

Architecture design of continuing professional education for teenage group

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Abstract. The institution's newly devised format not only methodically trains teenagers with specific skills but provides space to: discover one's calling, beneficial allocation of leisure time, honing new skills, and social networking. Development of new format CPE institutions space aims to solve early professional orientation issue of teenage group within the supportive developing educational surrounding. In future the presented research and recommendations could be used for the regulatory documents formulation, new format educational institutions design, also, they could become a methodological guide for exterior and interior design. Practical significance: the opportunity to use this research data in the process of constructing the schedules for CPE institutions design.

1. Introduction

For the last decade in Russia special attention was drawn to the projecting and construction of educational schools for kids with special development needs. The major point is the customisation of educational institutions for student groups with limited mobility [1]. The customisation of previously unaccommodated institutions is often performed by arrangement of additional transportation features (access ramps, elevators), minor interior and exterior supplements (convenience and navigation features). The requirements for ultimate environment creation sometimes are not taken to notice in contemporary schools' design projects. Features that are built in during the construction process do not look natural, thus attract unnecessary attention, and do not promote the architectural and artistic qualities of the space. Thereafter, in order to create neat modern educational space, the ultimate design requirements are ought to be taken to notice during the project development phase.

Today the space colouristic concept does not serve as an effective tool for students' condition improvement but depends on designer's taste only.



2. Literature review

Possible cooperation of designed space architectural form and colouristic concept is not investigated enough yet to be applied to the modern architecture [2]. This matter was partially covered in several architects' research papers [3]. Nevertheless, the study of architecture's effect on human was researched in such fields as art, urbanism [4], [5], psychology [6] and gestalt psychology, sociology and pedagogy. These researches are not applicable to the architectural constructional practice enough.

3. Methods & materials

The history of corresponding CPE institutions development was researched. Those are the places where teenagers were taught of some additional skills at, such as: /monastery workhouses (Figure 1), schools, foster homes, palaces of pioneers – thy places that train teenagers new skills. But remodelling of regular classrooms into effective educational spaces was not a priority.

Besides, on-site investigation of modern institutions such as Community centre (DK) (ZIL, Moskwitch), CPE (Fenix), contemporary city models (Masterslavl, Kidzania) was conducted. Investigated institutions underwent through reorientation and lots of minor renovations. For this reason, the original concept of colours and forms was lost for each of those spaces. The layout design of the educational spaces was to some level ruined as well. Some of investigated institutions have more decorative qualities than thought through architectural implications. Even so, the attempt to create suitable surrounding by adding such features as artificial greenery, interior zoning etc. is noticed. (Figure 2)



Figure 1. The workhouse of Firs Sadovnikov, 1823

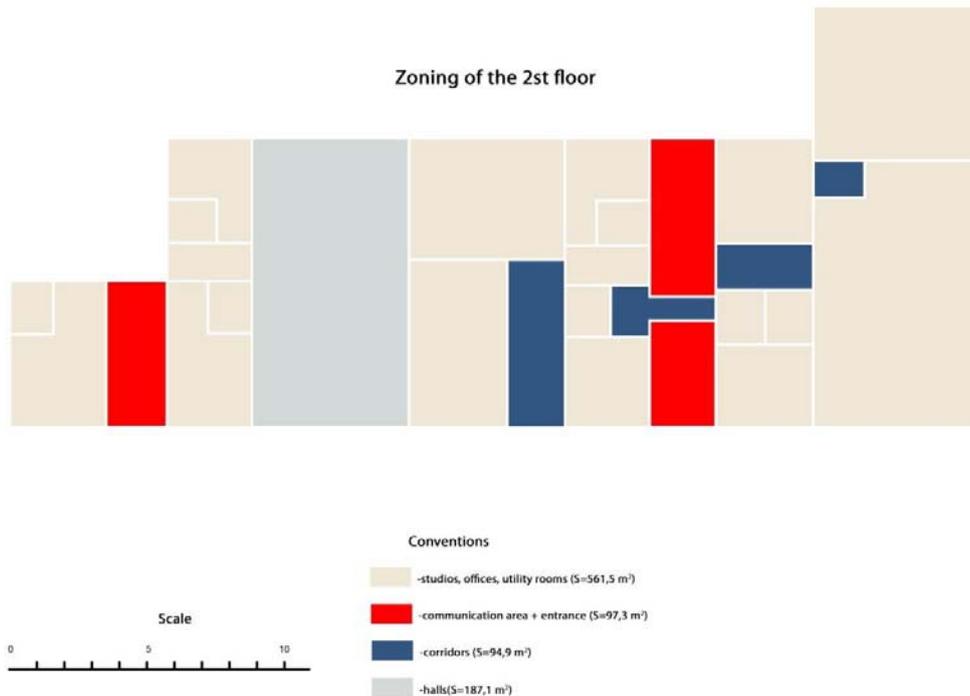
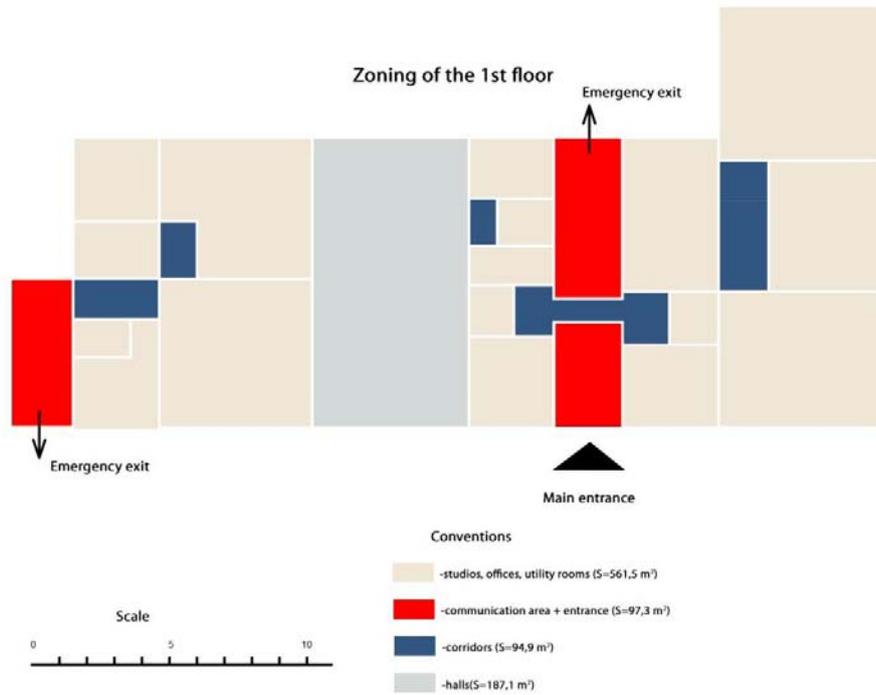


Figure 2. Mariinskaya School for deaf-mutes. Saint-Petersburg county, Murzinka. The spoken language lesson in primary school. 1907

In addition to the above said, the genuine field investigation of modern institutions was completed: Community Centre (ZIL, Moskvitch), Palaces of Pioneers, supplementary education institutions (Fenix), modern models of cities (Masterslavl, Kidzaniya). The investigated institutions had undergone the repurposing process and multiple cosmetic repairs. That all caused the loss of venues authors' concept regarding colouristics and shapes. The planning solution of educational space was also depraved. Some of reviewed institutional spaces have more decorative qualities than logically based architectural ones. Nevertheless, the tendency to create a proper environment by applying the additional features such as artificial planting, zoning with interior elements was noticed there. (Figures 3, 4)



Figure 3. Photofixation. The waiting room for parents and sitting room of SE Institution “Fenix”



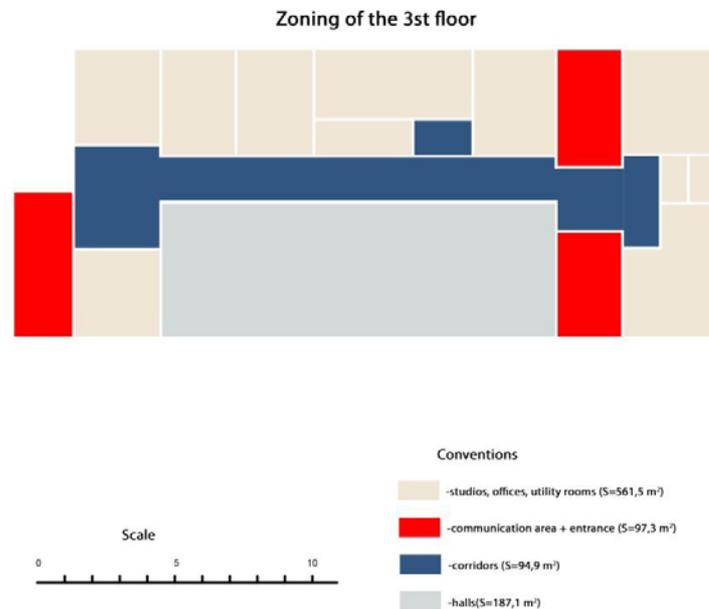


Figure 4. Active zoning plan for SE Institution «Fenix»

Basic factors were outlined in order to develop the recommendations plan for CPE institutions spaces new format design:

1. City-planning factors – the surrounding territory qualities and historical cultural side were studied;
2. Demographic factor – the statistics of fertility rate (including special development needs children) were analysed and the districts of families major agglomeration were outlined;
3. Architectural factors – functional, volume-planning, constructive, and architectural-psychological elements were reviewed;
4. Nature-climatic factors – climate and ecology features;
5. Hygiene-sanitary factors – required rules and regulations that provide supportive conditions for work and study of CPE institution staff and attendants.

The specialities of teachers' and volunteers' activities such as work schedule, students traffic, classrooms filling were reviewed.

Based on recognised factors the multistage evaluation system was developed. Using that system, the analogy buildings, the field investigated ones included, were analysed. The selection system outlined positive and negative qualities of existing institutions.

Based on the evaluation results, four objects-representatives of typology described above were selected out of 72 analogy objects. Detailed functional zoning plans were drawn out for each of the representing objects.

After performing multi-factor analysis of functional-planning, three-dimensional, conceptual characteristics of existing CPE institutions and their historical analogy, the fundamentals were detected and guidelines of architectural neurotransmitters in CPE new design institutions in Russia were developed. Architectural neurotransmitters – are environmental tools of buildings architecture development at the designing stage. These tools provide proper psychological climate, teenagers behaviour and quality of new knowledge reception.

It is impossible to track the direct impact of educational institution on child's behaviour. The child is affected by the environment passively, but the results of such affect appear during his maturing. The architectural environment the child grows up around leaves a print on the child's creative potential, determination, decision making skills and satisfaction of occupation choice.

Kids with special development needs are belong to the group of people who are exposed to direct environmental influence on their behaviour, mood and the health state even. And their reaction doesn't take long; they respond clear and promptly. Children and teenagers from this group of people cannot be deceived by made up shapes and colours. The real difficulty is to implement the proper space architectural design for such kids.

4. Research results

Space for Finding Your Life's Purpose is the CPE institution of new format design experiment that was developed in order to confirm the effectiveness of architectural neurotransmitters. (Figure 5)



Figure 5. The new format CPE institution:Space for Finding Your Life's Purpose

During the age of 12-17 years-old, teenagers face very adult like question, the answer to which will totally affect their life. The question is a philosophical one, but simply put: Whom to become? The lack of purpose is a problem for children of that age. The period of development and maturing is tough and on alongside that way, teenagers stop dreaming of becoming astronauts, ballet dancers, movie stars etc. The serious problem the solution of which cannot be postponed is: teenagers at this stage have no idea whom to become or where to go to study.

For teenagers with special development needs this problem is even harder. In some cases, at this age they only start to get acquainted with the outer world, that lays beyond their house walls. Thus more often they do not have a precise understanding of their calling and future occupation. It is very important to organize the architectural space, that should become for them not only friendly but inspiring as well, properly.

5. Conclusion

The implementation of the new format CPE institutions effective space designed for education and occupation orientation sense development of teenagers is possible with the establishment of the neurotransmitters, the architectural-dimensional features into design. The architectural environment in such institutions would be a «people-oriented» and provide the maximum amount of self-expression and self-perfection.

Taking all that to notice, the CPE institutions design is a very important task strategy wise. The carrying out of which will impact directly the future society evolvement. New format institution cannot systematically educate a teenager just one specific skill only but it has to become a calling acquisition

space, a place where beneficial leisure goes along with the skills gaining and facilitates the youth social relationship build up.

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