

## New educational space in New Ukrainian School

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**Abstract.** This study reveals the basic principles of creating an effective renewed educational space in the context of education reform in Ukraine and the creation of the New Ukrainian School. Modern educational environment means multifunctional flexible spaces that promote various forms of work, motivate to learn. An important factor in the renewal of the school is the creation of a modern educational space that will motivate the child to learn something new, stimulate different activities, and evoke positive emotions. Civic competence is one of the key skills enshrined in the Education Law in Ukraine. Along with the social, they are linked to the ideas of democracy, justice, equality, human rights, prosperity and healthy lifestyles, with an awareness of equal rights and opportunities. They include cooperation with others to achieve a common goal, activity in class and school life, respect for the rights of others, the ability to resolve conflict situations. One of the tools used by teachers to develop these competencies in primary school is the creation of “Class Rules” – the first “law” in the lives of first-graders. Creating a motivational educational space contributes to the principles of reforming primary and general secondary education and global trends: personality-oriented education, child-centeredness, competence and activity approaches.

### 1 Introduction

One of the main conceptual principles of reform within the New Ukrainian School [1] is the creation of a modern educational environment that will promote creative development and students' motivation to learn. Not only curricula and teaching aids are changing, but also the organization and design of the educational space. The student place should be single and comfortable, and the educational space of schools should be divided into thematic zones, places for games and recreation.

Due to the fact that the share of project, team and group activities during classes will increase in the New Ukrainian School (NUS), the options for organizing the study space in classrooms are also diversifying. The main document that determines how to arrange the educational space in NUS are special “Guidelines for the organization of educational space of the New Ukrainian School”, approved by the order of the Ministry of Education and Science dated 23.03.2018 No. 283 [2].

Tsybalaru considers “educational space of school” as a spatial-subject component – subject means, the totality and location of which creates conditions for organizing the necessary actions. It contains educational, developmental, educational, pedagogical spaces, etc. In addition, the researcher defines the educational space of the school as a complex formation, consisting of the educational space of each student, each teacher, each parent, etc.; as events in which different activities of each participant in the educational process of mastering the school en-

vironment, necessary to meet their educational needs [3]. Educational space is built around the individual, because only it is inherent in the activities through which the learning environment is mastered.

The new educational space is not necessarily the renovation or overhaul of the entire school building. Classroom space has the greatest impact on student achievement. School design is also important, but if it is not possible to redevelop the whole school at once, updating the classroom space (and, preferably, the surrounding recreation) is a smart decision that will have a significant effect.

### 2 Educational centres in New Ukrainian School

Since the New Ukrainian School works on the basis of a personality-oriented model of education, takes into account the rights of the child, his abilities, needs and interests, the educational space must meet these criteria. In addition to the classic options for organizing the learning space in the classroom, for example, mobile workplaces are used, which are easy to transform for group work.

In addition, the organization of educational space of classrooms requires extensive use of new IT technologies, multimedia teaching aids, updating training equipment. All this will be done through the organization of 8 centres [2]:

1. The centre of educational and cognitive activities with appropriate furniture.
2. Variable thematic centres, where boards / flipcharts / stands, etc. are placed.

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3. Game centre, equipped with board games, equipment for mobile games.
4. Centre for artistic and creative activities with shelves for storing accessories and a stand for a variable exhibition of children’s works.
5. Wildlife corner.
6. There is a recreation area with carpet for sitting and playing, chairs, armchairs, ottomans and cushions.
7. Children’s class library
8. Teacher’s office, equipped with a table, chair, computer, shelves/drawers, cabinets for storing didactic material, etc.

Given the peculiarities of the educational environment of the New Ukrainian School, the Ministry of Education and Science recommends that schools use general purpose equipment (school furniture), which is manufactured in accordance with current standards in Ukraine and meets certain requirements (table 1) [2].

Another in-depth support for changes in the organization of primary school education was the agreement between the Ministry of Education and Science and the LEGO Foundation. As you know, the company signed a memorandum with the Ministry, according to which the LEGO Foundation in 2018–2019 provided its kits for all first grades. Thus, about 17 000 schools received a set of “Six Bricks” and “LEGO Play Box” per class. LEGO is not just a toy; it is an extremely effective learning material. These kits can be used for integrated learning, reading, math, exploratory project activities, games and physical education as a tool in the work of a practical psychologist. And most importantly, these kits can be used to effectively develop children’s short-term memory [2].

In Canada teachers of elementary school organize educational process in so-called “learning centres”. A learning centre is a specially designated area in the classroom that enables students to practice, collaborate, communicate, create, and enhance their learning. Learning centres are supplied with books, art materials, manipulatives, and other instructional tools. Working independently or in small groups, students have an allotted amount of time to accomplish assignments and learn through various hands-on activities. After each student in the group has completed the task, groups rotate to the next centre. The essential elements of learning centres are flexibility, adaptability, and response to children’s needs in a safe, comfortable, and supportive environment. Building child-centered learning requires more than arranging materials and grouping students. It demands teacher’s knowledge of children, their abilities to acquire new information, their behaviour, ways of collaboration. This teaching strategy requires exceptional organizational and time management skills. Teachers need to provide differentiated instruction to meet all learners’ needs and design activities where students can work simultaneously and independently. The main advantage of learning centres is that they transform

**Table 1.** Main standards and requirements for school equipment.

Requirement	Description
Ergonomics	Availability in each class of sets of furniture for students (desk / table + chair) at least two growth groups (yellow, red, green markings); availability of stands for accessories on the tabletop; rounded corners of countertops, backs and seats.
Safety	Made of materials permitted by current sanitary legislation for use in educational institutions; the product meets sanitary and hygienic requirements; absence of sharp corners, strange smells; matte table top surface; structural stability; availability of devices to prevent damage and contamination of the floor.
Shape and size	A tabletop in the shape of a trapezoid, triangle or other, which will provide a quick transformation for group work; tables and desks must be single; the tabletop should have a cut-out on the closest to the student side; compliance with the size of the growth group; possibility to stack furniture compactly.
Strength	Warranty period of at least 24 months; vandal resistance; resistance to detergents and disinfectants approved for use.
Weight	Not more than 4 kg for a chair and 10 kg for a table or desk.
Colour	Not bright light warm shades of yellow, green, blue, pink.
Aesthetics	Attractive appearance; modern design; compliance with the style of the general arrangement of the classroom.

classes into engaging, active learning experiences. The activities promote hands-on learning and critical thinking. Learning centres give more opportunities for differentiation. Thus, they address the needs of struggling and advanced students as well as students with disabilities.

As Fontno and Brown stated, “students become more communicative and begin to work collaboratively. As they cycle through the centres, they experience using different resources and tools and can then compare those experiences to previous ones. Students are more focused and engaged during the centres as compared to traditional lecture sessions, where there are rarely questions asked and eliciting responses becomes difficult” [4].

There are many ways to organize learning centres, and teachers can make changes to the centres throughout the year. The number of centres may depend on the curriculum goals, the activities prepared by the teacher, the num-

ber of students, and the size of the classroom. A lot of teachers use this strategy daily. Some found it helpful to have specific “learning centre” days or allow students to work in the centres after they are done with their work. Considering space, teachers should organize learning centres around the classroom’s perimeter and nooks to not interfere with the classroom movement. To provide a new experience to the students, it is advisable to set up centres on the floor, rugs, and even hallways.

Teachers usually have information about students’ skills and knowledge after the first month of school. This information is essential while grouping students. They can place students of the same abilities in one group. However, it is recommended to have mixed-abilities groups where more advanced students can help struggling ones. Groups of 3–5 students are the optimum size to complete their assignments and move easily through the centres.

### **3 Main principles of the modern educational space**

Modern educational space is based on a combination of two principles – flexibility and stability. Flexible organization allows you to quickly change the space depending on the needs of the educational process, to implement various forms of work. Stability ensures continuity of the process, consistency of perception and activity, maintains order in space and controllability in work. Flexibility and stability are combined through appropriate zoning. In the classroom should be identified fixed stationary cells that form its basis – “frame”. As a rule, this is a teacher’s workplace, the main blackboard, containers for storing educational materials – both restricted and open to students. Other elements of the classroom can be mobile, provide flexibility, the ability to quickly reorganize. First of all, we are talking about student workplaces. And in a modern school it is not only standard tables and chairs; student furniture is very diverse and allows you to work with the whole class, in groups or alone, in various poses (sitting, standing, even lying down), communicate, relax [5]. Obviously, in a typical classroom, it is impossible to provide each student with a full set of furniture for all occasions, allocating separate spaces for frontal, group work, discussions, recreation and more. Flexible organization of the classroom allows you to change the location of student workplaces, quickly move from one spatial form of work to another, gives students the opportunity to transform their own workplace, use as needed furniture.

Written work should be done using standard tables and chairs; conversations and discussions are best done without tables, in a circle, sitting on chairs or on the floor (on the carpet or pillows); for individual and group tasks, workplaces can be different: grouped standard tables, and ottomans, chairs or sofas, and low tables that allow you to work sitting on the floor.

What kind of furniture to have in the classroom and how to use them – the answer to this question can best be given by teachers, based on their own experience and approaches to classroom management. The main thing is

that the furniture allows for a flexible organization, leaves enough space for activity, does not clutter the room, does not limit the choice of work forms.

The most noticeable and important factor in the artistic decision of the class is colour. It creates an emotional atmosphere, models the mood, promotes learning activities or, conversely, interferes with and demotivates. The issue of colour solution should be considered holistically. Every detail of the interior has a certain colour, but only a harmonious combination of colours can create the overall atmosphere that will make the room comfortable to stay. The colour of the walls or floor, cabinet doors or table legs – all elements of the space should be selected on the basis of a single approach, not to oppose, but to complement each other. Warm colours in elementary school create a cosy atmosphere, promote communication, encourage various activities. The main colours of the room – the colours of the walls and large furniture surfaces – should be light, calm. Brighter colours are used to attract attention: for example, a wall with a blackboard can have a deeper and more intense colour [5].

The design of the classroom should be balanced, provide sufficient, but not excessive visual stimulation. But today visually overcrowded rooms are more common. Studies by Portuguese psychologists show that such interiors negatively affect students’ ability to perceive and remember information. Overloading and visual clogging of the room is due to the fact that at different stages of decoration and arrangement is not taken into account how the premises will be used, what equipment, design, training materials are needed in the work [6].

The work of the teacher also has many opportunities to create a harmonious space or, conversely, to overload the classroom with many seemingly useful learning materials. Seasonal or holiday decorations should not be abused: you can decorate the classroom for the holiday, but no holiday lasts for several weeks. Permanent elements of work design (for example, “classroom corner”) do not have to take up much space and constantly catch the eye of students. In addition, it is recommended to exhibit in the classroom only those teaching materials (posters, tables) that are directly related to the topic of the lesson. The expectation that students will memorize mathematical formulas or verb forms simply because this information is constantly posted on the wall is futile: learning is an active and purposeful process, involuntary contemplation does not give the desired result [6].

Teachers should encourage children to participate in the organization of the educational space of their classroom. This will help to build students’ sense of responsibility. For example, children can help hang signs or make birthday calendars.

### **4 Creating class rules as one of the conditions for an effective educational process**

An important condition for creating a harmonious educational environment is the creation of so-called “class

rules". The use of materials and equipment (books, desks, storage areas, specialty materials and equipment) is an important area for rules and procedures. In "A handbook for classroom management that works" by Marzano et al. they provide some important tips for the safe use of materials and equipment in the classroom. The first strategy is "establishing rules and procedures for common classroom materials and equipment" and the second one is "establishing rules and procedures for specialty materials and equipment" [7]. In primary school, it is important to teach children to use, store, maintain in good condition the books and materials they use, as well as to keep order in their workplaces and in various classroom learning centers. Marzano et al. describes main rules for primary grades:

#### **"Be Prepared Every Day**

- Bring a pencil or pen to class.
- Bring a spiral notebook for note taking and other work.
- Bring your textbook to class each day.
- If you forget your materials, remember the Borrowing Rules we set:
  - Try to borrow what you need from a classmate. OR ...
  - You may borrow up to five times from the community shelf.
  - Put a checkmark next to your name each time you borrow something.
  - Don't forget to return what you have borrowed at the end of class" [7, p. 22] .

There may be materials and equipment in the classroom that require careful treatment and attention: computers, software, a printer, maps, globes, scales, and other specialty equipment. From the beginning of the school year, students must understand the essence of safe behavior in the classroom and remember that safety is paramount. In elementary school, the rule "Do not touch!" must accompany all dangerous elements of the educational space.

Nowadays, teachers are actively using the strategy of creating "class rules" or "learning promises", which aim to involve students in creating an educational environment, forming responsibility and maintaining discipline in the classroom and at school. Marzano et al. gives some examples of elementary school students "promises":

#### **"Our Promise to Each Other**

When we care about each other in our classroom, we share what we have, listen carefully, help each other learn, work hard, and have fun together. We understand that everyone makes mistakes, that we stand up for ourselves and others, and that when someone asks us to stop, we stop. This is who we are even when no one is watching" [7, p. 10].

#### **"My School Pledge**

I pledge today to do my best  
In reading, math, and all of the rest.  
I promise to obey the rules  
In my class and in my school.

I'll respect myself and others, too.

I'll expect the best in all I do.

I am here to learn all I can,

To try my best and be all I am" [7, p. 10].

When creating rules, teachers should pay attention to some tips: there should not be many rules (from 3 to 6); they should be short (3 to 7 words); the rules must be specific and clear from the first reading; these should be statements ("Always tell the truth"); negative phrases should be avoided ("Do not disturb others in class", "Do not run through corridors") and use positive vocabulary [8].

Children do not like to do what is imposed on them by someone and even with the word "obliged". Therefore, the rules are the conscious choice of the student and his responsibility for this choice.

For example, in Canadian elementary school every year the whole parallel of classes is mixed and new classes are formed, so each new team creates its own rules for students, agrees to follow them for effective learning and safe stay in school. Understanding the importance of rules is the key to following them [9]. It takes 2–3 weeks in September, 30–40 minutes daily to study and model behaviour, set rules, establish incentives and consequences for violations. Teachers spend so much time on this topic, diligently discussing and working on everything till Grade 4–5. It is much easier and less time for secondary and high school teachers to follow the rules, because they "get" students with a good understanding of the discipline. The topic "Class rules" is not very interesting for children, so you need to be creative: draw, cut, write, put together puzzles, glue, guess, watch videos etc. First-graders usually draw pictures: 1 rule – 1 picture. They present their drawing, interpret what it means, discuss WHY IT IS IMPORTANT. 20–25 children's ideas are summarized, and the teacher writes on a large poster 5–7 basic rules of behaviour. The children agree – they draw their hand on the paper, cut it out, write their name, and stick their hands with the names around the rules [9]. Usually the rules are as follows: "I respect everyone"; "I listen carefully"; "I keep my hands and legs with me"; "I go"; "I raise my hand to say"; "I try to"; "I thank".

The following lessons in Canadian elementary school are devoted to:

- discussion "What if ..." (if a student breaks the rule, what inconveniences or troubles he creates, what danger he exposes himself and others);
- analysis of different school situations, teachers read short stories, watch comics or watch videos, discuss which rule was violated;
- when it is possible/impossible to interrupt teachers, students, work;
- what is respect;
- how to be a good listener;
- identification of incentives and consequences.

Particular attention is paid to emotions, teachers and pupils should work on it constantly, all year round. You have the right to be angry, resentful, because we are all human, but you can not spill your negative emotions on other

people, on objects around you. And at lessons the teacher and pupils discuss what uncontrollable negative emotions can lead to. Someone hit, called, broke, shouted – “what rules have been violated?”; “how do other people feel did you get a positive result?”; “how are you feeling?” etc. Teachers often use the breathing exercise to calm the student – “Blow a candle, smell a rose” [9].

If the rules of the first-graders are just 5–7, the routine is much more, naturally, time and attention they need more. What is the difference? The rule is about the up-bringing and safe behaviour of the student, there are consequences for non-compliance. Routine is a daily action that has its own algorithm: to prepare for class, ask for a toilet, hand in notebooks, gather in the yard, go to the gym, etc., and there are no consequences, only reminders and repetitions. Adherence to these actions correctly and consistently is the basis of mutual success. Routines are not only discussed “why it is important”, but also modelled: the teacher shows himself, the students show, the whole class does.

Teachers usually talk a lot. But when it comes to routines, or when they give students assignments, the instructions should be as clear, concise and accurate as possible: “Clean up”, “Voices off”, “Stuck your chairs”, “Eyes forward”, “Line up” etc. In Canadian schools, students have finger signals – 1 index finger up – to the toilet, 2 fingers – I want to drink (there is a sink in the classroom), hand up – to answer. So, if the student needs to go out, he quietly raises 1 finger up, the teacher nods, if allowed (1 boy and 1 girl at a time). On the marker board near the door, the student writes his name, leaves, and when he returns – erases the name. Without a word! Without distracting others! Why is it important to write a name? The teacher can immediately see who is not in the class, especially when working in groups and not sitting at desks; whether it is possible to another pupil to go out or he/she should wait. This is important for teachers when there are training fire alarms (once a month), and they need to quickly take all children out into the yard [9].

## 5 Conclusions

The new educational space is a significant component of the modern educational environment. The interior and arrangement of classrooms are formed primarily for the development of students. A well-arranged classroom space creates opportunities for various forms of educational activities, provides a favourable emotional atmosphere, motivates and sets up for productive work.

Learning centres are efficient and effective means to offer engagement, cooperation, student-centered learning, and differentiated instruction. Whereas it is time-consuming to organize, design, and collect the materials for learning centres, the payoffs are worth the efforts. Learning centres are a teaching strategy that benefits students and teachers by maximizing instructional opportunities and providing varied activities simultaneously. In such

a way, teachers provide more instructional and practice opportunities to meet diverse learners’ needs and achieve more.

The creation of educational space should take place simultaneously and in connection with the renewal of the school in general, with the introduction of new pedagogical approaches, new programs and curricula, forms and methods of work.

Educational space planning is not just about developing a technical task for designers or creating tender announcements for the purchase of equipment. It is also necessary to outline the field for the activities of teachers, students, parents, find ways of systematic cooperation with science, a wide range of fellow educators, the local community and more.

The school environment nourishes the student’s learning experience. Everything from the aesthetics of school design to the emotional background is designed to create the conditions in which students will grow as individuals.

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