Quality of Modern Learning Environment and Health-Saving Discourses

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Abstract. This paper dwells upon the environmental health as the key feature of a “quality city” that must be prioritized by any educational institution in its development. The research identifies the factors of creating a health-saving environment as well as the specifics of creating learning space at a school. Emphasis is made on designing comfortable space of high aesthetic value, preserving a health-saving environment, implementing ecological resources and natural motifs, creating a unique environment and a positive image, as well as making unique artistic designs psychologically safer. It is important that designs make use of salutogenesis. The presented designs focus on modernizing the learning environment in Irkutsk to improve its quality, to make it help preserve and boost students’ and teachers’ health. Special emphasis is made on the importance of creative environment and nature-aligned lifestyles.

Introduction

Today The concept of Environmental Health, which was proposed by V.M. Zakharov and experts of the Russian Center for Environmental Policy [1–3] in the 1990s, is an integral concept conceived by naturalists, which is why it is mostly focused on ecological issues; however, it is gaining traction and advancement in the context of urban space and architecture quality.
However, studies have shown that the today’s conventions of environmental monitoring are somewhat constrained, which causes the current efforts in ecology and environmental issues to shift their focus, forcing researchers to advance this concept as sort of a “middle line” between two opposite trends: anthropocentrism and biocentrism. With that and the expanding modern view of health in mind, it becomes imperative to “immerse” the views of environmental health in the cultural ecology and the “sphere of human consciousness and spirit problems” [4], which will take the concept out of the discussion of purely environmental issues; in that case, anthropogenic factors that affect the emergence of a quality health-saving environment will include not only ecological problems, but also problems pertaining to spirituality, health, social life, information, and technology, etc. [5].

2 Materials and Methods

Desire for a healthier lifestyle and a better environment is a natural response to technogenic and environmental changes, to the reduced role of nature in the modern society’s life. Professionals have responded to such changes by establishing new trends in design (eco-design, green design, salutogenic design, etc.), which become crucial for creating a quality environment, be it urban environment or house interiors [6-11]. The promoted idea of alignment with nature is essential to a healthy environment. The paradigm of salutogenesis (“genesis of health” or “genesis/source of happiness”), which, as an alternative to pathogenesis, is an increasingly popular approach in healthcare, is becoming a top priority. Different forms of contact and interaction with nature are deemed genetically connected to healthy lifestyles, which is integral and fundamental to salutogenic design. The foundations of salutogenic design are laid in papers by Heerwagen J.H., Haubach J.G., Montgomery J., and Weimer W.C., who emphasize the following features: the availability of meet points; formal and informal meetings; personal adjustment of environmental parameters; unrestricted access to “private rooms”; special relaxation and recovery areas that provide good window view and access to open air [12].

Human-nature interaction, green urban landscaping and interiors stimulate the physical activity while helping reduce blood pressure, thus lowering the cardiovascular risks. Simply walking over a park has an antidepressant effect and boosts cognitive abilities by 16%, while esthetically nice public space that feature complex layouts and diverse design help reduce stress and mental fatigue [13].
Focus on systemic health improvements, which make use of salutogenesis, transforms the environment into something that helps preserve and boost one’s health, giving a sense of wellness [7].

The today’s cities are responsible for shaping the views of a health-saving environment and contain its tangible components; however, cities are increasingly unsuitable for healthy life, human or not. This makes relevant the concept of a positive and friendly city that features a health, comfortable quality environment. Another significant discourse is made by interpreting a modern city as a platform for the advancement of human potential and social capital [14]. Learning environment plays a very important role, and any developed country makes substantial investments in it.

In a direct response to the negative challenges of a modern city, the existing learning environment has to find ways not only to survive, but also to assume responsibility for the development, future, and quality of life. On possible way out is to partially modernize and reorganize the school environment to create healthier and more comfortable space.

Today, the learning environment of Russian schools either creates and advances the “health potential”, or destroys it in the learning process. The most common health-related problems of the today’s learning environment include lack of proper lighting and ventilation in the classroom; lack of equipped playgrounds; excessive use of video equipment and computers; lack of landscaping, etc. Factors threatening students’ health can be combined into three groups: hygiene and environment; organization and teaching; psychology and teaching. Aside from the above, potentially health-threatening environmental aspects include the visual ecology (design, dimensions, colors, and equipment); the quality of construction materials; and the environmental conditions of the adjacent territories [15].

What distinguishes a healthy learning space is that such environment is tailored to students’ age-specific and individual psychophysiological capacities to create a healthy space for school students that will enable each of them to become a positively attuned person; to that end, such environment must use creativity and environmental education. What comprises an integrated approach to making an efficient health-saving environment is the forms of child-adult interaction, where fine arts, communication, gaming, and cognition/research are of utmost importance. Relevant requirements to forming a comfortable learning environment include such points as “heterogeneity and complexity, interrelatedness of various functional areas, flexibility and controllability, completeness with symbolic meanings, individualism and authenticity” [16]; all of this is part of designer efforts that largely determine the quality of such space.
The problems of designing state-of-the-art learning space are closely related to research into quality health-saving environment. Aside from improving the standings of an educational institution, good design helps overcome the problems of “standardized” thinking while giving rise to a space of communication, tolerance, and creativity. An important part of health-saving is the creativity behind and within the learning process and the object-spatial environment.

3 Results and discussion

Research and development by the Design Department (Smagin Department of Monumental and Decorative Painting and Design), ISTU, makes a substantial contribution to, and serves as a milestone in the understanding of, the multifaceted topics of healthy lifestyle, quality of the today’s learning space, and problems of health-saving environment at educational institutions.

The Department’s research and experiments are dedicated to pure and applied studies into arranging a health learning environment and the skills it takes.

Emphasis is made on creating one-of-a-kind creative and communicative environments, attractive public areas, and organic combinations of interiors and urban spaces. This is extremely important for learning environment to survive today while facing the adverse effects of the outside world, as the lack of positive and diverse sensations and environmental data will “substantially and negatively affect all the aspects of personality: emotional, cognitive, behavioral, and motivational” [17], especially when the personality is only developing. Some R&D efforts focus on the ecological components of a quality learning space as an integral part of a healthy environment and a tool that helps foster a proper view of a healthy lifestyle.

Designer view of health-saving learning environment is reflected in the designs requested by Irkutsk’s municipal schools.

Thus, the learning environment, being part of the Universitetsky neighborhood’s recreation system and serving as a center for environmental education, is created in pursuit of improving the spatial environment of School №55 and its adjacent territories. The basis of the entire composition lies in stating a unique image concept for the educational institution; to that end, designers must create a series of images that individualize the place and help diversify its positive appeal. These R&D efforts consist in designing a substantial portion of the urban recreation opportunities, which is essential
for enhancing the environmental situation of the Universitetskoye neighborhood; the scenario of living in such environment is based on a scrupulous analysis of localities. Comprehensive creation of an object-spatial environment includes interior and exterior design that will organically embed an object in the environment, the daily and festive local life, while also providing integral coloring, a well-designed navigation system, and elements of uniquely designed equipment. The problem of establishing a comfortable educational institution as a signature yet purely functional space can be solved by creating a positive and memorable image that has a well-elaborated visual effect on the target audience and helps improve the school’s standings, which is one of the aspects of maintaining a group identity [18]. State-of-the-art space is where a person can satisfy their needs for a health-saving environment; it is also a system where live communication takes place, a feature that boosts the schools’ reputation.

The research into schools as recreational areas and centers for environmental education is continued within the framework of the project done for School №2, where, like in the previous proposal, some of the areas and rooms are designed to “enhance” the locals. “Environmentally conscious” human development in the learning space is something attainable by creating a proper environment for proper recreation and seasonal open-air classes, by designing a multifunctional structure that comprises an orangery, a research and creativity zone, an open stage for formal events, plays, and various performances. To deal with the opposition of regenerating the learning environment and taking the public space to a whole new level of use, designers rely on landscape restoration techniques as well as on a complexly organized “pulsating” indoor space. The ideas of eco-design manifest themselves in a variety of landscaping methods; from an enclosed orangery, the greeneries goes into the building, where it becomes part of the interiors. Such “healthy interiors” make students comfortable and enable them to develop mentally and physically, to feel safe, to find their identity, to self-actualize; all of this helps prevent and overcome various psychological hazards and risks.

The aesthetic impression of experiencing an unusual, artistically enriched, and harmonic environment triggers a positive response, a feeling of empathy and satisfaction; it gives invaluable experience [19] by linking art and creativity to rehabilitation and environmental quality. Authorial interpretations of the creativity discourse as part of the views of healthy lifestyle manifest themselves in the design of the primary schooling unit, School №63, Irkutsk. The basic idea is to design such school environment that will also help boost students’ creativity. Creating a state-of-the-art primary schooling unit, the learning and recreational infrastructure of which
shall provide a special level of comfort, is what shapes the planning and the unconventional approach to environmental design. The organic design of equipment and objects, coupled with natural eco-friendly materials, provides unique zoning patterns and helps improve the quality of the environment by creating an air of comfort, giving a sense of alignment with nature.

Learning environment is seen as part of the urban recreation opportunities, a center for environmental education and creative development; such a comprehensive approach is employed in designing a local municipal boarding school (Boarding Lyceum №1) in Irkutsk. The idea behind this project is to give psychoemotional comfort, to maximize one’s natural capabilities, to drive human creativity, to enable environmental education and learning; the project envisages a healthy atmosphere and good conditions for learning, rest, and outdoor activities. The concept is based on rethinking function- and action-diverse processes in the light of the “city-home” idea, which itself manifests in dividing the interiors into two basic parts: open public space and enclosed space that keep things private for personal well-being.[16] There is a whole toolkit of planning solutions to enable focus-switching and to compensate for monotony: the varying ceiling height drives a dynamic perception of space; waiting areas are embedded in long passageways to get rid of unneeded straightness in communication lines and “environmental deviations”; diagonal stripes on the floors, duplicated with special ceiling lighting, serve the same purpose. The stylistics, the colors, the lighting, and the shape of objects have a cumulative effect that creates a holistic living organism to help improve health and capabilities, to provide a better environment.

4 Conclusion

Thus, creating a “healthy” environment today is a must for any “quality” city, a priority for any educational institution; that makes a health environment is a whole set of factors: a comfortable space of high artistic value; maximum focus on health-saving; use of eco-resources and natural motifs; creating unique environments and positive image; making state-of-the-art forms and functions of design psychologically safer.

Research into “environmental health” as part of a professional analysis on the topic helps better master the theory, comprehend the concept of health-saving and healthy lifestyle in the context of designing learning environments where creativity and alignment with nature is made emphasis upon.
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