

## Improvement of Urban Planning and Design Consideration for Children Dropping out of Schools

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Received: 01-07-2020

Accepted: 24-08-2020

**Abstract:** The issue of school dropout is a global problem confronting the education industry around the world. This research introduces a clearer and more comprehensive picture of the school dropouts issue in Mafraq - Jordan in age's group between (5-14 years). The real causes and the effects on the community, to find out how they can enhance the urban planning and design in Mafraq for children to avoid this phenomenon.

To achieve that goal, it has been a necessity to adopt a descriptive and analytical method for the previous knowledge and take a sequential researching step to build a comprehensive theoretical framework by abstracting three main vocabularies of the theoretical framework represented by: School dropouts, Urban planning for child, and effective response, then to focus on applying the vocabularies of the theoretical framework on the selected area that located in Mafraq.

**Keywords:** School Dropouts; Urban Planning; Design; Children; Mafraq.

### Introduction :

Children are the main actors of the future. They are an important part of urban planning and design .In Mafraq According to The Ministry of Planning and International Cooperation (2017) the ratio of children in Mafraq are 34%, the planners did not focus on the suitable urban planning for children to receive their education Which led to the problem of dropping out of schools. The Syrians refugees increasing this phenomenon. Children are facing various psychological, physical and health problems as consequences from the phenomenon school drop-out.

Various researchers defined the phenomenon of drop out differently. According to Jamil (2010) drop out is —a term used for the children, who for any reason other than death, discontinue schooling and leave their education uncompleted. This is quite broad definition and includes all those students discontinuing substance. This is much generalized definition covering all students quitting their schools prior completing their courses (Malik, 2000).

### 1 . School Dropouts:

#### 1.1- Overview:

The children are the future workers, citizens, and leaders. Education remains the major tool by which people become empowered and the economic, social, and personal well-being of all citizens in a pluralistic society increases. Increasing dropout rate diminishes the pool of qualified people from diverse backgrounds who will enter the professional and political ranks that make important public policy decisions(American Psychological Association (APA), 1996).

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According to the many organizations such as care organization the Jordan objectives for refugees (2016-2017) are:

- 1- Syrian children receiving education.
- 2- Vaccinations provided to children & Health support
- 3- Schools renovated and refurbished
- 4- New roads paved or rehabilitated.

### **1. 2- Reasons of School dropout:**

The reasons for drop out have been investigated by various social analysts across the world, as drop out problem has turned out to be global concern.

There are many factors associated with the process of dropping out from school. Some of these factors belong to the individual or child, such as poor health, under-nutrition or lack of motivation to teach (Hunt, 2008). Others emerge from children's household situations such as migration and poverty. School level factors also play a role in increasing pressures to drop out such as teacher absenteeism, school location and poor quality educational provision (Alexander, 2008). The system of educational provision at the community level generates conditions that can ultimately have an impact on the likelihood of children dropping out from school (Alexander, 2008).

The results of the study showed that most of the subjective reasons that led to the drop out of school in Mafraq:

-According to the World vision Organization that the absence of students from the study is due to subjective and psychological factors related to the student.

-For student's refugees, especially the children of the tragic scenes of bloody left behind by the killing and UNICEF has not yet been able to control the school budget by the number of students in Al Zaatari Camp. Each division has at least 70 students, noting that crowding in the classroom creates non-educational or unhealthy environments (Al-Ghad newspaper, 2014).

### **1. 3- Psychology of children Refugees:**

Since the outbreak of the civil war in Syria in 2011, some 9 million Syrians have fled, three million of whom have fled to Lebanon, Jordan and Turkey. Several studies in Western countries have recently reported psychological disorders, depression and tension among refugee groups reaching both Europe and the United States, which the United Nations has described as "serious diseases"

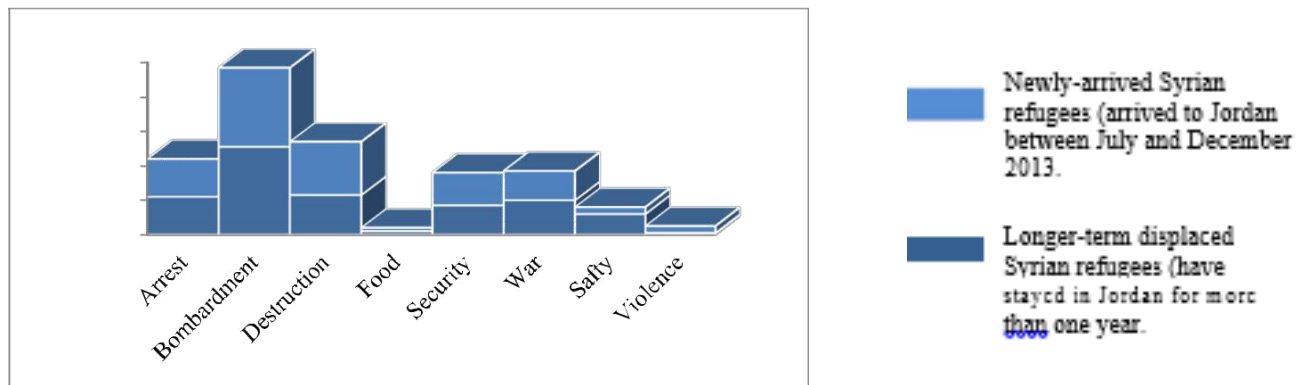
Mental health is now a new challenge for relief agencies working on the ground in Syria and its neighboring countries. "Most people suffer from high stress for long periods of time, making them move to survival and children in particular are vulnerable to these diseases, so donors pay special attention to education," said Gene McFale of Mercy Corps in Jordan.

"We do a lot of non-formal education, which in turn keeps children connected and so they continue to be permanent learners and donors appreciate it," McFale said.

"Many of the young people we talked to have a low level of depression caused by changing living conditions, but when we talk about depression for long periods, there is clear evidence that it can lead them to a long-term psychological illness," McFale said. One in four children has one child with a psychiatric illness (Dw Organization, 2016).

According to the care organization the reasons for Stability Syrian Refugees in Jordan are :

**Figure (1) : Reasons for Stability Syrian Refugees in Jordan**



Source: Care Organization

#### **1.4-The influence of school dropout on society:**

The school dropout leads to increase the phenomenon of street children and increase violence for them. Affects their physical and psychological development and organic consistency, and this came from their sense of indifference to the importance of learning and education, the child loses his self-esteem. As the juvenile delinquency is one of the effects of school dropout, the figures indicated that the number of juveniles arrested in the social welfare homes in the ministry last year reached 2086 cases (Clock News,2017).

## **2 .Methods and Materials:**

This research adopted an analytical method where urban design strategies were clarified by analysing different case studies and then suggested to the local case of Mafraq – Jordan.

### **2. 1- Over view:**

The inclusion of children in the planning process provides planners with a win situation, Benefits to children include: new ways of seeing and understanding their community; Improve their psychology, new networks of friends and role models; opportunities to learn about democracy and tolerance; active engagement in environmental and social change; and the strengthening of confidence, self-esteem and identity. The community benefits from their creativity and enthusiasm. Constructive alliances are forged between the different generations, overcoming prejudices and mistrust. Planners are better in touch with the needs and issues of the communities they serve and will make more informed and effective decisions. They can educate young people in policy and decision-making and engage them in sustainable development.

### **2. 2- Children as an Urban Issue**

One of the main goals of the urban development is preserving the environment for the future generation. In this regard, instead of only considering planning issues, focusing specifically on land use is also necessary. Planners have not adequately directed the needs, views, and opportunities for children in designing friendly urban environments because they are struggling with the task of considering children in city development and finding ways to maintain sufficient resources for this purpose. For instance, in the Jordan, the ratio of the greenery and recreational areas to the Children is very low especially in Mafraq, These prove the clear disconnection between the planning and

design methods of public spaces for children, which establish their social and psychological learning stimulations.

### 2. 3-Child and Environment

The influence of the environment upon human behaviors. The degree of influence differed with age, and more markedly upon children than adults.

Studies on children's needs and the experiences in the environment can be found in the environmental psychology literature. Environmental psychology is a branch of discipline developed by Proshansky, Rivlin and Ittelson. This interdisciplinary work area includes specific research topics such as perception, cognition and social learning in the relationship between the environment and human (Loebach, 2004). In the field of environmental psychology, the best concept to assessment the child's relationship with the environment, the opportunities presented by the environment and its elements is —affordance theory. Affordance generally refers to functional facilities offered by the environment. Firstly, it has been developed by James J. Gibson in the late 1970's. Later, the concept of affordance used to identify children's environment's opportunities by many researchers particularly such as (Acar, 2009). Functional possibilities offered by the environment create opportunities for different activities for children.

**Figure (2) : Mullerpiet Public playground in Rotterdam, Netherlands**



Source:[https://www.mimoa.eu/images/13665\\_1.jpg](https://www.mimoa.eu/images/13665_1.jpg)

### 2. 4-Opportunities offered by open spaces for children

Children need environment-related experiences during the character decisive years of their life. Environmental experiences helps children prepare for their life and provide positive contributions to their development. Open spaces are important places for obtaining these experiences because play outside offers a direct relation with environment and makes children discover their environment. Therefore open areas must be provided for children to play. Outside play areas contribute to the development of children's gross motor, allow them to play freely and noisier plays, and also help them to learn about the natural environment, It also helps shape their personality in an effective way (Wilson, 2004). Open spaces provide more opportunity than the closed spaces with the materials they have (Day and Midbjer, 2007). First of all, these spaces experimentally allow children to contact with their environment, to make observation and to learn natural events (change of the seasons and so on). Also, it helps children to become social because it presents the opportunity of being together with other children.

It is possible to increase these opportunities offered by open spaces for children. The importance of children's use of open spaces is more valuable, especially in urban areas. Children's opportunity to benefit from and access to open areas is less than in the rural areas than urban areas due to security, traffic and intensive construction. Therefore, it has become more important to make the existing places more qualified.

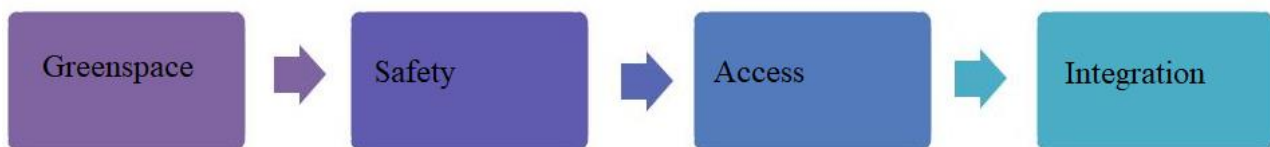
## 2. 5- Strategies that contribution to create urban planning of healthy social and psychological communities for children:

The appearance of Psychology would also have a fundamental impact in the consolidation of childhood's position in society. There are many contributions, based on observation, examined in depth the mental and physical development of children and classified their development indifferent stages. Particularly in the 20th century, these studies and findings shed some light into children, their characteristics, behavior and development; knowledge that proved essential to the emergence and evolution of new educational theories and that helped open up the way, as mentioned before, to a consumption cycle that would revolve around the figure of the child (Vieira, 2016).

There are many strategies that will be used to reduce school dropout children in urban planning, through provide suitable factors such as:

Green spaces, Safety, Access, Integration, for children to improve their psychological and development of mental and physical skills.

**Figure (3) : Factors that reduce school dropout**



### 2. 5.1- Green space:

Urban green space offers many benefits. It contributes to the improved health of citizens, it helps preserve the natural environment, and it improves the long-term sustainability of cities. Urban nature can take any number of forms, from parks and greenbelts, to gardens or even features like green roofs (Meyer, 2005). Urban nature can be more important to children than untouched wilderness areas, as it is available in daily life within a familiar environment (Meyer, 2005).

Physical activity in children has been positively correlated with the proximity of parks. Natural areas can be excellent playgrounds, offering opportunities for exploration and interaction that can never be substituted with built structures. In one study of a natural play space, the natural landscape's diverse features were found to encourage versatile play (Fjortoft and Sageie, 2000). Providing green areas for recreation can clearly have an influence on physical health through opportunities for activity. Other strong evidence has indicated that natural areas have positive social and psychological effects on residents. Natural areas help children develop appropriate independent social skills and freedom of movement leads to increased socialization (Prezza and all., 2001),.

One study indicated that green spaces help children strengthen interactions with peers (Meyer, 2005) and that they promote a healthy sense of community. The positive effects of natural areas on mental health have been well documented. Kaplan (e.g. 1995) has written widely on this subject. (Wells, 2000) found that children who were relocated to greener areas showed improved levels of cognitive functioning and attention compared to children who moved to areas with fewer green spaces. Research has also demonstrated how access to nature can counteract the effects of Attention Deficit Disorder, as well as improves self-discipline in troubled youth (Taylor and all., 2001). Unfortunately, children appear to be losing this connection with nature. Richard Louv calls this —Nature Deficit Disorder in his book that explores how children are being disconnected from nature and how to address the problem (Louv, 2005).

Natural, environmentally healthy, growing and in movement: Natural elements, especially plants are preferred by children and are responded to their expectations as they are living materials and reflect seasonal changes. Natural elements, therefore, used for different activities by children and should be included in the design of children places. In addition, other living materials and water should be considered.

Places and opportunities for participation: Children want to contribute to the ongoing, flexible, and permanent design in the process. Children feel good about themselves and have protective attitudes when they have a voice and contribute to the design of the environment they live in (Francis and Lorenzo, 2006),

According to White and Stoecklin, cited the following features that children like to see in Public green areas:

- Water
- Vegetation including trees, bushes, flowers and the long grass – Animals, creatures living in ponds
- Sand and water
- Natural colors, diversity and change
- places to sit under, in, and on, and sheltered places
- hidden, and private, places and places providing good view, especially replaceable structures, materials, and equipment that they imagine (White and Stoecklin, 1998).

According to Gür and Zorlu popular colors vary as follows:

Popular colors:

- (5-8 ages) – pinkish purple, red, pink, lilac, lemon yellow
- (9-10 ages) – purples, pink, red, turquoise, reddish orange, coffee, -(11-12 ages) – green, light blue, red, purple
- (13-14 ages) – light blue (masculine), red (feminine), blue, green, orange, dark orange (Gür and Zorlu, 2002).

While man-made landscape is not quite as effective as natural environments in facilitating the Development of nature immersion in children, it is still an advantageous aspect of child-friendly design. Yards, parks, greenways, bioswales, gardens, and planted vegetation can all connect children to natural processes, even when surrounded by urban environments. The key is to design these elements so they integrate health, inclusiveness, and nature all into one entity.

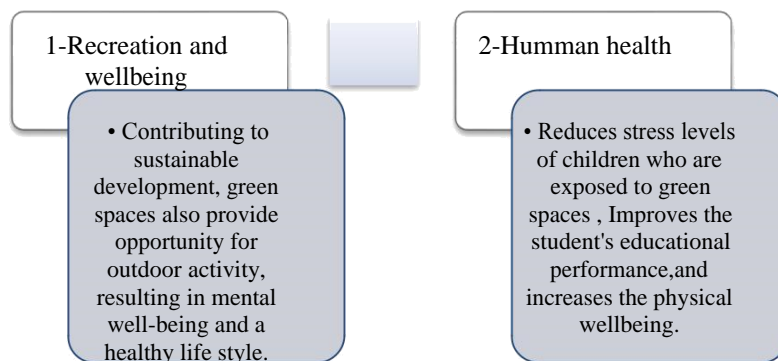
#### **2.5.1.1- Child friendly artificial landscape:**

-Shall flow from the private into the public realm. -Construct backyards, front yards, and courtyards as communal rather than public spaces. -Harmonize with urban concrete areas. -Be designed within neighborhood layouts that easily integrate vegetation, such as green alleyways, cul-de-sacs, greenways, woonerfs, home zones, and clustered housing (Stephen and all., 2008).

-Be heavily and diversely vegetated (Campbell and Wiesen, 2009).

The Benefits and impact of green spaces for children in urban areas from the social and psychological view are:

**Figure (4) : The Planning and Development of Green Public Places in Urban South Africa: A Child-Friendly Approach**



Source:E. J. Cilliers, Z. Goosen,2016

Children are likely receiving the message that green spaces are not for exploration or play and that they are not particularly welcome especially in Mafraq. However, since green spaces have the potential to significantly improve children’s physical, mental and social health.

### 2.5.1.2- Psychology of Play

Pioneering developmental psychologist Lev Vygotsky (1962) thought that play is the leading source of development in children. Many other psychologists talked about the advantages of playing and playfulness such as Rieber’s (1996) research led him to conclude that play has four attributes: it is usually voluntary, it holds intrinsic motivation (the act itself is enjoyable), it involves active engagement, and it contains a make-believe quality. Amory (1999) Reviewed work of several research studies to conclude that play performs an important role in childhood, —specifically as a voluntary, intrinsically motivating force. Games are thought to fill the role of a self-motivating and rewarding activity — a —universally accepted mode of learning. As Pausewang (1997) notes, games can contribute to the development of cognitive, psychomotor, emotional, creative, and social skills. Baer (1995) concludes that 'play is the best form of learning'.

Playgrounds are one of the most common components discussed in child friendly design, as they are constructed specifically for children to use and are seen as protective and safe. However, conventional playgrounds are much less popular than originally thought of because they are artificial, manufactured, and ordinary. Still, there is great potential in designing playgrounds that are frequently used by children as long as proper design methods are put into place.

### 2.5.1.3- Child-friendly playgrounds:

- Shall be inclusive. -Utilize nature. -Encourage learning through educational games and structures.
- Implement sound elements (wind chimes, drums, piano keys) (McLennan, 2012).
- Be placed in public rather than private locations. -Limit the construction of commonplace components, e.g., jungle gyms, slides, swings, and monkey bars. -Invoke creativity by using different themes, concepts, and shapes (Kellert and all., 2008),

Small, feasible, flexible: Children often prefer small-scale constructions formed by recycled, low-cost materials, and natural and green components (Francis Lorenzo, 2006).



**Figure (5) : Child-friendly playgrounds.**



Source:<https://luxtimes.lu/archives/2142-play->

Children's outdoor play: is typically revered as "a natural and critical part of a child's healthy development (Rhonda, 2004) through which children get physically apt, get to use their creativity, and learn important skills such as social competence and risk assessment. The outdoor landscape plays a key role in shaping children's play. Talbot and Frost (1989) coined the term 'Plays cape' as a way to think about how a particular landscape affords play and magical thinking. Herrington and Studtmann (1998) used landscape interventions to redesign play at a schoolyard, showing that this did not only lead to more varied play activities and an increased focus on pretense play, but offered opportunities for increasing the social status of children with high verbal and imaginative skills.

### **2. 5. 2- Safety:**

One major requirement of the Child Friendly City is a focus on safety. A safe community fosters feelings of security and, subsequently, improved social and mental health. In addition, people who feel secure are more willing to engage in outdoor activities, thus leading to improved physical health. With respect to children, safety is prevalent in the minds of most parents and also decision-makers. Concerns about traffic, crime and —stranger danger result in a climate of fear for both parents and children, resulting in over-regulation of childhood activity (Spencer and Woolley, 2000).

There are few places where parents feel safe letting their children play unsupervised (Veitch., 2006). In addition, parents influence the level of fear in their children (Matthews and Limb, 1999), so children may not feel safe exploring on their own. The demographics and physical attributes of regions affect parental assessments. According to one study, the factors that influence freedom for children include sex, age, the presence of courtyards, proximity of parks, age of the neighborhood and the network of relationships between neighbors (Prezza, 2001). Parents of children living in areas of low socioeconomic status showed particular concern with their neighborhoods Safety.

One major goal in planning for safety is to reduce criminal activity and to reduce violence in children and to encourage children to go to their schools (Veitch and all., 2006).

Sallis and Glanz stress that —priority should thus be placed on designing roads, sidewalks, and crosswalks that make it safe for children to walk and cycle (Sallis and Glanz, 2006, p. 94). Specific guidelines to improve transportation safety and accessibility for children have been recommended in the Centre for Sustainable Transportation's report on Child- and Youth-friendly land-use and transport planning guidelines.

Informal paths are a vital element in high density neighborhoods, especially for children. Informal paths offer children the opportunity to safely and quietly explore across their busy



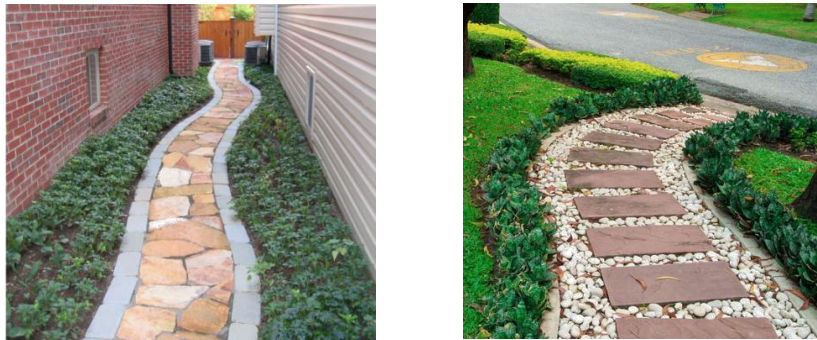
neighborhoods. They are separated from the chaos of the city, and become hidden quiet spaces that children can use for quick travel and relaxation.

-Child-friendly informal paths shall -Be slightly hidden. -Cut across green and natural elements.

-Be constructed of natural materials (Marcu and Sarkissian, 1988),

-Lead to shortcuts throughout neighborhoods. -Be narrower than major and heavily used pathways (Campbell and Wiesen, 2009).

**Figure (6) : Informal path constructed of natural materials.**



Source: Jacob Accola, Child Friendly Design in High

### 2.5.3-Access

By referring to urban settings, it is possible to find a large number of elements that characterize them. Urban scenarios and kinds of path vary in different contexts and the Lynch studies (1960) have shown that there are fundamental perceptual elements that can be recognized by everyone. These elements are four:

- Paths
- Nodes
- Landmarks
- Edges

He demonstrated that these elements identify urban scenarios; they are responsible to represent the shared and collective image of urban settings. This is confirmed by the fact that people recognize urban surroundings through familiar elements that confirm the perception to be in a known environment.

To improve urban way finding systems all these elements have to be connected one to each other in order to let them interact and communicate different levels of messages and information. When we consider children it is important to use languages that children are able to recognize, referring to their collective imaginary, capturing their interest and stimulating their abilities (The Design Journal, 2017).

The resulting elements that guide children and encourage them to walk and to interact are:

-Paths: flooring with tiles (especially irregular with different shapes) because leaks induce children to jump and walk. Curbs and steps to walk over.

-Landmarks: vertical elements as point of orientation as shop sign, advertising, colors, graffiti, signage, mail boxes, bus shelters. Colored garbage bins.

-Nodes: elements interesting for children to sign a path in the points of intersection as pedestrian crossing, trees, streetlight, shop-sign, advertising, colors, graffiti, signage, semaphores (Giraldi and all., 2017).

-The major challenge is providing children with access to a variety of environments. Fears about liability and safety limit the areas that children are permitted to use. However, access to a variety of services and environments is considered a requirement for a Child Friendly City (Chawla and Heft, 2002), and will have substantial implications for children's health. Children with abundant access to parks and play spaces are more likely to engage in physical activity and to have opportunities for building social connections, self-esteem and confidence. Children need room to explore during their play activities. As well as serving an important role in physical activity, play helps children develop their capacity to exercise control, demonstrate confidence and improve self-esteem (Thompson and all., 2005). Planners need to create opportunities for children to be physically active and play in a safe, but varied environment (Staempfli, 2008). Standard playgrounds, with uninspired, fixed equipment rarely take children's need for variety or exploration into account, but are still the norm. Children bore quickly of standard play structures. One good example of a creative style of playground is the —adventure playground that allows children to construct their own surroundings with available building materials Adventure playgrounds, found in many European countries, but not in North America, show great potential for providing development opportunities to children (London Planning Department, 2012). They offer less in the way of safety, however, and require more supervision. These include the dimensions of public facilities (such as width of entrances and the height of handrails), safety measures (such as non-slip surfaces), and clearly marked signs using images rather than just words. These measures improve accessibility for a broad range of people, including children.

-Children often use sidewalks as play spaces, sometimes even more so than neighborhood parks or playgrounds; thus, it is vital to design sidewalks not just for transport, but for entertainment as well. Sidewalks that become underutilized can quickly become deteriorated and dangerous, so keeping sidewalks busy is vital to promote walkability for children to access the schools.

#### **2.5.3.1-Child-friendly sidewalks:**

-Should contain a barrier between the road through the use of on-street parking or vegetation (McLennan, 2012).

-Have street furniture.-Incorporate dedicated kid routes using iconography or color palettes (Kellert, 2008).

-Encompass street vegetation (Jacobs, 1961).

-Be oriented toward retail facilities when possible (Francis and Lorenzo, 2006).

Accessibility: Play areas (if far away from children's home), especially for small children, should be separated from traffic flow, and be connected to their home or school with a good link or be within reach by bike. Urban and place identity: Disorder in scale, function and form in children's place, especially in urban areas, cause perception of space, as a market place. Whereas children know that places need to be identifiable. Signals and signs can be designed into the physical plan. Their design solutions are colors, materials, plantings (Francis and Lorenzo, 2002).

**Figure (7) : artistic street furniture and dedicated iconography.**



Source: Jacob Accola, Child Friendly Design in High Density

#### **2.5.4-Integration**

In many cases, children know what they want and need better than anyone. At the very least, they often have valuable opinions or ideas to contribute. Integrating children into decision-making processes takes commitment, patience and creativity to find ways to help them communicate with adults. This is a worthwhile goal, as integrating children fully into their communities helps improve social and mental health by promoting feelings of empowerment and confidence and offering social interaction opportunities. It also helps improve physical health by giving children the opportunity to help create spaces that are useful to them. Unfortunately, children are often treated as problems, rather than valuable citizens with valid opinions. It also takes a significant amount of work to reach the children in a community. Outreach programs and collaborations with schools would help reach children who are not likely to come forward to join programs. The integration of children and their opinions into the community is one of the fundamental requirements of a Child Friendly City (Clock News, 2017).

The better integration of children into society would also make Children's participation in the urban design process to improve their Improve the psychological state:

The children's ideas are grouped under following headings: "needs in general, expectations from the city, needs regarding urban green spaces, needs in school, needs related to whelming traffic, and needs for the future" (Francis and Lorenzo, 2002).

Some of their expectations are:

- To interact with nature in cities this means: playing, climbing, building huts, listening looking and understanding.- To have different experiences, sleeping out of doors, strolling together, \_kites between the houses', bridges between the windows.- More sport activities and children's theaters.- Areas for cycling.-To establish children's council to participate decision-making.- Quiet environments.
- Colorful and beautiful schools.-Secure traffic.-A lot of trees, shrubs and grasses.-Collect fruit trees.

**Figure (8) : Workshop with school children Observations on public space from Eindhoven (NL) and Jerusalem (IL) Suggestion how to further improve the school and neighborhood yard**



Source: Krishnamurthy S., Steenhuis C., Reijnders D., Stav T.(2018)

A community that includes children will foster mental and social health by allowing children to be contributing members of society, and to feel their opinions are important. An integrated society also allows children to speak up about their spaces, and help planners identify ways to make spaces more useful for children, thus improving opportunities for physical activity. Planning with children would improve many of the problems outlined above.

### 3- Case study: Mafraq

#### 3. 1-Mafraq

Mafraq is the desert area and second largest governorate in the Hashemite Kingdom of Jordan in terms of area, The second lowest density of population in the Jordan 9.5 km<sup>2</sup>, Located in the north-east reaches the Kingdom from the Far East of the Republic of Iraq through the borders of dignity and from the north of the Syrian Republic through the borders of Jaber. Its name was formerly Al-Fadain and contains many archaeological areas, most notably Um Al-Jimal.

#### 3. 2-The population in Mafraq:

The population of the Mafraq is (549948) people, 4.7% of the Kingdom's population. The population of Mafraq is 51.8% male and 48.2% female, and 60.8% of the rural population lives in rural areas.

The total number of families is (106521), families with an average number of members (5.2) and (4.8) at the Kingdom level, the percentage of the population under the age of 15 is higher than the general level of the Kingdom and 41.4% in Mafraq (The Ministry of Planning and International Cooperation, 2017).

The number of children in the age group (5-17) years old (184975), 90727 females and 94248 males the ratio of them 34% of the total population in Mafraq (The Ministry of Planning and International Cooperation, 2017).

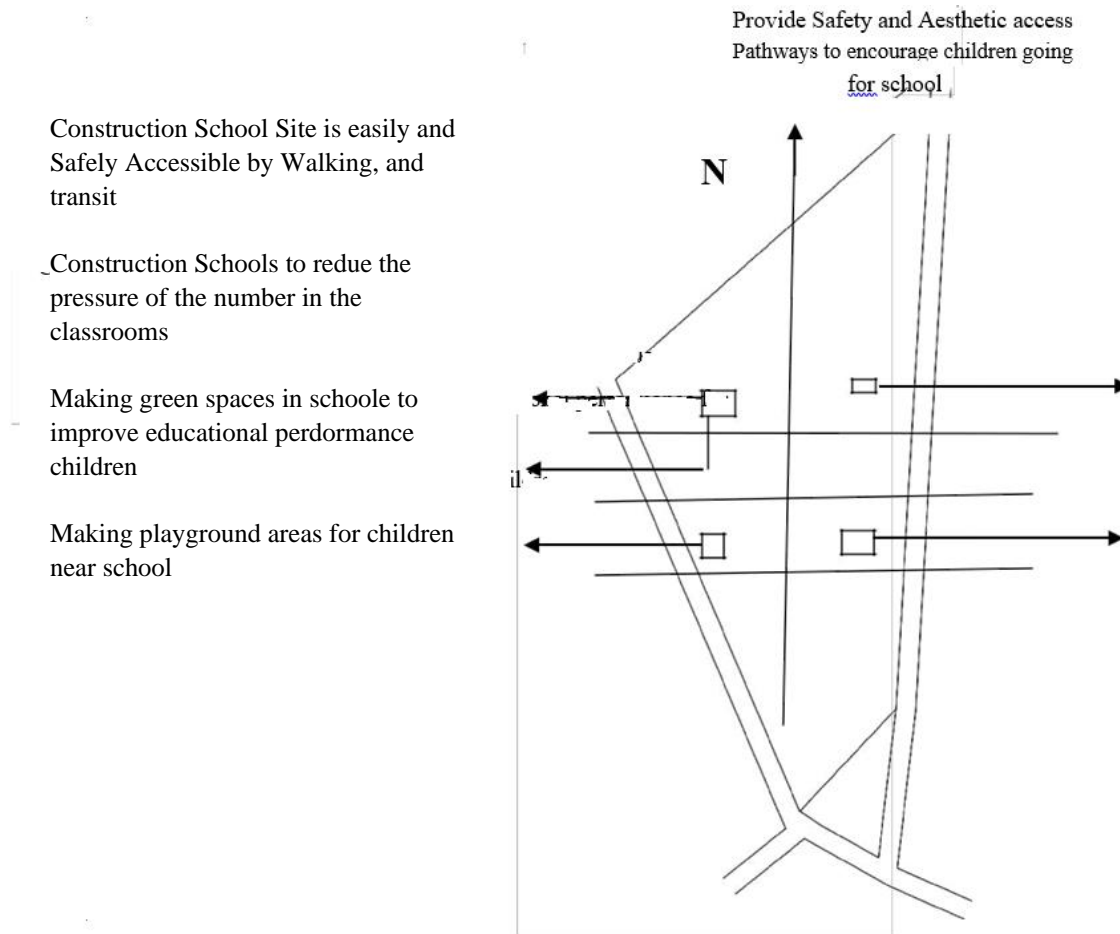
The deputy governor of Mafraq, Iyad Al-Rousan, said that the percentage of refugees in Mafraq province reached 130% of the total population of the governorate, which requires taking all necessary measures and measures to mitigate the adverse effects of the resort on the governorate (The Ministry of Planning and International Cooperation, 2017).

### 3. 3- Public Education in Mafraq:

- The number of schools 495 schools, including 139 schools rented and the number of students 111443 students. The percentage of illiteracy in Al-Mafraq governorate was 13.3%, which is higher than that of the Kingdom (13%).

From the previous literature and after analyzing the provided statistics the flowing model has been suggested.

**Figure (9) : A proposed model for the city of Mafraq aims at preventing school students' dropout**



### Conclusion:

Children have an intense relationship with their environments. This means that a community's design and land-use decisions have a significant impact on their physical, social and mental health. The four main issues discussed: safety, green space, access and integration, should be at the top of every planner's list in order to create healthy, child friendly cities and reduce school dropouts. The health benefits of a Child Friendly City are numerous. Obvious physical health benefits are derived from having safe places to play and walk able neighborhoods. Less obvious health benefits include reduced stress and improved cognitive functioning. Integrating children into society and giving them access to amenities improves social and mental health through empowerment and increasing self-confidence. A safe, green, accessible, inclusive society is the healthiest option for children.

**V- Recommendations :**

- There should be a study of the relationship of the number of students in the schools available to allow the possibility of Construction schools in the absence of sufficient number of them in the regions.

-Urban planners must create an inclusive environmental design in which all children would feel they are treated as equals especially between refugees and local community.

-Urban planners must organize sport and cultural activities at which every child will have a certain role and responsibility according to his/her abilities to give them the creativity and sense of self-confidence and make the child loves education.

-Planners should aim to create urban spaces where people feel positive about their neighborhoods and parents feel secure enough to allow their children to explore ultimately, safer neighborhoods will foster more physical activity, and improved mental and social health



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