Principles of design residential complex By approach on naturalism

Akram Bakhtiyari

Msc student of architecture Department, Islamic Azad University, Central Tehran Branch, Tehran, Iran

Abstract - Public spaces in residential complexes provide a major framework for social interactions. The active presence of people in social interactions raises the sense of community and improves the quality of life by strengthening civic sense.

Housing is an issue that every living being is involved with it and somehow try to provide it. It is home to major size meet people from the first moment of self and the environment, and even tried to build this is enough to give them meaningful, decisive and vital to the performance of his undertaking. It can safely be said that most residential spaces and living spaces are man-made. Residential housing needs of people go to work. Require the most basic human needs are residential. During more than a century of tall buildings with modern style was common in the world, Therefore, to solve some problems such as housing shortages caused by community today Increasing urban population, have been used But it has always been associated with new problems and shortcomings. The growing population in recent decades has created problems in housing referred to as the housing crisis.

The goal of research is achieving sustainable housing complex. The research method is "analytical- descriptive". Data collected is field and documental. Also in order to collecting data have been used questionnaire tools. Finding shows, three housing complex (Apadana, Atisaz, Pardisan) in Tehran are sustainable complex, but it is necessary attention to them for improving

Key word : Sustainable architecture, housing complex, green architecture,

1. INTRODUCTION

The simplest element of human life is social interaction. Social action is the range of desirable behaviors done by a human towards another to achieve a goal. People have an innate need to establish social relationships and therefore, they can provide opportunities

So they can experience the social relationships. Social relationships occur with a variety of purposes. They are emotional which include relationships with friend, relatives and neighbors or rational in seeking to maximize the chances of individuals to reach the goal or they are based on social values which set attainable goals without paying attention to its costs or the traditions and customs. Man since its inception is busy exploring nature, which has always been unknown and mystery to him, and is seeking comfort and efficiency of existing environmental conditions to gain peace. Architects and designers pay special attention to psychological understanding and further exploration in human behavior and nature in the environment because these behaviors are closely related with the physical environment. What separates Environmental Psychology from the other branches of psychology is examining the relation between behavior based on the human psyche and the physical environment. Thus, attention of designers to psychological investigating of designed spaces has created an inextricable link between environmental psychology and them. Environmental psychologists have committed themselves to the study of human behavior in his daily environment to be able to directly or indirectly investigate effects of physical environment on human behavior (Sayadi, 2010).

The unity-oriented thinking is rooted in Islamic culture, housing cannot be separated and apart from the rest of the phenomena studied and issues related to human life. Having adequate housing is a fundamental right social. Housing is the most basic of human needs. On the other hand, we now live in a world where everything is changing rapidly and this rapid change, many issues are accepted and seemingly irrevocable changes, and the path leads to an unknown fate. The cleaning of difficult issues have been fixed and variable. Our environment is being destroyed. Presentation of climatic One of the main reasons to address this concern Housing is an issue that affects every living creature that is with in an effort to provide it. It is home to major size Meet people from the first moment of self and the environment, and even tried to build this is enough to give them meaningful, decisive and vital to the performance of his undertaking. Hence it can be said with certainty that human-made biological residential spaces the spaces.

Researcher	Theory
Forgas (2000)	Architecture spaces can be an important component of human interaction with others. As organized, dynamic and talented creature, human is able to modify his behavior in the face of the changes in the architectural space.
Altman (2003)	The amount of social interaction of people in different social position and even at dif-

	ferent times of the day varies and changes occur to obtain the desired level of privacy.
Kasidi (1997)	If individuals are homogeneous in space, they are more likely to interact and heterogeneity decreases the possibility of communication.
Gans (1968)	A potential architectural space provides a wide range of opportunities to satisfy personal needs.
Abu-Ghazzehe (1999)	Multiple families housing design method is effective on the way people interact. The more people are at a distance closer to each other, they are more likely to have social interaction.
Gehl (1987)	Suggested three activity groups in urban areas: Necessary, Selective, Social
Oldenberg (1989)	Emphasis on public areas of the city, as the third place.

Table1.Design theories for social interactions

Based on the definition suggested by Humphrey Osmond, using words such as socialization spaces or isolated spaces indicating the spatial qualities which make people get together or keep distance (Osmond, 1975).Carmona believes that urban public spaces are places and social environments working as a field for the display and behavior, a common and neutral ground for social interaction and communication and the incorporation of a social consciousness, personal development and exchange of information (Carmona et al., 2003).Based on John Lang's model, in the urban public spaces, the patterns of social interaction are important. If people are interested in these environments, its most powerful social interaction will occur (Lang, 2002). One of the main dimensions and characteristics of public spaces is creating opportunities for social interaction. When people interact with other people in society, they feel a stronger relationship with the place and its community. These factors determine the presence of different social groups, the formation of social networks and staying in the domicile are measured and evaluated. The socialization process starts with the establishment of social interaction and communication among users of the shared public space and architecture. The ability to participate effectively in interactions with others, whether in private or public life is of critical importance (Forgas, 2000). Landscaping can be seen along the spaces and areas of private life. Therefore the design of possible measures should be taken to facilitate the access.

Most residents usually tend to those public spaces closer to their environment (Huang, 2010). In fact, the value of public open spaces and residential complex is not due to their vastness but the intimacy of the space and its proximity to the private environment (Huang, 2006).

Housing is one of the most basic needs of human communities' people. Article 31 of the Iranian Constitution specifies it as the right of every Iranian individual and family. Paying attention to the supply of urban housing is a step to supply the social justice and the distribution of the fruits of the community growth, and part of the policy of urban development. Under several decades of the impact and effectiveness of new developments in the field of modern urban planning and urban development, as well as modernization caused by distribution of oil rents in Iranian cities, the socio-economic structure of the country has been transformed, with the formation of a new texture with more suitable urban facilities, more efficient communication networks and more polished urban furniture in developed areas alongside a fabric texture lacking suitable urban facilities, poor access to roadways and disorder and the disproportionate problems becoming visible in the underbelly of modern cities as the original inhabitants of old buildings migrated within the cityscape to new housing and residential areas, being replaced in increasingly dilapidated older areas by rural migrants, immigrants and low-income families. Thus the fabric texture, due to of its residents' economic potency (ability), was confronted with a reduction in investment to modernize existing dwellings.

2. Literature review

2.1. Definitions of housing are provided below

Schultz tells us that the world is familiar with the home done immediately, there is no need to search for the target selection process and not at home and around the world is simply inexpensive. We can say, home is where everyday life takes place. Everyday life is something that represents their continued existence, and hence we maintain our support who sits as an anchor.

Also, Rappaport does not define house as an entity or a structure for which the organization has come very complex. Even at that time the house was brought to the shelter as a basic human concept of the utility function just as not all spent or performance space. But the concept of home means creating an environment favorable for life as a social unit.

But Le Corbusier, the most prominent architectural features of the building and the west, and who express views more than any other architect has been instrumental in the formation of modern architecture Le Corbusier was asked of all to look at the house as a machine for living (Farzanyar, 1992).

From the viewpoint of Mahmoudi, housing is more than a shelter. Housing should be a quiet corner of the space. But to live in that space. Housing in every form and shape that a human body is like the third shell is alive, breathing roots are In the ground.

Over time, the growing political, economic, social and cultural development of human wants, Home from a local shelter has changed in the vertical direction that provides only one security, i.e. where higher housing benefit and welfare of humans

provides Population growth leads to expansion of cities and a new phenomenon was named towers.

One of the phenomena that causes rather than build houses and multi-story buildings, is considered the tall building and then building the tower, shortage of land in the densely populated cities (Soltanzadeh, 1997).

Construction of high-rise building with elevator access to patented technologies and construction was common in the nineteenth century. At the beginning of the towers with traditional and eclectic style and shape, and structural systems are not perfect, but were modern gradually and with the full metal body and skin structures.

The residential part of the endeavor in good condition urban residential tower is to build in a particular area that applied equate green space for residents (Soltanzadeh, 1997).

Although transmission of human habitats where the Earth is not pleasant, we have no choice due to the overpopulation, but to resort to the towers, but we can use technology and new materials, and the nature of the towers to invite sense of distance from the ground to reduce the quality of life becomes more favorable.

The issues such as population increased in the twentieth century, the need for more housing in cities, the need to rebuild and modernize the urban areas, the demand for residential and /or work in the cities and the need to reduce the costs of expanding urban landscape is raised as one of the factors in the construction of high-rise buildings in major cities worldwide as a necessity. The continuous increase of the world population, more than ever faced with the problem of energy shortages and the threat to human life (Watson et al., 2005).

Given the current climate considerations are an integral part of the building. Because due to the shortage of fossil fuels and other fuels due to the climate and building design that Maximum use of natural conditions seem to be necessary (Ali Asgharzadih, 2006).

Given the above, the increase in population, housing crisis, energy situation in Iran and compare energy consumption in Iran and other densely populated countries in the world, this raises the intelligent design are compatible with the residential tower with green architecture given the social, economic, and environmental design, other arrangements can be based on the outline looking for a clean and healthy environment in the future Reduce fossil energy consumption in the housing sector.

2.2. Evironmental Psychology

Environmental Psychology is the study of complex between people and their environment. According Gifford, environmental psychology is different from the main branch of psychology because focuses on daily physical environment. This science provides framework from the standpoint of ideas researches and assumptions which can help us to better understand the interactions of humans and the environment. By using this knowledge you can evaluate before designing and construction, which is considered as the best tool for professional designers. If we know what in the past has shown better performance, we will be more prepared for the future to better design. By using the stated related theory, it can be seen that environment plays a key role in the formation of values and empowerment of different individuals and groups. To realize this, we first discuss about getting familiar with expressed theories and concepts and influential factors in this regard.

Many aspects of children school attitude and mood such as their concentration, interest, attention, stress fatigue and arousal probably affect their scholastic performance. These qualities may in turn, be affected by the psychosocial factors, work organization, educational methods as well as the physical environment as climate, light and noise (Lundquist, Kjellberg & Holmberg, 2002). Environments can be defined based on their objective, hard and quantifiable physical properties, Specific aspects of the physical environment include: lighting, noise, color, and air quality (Spivack, Askay & Rogelberg, 2009).

Educational environment put emphasis on the way specific components of the quality of environment and factors of physical environment (space, light, color, sound, materials, etc.) affect the learners' development and learning (Berris & Miller, 2011). A good number of studies have examined the effect of the physical conditions of educational settings (including chairs, furniture, noise, acoustic, climate, thermal control, air quality, classrooms, windows, sabotage, yard, etc.) on learners' attendance and health (Earthman, 2005). Physical factors have detectable effects on teachers and learners in the school settings. Furthermore, temperature, light, air quality, and annoying noise have harmful effects on the concentration, mood, well-being and health, attendance, and ultimately the success of learners (Higgins & Parteners, 2005).

2.3. Sustainable Architecture: Definitions and Concepts

Sustainable architecture is a general framework for "creating a sustainable environment by man-made" interpretation. Environmental Sustainability: A basic condition for achieving environmental sustainability, dynamic equilibrium between different systems environment. This condition from a practical perspective is simultaneous access to 1. Sustainable, 2. Sociocultural organization 3. Ecological economy organization. Sustainability in architecture is not a particular style or trend belonging to the present time is why the attitude and ethical approach arises at any time and in any situation is important and valid.

'Balancing human needs and aspirations of present and future global environmental and other conditions of the establishment. "

According to what was said, it can be concluded that: Plan a route to sustainable architecture called "sensitive and responsive" in the late 90's to reflect on design theory and human environments is making a sensitive ecological areas is inclu-

sive for establishing healthy living and quality important concepts of value - cultural, together with the maintenance of essential ecological balance and from this perspective for design "moral responsibility" is combined with the "duty of accountability on a global scale" depicts.

2.3.1. Sustainable architecture (the idea of nature-oriented)

Man, nature and architecture, which have three vertices of the triangle, are designed to guide us. And deployment experience, science and technology lies at the heart of nature and architecture around the bridge of friendship between man and nature, the nature of the work can be created to hold it in your nature. Dehkhoda sustainability means (durable-lasting) is given.

2.4. Green Architecture

Green architecture and sustainable architecture, which is derived from sustainable development, this is due to the adverse consequences of today's industrialized world requires human consumption era. Architecture and technology can learn from each other. It is sensitive to wider relations in such a situation, such as construction sites, power consumption. The urbanization and environmental awareness has led to nowadays Eco technology (combining nature with technology) is placed in front of each development.

Term sustainable of the architecture or architectural environment is sensitive to the architecture of a complex symbiosis between natures, man and refers to artifacts. This reality has led in most countries ecological architecture of a novel, imaginative futuristic or be considered a different luxury reserved for the upper class but the fact of the stereotypical idea of the architectural environment.

In contemporary architecture, which changes according to bioclimatic criteria and stability emerge, become more important every day. Speaking of sustainability in architecture can be interpreted to imagine and plan for future construction. It is not only the physical stability of the building, but with the stability and preservation of the planet and its energy resources, the urbanization and industrial expansion causes a variety of environmental impact, the most important of which is air and noise pollution. In contemporary architecture, which changes according to bioclimatic criteria and stability emerge, become more important every day. Speaking of sustainability in architecture can be interpreted to imagine and plan for future construction. It is not only the physical stability of the building, but with the stability and preservation of the planet and its energy resources, urbanization and industrial expansion causes a variety of environmental impact; air pollution is the most important. The least harmful to the environment and to humanity as a result of import (Atman, 2012), are the instructions for Green Architecture:

A: In the developed areas of construction

B: Project design and versatile map

A: Access to public transport, bicycle pathways, and pedestrian access to basic services is readily available

D: the reconstruction of old buildings

A: buildings with a view to minimizing the environmental-based compression you retain undisturbed areas

G: Climate of native plants and their properties with respect to the operation.

2.4.1. Green Architecture and Green Design

Green architecture defines an understanding of environment-friendly architecture under all classifications, and contains some universal consent (Burcu, 2015), It may have many of these characteristics:

- Ventilation systems designed for efficient heating and cooling
- Energy-efficient lighting and appliances
- Water-saving plumbing fixtures
- Landscapes planned to maximize passive solar energy
- Minimal harm to the natural habitat
- Alternate power sources such as solar power or wind power
- Non-synthetic, non-toxic materials
- Locally-obtained woods and stone
- Responsibly-harvested woods
- Adaptive reuse of older buildings
- Use of recycled architectural salvage
- Efficient use of space

While most green buildings do not have all of these features, the highest goal of green architecture is to be fully sustainable. Also Known As: Sustainable development, eco-design, eco-friendly architecture, earth-friendly architecture, environmental architecture, natural architecture (USGBC, 2002).

2.4.2. Natural Building

A natural building involves a range of building systems and materials that place major emphasis on sustainability. Ways of achieving sustainability through natural building focus on durability and the use of minimally processed, plentiful or renewable resources, as well as those that, while recycled or salvaged, produce healthy living environments and maintain indoor air quality. Natural building tends to rely on human labor, more than technology. As Michael G. Smith observes, it depends on "local ecology, geology and climate; on the character of the particular building site, and on the needs and personalities of the builders and users (Smith, 2002).

The basis of natural building is the need to lessen the environmental impact of buildings and other supporting systems,

without sacrificing comfort or health. To be more sustainable, natural building uses primarily abundantly available, renewable, reused or recycled materials. The use of rapidly renewable materials is increasingly a focus.

2.4.3. Green Building Materials

Green building materials are generally composed of renewable rather than non-renewable resources and are environmentally responsible because their impacts are considered over the life of the product. In addition, green building materials generally result in reduced maintenance and replacement costs over the life of the building, conserve energy, and improve occupant health and productivity. Green building materials can be selected by evaluating characteristics such as reused and recycled content, zero or low off-gassing of harmful air emissions, zero or low toxicity, sustainably and rapidly renewable harvested materials, high recyclability, durability, longevity, and local production (Cullen, 2010). The materials common to many types of natural building are clay and sand. When mixed with water and, usually, straw or another fiber, the mixture may form cob or adobe (clay blocks). Other materials commonly used in natural building are: earth (as rammed earth or earth bag), wood (cordwood or timber frame/post-and-beam), straw, rice-hulls, bamboo and stone. A wide variety of reused or recycled non-toxic materials are common in natural building, including urbanite (salvage chunks of used concrete), vehicle windscreens and other recycled glass (Woolley , 2006).

One-half of the world's population lives or works in buildings constructed of earth. Straw bale construction is now gaining in popularity and Many jurisdictions in California have adopted the Straw bale Building Code. Green Building Design favors natural building for its local availability, ease of use, lack of toxic ingredients, increased energy efficiency, and aesthetic appeal (NAOHB, 1998). Several other materials are increasingly avoided by many practitioners of this building approach, due to their major negative environmental or health impacts. These include unsustainably harvested wood, toxic wood-preservatives, Portland cement-based mixes, paints and other coatings that off-gas volatile organic compounds (VOCs), and some plastics, particularly polyvinyl chloride (PVC or "vinyl") and those containing harmful plasticizers or hormone-mimicking formulations (Woolley, 2006).

3. Research methodology

a. Case study

Target population included Residents of residential complexes who are live in "Apadana, Pardisan and Atisaz housing complexes. According to Cochran formula, the least sample 120 of 357 patients was obtained.

b. Research and material

Present study in terms of objective is application. Its application is propose assessment housing complexes in order to improving their quality environment. The study in terms of research is "analytical-descriptive". Data collection method was library and survey. Also, SPSS Technique has been used. So, at first questionnaire was prepared. At finally, talent analyzed hypothesis. The hypotheses are:

- Hypothesis 1: looks green acchitecture in residential housing complex is led to sustaible building.
- Hypothesis 2: Looks mentioned compelexes are sustaible settlements.

4. Discussion

4.1. Analyzing data

4.1.1. Pardisan Housing complex

Pardisan Housing complex because of the bright, air flow is appropriate, access to green space by directly and indirectly in the kitchen, in comparison with other areas, 35% of residents in the atmosphere of your favorite kitchen have declared that shows quality of this space is its pleasant effect.

4.1.2. Atisaz housing complex

In the complex "Atisaz" More choice for residents of was pleasant, helpful and 30% were living due to their good position. On the other hand Atisaz complex has open space for kids that it is based on green architecture.

Also, there isn't appropriate accessibility to other area so, there is weakness.

4.1.3. Apadana housing complex

Complex "Apadana" light having two fronts, especially in the bedroom, this space by 40% Comments residents have their favorite space. Complex "Apadana" light having two fronts, especially in the bedroom, this space by 40% Comments residents have their favorite space. In Field studies and observations in the complex, green space, the passing cars and walking path to certain species have been separated. Also, due to the lack of space for children, children to play outdoors and use a wide roadway route. Accordingly, in addition to reducing the amount of security, reduce mental relaxation is also for parents to have.

Apadana Complex by limiting the spaces input than the wind and complex campus and the Atisaz, the highest percentage in the absence of green space in this part of his buildings to be allocated in this regard in terms of residents conclusion was that green spaces at the entrance it can be gratifying and enhance their satisfaction with residential space.

Assessment and Comparative study in case study

In selective case studies the uses of green spaces and natural elements have each been effective in residents' satisfaction and the quality of their lives has an impact.effective factors are appropriate accessibility to green space. Satisfaction of open space, trees and plants. Totally, 90% of Pardisan residential satisfy from their settlement and 95% of Apadana and Atisaz complex are satisfying.

On the other hand, residential want other pleasure land use in their environment. They are water and various canopies. Three complex design based on principle green architecture and sustainability.

4.1.4. Proposing principles and suggestion

1. Design of residential complexes, in particular, in comparison with green space and items listed priority access to green spaces and infrastructure.
2. It is necessary open space for children.
   - Thus, in the questionnaire needed space for freedom of behavior, play and explore children's "play space for children" is checked.
3. Open and semi-open spaces to relax, rest and interaction with nature is mandatory for residents of residential complexes.
   - 50% of people in order to rest and leisure, calling for the formation of open or semi-open spaces interact with nature brought comfort to them.
4. The seat must have the proper perspective to satisfy the minimum requirements.
5. According to the results, 55% of people prefer living space to other spaces are required to have a vision of nature.
6. It is necessary plant vegetable in indoor and outdoor space 75% of people prefer green space rather than other spaces. Also, 40% people prefer social space in this housing complex.
7. The ranking of natural elements are:
   - Green trees
   - Flower and sun light
   - Water
   - Grass and fruit plant
8. The air flow in space and exposure for human being is very important spaces and living spaces, living and bedrooms were more important.
9. Elements of interest to the public green space.

Group 1: Elements of interest to people in the green area of priority are:
1.Tree (as long, dense canopy and shrubs)
2. The presence of water (as a pond, waterfall, fountain and river)
3. Flowers and other plants
4. Grass

Group 2: the needs of people in the courtyard of a housing complex:
1.Sitting interest of peace (as camellia, chair)
2.Recreational spaces (in order to play, barbecue)
3. Amenities

Group 3: arrangement of green spaces is proposed as follows:
1. The order in the arrangement of trees and fountain
2. Due to the dimensions of space
3. Class of green space
4. The combination of green space with volumes building

10. It is necessary public green space in housing complex (55% of people believed green space is necessary) Given the interest of public green space and findings from interviews, some people due to lack of time, the inability to deal with plants or personal problems to maintenance of green areas is not specific and prefer the public green space in the form of the design.

Residential neighborhoods designed around the local park and each one has a middle yard with green spaces and grounds for playing children. Kindergarten, meeting space, rest and leisure rooms, some shops and janitor houses are located on the ground floors. Each neighborhood has combination of residential blocks with different heights in order to have different interesting spaces. Besides, each block consists of various houses to response different family tastes.

Conclusion

The intelligent architecture, green architecture according to the modeling approach for tower residential space is achieved by harmony with the architectural concepts of climate (green) and vernacular architecture of the region are responsible for saving energy and sustainability. To climatic design principles such as the design of the enclosure, located in the appropriate field of smart structures in different parts of the building, the use of green roofs on the towers and stations along the outer walls of the building, the use of double smart glass for windows, insulated exterior walls of the building, roof insulation, intelligent design styles that reduce energy consumption for heating and cooling can be used. Due to the above, Status and Power in Iran and compare energy consumption in Iran and other densely populated countries in the world this raises the benchmark with intelligent design architecture residential tower in the green given the social, economic, and environmental design. Measures and recommendations for the design of residential towers with sustainable architecture approach:

- Use of recyclable materials, resulting from demolition of old buildings for energy
- Using Advanced System walls and double-glazed windows for efficient use of sunlight
- Use a dehumidifier system and utilizes the heat accumulated in the two-chamber view as an energy source
- The use of photovoltaic cells to provide energy on a large scale in Slough
- Reduce noise transmission from outside to inside the skyscraper
- Solar panels that use geometry to create an efficient lighting system and light distribution are handled.
- There are three large coolers in the basement of skyscrapers, the tower is used to reduce internal temperatures and the skyscraper certainly did not need any external source of energy.
- Use of a set of solar panels that can gather and enjoy the extra energy and excess energy can be provided to other uses.
- Use natural ventilation skyscraper is 100 percent that it is also possible to store more than 30 percent.
- Ventilation system with heat recovery and cooling capacity of the air intake
- Ensuring that the use of sensors, solar sensors, tries to use less artificial light and only time can provide lighting space. It has features such as skyscrapers.
- Use of double glazed facade to save and conserve energy
- Using a natural air conditioning system, an average of 60 percent on the year, it makes possible efficient as possible.
- Vegetation around the building to convert carbon dioxide to oxygen consumption
- The use of ecological materials that will cause environmental degradation.
- The use of radiant heating system during the winter months
- The possibility of opening windows on the top floors of the interior, even for those who are able to use natural ventilation (Ehsan & Sayadi, 2010)

The buildings themselves are kind of technology. They are adapting their technology and take advantage of it. Once the computer is the ability to construct buildings as a capture, be smart. The intelligent building technologies in order to provide safe, comfortable and energy uses. The idea of an intelligent building, the connection between access, lighting, security, monitoring, management, and puts forward a remote connection.

Access to new technologies in smart materials, and special attention from architects to create buildings with intelligent systems ability to design buildings with high durability against climate are taken and It is expected that Demand and utilization of intelligent buildings, increase day by day. And creates a more stable architecture for the next generation to combine.

Principles of Green Architecture are:

- Water features and their management; natural building design; passive solar design;
- Green building materials; living Architecture. These principles are applied in a sustainable fashion to achieve an eco- friendly
- Building.
- Any architect has the ability to change an entire building process by specifying materials with low carbon dioxide emissions.
- Green building standards are available for almost every type of building on a global basis and these standards are well developed and are regularly being updated; they cover all phases of a building's life cycle from design through demolition.
- Buildings that have been designed according to sustainability standards need to be operated and maintained according to these same standards.
- Buildings that were built prior to enacting these sustainability standards can also be upgraded to meet the standards that have subsequently been put in place.
- Green buildings must have a number of common components: these include a focus on energy efficiency and, in some cases,
- renewable energy; the efficient use of water; the use of environmentally desirable building materials and specifications; a
- minimization of the waste and toxic chemicals generated in the building's construction and operations; good indoor air quality; and an eye on so-called "smart" growth and sustainable development.
- Green architecture produces environmental, social and economic benefits. Environmentally, green architecture helps reduce pollution, conserve natural resources and prevent environmental degradation. Economically, it reduces the amount of money that the building's operators have to spend on water and energy and improves the productivity of those using the facility. And, socially, green buildings are meant to be beautiful and cause only minimal strain on the local infrastructure.
- Traditional building materials are to be adapted to meet code-required standards for health and safety in contemporary buildings. Not only are they cost effective and environmentally friendly, but, when used correctly, these natural alternatives match the strength and durability of many mainstream construction materials.
- New building technologies, and in particular ICT automation and new materials, are to constantly be introduced to enhance the
- sustainable building process with the goal of reducing the impact of the building on the surrounding environment by using resources more efficiently (e.g. energy, water); enhancing and protecting the health

and well-being of the occupants; and reducing any negative impacts.

.REFERENCE

i. Ali Asgharzadeh F, 2006. With the design of residential structures in Tabriz climate approach. MS Thesis, Department of Architecture, Islamic Azad University of Tabriz punishment, Iran.

ii. Altman, I. (2003). Environment and social behaviour: privacy, territory and personal space, Translated by: A. Nemazyan, Shahid Beheshti University, Tehran.

iii. Abu-Ghazzeh, T.M. (1999). Housing Layout, Social Interaction, and the Place of Contact in Abu-Nuseir, Jordan, Journal of Environmental Psychology (19): 41 –73

iv. "Burcu, G., 2015, "Sustainability Education by Sustainable School Design" Dokuz Eylul University, Department of Architecture, Turkey Procedia - Social and Behavioral Sciences 186 (2015) 868 – 873

v. Ehsan M, Sayadi M, 2010. Sustainable architecture, First Edition, Lutz, Tehran.

vi. Carmona et al. (2003). Public places, urban spaces: The recitations and others, Tehran University, Tehran.

vii. Cullen, Howe J. , 2010, "Overview of Green Buildings", http://epa.gov/greenbuildings/pubs/gbstats.

viii. forgas, J. P. (2000). Psychology and social interaction: interpersonal l behaviour, translated by Firouzbakhsh.M.And Khashayar Beigi, Mahd Publications, Tehran.

ix. Gehl, J. (1987). Life between Buildings, Translated by Koch, New York

x. Huang, S.C.L. (2006). A Study of Outdoor Interactional Space in High-rise Housing, Landscape and Urban Planning (78):193-204.

xi. Huang, S.C.L. (2010). The Impact of Public Participation on the Effectiveness of and User's Attachment to Urban Neighborhood Parks, Landscape Research (35): 351-362.

xii. Lundquist, P., Kjellberg, A., & Holmberg, K. (2002). Evaluating effects of the classroom environment: Development of an instrument for the measurement of self-reported mood among school children. Journal of Environmental Psychology, 22, 289-293.

xiii.

xiv. Spivack, J. A., Askay, A. D., & Rogelberg, G. S. (2009). Contemporary physical workspaces: A review of current research, trends, and implications for future environmental psychology inquiry. In J. Valentin, & L. Gamez (Eds.), Environmental psychology new developments (pp. 37-62). New York, Nova Science Publishers.

xv. Mahmoudi M, 2009. Housing development compatible with sustainable development, Tehran: Institute of Tehran University Press.

xvi. Oldenburg, R. (1999). The Great Good Place: café, coffee shops, bookstores, bars, hair salons and the other hangouts at the heart of a community, Marlowe and Company, New York.

xvii. Osmond, H. (1957). Function as the Basis of Psychiatric Ward Design, Holt Rineh art and Winston, New York.

xviii. Soltanzadeh H, 1997. Based on the architecture of adobe of Tabriz, Iran, Tehran: Publications Office of Cultural Research.

xix. Smith, Michael G., 2002 "The Case for Natural Building," in Kennedy, Smith and Wanek.

xx. Watson D, Lip Q, Feiz-Mahdavi M, 2005. Climate Design (theory and application of building energy performance), Tehran: Tehran University Institute of Publishing and Printing.

xxi. Woolley T. 2006. "Natural Building: A Guide to Materials and Techniques". Crowood Press

xxii. USGBC, 2002, U.S. Green Building Council, Building Momentum: "National Trends and Prospects for High-Performance Green Buildings," Prepared for the U.S. Senate Subcommittee on Environmental and Public Works by the U.S. Green Building Council, November 2002.

xxiii. NAOHB, 1998, National Association of Home Builders, "Deconstruction: Building Disassembly and Material Salvage,"

xxiv. Susan, Loh, 2008, "Living walls – Away to green the built" www.environmentdesignguide.com.au/media/TEC26.pdf