts of the qualities are presented and analyzed.

And like mentioned before in section 4.5.1, the qualities the children mapped were entered into an excel sheet and joined with the spatial database. Maps that show the spatial distribution of these qualities are presented in the appendices where two opposite qualities were superimposed in each map to explore spatial relationships. However, further exploration was not done and is recommended for the future.

### 5.4. Emergent qualities

Based on the findings discussed in the earlier sections and after further textual analysis on the in-depth interviews and the photographs taken by the children, the conceptual framework proposed in the beginning is re-introduced here with a number of new qualities that appear in this specific context and a number of qualities that disappear from the original framework. As seen in Figure 19, the horizontal axis representing the physical qualities presents new qualities that emerged in this study with a couple of qualities that disappear; while on the horizontal axis many of the qualities start disappearing from the context of this study.

More specifically the social qualities that did not appear in the adapted framework include 'insecure tenure', 'racial tensions', 'sense of political powerlessness', and 'tradition of community self-help'. It is important to note that this does not necessarily mean that these social qualities are not applicable to the context of the city of Enschede, but rather they are not applicable to this specific case study mainly because the study was not conducted in the neighbourhoods where the children are living but rather in the city centre area. The social qualities that remain are: 'freedom from social threats', 'cohesive community identity' and 'social integration from the positive axis and 'fear of harassment and crime', 'social exclusion and stigma', and 'boredom' from the negative axis. For further information on how these qualities are defined please refer back to section 2.4.2.

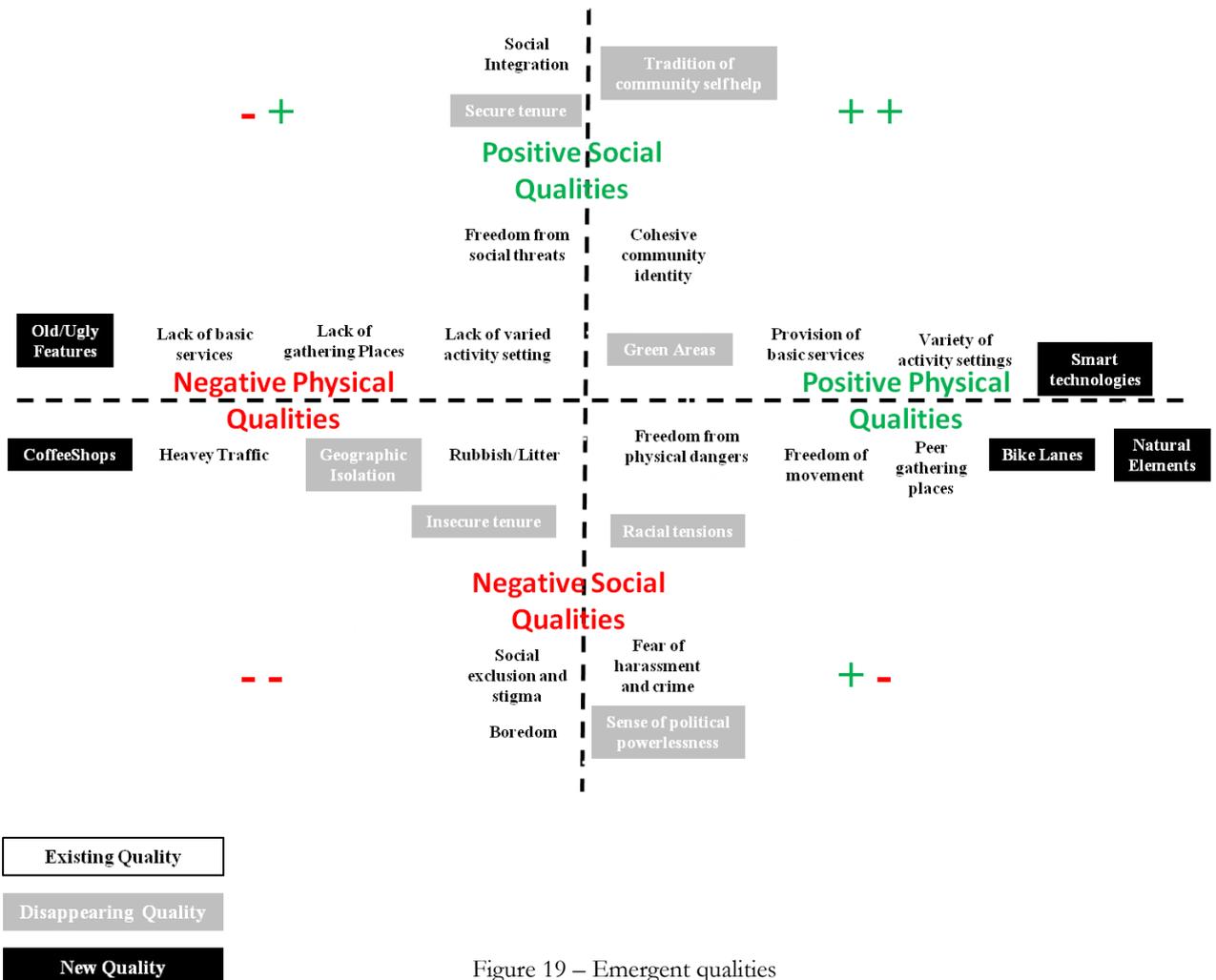


Figure 19 – Emergent qualities

Looking at the physical qualities, the only quality that does not appear in comparison to those mentioned in the original framework is 'geographic isolation' simply because the location of the study area is perceived accessible by all children and is not isolated by any river, mountain, etc. 'green areas' disappear as well in this context but as it will be explained below, it has been incorporated in one of the new qualities that includes other natural elements. The rest of the qualities are maintained with the introduction of new qualities that emerged in both the positive and negative axes. These qualities reflect this specific case study and they are as follows:

- Natural Elements which is a quality that is very similar to "green areas" but has been adapted to include other natural features including water, flowers, sunlight and shade and was one of the positive qualities that were repeatedly brought up by the children.
- Bike lanes: a quality that appears because of the specific context of the case study which is the city of Enscheda in the Netherlands (one of the most bicycle-friendly countries in the world). The children recognized that quality positively especially when they compared the city centre to the different places they have lived in before.
- Smart technologies (i.e.: ICT, video-gaming, and other areas): this quality has specifically emerged in response to the time this research was conducted in. In this millennium, the children have recognized advances in technology in all areas (specifically Internet, and video-gaming) as an essential positive quality that determines whether or not a space is associated positively.
- Coffee shops: a physical quality that again appears because of the specific case of the Netherlands. Coffee shops here refer to stores that legally sell weeds and cannabis to the public under the law of the public authorities. Children associated this quality negatively and hence spaces where this quality appears were rated negatively as well.
- Old/Ugly Features: Children were very sensitive to old features that looked untaken care of or features that are dull or "grey" with no colour or artistic touch to it.

For further information about how the remaining existing qualities are defined, please refer back to section 2.4.1.

When investigated further, one can find many factors that may influence these qualities and cause them to appear and with further analysis relationships between the different factors start emerging and relationships between the different social and physical qualities emerge as well and this gives deeper insights into why these qualities appear and what can be done from a policy making point of view to help making the city centre a child friendly area. The factors that influence the different qualities along with the explored relationships are presented in the following section.

The framework introduces 22 qualities some of which are associated with the physical environment and some with the social environment. However; not all the qualities had the same impact on the children and their experience of the city centre. The following section will shed further look into the qualities that ranked high (mentioned frequently in maps, interviews, and photographs). It will introduce the inter relationships that exist between the different factors and qualities, and it will discuss in detail the perception of these qualities from the point of view of the children.

#### **5.4.1. Significant qualities (i.e.: frequently mentioned)**

The qualities that are frequently mentioned by the children are introduced in this section and the relations between the qualities are explored in depth. This is done via the conceptual network diagram function of ATLAS.ti. As explained in chapter 2 after the textual analysis of the children's narratives and assigning different codes to the statements provided by them, relations between the codes were investigated further.

These network diagrams include codes that specifically refer to the qualities that feature in the conceptual framework, they will be colour coded: green for positive and red for negative and they will be connected to different codes through different relationships including (associated with, is part of, contradicts, is a). These connections are an attempt to articulate visually the emergent relationships between these qualities and make it easy for the reader to follow the story visually. Moreover, the discussion presents children's narratives, photographs, and observations taken during the guided tour (all geo-located in accompanied maps to support the findings reported in the discussions. The narratives on the maps are numbered and the numbers can be traced back in the presented discussion.

As mentioned before, the different qualities were interrelated in such a way that introducing each quality separately will not be feasible (for a complex view of the network diagram linking all the emergent codes together refer to the appendices). For that purpose some of the qualities will be presented in groups when appropriate so that the relationships between them can be further explored and more easily understood.

**5.4.1.1. Freedom from danger**

When looking at the children's maps, the word dangerous was the most repeated quality that was associated to the negative clusters. Typical spaces that were associated with this quality were narrow streets, and dark spaces. The number of people in a space also was a determining factor for whether the children perceived it as safe or dangerous. These three qualities had a temporal dimension attached to them as children reported that these specific kind of spaces would be labelled as dangerous specifically at night time. This was observed in the guided tour as the researcher and a group of children walked in some of these spaces that they mapped as dangerous and the children started commenting that the spaces don't seem that dangerous because it's day-time. This supports similar findings reported in researches done in England and Ireland where the children's dislikes and accounts of risks included the above mentioned qualities and associated them with time as well (Leonard, 2007; Woolley et al., 1999).

With further investigation from the interviews and the photographs, many qualities start appearing under: 'dangerous'. These qualities are part of the framework (shown in red and green in Figure 20) and they include: fear of harassment and crime, heavy traffic, physical dangers. The different factors that were associated with each quality and the relationships that were formed between the different nodes are illustrated in Figure 20.

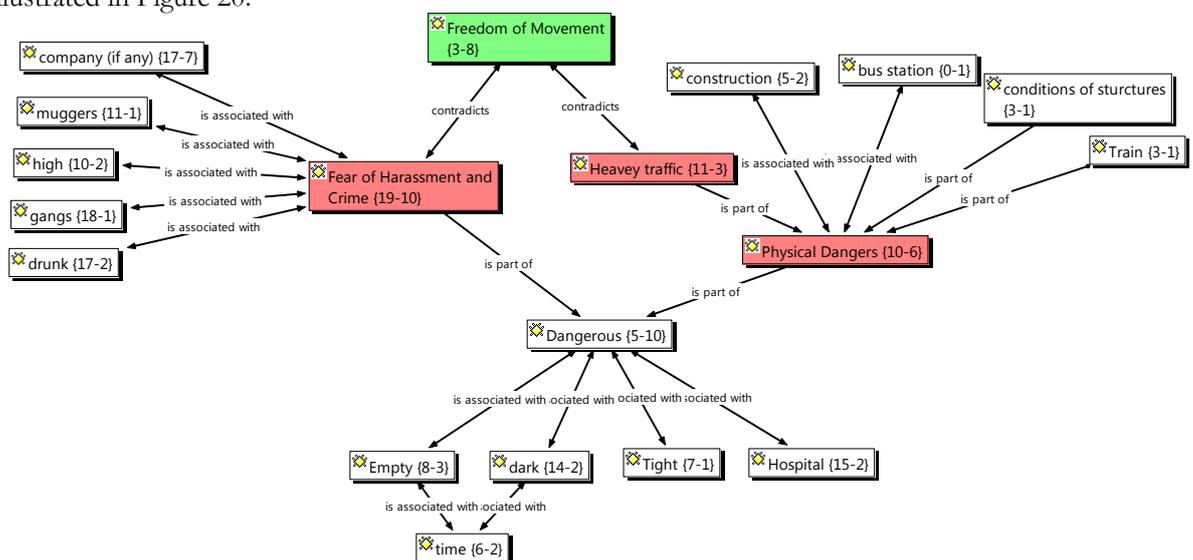


Figure 20 - Network diagram for the quality 'Dangerous'

The physical forms of danger were repeatedly mentioned by the younger children; in fact one of the negative locations that the children mapped was the roundabout where the children reported difficulty to cross

1. *“Every single time we try crossing there, there is always someone almost crashing into us.”* (Boy, 12)

This fear of heavy traffic was also reported in the different major streets surrounding the city centre area by other younger children as well and it was not limited to cars only; as some children reported fear of buses specifically in the bus station

2. *“You know the place where you stand waiting for the bus? I don't like it. It's not very far from the bus station and the drivers they just come so near to us sometimes, it's terrifying! I can't even let my small brother go through it. I have to shout at him to watch out! I really hate that place!”* (Boy, 12)

This apprehension towards heavy traffic has been reported on repeatedly in many GUIC sites including sites in England, Australia, and Norway (Malone & Hasluck, 2002; Percy-Smith, 2002; Wilhjelm, 2002) and in the Netherlands itself (De Vries et al., 2010) and it resulted in limited independent mobility for the children. In fact, the freedom of movement that the children displayed in the city centre (rendered as a car-free zone) asserted the fact that children appreciated such an environment.

Other kinds of physical dangers that were reported included the physical conditions of structures (e.g. construction sites) where many children photographed cranes and steel structures and labelled them as dangerous for pass-byers. It also included the condition of pavements and roads as one child pointed out in the guided tours that he sometimes trips while walking around because *“some tiles are high and some are low”* and other children reported seeing others also fall because of that.

On the other hand perception of danger due to social reasons was reported by most children regardless of their age especially in the areas surrounding the coffee shops as some of the children saw the adults who consume alcohol or weed as a threat

3. *“They are all high, there are all these people there that are drunk and use drugs and stuff, I just don't feel safe going there alone.”* (Boy, 11)

A further discussion of this specific aspect will be presented when the quality ‘coffee shops’ is introduced in the next section.

Furthermore, children (specifically the girls) mentioned not being comfortable walking alone in some areas in the city centre (including the plaza in front of the train station and the area behind City Hall) where gangs or *“weird people”* like they referred to them hang around

4. *“I and my friend were walking and there were like all these boys smoking and walking around like gangs and it wasn't very friendly.”* (Girl, 14)
5. *“I went past there once and there were these people and they had what looked like bookers with them and they were staring at me and I just biked by real fast. I didn't really feel safe.”* (Girl, 14)

These incidents were less reported by the boys, and also less experienced in the guided tour as the boys were not very aware of the presence of gangs as the girls were when they passed by them.

On the other hand, both genders mentioned being robbed as a negative experience that made some of them cautious around strangers. Stories about stolen bikes, stolen bags, and stolen money come up in the interviews. These negative experiences although might not be the generalized perception, led some of the children to map popularly positive locations as negative ones (including the open plaza, the square and the train station). This led some of the children to suggest the instalment of more CCTV cameras to ensure the safety of themselves and other people. Nevertheless, they still reported going to these locations on their own and feeling a sense of safety in them because of the number of people that are usually around this area.

6. *“People sometimes don’t care about you, but for example here someone was at the restaurant and when my friend’s bag got stolen, he actually ran down as fast as he could to come and say what happened because he saw it. He was very helpful!”* (Boy, 14)

This might explain why most of the locations that were mapped as safe were the open squares and the shops, restaurants and cafes surrounding them as the children felt like they are being watched over by responsible adults. As a result, and as Chawla et al. (2002) noted, children exhibited space negotiation skills where they drew their own lines and moved around “zones of avoidance” which included streets with coffee shops, and empty narrow streets.

A couple of the locations that got mixed perception from the different children are the hospital and the dentist. It is a fact that some children mapped the hospital as a safe location where their lives can be saved; however, the majority of children associated dangerous with the hospital and dentist as clearly they have been one of the negative clusters in the maps. Children’s reasons included their association of the hospital with bad memories, operations, and experiences with bad doctors, and a feeling of discomfort around sick people.

7. *“It makes people better but sometimes germs can spread that way”* (Girl, 17)
8. *“you get the feeling that there are a lot of sick people there even though it is clean but sick people have to go somewhere and you know they are near and I don’t really like that feeling”* (Boy, 12)

Similar views were reported in a research by Coyne and Kirwan (2012) where the children expressed their wishes for doctors to make an effort in listening to their needs and responding to them.

Figure 21 shows the geo-locations of the narratives mentioned above which are supported by geo-coded photographs that were taken by the children. Together, these information provide a contextual view of what the children perceived as dangerous and what they perceived as safe.

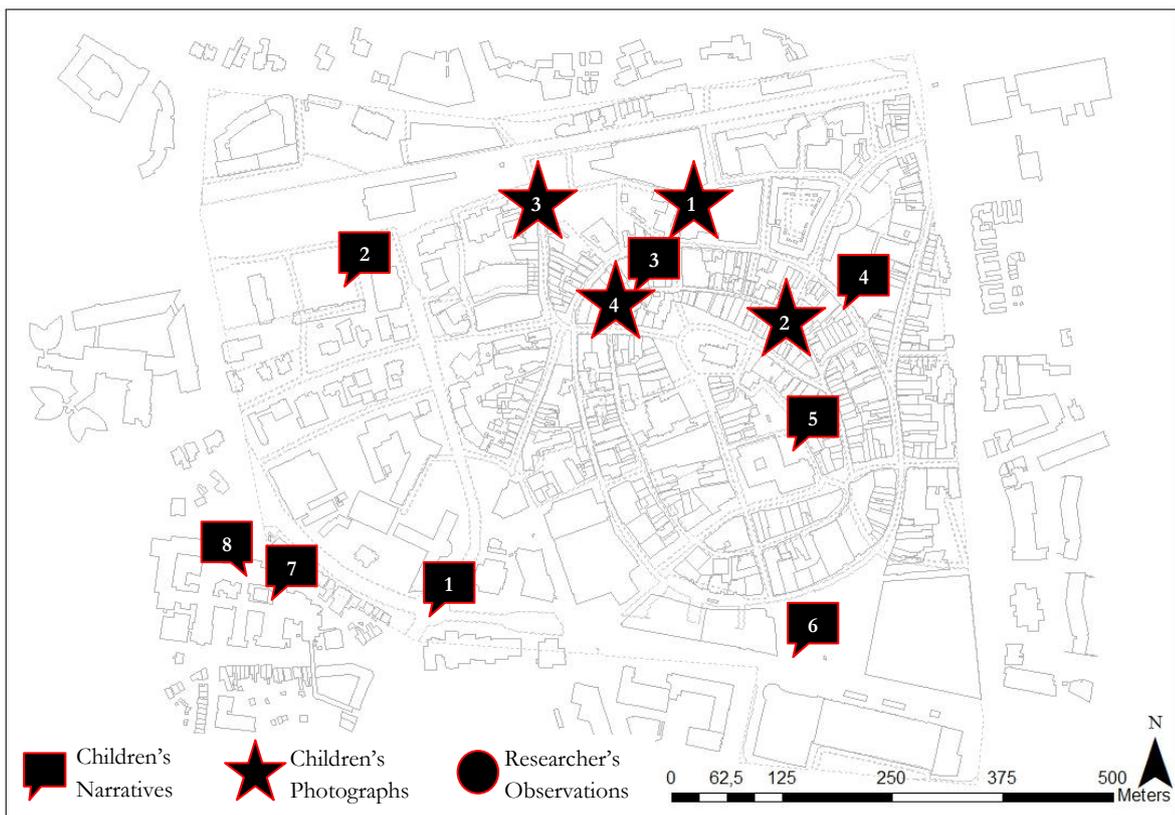


Figure 21 – Children and the quality: ‘Dangerous’

5.4.1.2. Natural elements

Like expected, one of the qualities that came up repeatedly is: *natural elements* and as shown in Figure 22 there were many forms of natural elements and many form of activities and experiences associated with it. Even though the city centre does not have green spaces per se, it was apparent that the children did appreciate the areas where they could have “*an opportunity to have the outside inside*” as one of the children described it. They associated qualities like: calm and fresh air with the presence of water and green areas as well as other activities. And even though, the older children agreed that the presence of these qualities are positive, they mentioned different reasons as they were aware of the environmental benefit that trees and other green spaces have. In fact; adding more trees were one of the top improvements that were mentioned by the children when asked about what they would change in the city centre.

The below conversation that took place in the focus group discussion with the young group illustrates their perception of one element (namely: water):

Researcher: a lot of you mentioned this area (referring to the fountain in the open plaza), why is that?

Child 1: Because it is Positive! There is water!

Child 2: it's fresh.

Child 3: it makes you think of life.

Child 4: it looks fun and exciting.

Researcher: so what do you guys do there?

Child 1: I play there a lot.

Many children: Yeah! Oh yeah!!

Child 3: I went skateboarding there once.

Child 5: I always go on the bicycle through the water.

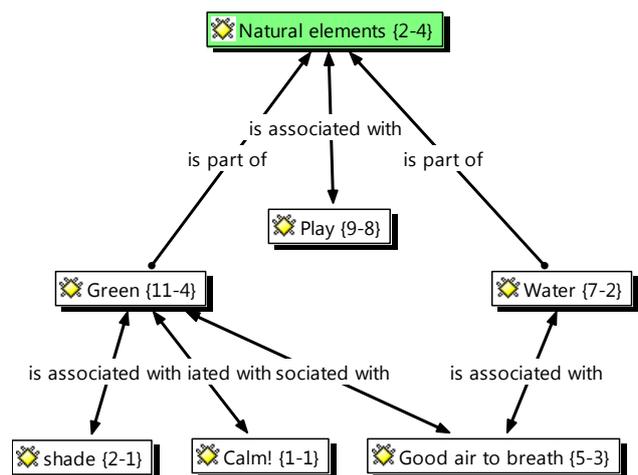


Figure 22 - Network diagram of the quality: 'Natural Elements'

In fact, the natural elements were labelled by (Kyttä, 2004) as an environmental quality that affords the children opportunity to engage in interactive activities This interaction that happens between the children and the natural elements has also been observed in the guided tour where children spent considerable amount of time exploring (climbing, playing, photographing) these elements as illustrated in Figure 23.

In their maps, children also pointed out locations that they like; stating the presence of natural elements as a primary reason for mapping that locations. The below narratives illustrates that and are geo-tagged in Figure 23.

1. “I like skipping stones onto the water” (Boy, 12)
2. “I think this place has good air to breath because of the green around it” (Boy, 13)
3. “I love this fountain! I go there and play with my friends, we keep going round and round and round and round” (Boy, 11)

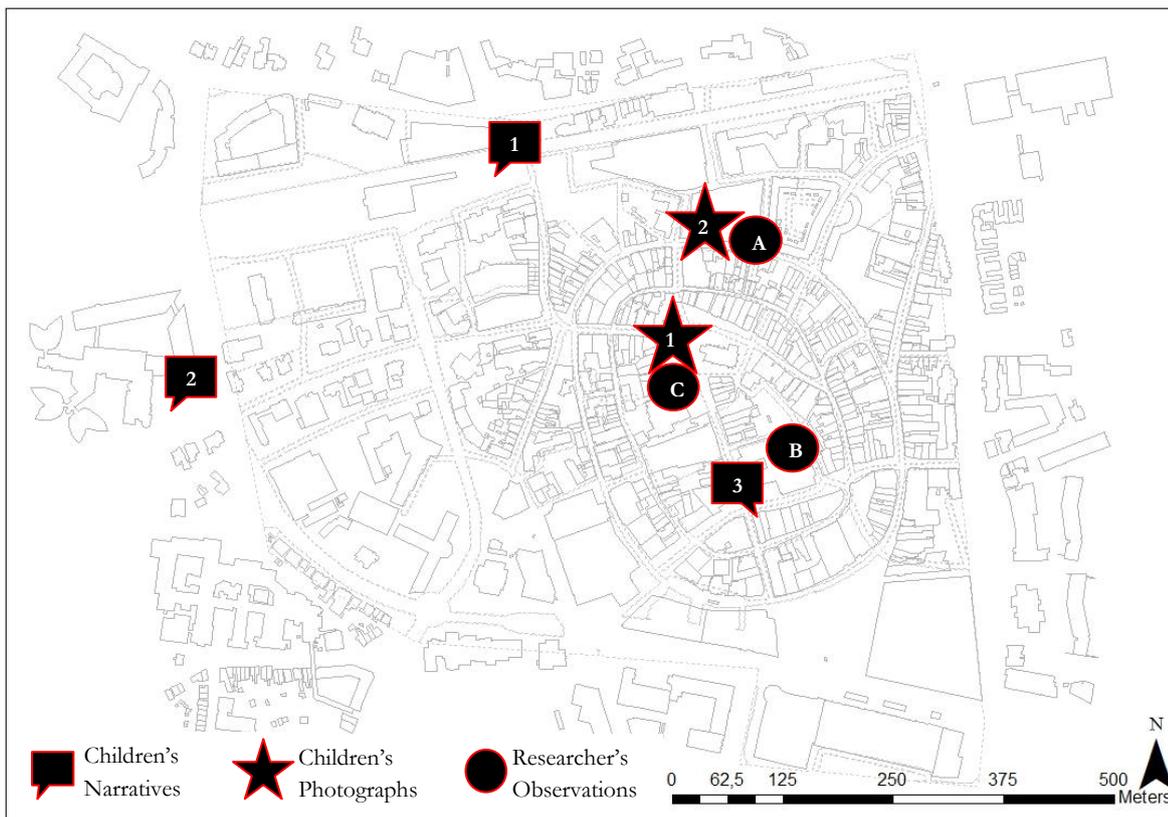
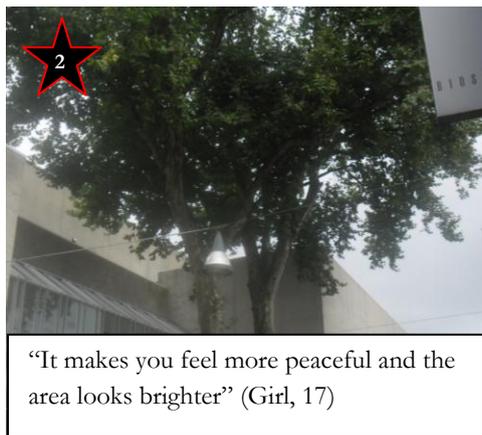
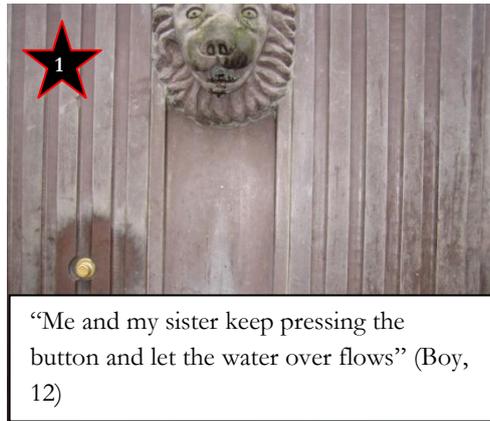


Figure 23 - Children and natural elements

5.4.1.3. Variety of activity settings and peer gathering places

These two qualities come hand in hand because the venues for the different activities are considered peer hanging places by many of the children. As shown in Figure 24 there are many forms of activities that the children engage in while being in the city centre (such as shopping, playing, eating, attending festivals, and watching movies) which eliminates the feeling of boredom. This supports Percy-Smith (2002) findings in stressing that catering for children’s needs is only addressed by providing a range of activities that the children are free to engage in. The activities for the different group of children; and while all of them mentioned the different restaurants as peer hanging places, younger boys stated play as a main activity, and older girls mentioned shopping with friends as their most important activity. This variation can be traced back in the children’s maps as illustrated previously in Figure12 and in the places they chose to photograph as shown in Figure 25.

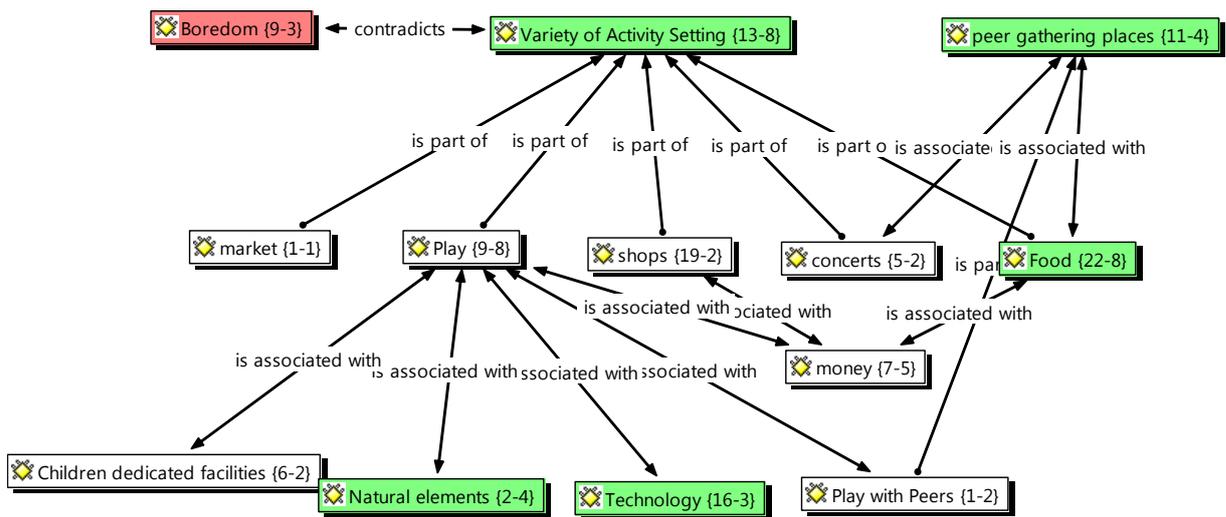


Figure 24 - Network view of ‘variety activity settings’ and ‘peer gathering places’

In fact two of the most popular positive locations among the children (the open plaza and the square) were mapped for the activities that surround them (restaurants, shops, open market, and festivals).

The following are some of the narratives given by some of the children when describing their activities in their peer hanging spaces in the city centre.

1. “I like this street, I just like to go with my friends and look at the shops, the clothes and fashion” (Girl, 15)
2. “It’s a nice place to be, there are nice restaurants and a lot of people and activities. I go there with my family” (Boy, 14)
3. “ it’s very exciting for the people to come and see what’s there because there is a market in the middle and children and people near the fountain” (Boy, 12)
4. “ I go there everyday with my brother or friends to play ping pong” (Boy, 12)
5. “They have everything here ... xbox, video games, everything!” (Boy, 11)
6. “ We just go and hang there with friends” (Boy, 13)

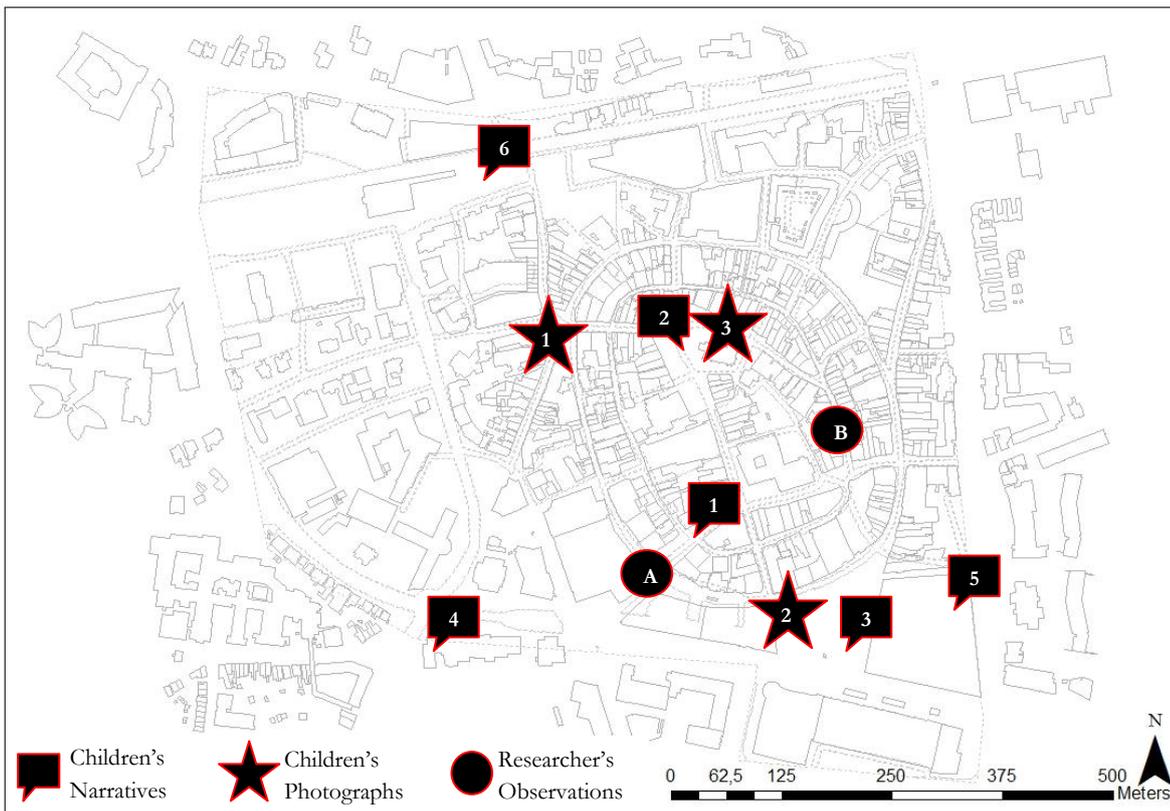


Figure 25 - Children and their activities and hanging places

5.4.1.4. Ugly/Old features

The children, regardless of their age or gender were very sensitive to their surroundings as they quickly picked up on features such as litter, dirty walls, bad smells, untaken care of buildings, crowded spaces and other features as shown in Figure 26. This was reported on in previous researches where children exhibited very detailed observation skills of their environment in comparison to adults (O'Brien, 2003; Vliet, 1981; Woolley et al., 1999). Ward (1978) accounts this to the smaller size of the children which means that they are closer to the floor level and their surroundings. This was observed in their attention to details in the photographs that they captured and also in the way they experienced the different spaces during the guided tour.

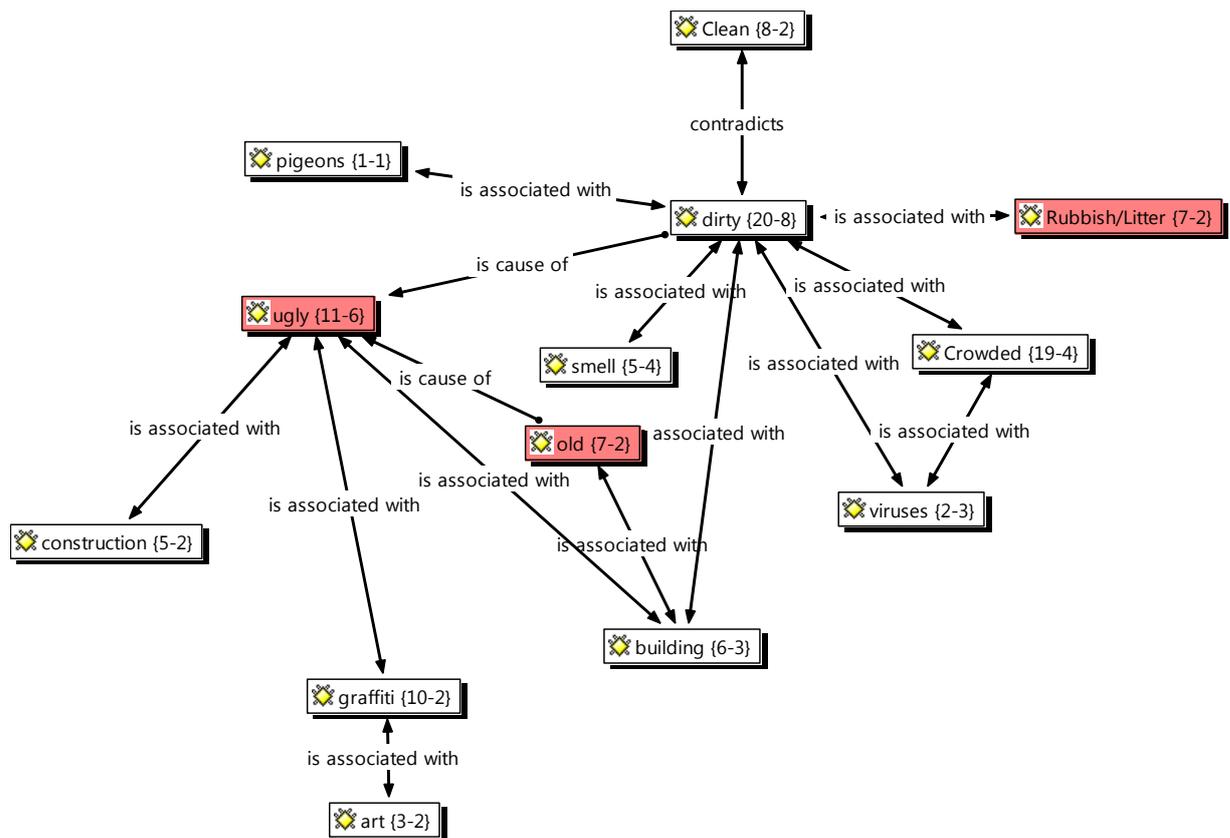


Figure 26 - Network diagram of the quality 'Ugly/Old'

As it can be noticed from Figure 26, the children’s perception of old buildings, construction sites, graffiti, and litter came negative as they associated them with “ugly” and “dirty”. On the other hand, children reported positively on modern, artistic features as many pictures were taken of colourful street art, details of buildings and the many different installed figures around the city centre area. In fact, in a discussion with the younger children in how they would change the ‘ugly’ sight of construction sites, they gave many suggestions that incorporated these positive factors.

Child 1: *Cover the whole thing so we don't see the construction*

Child 2: *but it will cost a lot*

Child 1: *I've seen bigger constructions and they can still cover it*

Child 3: *yeah and put something beautiful and attractive on the wall*

Researcher: Like what?

Child 3: *like what is the place going to be in the future*

Child 4: *or like the history of Enschede*

Child 5: *or they can invite artists to do some art and graffiti on the wall.*

The conversation above points out to the distinction that the children make between the different types of graffiti; the ones that are made by artists (mainly photographed as a positive feature) and the ones that are done randomly and contain vulgar language. In fact, some policy makers in Australia have advocated making place for legal graffiti by providing legal space for it in the city or by running graffiti workshops for children interested in learning the art (Gleeson & Sipe, 2006).

The sensitivity to what the children perceived as dirty was also observed during the guided tour where children avoided going to areas with a lot of crowds in the open market and expressed dissatisfaction with the smell when walking around the fish stands and the alleys with coffee shops. Younger boys also mentioned the pigeons as a huge problem as some described them as “*rats with wings*”

Figure 27 below illustrates some of the examples of the features discussed above in the form of photographs and narratives by the children themselves

1. “*I think the station in itself is a little ugly. It’s boring like the architecture has nothing special. Besides it’s dirty!*” (Boy, 12)
2. “*This pavement is ugly really, make the whole thing the same colour and make it more straight!*” (Boy, 14)
3. “*I don’t like it. The whole street is just very dirty and disorganized!*” (Girl, 15)
4. “*if you go through a lot of people you know they sweat and you are going with a t-shirt, you never know what touches you!*” (Boy, 14)
5. “*The building looks run down. It is not how a hospital should look like.*” (Girl, 14)
6. “*I like this area because the buildings look modern and new.*” (Boy, 12)



“This is really ugly and it looks like a prison.” (Boy, 11)



“This is really cool! I wish I had it in front of my house” (Boy, 12)



“I hate it when they spray things like this on walls. This is bad” (Girl, 12)



“The windows are really nice. I like their color” (Boy, 11)



“See, there is a place where they can put all the trash but they just leave it there and it smells” (Girl, 13)



“I like street art when it looks nice and proper; it adds color to the grey boring buildings” (Boy, 12)

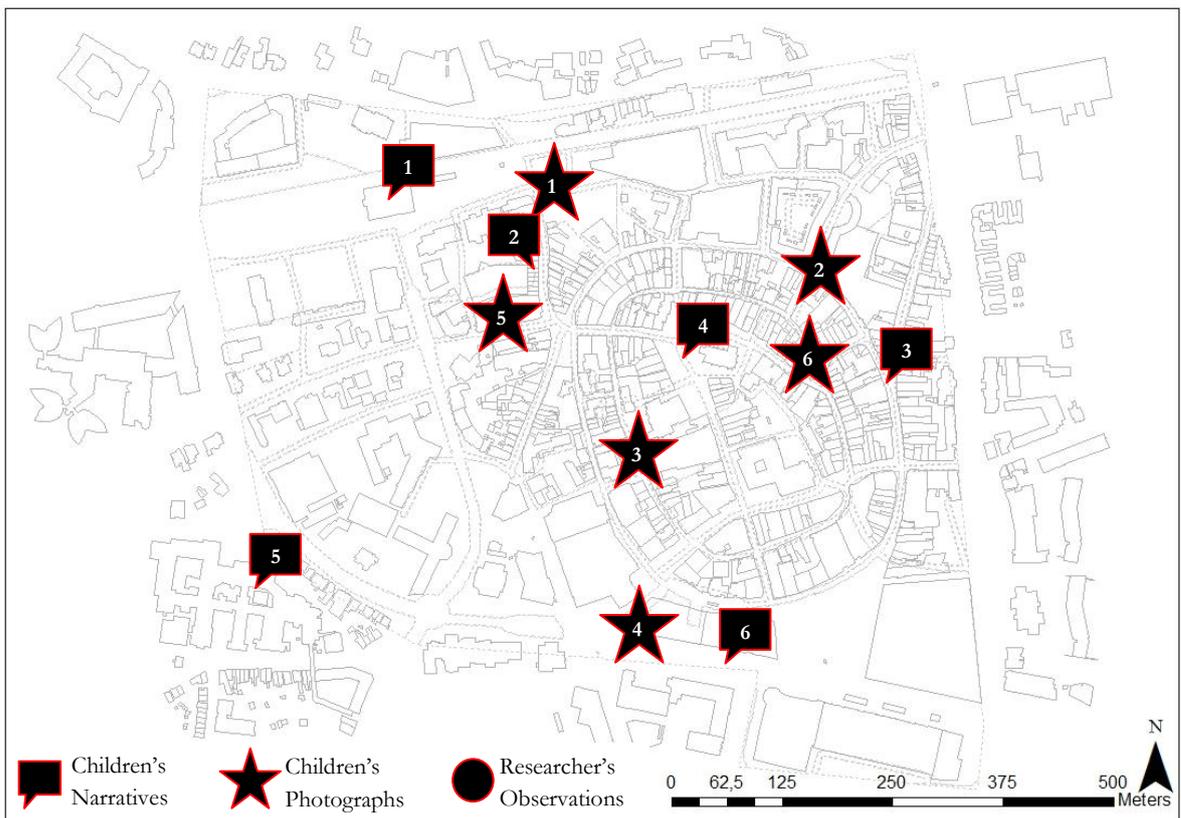


Figure 27 - Children and ugly vs. Beautiful

#### 5.4.1.5. Smart technologies

Smart technologies were frequently mentioned by children regardless of their age especially when it came to the use of the internet or video gaming. Generally speaking the children were more inclined to the use of technology in their everyday life. When asked about what they would rather do in their free time 20 of the children opted to stay inside and either play games online or use the internet. This growing tendency to retrieve indoors and play with the computer was traced back in one of the GUIC sites as well (Percy-Smith, 2002). In this case, this dependency on the digital world can be observed in a conversation that took place in a discussion with the younger children when they were shown a picture of a crowd of people in the Oud Markt:

Child 1: *Maybe this picture shows the celebration of Queen's day?*

Child 2: *or maybe when the Dutch team was playing football?*

Child 3: *to me it's negative because there are too many people, it's too crowded*

Children: *yeah!*

Child 6: *for me everything is coming together and people are together having fun*

Child 3: *you can do the same thing on Facebook.*

Child 7: *yeah! You don't need to go through all of this.*

Children: *Yeah!! (Laughing)*

In the instance of younger boys, smart technologies was associated with playing video games and internet games which was the main reason an electronic shop scored a leading positive location in their maps.

1. *"The Media Markt is the most important place for me because there is so much high-tech stuff. I like technology"* (Boy, 12)
2. *"I like Macdonald's because it has free Wifi"* (Boy, 12)
3. *"La Palace has free internet, did you know that?"* (Boy 13)

The older group of children saw smart technologies as a solution to some of the problematic areas they pointed out on the maps

4. *"I don't like the bus station, there are too many buses and this is bad for the environment. Too much CO2. They should try to look into electric buses .. it is 2012 after all"* (Boy, 14)
5. *"I don't like Jumbo, it's quite old ... do you know the AH on the way to Gronaou? It's so cool because they have this new hi-tech thing where you have like an electronic laser and you point to anything you want and once you are finished you check out. I think shops should be more into technology ... more people would go then"* (Girl, 14)

These narratives along with pictures of the most prominent forms of smart technologies that the children associated with are presented in Figure 28.

It is interesting to note that Chawla et al. (2002) noted that television was an important element of the children's lives in many of the GUIC sites in the 1990s. Therefore, smart technologies appearing in the context of this study is a response to the developing times it seems like the natural progress from the 1990s.



“Without it the city centre would not be the same. It is all technologish” (Boy, 12)



“I go there ever week to play the demo games and buy new games” (Boy, 12)



“The memes; you can make them on the internet and they are funny stuff ... better than graffiti” (Boy, 12)



“Video games! Of course this is a positive picture.” (Boy, 11)

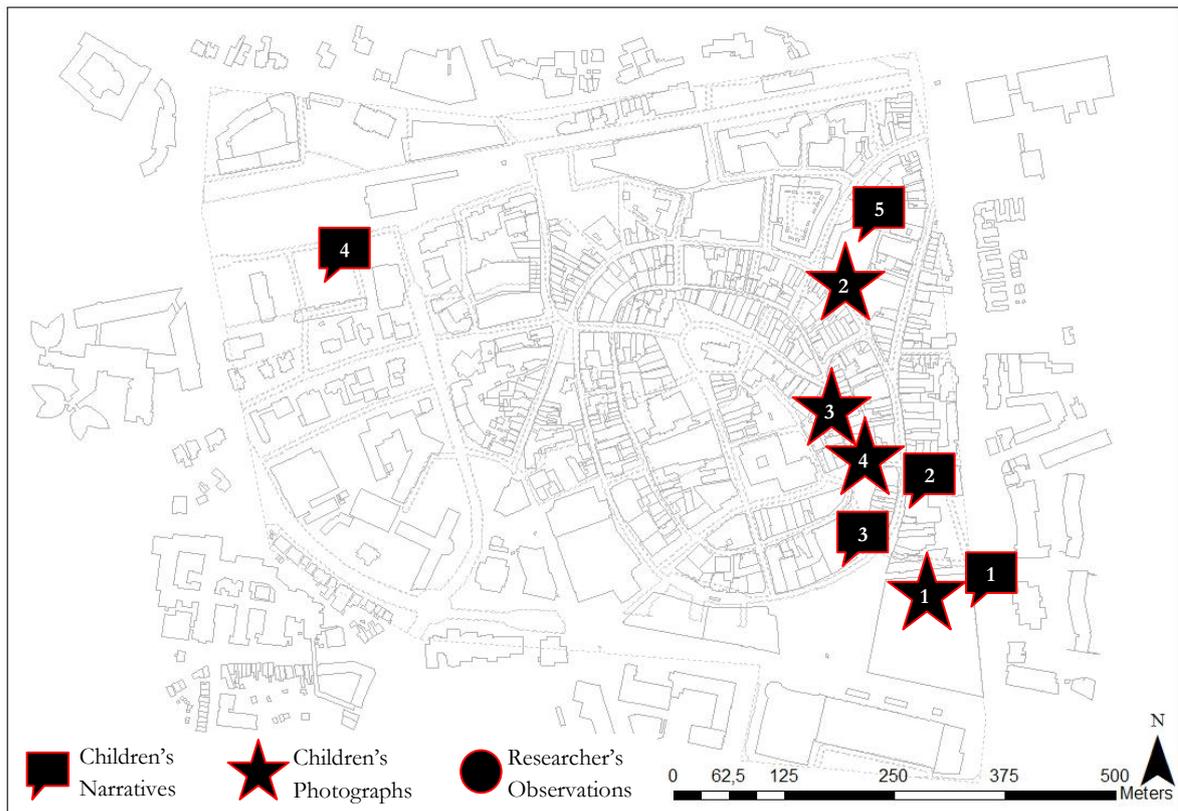


Figure 28 - Children and smart technologies

#### 5.4.1.6. Coffee shops

The presence of coffee shops is the one quality that all the children agreed on evaluating it negatively. In fact, the street with a concentration of coffee shops was the very top negative location, the number one photographed object by the children, and the top priority for children when asked about improvements to the city centre.

When children described this quality they tended to use the words: ugly, dirty, and dangerous. Some of the children (especially the younger boys and the girls) perceived the people around these areas as dangerous

*“ I don't really like it, because that is where people smoke weed and get drunk, I don't feel comfortable around these kind of people because they don't value their life so why are they going to value someone else's”* (Girl, 14)

*“There might be crazy people or they don't have enough money, so they just say give me money ... it's just better not to go there.”* (Boy, 12)

*“They are all high there are all these people there that are drunk and use stuff, I just won't go there alone.”* (Boy, 11)

While others seemed to be focused on other qualities that affected their senses

*“I accidentally went there once and there were weed bags everywhere! That place is just dirty”* (Boy, 12)

*“People just go in and come back and we can smell it from their faces ... the place is dirty and smelly”* (Boy, 11)

Interestingly enough even though most of the children stated *“removing the coffee shops”* as the number one priority for making the city centre a better place, a lot of them were still aware that these places still need to exist to serve their “audience”

*“If I can change the city centre I would place the coffee shops somewhere else, I don't know where to place them, They don't have to disappear otherwise the people that use drugs .. well they would just go really crazy and angry.”* (Boy, 12)

#### 5.4.2. Other physical qualities

The remaining qualities may not have appeared as strongly as the qualities discussed above, but they still had significance on how the children experienced the city centre. The two physical qualities that have not been mentioned even though they appear in Figure 20 in relation to ‘danger’ and ‘freedom of movement’ are the ‘coffee shops’ and the ‘Bike lanes’ which are two of the qualities that are very specific to the context of this study.

When it came to freedom of movement and bike lanes, these two qualities became closely associated to each other. Children were aware of the extensive network of biking lanes in the city and made use of it as more than half of the children biked to school every day and some chose to bike to the city centre on the day of the guided tour. This gave children more freedom of movement as they didn't have to depend on their adult guardian

*“You can just go by bike anywhere, people don't have to take me by car I can just go by myself”* (girl, 15)

The availability of tasty food appears as a positive quality as well in the context of this study. This was apparent by the repetitive appearance of food establishments as positive locations. The children were

aware of the healthy and non-healthy options and made informed choices. Among the places the children pictured were ice-cream shops and candy shops.

#### **5.4.3. Other social qualities**

Many of the social qualities did not come up in the previous section mainly because they did not majorly appear spatially in maps or in reported photographs (with the exception of 'fear of harassment and crime' and 'freedom from social threats'). However that doesn't mean that they did not come up in the in-depth interviews and narratives given by the children.

Boredom for one, is a quality that was repeatedly mentioned by children and that was mainly associated with spaces that did not offer them what is appropriate for their age (the library not offering a lot of comic books, and the music centre offering only classical music), or spaces where the children experienced long waiting times with not a lot of offered activities (the bank, the train station). Otherwise, as illustrated in section 5.3.1 children have a variety of activity settings and peer gathering places which includes many restaurants and shops. This basically meant that the children were socially integrated and welcomed by adults in these spaces. Interestingly enough, children made a relationship between this social integration and money. When asked if they feel like they are welcomed by adults in the different shops as the children were clear on their perception: *"It doesn't matter if we are this big or this big, they just want you to pay so it they get their money they are happy and we are happy"* (Boy, 12)

However, the children stressed that they are free to enter any space in the city centre except for the casino, the coffee shops and the bars with no sense of exclusion. A small group of children nevertheless, reported feeling excluded because of their language as they felt they can not fully communicate with staff in restaurants and shops in Dutch and perceived some of the people who refuse to communicate with them in English as unfriendly.

Even though the children in this study are not of Dutch origin they still exhibited a high level of awareness of the community's identity as a number of them mapped the old church as a positive point for it's historic value and in general they took part in the different festivities including the celebration of Sinterklaas and the Queens day. The boys specifically reported their interest in the FC Twente football club, and reported going to the old market area to cheer for the Dutch football team in the Euro cup that took place earlier that same year.

### **5.5. Summary**

In summary, this chapter provided a detailed account of the children's perceptions of their environment. Even though the context of this case study was not the children's own neighbourhoods, many of the qualities reported by Chawla et al. (2002) re-appeared again. This only illustrates that regardless of their background or their living environment, children basically want the same thing: environments that are safe, clean, where they are valued as members, and where they can find a variety of activities to engage in. The next chapter explores whether the qualities reported in different neighbourhoods of Enschede by a different group of children would correspond to the ones mentioned in this chapter or not. A summary of the similarities and differences will be presented along with examples of the neighbourhood's features that were photographed by the children.

## 6. “MY NEIGHBOURHOOD” – A SUPPORTIVE CASE STUDY

*This chapter provides an overview of the second case study carried out in support of the main case study presented in the previous chapters in an attempt to find similarities and differences between the two contexts (the city centre and the neighbourhood). The chapter begins by introducing the case study and the participants' profile, followed by the main purpose of the study and the methods that were used to collect and analyse the data. The findings are again presented in terms of physical and social qualities of the living environment. This is analyzed in comparison to the previous case study that was carried out in the city centre.*

### 6.1. Introduction to case study

The study was done in collaboration with Al-Ummah School in Enschede where access to the field was granted after initial communication with the school's principal and further discussion with the teachers of classes 7 and 8. The study involved a total of 39 children (21 girls and 18 boys) ranging in age between 10 and 11 years old. It is important to note that all the children come from Muslim backgrounds including Bosnia, Morocco, and Turkey but nevertheless, most of them have been born and raised in Enschede and hence have been residing in the city for longer periods. This was one of the main reasons why the researcher opted to investigate their local knowledge of their direct living environment instead of looking at the city centre area. Because the children did not all come from one neighbourhood as discussed earlier in chapter 3, this case study focused on the neighbourhoods where each child resided. This resulted in a total of 12 neighbourhoods that were included in this study (9 of which are in Enschede). These neighbourhoods along with the number of participants in each neighbourhood are shown in Table 5.

Table 6 - participants profile

Neighbourhood	No. Of Children
Enschede	33
Hogeland	6
Deppenbroek	8
Wesselerbrink	5
De Bothoven	3
Stadsveld	4
t'Ribbelt	2
Velve	1
Stroinkslanden	2
Twekkelveld	2
<b>Almelo</b>	<b>2</b>
Aalderink	2
<b>Oldenzaal</b>	<b>1</b>
De Thij	1
<b>Lochem</b>	<b>3</b>

This study focused on exploring the physical and social qualities reported by the children in their own neighbourhoods; because of the limitation of time and limited number of participants per neighbourhood, the spatial component of the qualities was not explored, instead this research was interested in finding whether the qualities will coincide with those reported in the previous case study or not with the purpose of exploring further the similarities and differences between the two contexts (the city centre and the neighbourhood).

Similar ethical procedures to the ones mentioned in section 4.3 were followed in this study as well and the methods were adapted to fit with the limitations of this case. Since the children's first language was Dutch, the methods were limited to the visual ones that were able to communicate the message without the need of extensive verbal communication. The primary data collection method in this case was photographs with the aid of Google maps 'street view' option to help the children who did not have a camera capture the locations that they wanted.

In the course of one week, the children photographed places that they liked and they disliked and attached them with a Google map to help identify the locations as shown in Figure 29. The children who did not own a camera was given an option to utilize the street view option of Google maps to show their spaces as shown in Figure 30. They attached a one line description of each photo explaining why the photo was taken. A total of 190 pictures were handed back and translation of the descriptions was done in order to allow for an effective thematic analysis to be performed to check the reoccurring themes and to help identify the emerging social and physical qualities. The next section introduces a summary of these findings starting by the positive qualities reported and followed by the negative qualities.



Figure 29 - Example of a child's output (photograph)



Figure 30 - Example of a child's output (street view)

## 6.2. Results and discussion

The pictures that the children reported reflected many of the qualities their peers in the previous study reported as well and these can be sorted into negative and positive qualities and further divided into social and physical qualities as well. As a matter of fact, looking at Table 7 one can notice that although some of the qualities reappear in this context again, others have not appeared. The qualities that did not appear include: 'smart technologies', 'bike lanes', 'coffee shops', and 'freedom of movement' from the physical axis and 'cohesive community identity', 'social Integration' and 'social exclusion' from the social axis.

Table 7 - Emerging Themes

Themes (Qualities)	No. of Pictures
Variety of Activity Settings & Peer Gathering Places	65
Physical Danger	33
Dirty	25
Boredom	20
Familiarity	12
Fear of Harassment and Crime	12
Natural elements	10
Basic Services (Food)	5
Beautiful	5
Safe	2

The absence of these qualities or other qualities from the conceptual framework does not necessarily mean that they do not exist in the context of these neighbourhoods, but rather they did not emerge in this study for the lack of data gathered; as most of these qualities are usually reported through narratives that the children provide in in-depth discussions and interviews which were not feasible in this case. Nevertheless, the photographs provided rich information of the living environment of those children and even though at the first instance the themes that emerged look identical to those that emerged in the previous study, differences start to emerge within each theme or quality.

Looking at the highest ranking quality for example; 'variety of activity setting', both groups of children reported places where they can do some form of play activity with their friends. But the spaces reported were somehow different. The children in the city centre area mapped out video game shops, restaurants, and open squares as their spaces while the spaces reported in the neighbourhoods were actually child dedicated facilities that were specifically designed for play. 30 pictures came back of playgrounds, 8 of football fields, 7 for especially dedicated activity centres (where children go for karate lessons, or swimming lessons), and 5 of different small parks in their neighbourhoods. This was expected as the context of the study was different and also the children in this specific case were younger. But that did not stop a number of them (14 pictures) to map out shops and supermarkets in their areas as a place for them to go and buy things and also restaurants in their area. This difference in the activity settings probably explains why a quality like smart technologies disappears from the framework in this case as the children start utilizing the opportunities offered in their surroundings to their advantage and not retreat back to the use of computers.

The other positive qualities reported by the children appear to be in the bottom of the list, surpassed by the negative qualities. These qualities were the presence of natural elements, the presence of beautiful features in the neighbourhood and safety. Interestingly enough, most of the pictures reported here came from the girls as they photographed small lakes, trees, and green areas and associated them with serenity, calmness and good air to breathe. The Beautiful features were also exclusive to girls as they took pictures of benches and installations in their area that were decorated and colourful.

However, that doesn't mean that children from both genders did not note negatively features including buildings, green areas, and installed services like public phone booths and trash cans that are ugly, old or just abandoned and untaken care of. And like their peers in the previous casestudy, the children were sensitive with their senses as a total of 8 pictures were taken of areas where the children experienced a lot of noise or bad smells. These include pictures of construction sites, litter and trash, major roads with a lot of cars passing, and green areas where they reported people not picking up after their pets.

The other negative qualities reported include: danger (both physical and social) and boredom. When it came to boredom a total of 20 pictures were reported back including pictures of installations in playgrounds, empty green areas, bus stops, and streets around the neighbourhoods. The reasons the children gave for experiencing boredom in these places referred back to the sterile features in the space that did not respond to their needs. For example, some playgrounds that were captured had one installation that was not really age appropriate for the children in this study. Also like their peers in the previous case study, they reported boredom in places where they experienced long waiting times with nothing to do like bus stops and banks.

Heavy traffic topped the pictures representing physical danger as 16 pictures of major roads and streets were reported back with comments including difficulty to cross, accidents taking place, and even people getting hit and injured by these cars. Although heavy traffic has been reported by the children in the city centre area (specifically in the roundabout intersection), it can be noted that the fact that the city centre was a car free zone probably resulted in a larger freedom of movement for those children than the children in their own neighbourhood. Of course the age of the children comes into play as well as the children in this study are younger and maybe did not start exploring their surroundings as their older peers in the previous study. The next leading set of pictures came of dark narrow streets including small streets under crossing bridges and streets in between large bushes of trees.

The one difference noted here is the fact that the children reported more pictures of small details in the physical environment that represented danger for them. This included pictures of fear of falling in small pits in the streets, being stung by certain kind of plants, or fear of dogs in certain areas. This level of detail reflected a high level of local knowledge of their surroundings

When it came to freedom of harassment and crime, the one major difference was the fact that the children here started picturing areas of their neighbourhoods where they experienced bullying from other children. This bullying was not investigated further to identify a certain cause (whether it was racially based for example). Other than that, the children still pictured areas where the reported fear of gangs gathering and drinking and also pictures of old nursing houses where they reported unfriendly people.

The one important note that needs to be made in this case study is that children (especially the girls) pictured their own homes and also pictured the streets in front of their homes as their favourite places. This came in line with results from different researches that associated a sense familiarity and safety

the children felt with their immediate surroundings. (Broberg & Fagerholm, 2011; Malone & Hasluck, 2002; Rasmussen & Smidt, 2003).

In conclusion, the qualities reported by the children regardless of the context are very similar in nature as most children want safe, clean areas where they can play, and enjoy other activities with their friends. But like Chawla et al. (2002) noted, studies into different contexts are important as differences start to emerge within these qualities. It should be noted that because of the limitation of data collection method in this case, more insightful information on the perceptions and experiences of the children was not possible. Attributing the differences in qualities to certain factors was also not investigated as it can stem from a number of factors including the age of the participants, their cultural background and their socio economic status.

## 7. THE ADDED VALUE OF CHILDREN'S PERCEPTION - REFLECTION ON THE STUDY

*This chapter provides a reflection on the whole study including: the process, the data collection methods, the data analysis methods, and the results. It illustrates the potential benefits of the carried study for the participants and the community. It also looks into the possible incorporation of the process and the results in the planning process from the point of view of planners.*

### 7.1. Reflection on the process, methods, and analysis tools

It has been already established that the children hold different perceptions and experiences than those of adults, but how effective has this study really been in capturing the perception and experiences of children? It is imperative to ask this question, reflect on the process carried out, and examine the strengths and drawbacks of the entire process to help establish the usefulness and efficiency of conducting such research.

The use of qualitative methods in investigating the perception of the local living environment is essential to get an understanding of the phenomena that happen at such a small scale. This kind of local knowledge allows for further exploration of the experiences of the different individuals, which offers researchers rich contextual information and explanations of the interactions between human and their surroundings (Cope & Elwood, 2009). Some may argue that the use of a number of different methods may lead to a repetitive kind of information; but the truth of the matter is that incorporating multiple forms of data results in a greater understanding of the perceptions and experiences (Celea, 2006). This advantage has been witnessed in the first case study as more insights were revealed about the perceptions the children held of the city centre area as the information collected via the different methods were overlaid and added together and relations between the spatial and social construct were explored using querying functions of the textual analysis (Jung & Elwood, 2010). Mapping the point they liked or disliked and associating it with a quality was only one layer of information that needed to be supported by the interviews, photographs, and walks through the city centre. The lack of this supportive information and what they reveal about the perceptions of these children came to light in the second case study where limited methods were used which led to speculations about many of the perceptions reported (Why did the children feel bored in certain spaces? What are the different types of social threats that they refer to in their pictures? What kind of changes did they envision for a better experience of space?) and also led to the disappearance of some of the qualities that most probably exist in their context (tradition of community self help, social exclusion and stigma, racial tensions ... etc).

The participatory mapping used in both case studies has been very successful in eliciting initial observations about what the children liked and disliked about their environment. As founded earlier by many researches (Blaut, 1997; Blaut et al., 2003) the children possessed an innate ability to use aerial maps and locate themselves in space regardless of their age or background. And even though the children at Al-Ummah School were not as experienced with map reading as their peers in the International school which resulted in cancelling the aerial mapping exercise, they nevertheless portrayed a quick learning ability as they took on the tool of using Google maps after a brief introduction and utilized it well in locating their homes, neighbourhoods and spaces in between. The number one advantage of using this method is obviously the opportunity to produce maps which allows for a visual identification of locations the

children liked or disliked with the spatial relation these points have with each other or with other points of the area (Travlou et al., 2008) .

The process of producing these maps in groups promoted the active engagement of the children and encouraged discussion among them and the additional function of the transparent overlay worked in full advantage as well in helping show the children the points that many of them mapped and initiated further discussion on why these points kept reappearing. This worked in the children's advantage as they were more involved in the decision making of the route that will be followed in the guided tour which made them feel like active participants instead of mere respondents (Hart & Centre, 1992). The only drawback this method had was the approximation of the locations that the children pointed out especially when the children started pointing out to areas like "near Jumbo" or "in the dark alley" or "behind the coffee shops", but that's when the strength of combining the other materials with these maps (like the photographs taken by the children, and the observations of the guided tour comes) become more obvious as it starts offering a better idea of what exactly in that approximate location did the children like or dislike.

The focus group discussions were also very instrumental in observing the interaction among the children. The further split that was made between the younger and older children helped in revealing the differences in the perceptions of the two groups, but as Morrow and Richards (1996) and Driskell (2002) have indicated, the setting of the focus group (shown in Figure 7) in a school's environment may have led to having a formal kind of participation where some of the children felt the need to raise their hand before speaking which may have resulted in a not very fully participatory discussion. This power distance between the researcher and the children was reduced after the very informal guided tour which resulted in a much easier communication when the one on one interviews took place afterwards.

The guided tour and the photographs have proven to be one of the very successful methods to actually get a glimpse of how the children interact with their surroundings. The photographs specifically allow for not only the active participation of children and for an increased power to the child holding the camera, but also it allows each child to freeze his experiences from his everyday life in a way that would not be possible to communicate through a normal interview (Rasmussen & Smidt, 2003). Although it should also be noted that peer influence was present and that was especially apparent in the photographs the children reported as a number of them came with very similar photos, but that was expected since the photographs were taken during the guided tour itself and the discussion between the children during the tour naturally resulted in this influence.

All in all, the methods followed and the fact that the children were active participants in the process was not only beneficial to the research in shedding a light on how the children experience their space and identify positive and negative qualities, but it was also beneficial for the children themselves. Even though the process was not completely participatory; but as Driskell (2002) and Frank (2006) point out, there were many benefits to the children including participating in an interactive activity, opening up the city to them and allowing them to understand their local environment in new ways, developing a sense of environmental responsibility, developing new skills like the use of Google Maps and geo-tagging of photos, and developing confidence in their abilities and their self-esteem by participating in the discussions and learning that there are no wrong answers and that their opinions are valued.

All of the discussed above suggests that working with children to get a fuller insight into their experience is feasible, add to that the fact that the children demonstrated familiarity with planning concepts as many of them started talking about accessibility problems, and suggested better zoning when they suggested solutions to problems concerning coffee shops locations and it becomes clear that children

are experts in their own environment. The question remains as to how the information that they provide fit into the agenda of planners and how useful is it in informing their policies. A brief overview will be addressed in the next section by looking at the literature and the feedback given by the planners at Gemeentee Enschede.

## **7.2. Reflection on the benefits of working with children to the planning process**

It has been established that planners and policy makers play a major part in determining the physical form and structure of the living environment, and hence they have the power (through the regulations) to affect significantly the experience of the children in their cities (Gleeson & Sipe, 2006). This highlights the benefits that could be realized by taking children's insights into accounts including understanding the needs and issues of the local communities these policy makers serve and making more informed planning policies in their development and planning decisions (Driskell, 2002).

The two planners that were interviewed agreed on the importance of children's insight in the planning process. They stated that not only that the children's insights are significant to know what can be done about the current situation, but also they stressed the importance of taking these insights into accounts for the future plans of the city. Having said that, they both acknowledged the fact that children are usually forgotten in the process and they attributed that to the view held of children as "dependable" on their adult guardian: *"We speak a lot with the parents of the child. In the Netherlands when we plan for a playground for example; the parents will often make their opinion heard while the children are not in the picture."* They also mentioned that one of the reasons a policy maker would be more interested in a parent's point of view is because the parent is the voting member of the family. This tension has been stated before in the literature as Knowles-Yáñez (2005) mention the planner's interest in politics and power as a main reason for overlooking the children's right to having their insights incorporated.

When asked how this obstacle can be overcome, they pointed out to the importance of researches that are similar to the one reported on here. In fact, the collaboration between the school and their office through this research was seen as "the power" of the whole study since not only access to children in a learning environment (a school) is possible, but a systematic approach can be developed so that the school can schedule this kind of activity in their yearly program which will make future collaboration more attainable. Indeed, this process of graduated learning and incorporation at the local level between the municipalities and schools in order to offer children the opportunity to develop shared decision making is being introduced in different part of Australia, new Zealand, and the United Kingdom (Gleeson & Sipe, 2006) and was one of the recommendation of Chawla et al. (2002). Once this link is established, it is much easier as one of the planners stresses; to replicate this research with different Dutch schools where one neighbourhood can be investigated and then the results will be more powerful because they reflect local knowledge of a specific area which will make targeting the problems much easier for the local municipal offices.

The methods and the results that were communicated to the planners have proved to be insightful into what the children think of their environment. One of them stated that: *"these methods are very good because by walking around, the children can exactly point what they like and dislike and by taking pictures we can see their point of view and the mapping is a good learning for the children and the combination between the maps and the picture is really good for us."* Among the results that were communicated, the maps ranked highest in importance to them but not when displayed alone without the supportive information. As they explain: *"It is important to know what are the positive areas and why and also the negative areas and why. Then you can lay them next to each other,*

*then you can find the relationships because then when we make our plans we can see and understand what can we do to turn a negative point into a positive one. And that is why it is important that we know exactly why is it negative. That is very important for the policy makers. Why! Why! Why! Because only then we can look if we can do something about it.”*

This does not only confirm the discussion illustrated in section 7.1 but stresses the fact that the use of qualitative methods is not only beneficial for the research but also for planning policies. Like Dennis (2006) suggests, we need to start thinking of GIS as a communication tool and allow some room to qualitative representations to achieve an equal position with the quantitative data.

Both planners agreed to the importance of communication and conversation between the children and the policy maker because that is the way to manage the expectation of the children and show them that their work is of value. This way the children recognize the importance of their insights, and they also recognize the possibility (and the reasons) in whether their views are taken further in the planning policies or not. This was also pointed out as a recommendation by Chawla et al. (2002) as she stresses on the importance of communication between the children and the different governmental bodies to ensure a good participatory practice. *“Presenting their findings in front of the Mayor would help these children a lot”* was a remark that one of the planners made when asked how this can be achieved. \*

It is important to note as a concluding remark that The Netherlands has its own National Youth Council that is responsible for improving participation at national and local level and advocating the best interest of young people (Netherlands Youth Institute, 2012). To what extent does this council operate and carry out its set goals was not further explored.

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*\*At the time of writing this report, the children of the International School Twente were scheduled for a presentation of their own findings that was going to take place in ITC in front of their peers, parents, teachers, academics from the Urban planning department and the interviewed planners from Gemeente Enschede.*

## 8. CONCLUSIONS AND RECOMMENDATIONS

*Having reached an understanding of the children's perception of their local living environment in the city centre and the neighbourhood, and having understood the implication the results and the process as a whole can have on planning policies; This chapter provides the concluding remarks which are drawn from this conducted research. This includes a summary of the objectives that were fulfilled and a summary of the main findings. This is followed by a discussion of possible recommendations for future work based on the findings and the outcome of this research.*

### 8.1. Conclusions

This study focused on involving children in the research process by capturing their perception of their local living environment in the city of Enschede. Having the framework that was developed by Chawla (2001) serving as a preliminary point, an investigation was done to get an understanding of the children's perception of the social and physical qualities of their environment. Since these perceptions are difficult to understand because of their subjectivity, a number of methods that are qualitative in nature were utilized to get a fuller insight into them.

This was fulfilled by first looking into what physical and social elements are important for the children. This was done by reviewing the literature and conducting focus group discussions with the children, which resulted in a framework that is specific for this study shown in Figure 20. This was followed by a deeper investigation of the qualities to find out their spatial distribution and what the underlying relationships between them are. The qualities that appeared in both case studies included many of the qualities that appeared previously in Growing Up in Cities sites with danger both physical and social ranking at the top, presence of variety of activity settings and peer hanging places, sensitivity to dirty, old untaken care of features and appreciation of well taken care, and the appreciation of natural elements coming up repeatedly as well. A new major positive physical quality appearing in the first case study was the presence of ICT technology. Other new qualities appeared because of the context of the study including negative perception towards the coffee shops which was associated with danger and dirt and an appreciation of biking lanes which facilitated freedom of movement for many of the children. And even though the contexts of the two case studies were different (the city centre and the neighbourhood) the children agreed on many of the qualities and their perception of it.

Taking the process further and investigating whether it can be incorporated into the planning process, the results were communicated with planners from the local municipality in Enschede which resulted in a positive review and a realization that the inclusion of the children is important and possible if a partnership and cooperation between the different authorities in the community is attained.

In conclusion, this study can be seen as an experimental research. Even though it presents insights into the perception of children in a specific context, it still demonstrates the importance of a participatory, qualitative process as a methodological framework in providing children (or any marginalized group for that matter) the floor to express their views; while also providing a fuller understanding of these views and perception for the researcher, the policy maker, and the community as a whole.

## **8.2. Recommendations for future work**

Based on the findings of this research, a number of directions exist for further research. A further quantitative investigation of these perceptions that takes into account a representative sample of Dutch children is recommended to get a generalized idea of children's evaluation of the city of Enschede. Furthermore, an effort should be made for the collection of secondary data from census publications and governmental agencies including population and demographics, land use information, economic indicators, reported crimes, and land tenure, ...etc. This will allow for the subjective perceptions to be overlaid and compared to the objective reality on the ground which will give better insights into the relationships between the perception and the living environment. Developing a methodology that can easily capture the perception utilizing ICT technologies is a suggested direction for further research as well. Investing in the children's interest in the ICT technology can open the gate for an easier incorporation of their insights into the planning process. This has been investigated by Kahila and Kytta (2009) and their development of a softGIS system to help children (and the wider community) register their perceptions. By taking this even further and incorporating gaming, the process can become more interactive and interesting for the children. Finally, developing a proper framework that ensures the incorporation of children in planning processes and local decision making is suggested to better fulfil the needs of the wider community and better address the skills and competencies of children as independent stakeholders.

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# APPENDICES

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## Appendix 1 -Children Interview – Question Guide

*Child ID* \_\_\_\_\_ *Name* \_\_\_\_\_ *Age* \_\_\_\_\_

### **RESEDINTIAL HISTORY**

*How long have you lived in Enschede?*

*Where did you live before coming here?*

*Can you tell me your zipcode area?*

### **FREE-TIME ACTIVITIES**

*What do you usually do in your free time?*

### **GENERAL PERCEPTION**

*How would you describe the city center to someone who had never been there before?*

*How would you compare it to where you lived before?*

*Did your perception change after the visit?*

*Which of these qualities apply to the city center area?(Provide with card)*

*Pretty ----- Ugly*

*Quiet ----- Noisy*

*Uncrowded -----Crowded*

*Interesting ----- Boring*

*Friendly -----Hostile*

*Important ----- Unimportant*

*Safe -----Dangerous*

### **MAP QUESTIONS:**

*What are the places you pointed on your map?*

*Can you tell me more about the places you like? Why do you like them?*

*Can you tell me more about the places you don't like? Why do you not like them?*

### **PLACE KNOWLEDGE AND USE**

*Can you show me on the map the places you usually spend your time in? What do you do there?*

*Where can you move around in the city center? Can you go everywhere? Do you go there alone? If not, with who? friends or parents?*

**FAVOURITE PLACES**

*Which of the places mentioned above is most important to you? Why is it important?*

**PROBLEM PLACES**

*Are there places where you do not like to go? What do you dislike about these places?*

*Are there places where you are not allowed to go? Who forbids you? What are their reasons?*

*Are there places that you cannot get into? Do you wish you could?*

*Are there dangerous places in the city center? What makes them dangerous?*

**PLACE OWNERSHIP**

*Are there any places that feel like your own?*

*Are there places where you feel like an outsider?*

**PLACE CHANGE**

*If you could make changes to the city center area, what would they be?*

*What would you add to make it a place you like?*

*What would you take away?*

**PICTURES QUESTIONS (PHOTO-VOICE)**

*What do we see in the picture?*

*Where did you take it?*

*Why did you take it?*

*Is it a positive or a negative quality?*

## Appendix 2 - Policy Maker Interview – Question Guide

### **BACKGROUND INFORMATION**

1. *Do you think the inclusion of children is important? Why is that?*
2. *What do you think are the barriers that stop policy makers from doing so?*
3. *What motivated your interested in this research?*

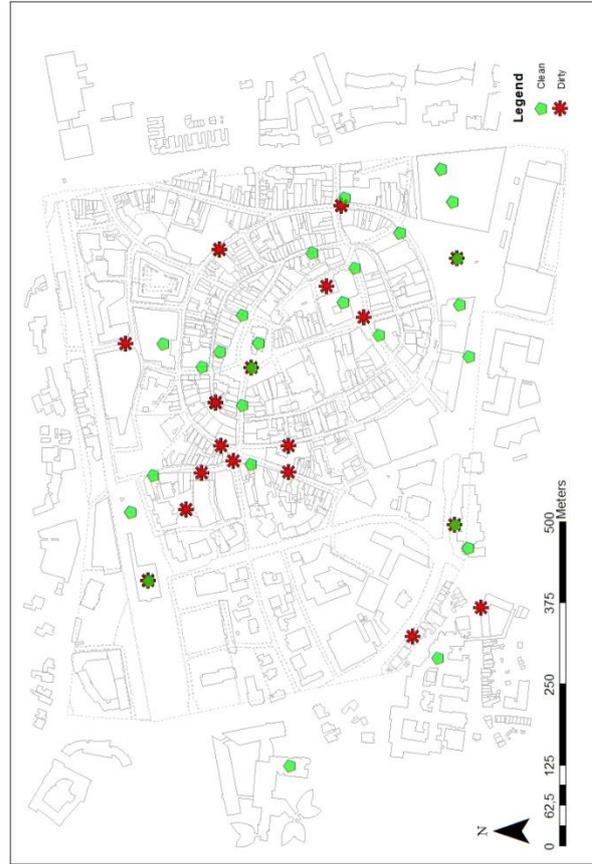
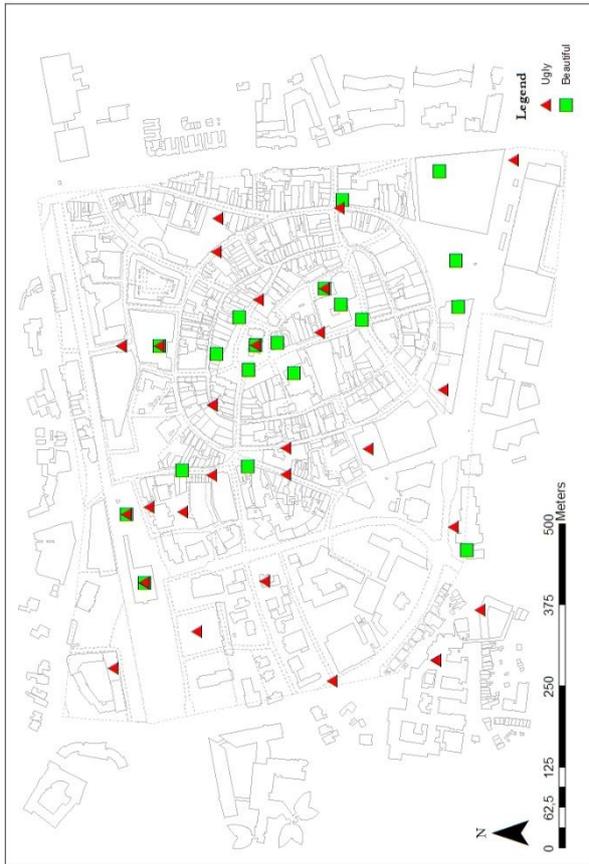
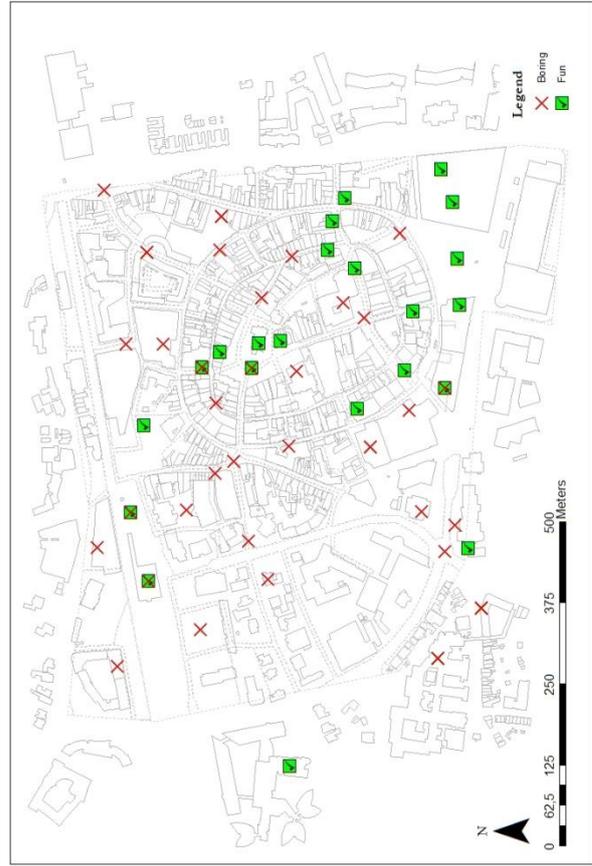
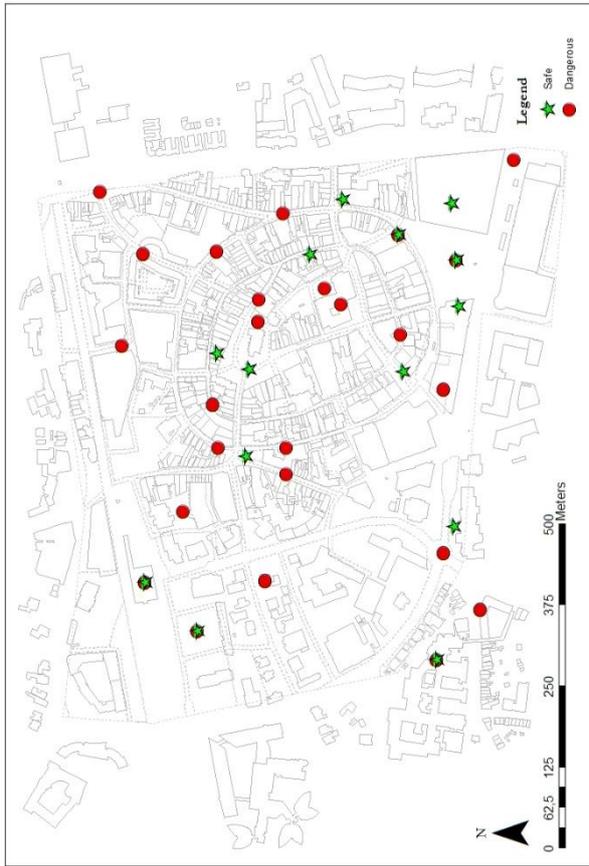
### **ADDED VALUE**

1. *Did the presented findings enable you to identify the qualities important to children?*
2. *Is the information useful? Which of the presented information can be easily utilized?*
3. *Do you think the findings can be used to formulate better policies? How so?*
4. *Would you take actions based on the findings presented here?*
5. *Do you think the collaboration (between the municipality office, ITC, and the School) was successful?*

### **FUTURE POSSIBILITIES**

1. *What would you change and/ or adapt of the methods utilized in this case study?*
2. *Do you think future collaboration is possible?*
3. *Do you think it is possible to invest in people who can facilitate children's participation?*

### Appendix 3 - Spatial Distribution of the Qualities



## Appendix 4 - Coding and Geo-Coding in ATLAS.ti

The screenshot shows the ATLAS.ti interface with a text document open. The document contains interview transcripts with line numbers 034 to 063. The coding panel on the right lists various codes applied to the text, such as 'company (if any)', 'Social Integration', 'Food', 'Healthy food', 'positive quality', 'positive space', 'Play', 'Variety of Activity Setting', 'sports facilities', 'Children dedicated facilities', 'Clean', 'Positive Physical Quality', 'positive space', 'Clean', 'dirty', 'Negative Quality', 'Social threats', 'Negative space', 'Rubbish/Litter', 'high', 'drunk', 'company (if any)', 'Rubbish/Litter', 'Negative space', 'Social threats', 'Fear of Harassment and Crime', 'drunk', and 'Social threats'.

P3: FGD- Young.txt -> <HUPATH>\Interviews TextFiles\FGD- Young.txt

The screenshot shows a Google Earth map of a city area with various locations marked with numbered labels. The labels include: 33:37 Train Crossing, 33:39 Train Station, 33:28 Station Splein, 33:31 Atak, 33:30 Muziekcentrum, 33:35 CoffeeShop Alley, 33:29 Oude Market, 33:21 Van der Pauw, 33:41 Empty Road, 33:23 Subway, 33:42 Behind cityhall, 33:24 Gameshop Twente, 33:34 Library, 33:22 Macdonalds, 33:25 La Palace, 33:40 Hospital, 33:36 Roundabout, 33:20 Media-Market, 33:26 ITC Hotel, 33:33 Casino, and 33:27 Van heekplein. The map also shows street names like Hengelosestraat, Melensstraat, and Parallelweg.

P33: Google Earth -> @GE:



## Appendix 6 - Positive points

### Positive Hotspots

POINT_NAME	All_Value	Male	Female	Young_1	Old_2
Area around ITC Hotel	1	1	<null>	1	<null>
Area behind City Hall	1	<null>	1	1	<null>
Atak	1	1	<null>	1	<null>
Bus Station	1	1	<null>	1	<null>
Church	1	1	<null>	<null>	1
Cinema	2	<null>	2	1	1
City Hall	1	1	<null>	1	<null>
Concordia Class	1	<null>	1	<null>	1
Concordia Theater	2	<null>	2	1	1
Fountain (City Hall)	2	2	<null>	2	<null>
Green Area	2	2	<null>	2	<null>
Grote Kerk	4	3	1	2	2
Holland Casino	1	1	<null>	<null>	1
Hospital	2	2	<null>	1	1
ITC Hotel	4	4	<null>	4	<null>
Music Center	2	2	<null>	1	1
Oude Markt	13	9	4	6	7
Restruant (Cookies)	2	2	<null>	2	<null>
Resturant (Bubble Tea)	1	<null>	1	<null>	1
Resturant (Deli France)	2	1	1	1	1
Resturant (La Palace)	6	2	4	2	4
Resturant (Los Ponchos)	3	2	1	1	2
Resturant (mug&beans)	1	1	<null>	1	<null>
Resturant (Pizza)	1	1	<null>	1	<null>
Resturant (Subway)	2	2	<null>	2	<null>
Resturant (Van der Poel)	2	2	<null>	2	<null>
Resturant (Wok to go)	1	1	<null>	1	<null>
Saxion	1	1	<null>	1	<null>
Shop (Clairs)	2	<null>	2	1	1
Shop (de bijenkorf)	4	3	1	3	1
Shop (Gameshop Twente)	1	1	<null>	1	<null>
Shop (Hema)	3	1	2	1	2
Shop (Klenderij)	7	2	5	3	4

## Appendix 7 - Negative Points

### Negative Hotspots

POINT_NAME	All_Value	Male	Female	Young_1	Old_2
Area Around Hema	4	3	1	1	3
Area around ITC Hotel	1	<null>	1	<null>	1
Area around Jumbo	4	1	3	1	3
Area around museum	1	1	<null>	1	<null>
Area behind Bank	2	1	1	1	1
Area behind Church	2	1	1	1	1
Area behind City Hall	1	<null>	1	<null>	1
Area behind Music Center	1	1	<null>	1	<null>
Area infront AH	1	<null>	1	<null>	1
Area Infront of Station	1	1	<null>	<null>	1
Bank (ING)	1	1	<null>	1	<null>
Bank (SNS)	4	3	1	3	1
Buildings behind Station	1	<null>	1	1	<null>
Bus Station	3	2	1	2	1
Church	1	1	<null>	<null>	1
Cinema	2	2	<null>	1	1
City Hall	1	<null>	1	1	<null>
Coffeeshop Alley	10	8	2	8	2
Dentist	9	6	3	4	5
Fountain (City Hall)	1	1	<null>	1	<null>
Fountain (Duck)	1	1	<null>	1	<null>
Government office	1	<null>	1	<null>	1
Grote Kerk	1	<null>	1	<null>	1
Holland Casino	6	5	1	5	1
Hospital	8	3	5	3	5
Inappropriate shops	1	1	<null>	1	<null>
Library	2	2	<null>	2	<null>
Music Center	2	2	<null>	1	1
Oude Markt	2	2	<null>	2	<null>
Resturant (Wok to go)	1	<null>	1	1	<null>
Roundabout	6	6	<null>	5	1
Shop (VVV)	1	1	<null>	1	<null>
Street (alley behind church)	1	<null>	1	<null>	1