

## IMPROVEMENT OF ARCHITECTURAL COMPOSITION SOLUTIONS OF SECONDARY SCHOOLS IN NUKUS

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### ABSTRACT

*Demographic structure of the city of Nukus. The article discusses the buildings of a secondary school in Nukus. It shows the types of secondary schools in Nukus and the capabilities of their students. Over the years, the types of schools have not changed depending on the capabilities of students*

**KEYWORDS:** *Nukus City. Demographic Structure Of The City Of Nukus, Types Of Secondary School Buildings, Number Of Students In The School.*

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### INTRODUCTION

Nukus name Nukus originated from the name of the ancient tribe of karakalpakians. [1] Nukus from a small village in 1932 to the 1950s became a modern Soviet city with wide alleys and large public buildings.

The city of Turtkul became the administrative center of the autonomous region of Karakalpakstan with the arrival of Soviet power to power. However, in the 20-ies, the threat of turbulence to the Amudarya, located 12 km from the river bank, caused the Karakalpakstan towards the Nukus of the core. The city was officially founded in 1932 year. The land area is 222 km<sup>2</sup> (86 m<sup>2</sup>) and occupies 0,13 percent of the territory of the Republic. The population is 329 100 thousand people in the state of January 1, 2022, the density is 1341.8 people per 1 sq km.

In the second half of the XX century, the city of Nukus grew rapidly due to rural migration. In general, in the USSR, the increase in the population of the city during this period occurred due to migration (on average 44,6%).

In the conditions of Karakalpakstan, the population of Nukus in many respects increased by 22 percent due to administrative changes. For example, the concentration of the population in Nukus contributed to the rapid development of the urban agglomeration - combined with the nearby population points — Kyzylketken (g'isht plant), Samanbay, Sarancha, sickle sign,

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pristan, Koskol and other complex and diverse links. The formation of the urban agglomeracy of the capital was adopted today on a large scale and was the most important feature of modern urbanization.

In the first half of the 1990s and until 1991 year, the population of Nukus in many respects increased on account of migration and natural growth. These two factors led to the emergence of a new tendency to push the city limits.

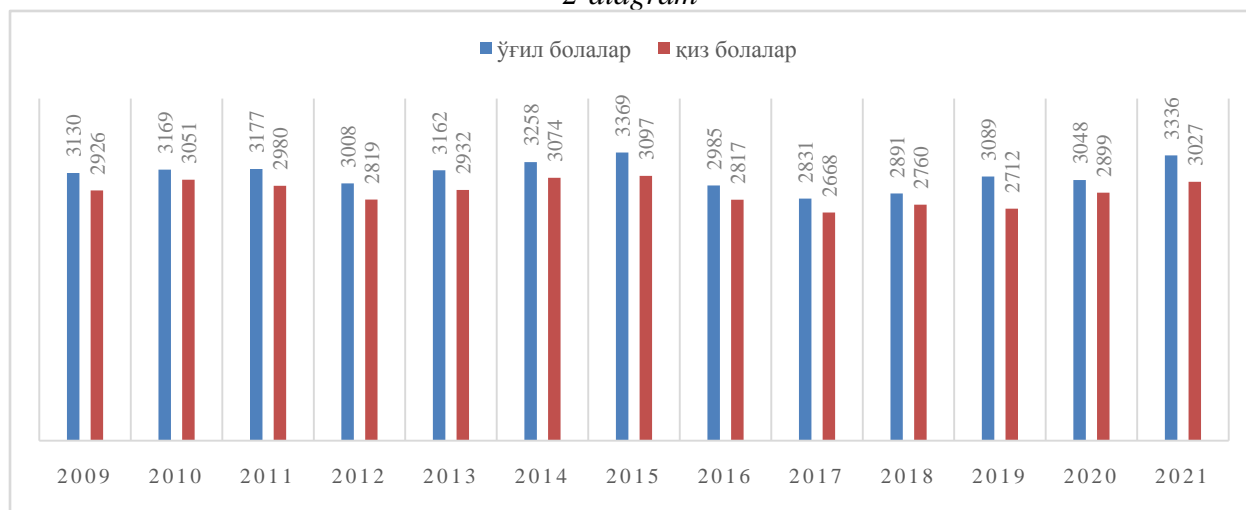
*Population of the city of Nukus in 1933-2022 years.*

1-diagram



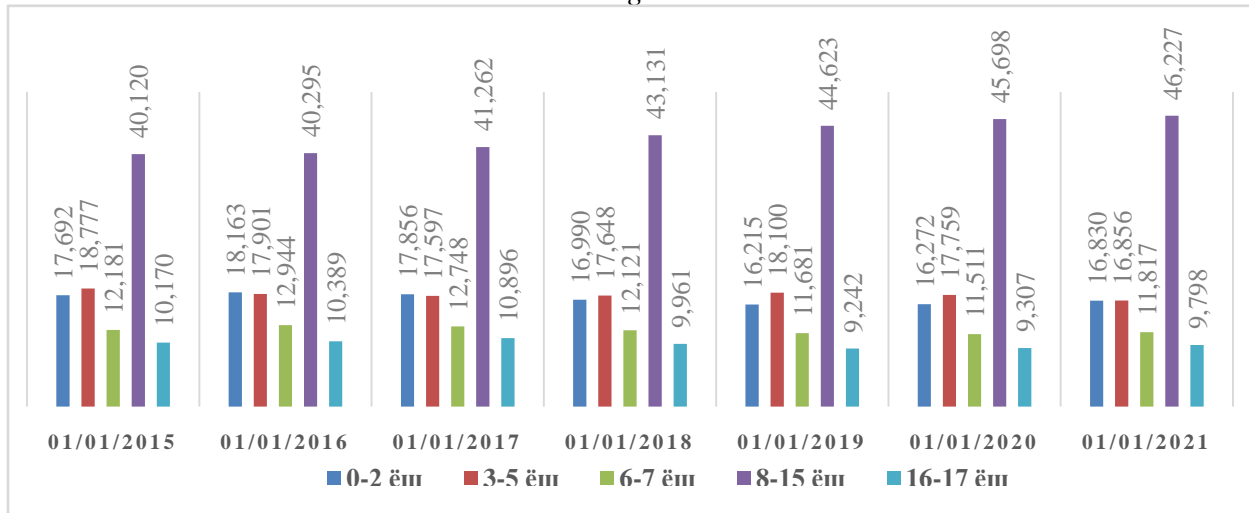
*Nukus city between the years 2009-2021 number of children born*

2-diagram



*The number of children of preschool and school age 2015-2021 years of the city of Nukus.*

3-diagram



**Research methodology:** the school building is characterized by a variety of functional groups and buildings, their interdependence is clear. In addition, the school building should help create a certain psychological atmosphere, evoke positive emotions from students and have a direct connection to the educational process. Based on these basic requirements, it is necessary to establish the scale and interior of the school.

The development of the typology of school buildings is associated with the complexity of accepting their composition. Exterior shape of buildings reflect the complexity of the functional process— allocate children according to age groups, which require special conditions for Education, Labor and rest. Separate groups of buildings in the school complex can make different volumetric-spatial interpretation according to their purpose, and this will help to create a terrestrial and plastic expression of the architectural form. Depending on the mutual nature of the main groups of linear, perimeter, block-buildings, the most common size and spatial composition of school buildings are conditionally divided into three types. The linear composition can be expressed in several versions: N-shaped, cross-shaped, etc. Its downside is that it is difficult to overcome the "corridor" of the interior. Schools designed for central areas with relatively peaceful terrain of linear composition are compatible with a relatively small size (up to 20 classes) (Picture 2).

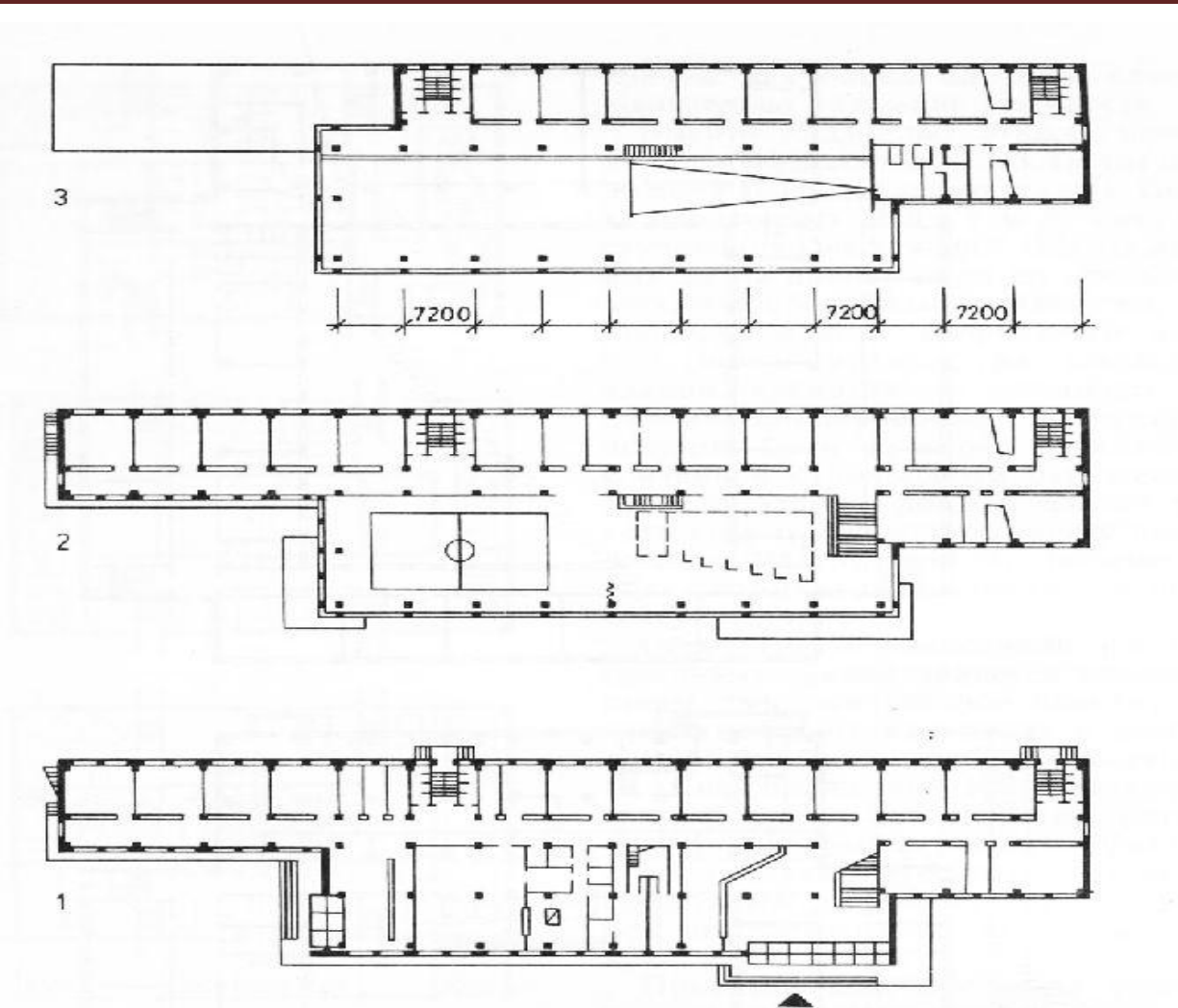
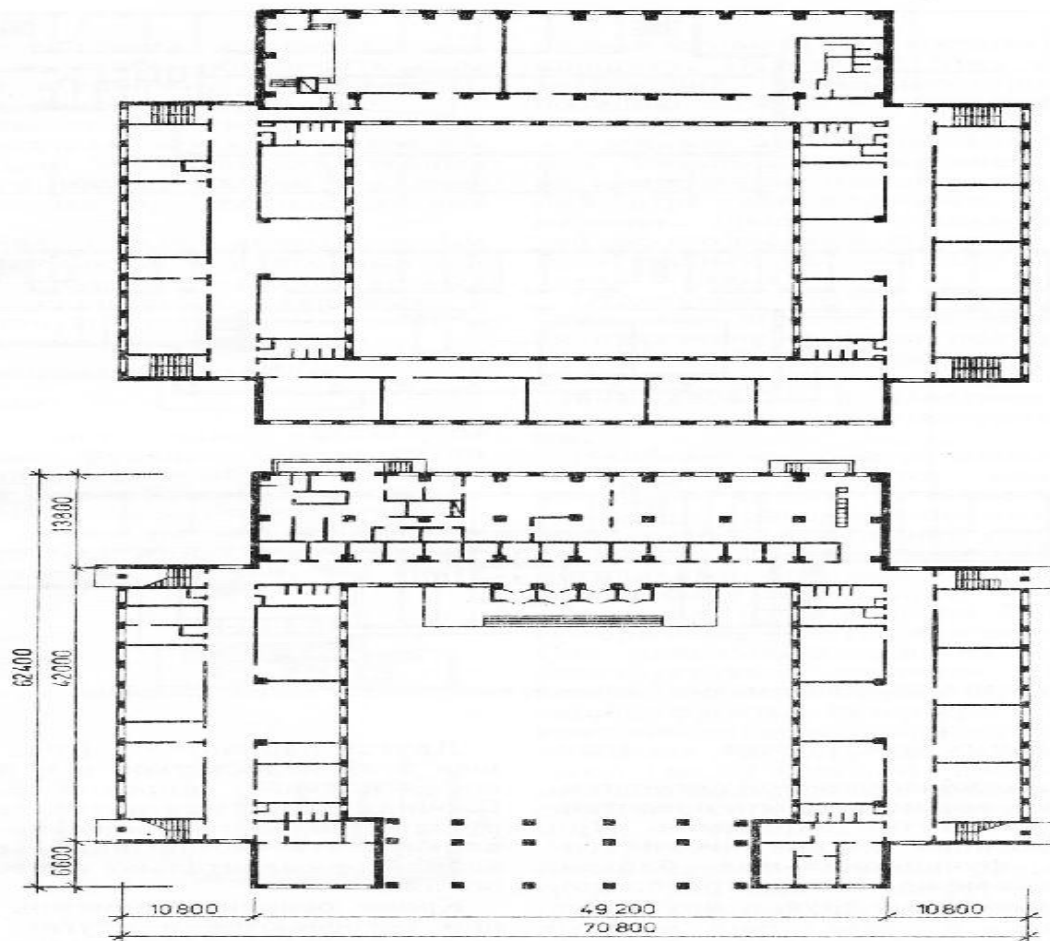


Figure 2: experimental secondary school (linear option)

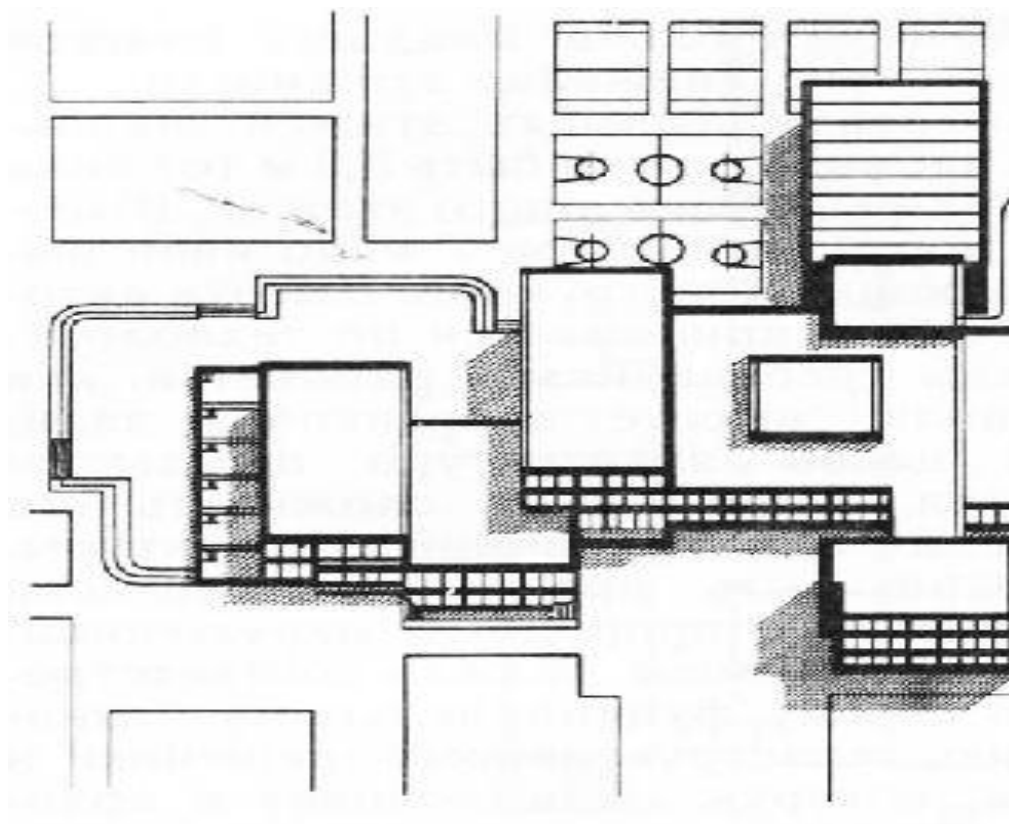
The perimeter composition scheme is characterized by a change and the arrangement of groups of buildings around the open courtyard, designed for recreation in various school ceremonies. Such a composition is also very compactly combined with the large size of the school. The convenience of "rotation" of horizontal communications makes it possible to connect rooms of considerable importance in the system of training rooms. (Picture 3)



*3-picture. Architects K. Kapterev, A Samsonovs. 1176 of secondary school for pupils (30 classes) (perimeter type).*

One variant of such a composition can be the grouping of study rooms around the halls.

Block Composite diagram is the most flexible; it can be presented in a variety of options. In this composition, the school building consists of functional blocks that are interconnected by the transition period or interconnected without transitions. (Picture 4) [2]



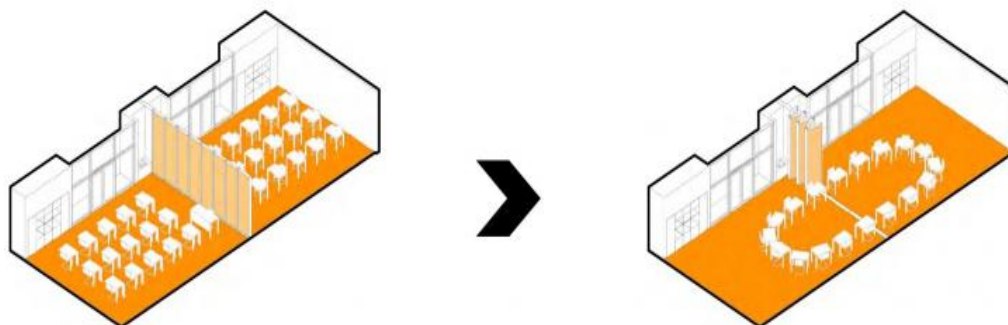
*Picture-4 School of Secondary Education in the 36 class (block type)*

Analysis and results: there are a total of 51 secondary schools and 2 boarding schools in Nukus city. [3].

Of particular interest are the problems of formation of architectural principles of the design of school buildings in the conditions of modernization of the educational system in the schools of the city of Nukus. The educational environment in the current socio-political conditions requires an adequate architectural space, which must be created on modern principles. Their development is conditioned by the following: first, the improvement of pedagogical processes that meet the requirements of effective education; second, the understanding of the need to adapt the architectural space to changing educational conditions; thirdly, it is associated with a change in the fundamental attitude to understand the importance of the architectural environment, which can have a significant impact on the formation of ideological foundations of the younger generation.

Recommendations: today education is regarded as a continuous process; one of its important components is communication that occurs not only during the lesson, but also in the dining room and at rest. The concept does not imply the abandonment of training, but rather the possibility of training mini-classes for individual work with the teacher, as well as the rapid change of standard classes for different scenarios, as well as their combination and a large audience for several groups. At the same time, a wide educational environment is formed not only on the scale of

different audiences, but also from the account of recreational zones. Here, variability and adaptability are the foundations of creative, project thinking, formed by the school field itself. [2]



When the child wants to create a place where he can walk, learn, develop and rejoice, they get a lot of samples from the experience of Northern Europe, especially Denmark and Finland, where the school is regarded as part of the urban environment.

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