Strategies to Make Creative Urban Space with an Emphasis on Interactive Lighting
(Case Study: Ahmadabad Avenue of Mashhad- Iran)

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ABSTRACT: Urban space can be the most successful public arena in this century if employ the potentials for collective cooperation in creative ways in order to provide further services. The theory of creative city tries to strengthen the qualities which enhance the image of a city for the citizens and create a dynamic city in terms of culture and intercultural learning. Therefore, the existence of generator, open, and the popular spaces are necessary along 24 hours a day. Since the nightly work and activity gradually became parts of the urban life, urbanization requirements converted night into day for people, and the urban spaces allocated a special position in this phenomenon. Desirable urban spaces should be made in response to the present urban environment of the cities. Accordingly, the purpose of this study is to present designed solutions in order to interactive lighting to create live and urban spaces. The study uses a qualitative research method and a case study, based on field studies via a questionnaire and direct observations, meanwhile recognizing the principles of making creativity in urban spaces and the study of physical and social environments of Ahmadabad Avenue- Mashhad are investigated by using SPSS to analyze formal, qualitative and visual values in the space. Results of this study indicate whatever emphasized in urban design and the darkness comes following the sunset, may arise disorder in its performance, to helping artificial light modeling keep its efficiency during the night.

Keywords: *Creative Urban Space, Interactive Lighting, the Quality of Urban Life.*

INTRODUCTION

In the design of cities lighting must be considered to three factors: the location of city, the history of city and beliefs of the city inhabitants. Lighting can provide quality and dynamism that required for life at nightly and as an influential factor, can change the other space properties such as color, tissue and etc. Or emphasize on them. Since 2004, an interactive lighting as a new approach from dynamic lighting design has played a significant role as a creatively process, in the development of architectural spaces. Lighting to improve the overall quality of life in the city and more attractive urban environment can have a great impact on the design of creatively space and by strengthening social interactions, increased security, and protection from architectural heritage, human intervention in urban space design, help to show the visual environment and

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making different, productive and creative spaces. The necessity of research appears when the urban spaces as a context of the collective activities of citizens, at the end of the day we can see the reduction of the presence of pedestrian, due to is the lack of coordination and coherence in the day and night landscape, and loss of sense of place, and needs to shaping the urban landscape and dynamics of urban spaces. Nowadays dynamic and creative spaces are considered of growth and success factors of cities in competition; Globalization is a complex multi-stage process that causes increasing complexity of time and place, greater awareness across the global and acceleration of cross-cultural interactions (Bayzidi, et.al., 2013,13). However Mashhad, the second largest metropolis in the country and spiritual capital in Iran, according to its national and international role is deprived of any creative urban spaces. Therefore choosing the Ahmadabad Avenue as a public space based on pedestrian movement, due to having high potential in order to become

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a creative urban space, was considered as a research priority. Therefore, this study aimed to become familiar with creative lighting requirements as one of the main urban elements, and the impact on improving the visual aesthetic and urban life quality in the formation of creative urban spaces, and emphasized that the correct and creative lighting can be aimed at improving the life quality, have an important role in increasing the attractiveness, the time of activity and urban security for the residents. This study, based on this question is formed that: "what are the design strategies in order to establish a creative urban space by using of interactive lighting?" Thus, by using different approaches in the urban spaces night lighting, can provide an environment for the audience and strengthening their visual intelligence, caused flourished of creativity in urban space.

Theoretical Basis
Interactive Lighting

The most recent and valid theories which are about the light and its application in architecture and urbanization are proposed by two experts called Richard Kelly and William Lam. They are attempting to demonstrate that the application of artificial light and its benefits for humans are far more than using this phenomenon merely for illuminating the avenues. The first one considers different aspects of light function as an information-giving tool, while the second one focuses on human's perception as a context for modeling and solving the problems of designing artificial light (Baradaran, 2011).

To approach a dynamic light design of an urban square calls for a creative process similar to that needed in the development of architectural space. Designing interactive illumination a number of challenges have to be addressed as security, social space, functionality, aesthetics, and energy consumption. The illumination can then, with very low power consumption, make light patterns that are embracing, inspiring, scary, natural or just neutral depending on the design intentions. However, when people enter the space effect lighting strategies will secure a suitable illumination that potentially addresses security, aesthetics and social requirements (Poulsen et al., 2012,2).

More external stimuli are constantly affecting our choices people will in this way interact direct or indirect with elements in the environments (Esben et al., 2012, 339-340). Therefore, by attracting addressees and making them participate in creating space and spatial diversity due to addressees' diversity, interactive lighting is considered to be a suitable approach to creating dynamic and legible urban spaces, which provides a new definition of place by changing the addressee's role from absolute observer to space former (Mehrannejad & Gholampoor, 2012,57).

Creative Urban Space

The UNESCO Creative Cities Network (UCCN) created in 2004. The network includes 69 cities from 32 countries of the world, which have identified creativity as a strategic factor for sustainable urban development. UNESCO, aiming to make a conjunct network of cities that are having activity in seven fields of literature, film, music, crafts and folk arts, design, gastronomy and media arts, holds the creative cities program around the world each year. The concept of "creative cities" is based on the belief that culture can have an important role in urban renewal ("Mission statement", n.d.). Changing a city to a creative city is not possible without desirable public spaces. Having advantages such as liveliness, diversity, identification, attraction, economic value and partnership, public spaces lead to make creativity and formation of a creative city (Kalantari et al., 2012).

In converting high-quality and desirable urban spaces to creative urban spaces, the elements of creativity and innovation play an essential role (Mesgarani & Jalali, 2014, 1170-1171). The loss of undifferentiated public spaces leads to a diminution of the ability of individuals to meet and interact freely with others. This is an interconnected set of arguments with complex implications. The loss of public space can be seen as something with important social outcomes part of what Atkinson and Blandy conjecture may be a "downward spiral of urban social relations" (Atkinson & Blandy, 2005, 179). Human presence and accordingly establishing suitable condition for social interactions are important factors in shaping urban spaces (Habib & Sashourpour, 2012, 5). Montgomery describes the role of place in developing a creative environment using canter's place model. He believes that in most cases, the entire city cannot be a creative environment; rather, one or more parts of environment are creative which are now called cultural centers and creative economy clusters (Montgomery, 1998). In Montgomery's view, the criteria of creative urban space are classified in three groups of activity, built form, and meaning. Contemporary urban planner and architect Edmund Bacon believes that one of the main objectives of architecture is to sublimate the phenomenon of existence. Therefore, urban spaces should be designed in a way that they provide distinct spaces for different activities and in a way link them together that their content encourages humans' act and life in that space (Muzaffar et al., 2006, 77). There is a strong relationship between space and creativity. Creative individuals need some spaces for living, working, inspiring, and presenting their works. Here public spaces can play a very important role (Mohammadi & Majidfar, 2010, 18). By applying creativity in design, we can be converted urban spaces into exciting and vivacious spaces (Rahmati et al., 2013, 10). Creativity is recognized as an invaluable skill in the age of information; the arts are valued for their important role in the economy as well as for their spiritual, intellectual and social benefits (Duxbury, 2004, 1).

Explanation of Creative Urban Space Indices Based on Interactive Lighting

In order to prepare the indices, after studying the literature of interactive lighting and creative urban space, indices related

to the concept of creative urban space were identified based on theoretical standpoints of Charles Landry (2006), Richard Florida (2005) and research studies of John Montgomery (2003) and etc. In analyzing the concept of creative urban space, theorists mentioned 8 components of diversity, area identity and imagery, liveliness, security and tranquility, beauty, legibility, environment or third space. In general, based on pluralization the whole different definitions about of creative city and interactive lighting it can be inferred that achieving a creative urban space based on interactive lighting has 5 essential components which include: network dynamics (participation), safety and security, identity, liveliness, and legibility; each of which has sub-components in indexing

process.

By reviewing the proposed theories about creative urban space in sources related to psychology and urbanization, as well as the components affecting on interactive lighting, which, according to the above-mentioned issues, have close relationship with features of creative urban space, variables required in order to consider factors effective in designing creative urban spaces are presented in Table1.

MATERIALS AND METHODS

Given its nature, research method is a combination of qualitative methods (descriptive, analytic) and case study. In the qualitative approach, the generality of the studied phenomenon and its

Table 1. The criteria posed about the creative urban space design based on the interactive lighting

Criterion	Under criteria	Indices
Network dynamics (participation) (Landry)	Presence	Amount of presence of human in the urban space How presence of human in the urban space (human behavior in space) Existence of pause spaces and behavior station (meeting and aggregation spaces) (Montgomery, 2003) Existence of convergent and movable urban furniture (Pakzad, 2008)
	Partnership and strong links of communication	Promotes social interactions in urban space (Mesgarani & Jalali, 2014,1178) Providing places for social participation in different hours of the day (Landry) Festivals and cultural events (Montgomery & Florida) Existence of soft infrastructure (human participation) (Landry)
Safety and security (Landry)	nightly lighting	Amount of pedestrian path illumination Amount of roadway path illumination The exposure value of illumination at different times (different hours of the day, special occasions) Visibility of human, elements and phenomena in the night
	Social surveillance	Existence of reliable urban spaces (Florida) Existence of watchful eye (Mesgarani & Jalali, 2014,1178) Keep stamping ground and meeting location and collective activities in different hours of the day (Ghasemi Esfahani, 2011) The possibility of citizen participation at different hours of the day
Identity (Montgomery & Landry)	Memorable or image (Montgomery)	Existence of valuable and prominent buildings in terms of architectural (valuable design and style) (Montgomery, 2003) Existence of monuments and heritage building (Florida) Existence of physical and visual prominent elements and signs Existence of memorable activities Promotion of national symbols and signs in the body (Mesgarani & Jalali, 2014,1178)
	Capital of the natural environment (Florida)	Pay particular attention to green spaces and quality of life (Landry) Designing of texture and collective spaces in accordance with climatic features and native substrates (Mesgarani & Jalali, 2014,1179) Existence of water element in motion milestones of pedestrian (Pakzad, 2008) Restructuring and conversion of contaminate and abandoned spaces to urban liveliness places (Mesgarani & Jalali, 2014,1179)

Continue of Table 1. The criteria posed about the creative urban space design based on the interactive lighting

Criterion	Under criteria	Indices
Liveliness (Florida & Montgomery)	Space diversity (Florida, Montgomery & Landry)	Diversity of land use and cultural venues such as museums, libraries, exhibitions (Montgomery, 2003) Existence of activity and lively in different hours of the day (Jacobs) Raising of awareness through the function and body of urban space (Landry) Informal, inclusive and participatory activity (Florida) Various and youth-friendly environmental in terms of urban furniture, lighting, Create space and etc. (Florida) Physical diversity in city buildings (Mesgarani & Jalali, 2014,1178) Making diversity and attractiveness through playing symbols and cultural elements (Mesgarani & Jalali, 2014,1178) Increasing of complexity, enjoyment, visual pleasure and attractiveness in the urban artifact environment (Mesgarani & Jalali, 2014,1178) Amount of suitable illumination of natural areas Lighting in order to instill a sense of time Using the light element in order to performing shadow play Using of colored lights Fine-grained urban texture (Montgomery) Diversity in the size of buildings (Ashtary & Mahd neJad, 2012, 51) The combination of quiet and exciting spaces (Landry) Defining a network of diverse and multi-functional open spaces (Mesgarani & Jalali, 2014,1178) According to the human scale of space (Pakzad, 2008) Holding the nightly showing
	Energy efficiency (Poulsen et al., 2012, 2)	Producing light with less energy and use of lighting advanced technology (Florida &Landry) Using of renewable energies (solar panels) Saving energy by using motion sensors
Legibility (Montgomery)	Visual unity	Harmony in lighting furniture Existence of desirable visual corridors Observation of volume rhythm in mass establishment (Ghasemi Esfahani, 2011)
	Integration and (Pakzad, 2008)	Existence of rhythm and harmony in the amount of space exposure Existence of rhythm on the facade of wall Existence of rhythm on the sidewalk flooring
	Right away (Pakzad, 2008)	Existence of body and unexpected spaces in the points of emphasis (Ghasemi Esfahani, 2011) Existence of openness along the way where that the activity focus is possible or likely (Ghasemi Esfahani, 2011)
	Flexibility (bridge) in the active walls of street(Montgomery)	Existence of dynamic sky line Existence of various materials and yet coordinated Existence of the proportions building Harmony in horizontal and vertical weight The dynamic plan in the floor Existence of dynamic color spectrum Reconstruction urban defenseless and turn off spaces and convert to the flexible places (Ghasemi Esfahani, 2011) The use of the physical distinctions in order to be recognizable urban spaces from each other (Ghasemi Esfahani, 2011)
	Opening visibility	Passable spatial enclosed (Pakzad, 2008) Sky line adjustment (Pakzad, 2008) Diversity in the building density

texture is of more importance, and the collected data instead of being compared with previous theories, are inductively interpreted by the researcher (Mansouriyan, 2009,60). In this study, "descriptive statistics" is used as a tool for introducing the studied population (Mansouriyan, 2012). The case study method also includes one or more research approaches which forms a strategy as a whole. In this method, a specific location is holistically studied view and using different techniques of information gathering and analytical measures (Grote & Wang, 2005).

In this research, it is intended to find factors that affect the satisfaction or dissatisfaction of users of urban spaces in Ahmadabad Avenue in the last hours of the day; therefore, using qualitative approach, we can achieve to recognize space users define the lighting concept, the affective factors in the increase or decrease of using space, and how affects the different behaviors of addressees in the formation of dynamic spaces, particularly in the last hours of the day. The obtained information has been gathered, classified and arranged through related to the subject sources and field survey. For part of field studies, after extracting the lighting indices for making a creative urban space, by being present in the location and observing it directly and having interviews, we evaluate the criteria in our case study; to do so, a questionnaire with 13 items was designed which encompasses our objectives in sum. The studied statistical population includes all people visiting Ahmadabad Avenue in Mashhad, which are about 350 persons; research sample is considered through purposive sampling (Mansouriyan, 2012); such sampling includes the selection of the studied units or indices not only based on random sampling, but also based on research objective. In this type of sampling, sequential sampling is used in which instead of choosing one fixed sample, sample size expands until it is sufficient it means that we reach to the data saturated. This occurs when data that can develop, adjust, enlarge, or be added to the existing theory no enter to the research. A criterion for understanding that data have been saturated is that previous data are repeated, so that the researcher encounters constantly with repetition data (Ranjbar, et.al., 2012, 242-245). In this research, having filled 30 questionnaires, we obtained saturated data and previous ones were repeated, that in order to scrutinize the sample size, Cochran method with confidence level of 95 percent and error factor of 0.1 estimated the sample size as 56;

Data analysis method was based on preparing a questionnaire for obtaining the opinions and mental images of residents, practitioners, users and passerby of Ahmadabad Avenue, with cross-sectional method and after being present in the avenue and gaining the concrete experience of the space from lighting, the questionnaires were distributed. Finally, addressees' opinions were gathered through conceptual interview method. Items of this questionnaire are designed in a way that each respondent is allowed to select more than one answer for some questions. Therefore, when analyzing the questionnaires, respondents' percent for each question is reported that may be more than 100 percent. In the last section, projects and operational policies are presented for the sake of enjoying a live, dynamic and creative space using lighting and making the addressees to take part in the formation of the place.

Comparison and Evaluation
Recognition of the Study Area

By considering public arenas in Mashhad's framework, Ahmadabad Avenue as a commercial axis in the city center was analyzed due to lack of harmony in urban landscape of day and night, existence of visual pollutions, having the potential liveliness, and presence in parts of the space (Fig.1). Ahmadabad Avenue located in western middle zone connected to Mashhad's city center and in region 1 of municipality is considered as one of the essential and important focal points of the city and the necessity of changing it into an urban space, in addition to removing its unorganized, is emphasized in this important axis. Today, Ahmadabad Avenue with crust width of

Fig. 1: Position and status studied area of study in Mashhad (Source: Armanshahr Consulting Engineers, 2008,65)

55 m and length of 2.2 km and its current traffic behaviors is classified as one of the main second-order arteries (Parsoumash Consulting Engineers, 2010). In recent years, implementing the project of avenue landscape organization and paying attention to planting trees and maintaining them have, to some extent, amplified visual image of this avenue. However, lack of attention to spatial qualities in some inactive walls of this axis as a commercial-service path which offers services in different hours of the day, has led to an almost non-continuous relationship with space users. In studying urban design area, part of the Ahmadabad Avenue that is between Aboozar Ghaffari Avenue and Palestine square, was selected due to the existence of an equipped axis, wide sidewalks, organized green space, inactive walls particularly in the last hours of the day, lack of dynamic and creative lighting, existence of prominent elements of identity, etc.

Evaluation of the Indices Proposed in the Case Study

Regarding the criterion of network dynamics, we considered behavioral patterns of space users. Regarding the criterion of safety and security, the status of the axis evaluated in terms of measured pedestrian traffic, sufficiency of avenue illumination and problems resulting from insufficient lighting, as well as the status of desirability and undesirability of lighting in Ahmadabad Avenue regarding the criterion of identity (memorable and image), were evaluated factors such as, memorable elements of the avenue, and the most important spaces and elements in Ahmadabad Avenue in order to orientate the movement of users. Regarding the criterion of liveliness, were considered amount of existence activity and motion in different hours of the day, amount of illumination in public arenas, and existence of fine-grain urban texture. Regarding the criterion of legibility, were questioned amount of diversity and interesting and attractive faces of the avenue, sidewalks' amount of being pleasant or unpleasant, and the amount of beauty and harmony in buildings' faces in Ahmadabad Avenue. These are presented in Fig.3 to Fig.7. General information about interviewees is also shown in Fig.2.

Studying the User's Behavior from Space

By surveying the space users' behaviors, crowded points, pause points, stamping ground, etc. Were identified. In order to consider the behaviors, four points of Ahmadabad Avenue – between Aboozar Ghaffari Avenue and Palestine square – were selected and inspected in two different time intervals of the day and night. One of them, from 12a.m. to 1p.m. and the other from 8p.m. to 9 p.m., they are shown in Fig.2.

Traffic in morning and afternoon is almost equal in this axis, even sometimes at night, the traffic intensifies. However, pause points differ in different hours.

Studying the Image of Users from Space

In considering the memorable elements of the avenue, out of 128 stated responses (100 percent), 12.5 percent is related to commercial land uses, 10.2 percent to beautiful urban spaces, 8.6 percent to avenue oldness, and 7.8 percent to Palestine square. The rest is related to cactus restaurant, green space of the Middle Island, avenue lively, shopping, etc.

In considering the most important squares, spaces and buildings adjacent to Ahmadabad Avenue, out of 233 stated responses (100 percent), 11.6 percent referred to Palestine square, and 21.2 percent to Bani -Complex, Homa Hotel and Dariush Hall. The rest referred to Qaem hHospital, Ahmadabad square, Rahnamayi three-way path, etc. In considering the way of giving address in the avenue, out of 265 stated responses (100 percent), 40.7 percent referred to Rahnamayi three-way path, Palestine square, Bani-Fatemeh complex, and Aboozar Ghaffari Avenue

Receiving the Perception of Citizens from Avenue Spatial Organization Legibility

Although time effects the level and the way of perception and legibility and it should be noted that there is clear difference between human perception and space legibility during day and night (Habib & Sashourpour, 2012,5). In considering the most important interesting, attractive and beautiful faces in Ahmadabad Avenue (Fig.3), out of 120 stated responses (214.3 percent), more than 125 percent referred to beautiful urban
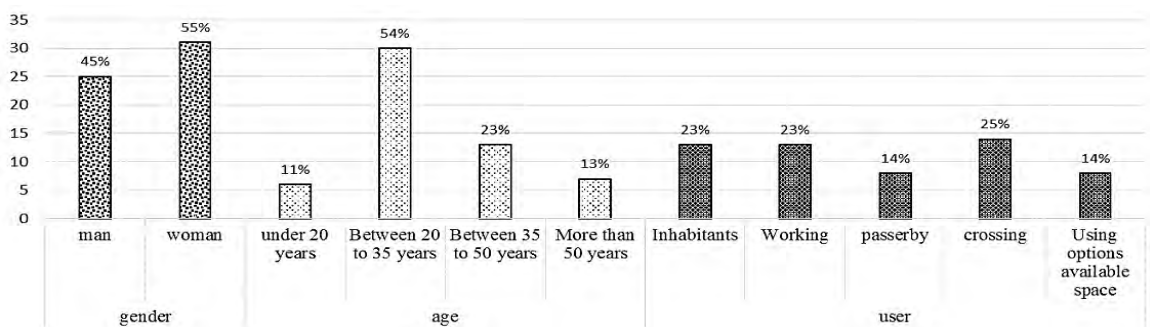

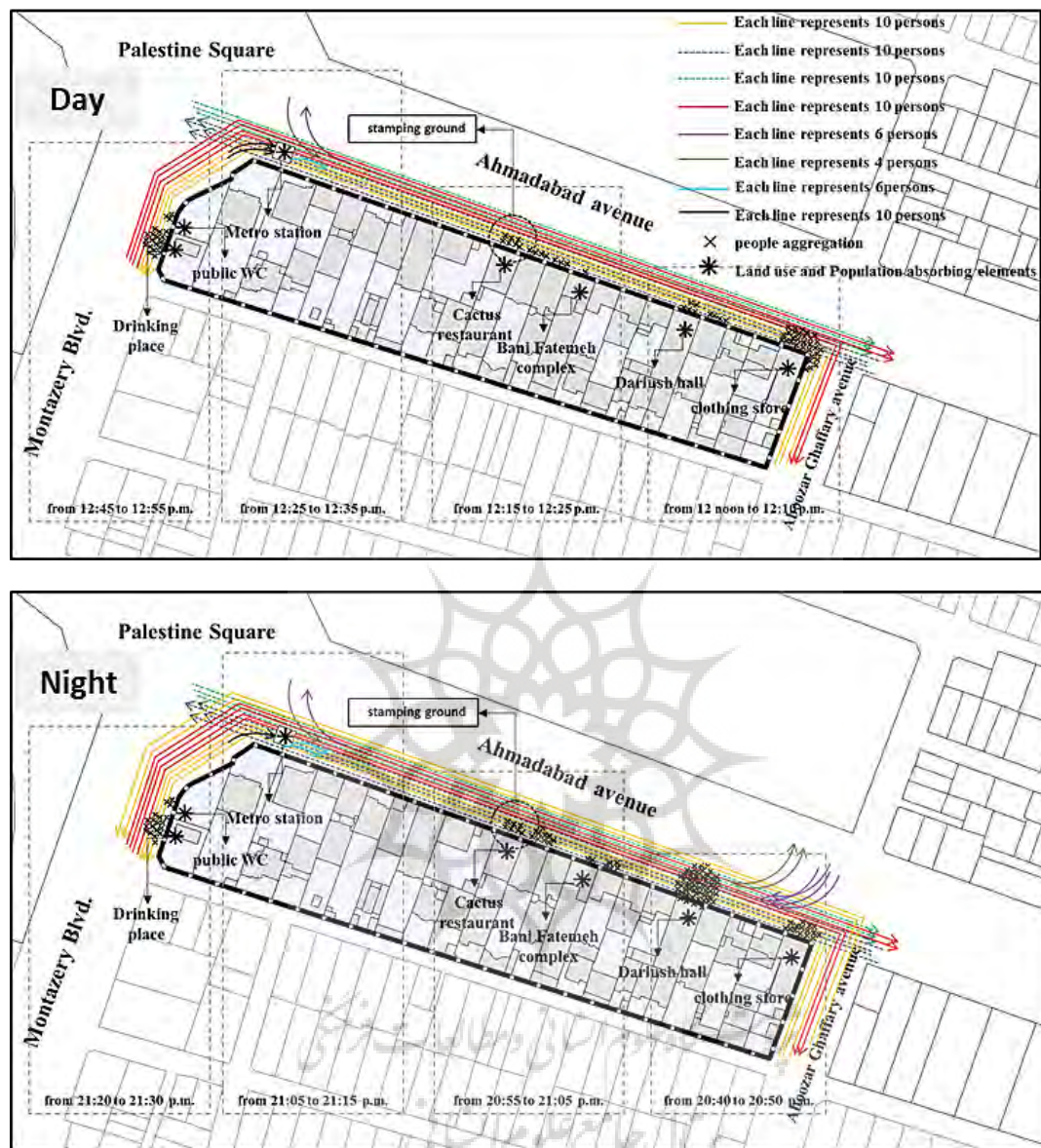Fig. 2: General information extracted from the questionnaire

Fig. 3: The study of the behavioral patterns of the space audience at different times in different hours of the day on Ahmadabad Avenue - august 2015

spaces and suitable living facilities, and only 12.5 percent has evaluated avenue lighting as suitable. In considering amount of diversity of existing elements in the avenue (Fig.3), out of 100 stated responses (185.2 percent), 103.7 percent of responses was related to diversity in functions and buildings' difference, and only 13 percent referred to color differences in the avenue. In considering sidewalks' amount of being pleasant or unpleasant (Fig.4), out of 138 stated responses (265.4 percent) for pleasantness of sidewalk space, 113.2 percent referred to urban furniture and stores, 103.8 percent was related to vegetation and flooring, and 30.8 percent to lighting. Out of 74

stated responses (145.1 percent) for unpleasantness of sidewalk place, 78.4 percent referred to lighting, which is a significant percent.

In regard to asking about beauty and harmony in buildings' facade, out of 56 stated responses (100 percent), 83.9 percent evaluated the axis walls at average and low levels.

Studying the Safety Situation and Social Surveillance of Public Areas

Existence of non-functional spaces, lack of nightly land uses, and lack of suitable lighting near inactive blocks have led to the
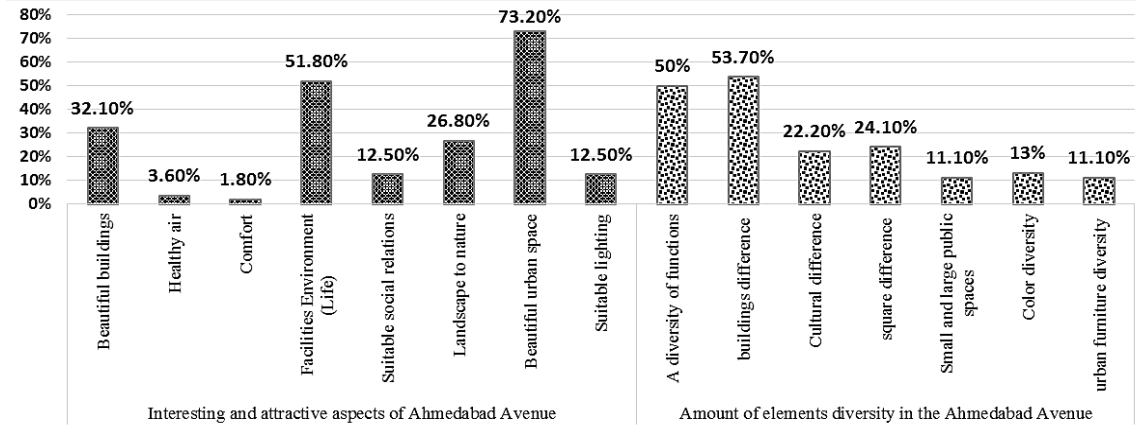
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Fig. 4: The amount of diversity and interesting and attractive aspects on Ahmadabad Avenue

creation of indefensible qualities in the studied area. Existence of rigid bodies with long lengths from practical and physical aspects, besides lack of visual sighting and visual obstruction and making of hidden corners, and lack of suitable lighting at night have led to the formation of indefensible spaces in the axis. By considering the opinions of space users, amount of pedestrian traffic in different hours of the day, out of 56 stated responses (100 percent), 32 percent referred to day, 39.3 percent to night, and 28.6 percent to day and night. In regard to the status of Ahmadabad Avenue's safety and security, out of 56 stated responses (100 percent), 62.5 percent evaluated the safety and security of the avenue at good level.

Urban Landscape Nightly

In response to sufficiency of illumination in avenue in the last hours of the day (Fig.5), out of 56 stated responses (100 percent), 35.7 percent evaluated it at low level, 33.9 percent

at good level, 23.2 percent at average level, and 7.1 percent at very low level. In regard to asking about the problems and inconveniences resulting from lack of sufficient lighting in parts of the avenue (Fig.5), out of 41 correct responses (100 percent), 58.5 percent referred to lack of liveliness and dynamics which is the main concern of this research, and 39 percent referred to reduction of citizens' presence and lack of easy access to essential part of the avenue.

In order to investigate which parts have suitable lighting and which parts do not (Fig.6), out of 89 correct responses regarding suitable lighting (100 percent), 33.6 percent stated that commercial land uses, Ahmadabad square and Dariush Hall have interesting and attractive lighting; and 10.1 percent stated that avenue lighting is uniform and has no attraction. Similarly, out of 78 stated responses regarding unsuitable lighting (100 percent), 20.5 percent referred to the distance
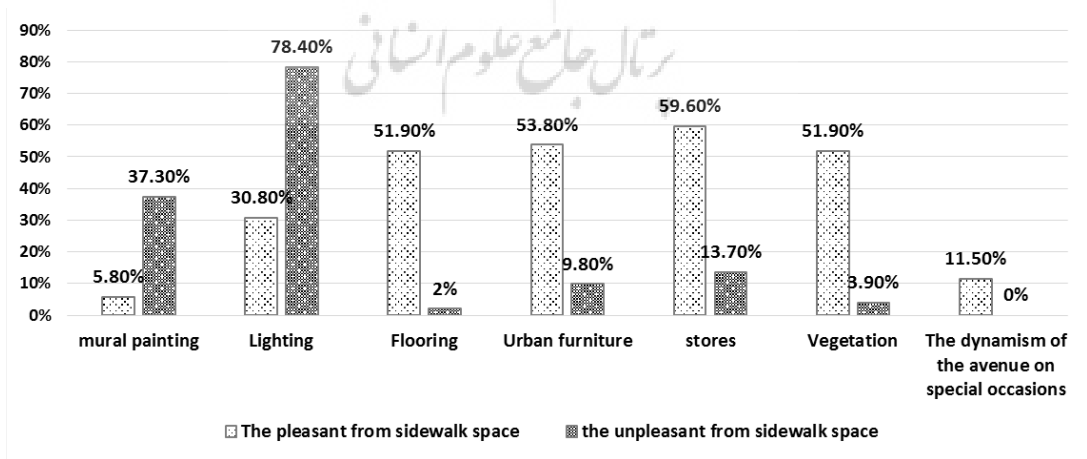

Fig. 5: The amount of pleasant and unpleasant from the sidewalk space in Ahmadabad Avenue
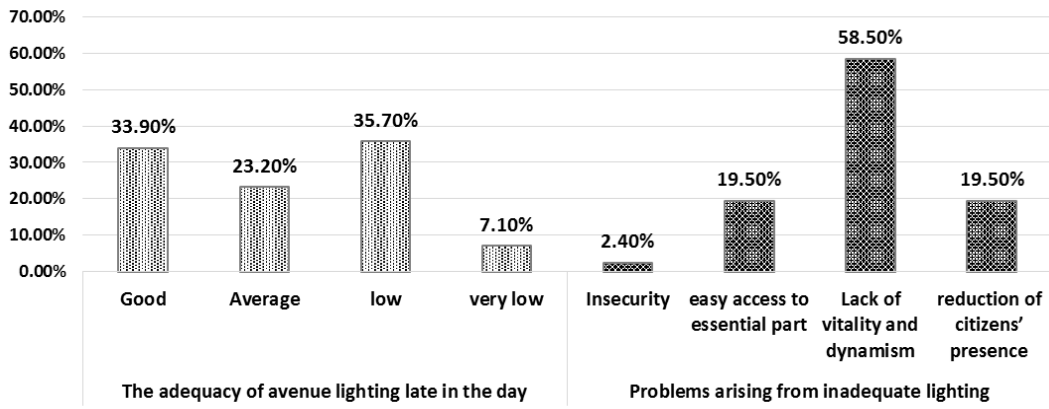
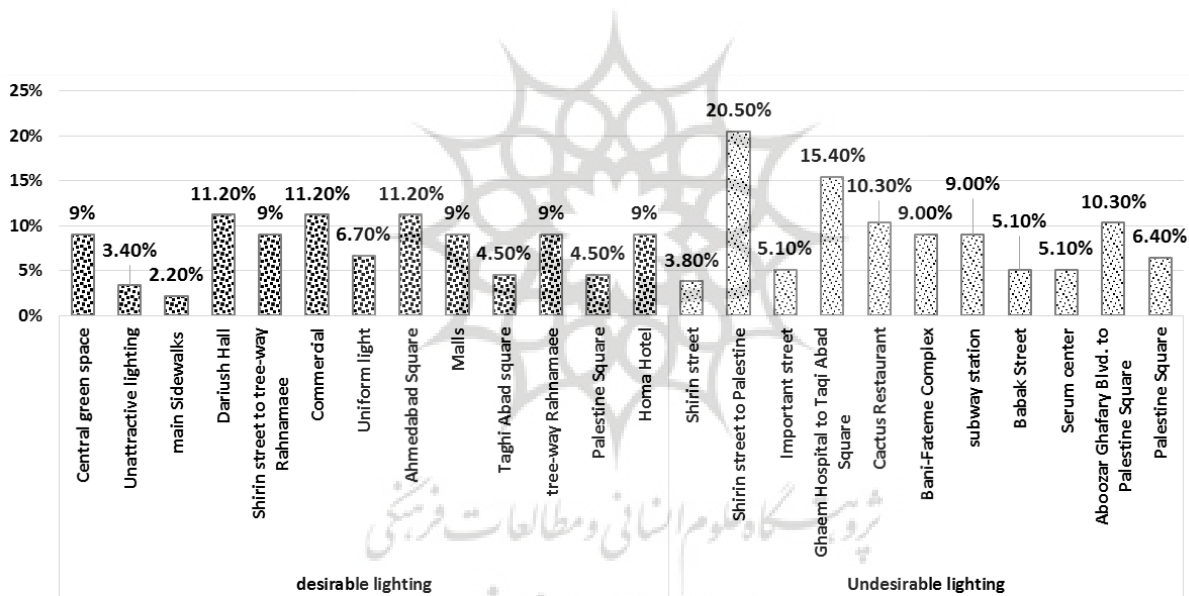Fig. 6: The adequacy of avenue lighting and problems arising from inadequate lighting on Ahmadabad Avenue

Fig.7: Desirable and undesirable situation on Ahmadabad Avenue lighting

between Shirin Street and Palestine square, 20.6 percent between Aboozar Ghaffari Avenue and Palestine Street as well as the cactus restaurant as having insufficient lighting.

RESULTS AND DISCUSSION

The analysis indicates that this part of Ahmadabad Avenue is an appropriate place to make a creative urban space. Therefore, should provide a basis for creative events to arise and the creativity in the space. There is nothing in our urban experience that demands that public space and the public sphere are inherently, ubiquitously and infinitely connected (Kirby, 2008, 92). In this regard, it is necessary

to utilize interactive lighting to increase the presence and social interactions within this space. For this reason, it is essential to have provided desirable and the quality of urban space with properly design. Based on the analysis performed, it can present as following, vision for the transformation of Ahmadabad Avenue into a creative urban space based on interactive lighting:

The urban space of Ahmadabad Avenue – between Aboozar Ghaffari Avenue and Palestine square – is defined as a creative urban space in the addressees' minds. This space as an urban luxury avenue and main arteries, with having historical, cultural and entertainment identities in the city of Mashhad,

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Table 2. Codification of projects and executive policy become Ahmadabad Avenue space into creative urban space

No	Projects	Executive policy
1	Predicting the forecourt space for cultural land use to enhance the social interaction	1. Various space designing in order to encourage the charitable activities and public donations and make sense of participation 2. Using the three-dimensional and creative elements in space design 3. Space for the aggregation, particularly in special occasions such as Muharram and Qadr nights, etc. 4. Providing space for establishment temporary and outdoor exhibitions
2	Creating the cultural complex with diverse and attractive urban space in order to holding exhibitions and festivals	1. Designing the positive of cultural complex in order to create urban life the atmosphere of everywhere. 2. Using the element of water in order to subtilize air 3. Using creative elements in space and emphasizing the cultural building with the use of light and color 4. The play of light, shadow, create a sense of dynamism and encouraged to move and route diversity by motivation person creativity 5. Supply the cultural creative products and holding the art exhibitions in the space of cultural complex and provide the opportunity for interaction between people 6. Design the interior space of cultural complex in order to holding the religious and national celebration 7. Providing physical opportunities for interaction and dialogue between different groups by age and gender 8. Increasing the role of learning environment by creating the ritual and religious plans such as: Tazyehkhani, Shahnamekhani 9. Creating artistic fields and using social intelligence 10. Transparent design cultural complex in order to communicate between the inside and outside 11. Holding ceremony such as theater, puppet show, ritual art, and etc. In outdoor 12. Using the flexible structures in space to enhance the vitality 13. Existence mixed use of cultural, artistic and commercial 14. Strengthening the night life by using the space lighting design 15. The portico design in connection with public open space in order to create of square enclosed 16. Using the converged furniture to increase social interaction
3	Lighting design wall with an emphasis on land uses and architectural prominent monuments	1. Lighting design architectural prominent monuments 2. Lighting prominent land use such as Bani-Fatemeh complex and cactus restaurant 3. Emphasizing on the skyline by using the light at night 4. Mass and building density modification 5. Due to available architectural patterns and their use in other buildings 6. Emphasizing on horizontal and vertical elements of the facade at night 7. The induction of color to the environment by using lighting
4	Designing the avenue space (floor, furniture, green space) to enhance the vitality and dynamism	1. Designing convergent and compatible furniture with the climate and needs of citizens to increase soial interaction 2. Strengthening stamping ground in front of cactus restaurant 3. Using the solar ceramic on flooring in order to make sense of movement and interaction with space 4. Strengthening the vegetation cover of sidewalk margin in order to create of enclosed 5. Strengthening the visual effects of marginal green spaces by using colored and dynamic light 6. Considering the use of renewable energy in order to reduce costs and environmental damage 7. Separating part of move and pause by using different flooring 8. Using the colored lights 9. Using the motion sensors in the floor in order the dynamics and interaction with the audience 10. Paying attention to pause and move points by using the lighting at night 11. Visual effects creation in the sidewalk that simulate daylight. 12. Emphasizing on benches furniture by using the interactive lighting at night

has provided possibility the formation of voluntary and social activities, and creative events in the last hours of the day, by using interactive lighting appropriate to the visitors' needs. So that the use of dynamic and creative lighting have not only strengthened face to face communications across the people, but also played a potential role in enhancing the urban attractiveness, activity time, and security for the addressees of the space. Hence, Ahmadabad Avenue is attractive place to work and live for both the residents (especially young people) and the tourists, capable of making an interactive space with user, capable of flourishing different economic sectors (through the use of technology and good management practices) and has desirable visual landscape all along the day. Before starting to the lighting design, it is very significant to consider the project purpose, it means that to design a creative urban space; and it is also important to select brightness classification and the transition between day and night lighting. Because of having valuable lighting schemes, it should be considered the existence of dark or dimly lit spaces alongside bright spaces. Recently, in many countries, masterpieces of design based on the idea of "design by the people" so should be pay attention to places that importance for people in different feasts and ceremonies, for lighting and illumination, because that places certainly have a serious potentials.

Here we are considering different kinds of lighting and the classification of illumination intensity and weakness in any part of Ahmadabad Avenue:

1. Architecturally prominent monuments' lighting,

2. Lighting of prominent buildings: cactus restaurant, Bani Fatemeh complex,

3. Flooring lighting: differentiation of pause and move places with light and shadow, and using interactive lighting,

4. Wall lighting: emphasis on the skyline, architectural elements of the façade,

5. Green space lighting: creation of the visual display across marginal green spaces, tree lighting to simulate daylight, and

6. Urban furniture lighting: the use of interactive lighting to individuate urban furniture such as bench.

Then, based on inductive reasoning, a set of projects and operational policies were developed for the design of Ahmadabad Avenue – between Aboozar Ghaffari Avenue and Palestine square - that table 3 reports the results of this part of the research.

CONCLUSION

The urban space as part of the environment, it can affect the user's behavior and vice versa, therefore, consider of human's behavior within the environment, it is necessary for designing; because it is actually designed for human being and must be more harmony with humans' behaviors. The findings indicate that the effectiveness of lighting in the formation of the city's creative spaces. This part of Ahmadabad Avenue in development process itself faced with challenges that lack of environment's harmony with user's behavior and transformation of space into a place to pass through not to stay among these cases. In this study, tried to with minimum interference in the environment and reducing costs and using renewable energy of environment in addition to make creative space in along 24 hours a day, able to look at the light differently and utilize not such complicated technologies in order to cooperate the addressees in the plan and interaction with urban space, to achieve an appropriate response to the space dynamics and excitement (Fig. 8). On the other hand with lighting design in the interaction with addressees, we succeeded to increase positive behaviors (participation, interaction with the environment, pause and etc.) And as much as possible reduce the negative ones (indifference towards the environment, pass on and etc.), and cause the space to be used in along 24 hours a day and the visual pleasure of audience.

REFERENCES

Armanshahr Consulting Engineers. (2008). *Urban Design of AHMADABAD Blvd. of Mashhad. Mashhad:* Municipality of Mashhad.

Ashtary, H., & Mahd neJad, H. (2012). *Creative city, creative class*. Tehran: Tisa.

Atkinson, R., & Blandy, S. (2005). Introduction: international perspectives on the new enclavism and the rise of gated. *Housing Studies*, 20(2), 177-186.

Baradaran, S. (2011, 05 27). *Light at night and necessity of attention to it in the architecture*. Naghsh-Negar, Retrieved
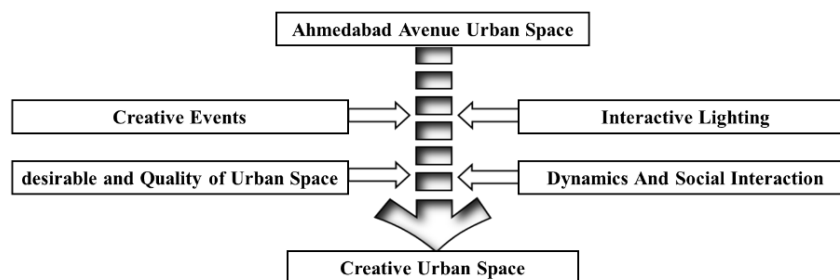
Fig. 8: Strategies required in order to achieving the creative urban space

August 4, 2015, from http://www.naghsh-negar.ir.

Bayzidi, Q., Etesam, I., Habib, F., & Mokhtabad Amrei, S. (2013). An Investigation of Global-Regional Interactional Approach at the Prominent Works of Contemporary Iranian Architects. *International Journal of Architecture and Urban Development,* 3(2), 13-20.

Duxbury, N. (2004). *Crative Cities; Principles and Practices.* Ottawa: Canadian Policy Research Networks Inc.

Esben , S., Hans, J., Ole , B., Rikke , G., Tobias , T., & Thomas , B. (2012). Controlling Urban Lighting by Human Motion Patterns Results from a Full Scale Experiment.

Florida, R. (2005). *Cities and Creative Class.* New York: Routledge.

Ghasemi Esfahani, M. (2011). *Where am I? Identity to Tissue Residential.* Tehran: Publications Rozane.

Grote, L., & Wang, D. (2005). *Architectural Research Methods.* (A. Eynifar, Trans.).(5th ed.). Tehran: Tehran university.

Habib, F., & Sashourpour, M. (2012). The Cognition of the City at Night (Investigating the Role of the Night in Citizens Cognitive Maps- Case Studies: Zanjan and Abadan). *International Journal of Architecture and Urban Development,* 2(3), 5-12.

Kalantari, B., Yary-gholi, V., & Rahmati, A. (2012). Public space and creative city. *Manzar*, (19), 74-80.

Kirby, A. (2008). The production of private space and its implications. *Political Geography,* 27, 74-95.

Landry, C. (2006). *The Creative city: a Toolkit for Urban Innovators*. London: Earthscan.

Mansouriyan, Y. (2009). researchers Hopes and doubts to "qualitative approach" In the process of research. *Generalities Mah Book- Information, Communication and Knowledge*, 13(147), 60-65.

Mansouriyan, Y. (2012, 02 04). *Repeatable Questions around "Qualitative Research"*. Atf, Retrieved October 8, 2015, from http://www2.atfmag.info/1390/11/15/qualitativ/

Mehrannejad, M., & Gholampoor, S. (2012). Interactive Lighting. *Manzar*, (21), 56- 60.

Mesgarani, n., & Jalali, A. (2014). Creative urban design; Approach to recreating and creating places. Case Study: Mashhad Bagh-chesme. *Tourism Development*. Proceedings of the International Scientific-Strategic Conference on Tourism Development for Islamic Republic of Iran challenges & Prospects, October 18, (pp. 1167-1186). Mashhad: Tourism Institute (SID).

Mission statement! (n.d.). Creative City Network, Retrieved July 20, 2015, from http://en.unesco.org/creative-cities/

Mohammadi, K., & Majidfar, F. (2010). The period of Creative Cities. *municipalities,* (100), 16-21.

Montgomery, J. (1998). Making a City: Urbanity, Vitality and Urban Design. *Urban Design,* 1(3), 93-116.

Montgomery, J. (2003). Cultural Quarters as Mechanisms for Urban Regeneration. part1: Conceptualising Cultural Quarters, *Planning, Practice & Research,* 18(4), 293-306.

Muzaffar, F., Bagheri, M., & Azemati, H. (2006). Designing urban parks and children's creativity. *Journal of Technology and Education,* 1(2), 75-86.

Pakzad, J. (2008). *Design Guidelines of Urban Spaces.* (5th ed). Tehran: Shahidi.

Parsoumash Consulting Engineers. (2010). *Detailed plan of Western Middle zone of Mashhad.* Mashhad: Center of study and planning of Mashhad.

Poulsen, E., Andersen, H., & Jensen, O. (2012). Full Scale Experiment with Interactive Urban Lighting. *Designing Interactive Lighting.* Proceedings of In Workshop on DIS: Designing Interactive Systems. Denmark: Aalborg University.

Rahmati, A., Rabiee Far, W., & Zareie, S. (2013). The role and place creativity in public spaces desige. *architecture, restoration, urbanism and Sustainable Environment.* Proceedings of The first national conference on. September 19. Hegmataneh: Community Environmental Assessors.

Ranjbar, H., Hagh doost, A., Salsali, M., Khoshdel, A., Soleimani, M., & Bahrami, N. (2012). Sampling in qualitative research: Guidance to get started. *Military Medical University Islamic Republic of Iran,* 10(3), 238-250.