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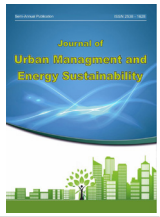

CASE STUDY RESEARCH PAPER

Explaining the role of effective factors in the level of learning of primary school students in flexible open spaces of schools (Case Study: Mazandaran boys' primary schools)[1]

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ABSTRACT

According to psychologists, flexible people are more developed people and they react more appropriately to changes. Environmental variables are among the factors influencing human reactions, and they play an important role in the category of flexibility and its relationship with learning. The aim of research is identifying the components affecting the flexible physical body in open educational spaces and its effect on learning and using the descriptive-analytical method. Data was collected by library and field methods and the sample size is 250 people based on Morgan's table. The respondents of this research were the students of elementary school for boys in the cities of Mazandaran province in Iran. The respondents paid attention to the factors of the physical and visual environment of educational open spaces and memorable elements in the design of forms and surfaces, as well as creating spaces that fit the scale of children. The results of this research showed that the flexible furniture of the yard and open spaces with flexible forms in the open education space is much more effective than being in a uniform and soulless yard on children's learning. Based on this, qualitative components in open educational spaces in the form of diversity, adaptability and changeability have a higher importance than individual and social components, and the requirement to pay more attention to it, as a vital factor in the quality of educational activities, can lead to the formation of a platform. It is desirable to increase the learning rate of students.

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1. This article is taken from the Doctoral Thesis of Seyyed Abolghasem Ghoreishi Galougahi entitled "Flexibility in the open spaces of schools and its effect on learning (Case Study: in primary boys' schools in Mazandaran)" under the guidance of Dr. Behnam Rajabifar and the advisors of Dr. "Syedah Olia Emadian" and Dr. "Abdullah Ebrahimi" will be presented in "Azad Islamic University" in "Sari Branch" in 2023.

INTRODUCTION

Children value natural places for play and exploration, and specific places for play are the least attractive to them, and it can be seen that 50% of children's activities in the outdoor environment, include collecting, observing and experiencing (Imeni and Shahabzadeh, 2015). Perhaps one of these quality features that has the necessary platform for movement, activity, group work and dynamism of students is the organization of open spaces, in such a way that the stillness is as necessary and the movement as possible. Children enjoy being outside the house and public open space, which causes them to interact closely with social movements and stimuli. Encountering new phenomena and directly touching events and gaining new experiences causes better brain function and mental and physical growth, and improves their creativity and learning level. The open courtyard of schools is considered to be the field of strong emotional and perceptive interactions and relationships of students, and it is considered in psychology as a platform for energy discharge and skill acquisition (Torabi and Nazimi Qobadlou, 2015), according to the topics of child psychology and the age group of the above research, which in the ages Between the ages of 7-12, the Child needs to be freed from a closed and limited environment, familiar with culture and civilization and social experiences, the stage of passing from sensory perception to abstract thinking, with the development of moral issues, the tendency to judge actions, the emergence of conscience, understanding the concept. Justice and attention to it is significant (Mollali, 2013). In recent years, due to the increasing growth and the extent of changes in educational methods, it is very necessary to adapt the learning platform to all aspects of the learner's needs. Considering that nowadays urbanization has led to the separation of children from contact with the outdoors in many cities, despite the great educational benefits that open spaces can provide in children's learning (Wang et al., 2018) and cause the social development and communication of children. Expand him with the outside environment and the social world and cause the flourishing of hidden talents and the emergence of creativity in the child and cause a sense of cooperation; Cooperation and participation of the child. Because playing in open educational spaces is one of the methods through which social skills can be taught to children and improved (Sartin, 2009). It has been confirmed, the game affects the physical-emotional-mental-educational-moral-personal-social development (Moghadam, 2006) and it is considered a natural way of ideas and feelings as well as to discover and understand the world around children. Inter-personal social relations of children help (Kameli Nia, 2006) re-education spaces play a significant role in the mental development of the child, the role in learning, it is very effective in the growth of the child's intelligence, he made with concepts; The space and form become familiar and the child's intelligent behavior is strengthened, the situation of using the child's imagination arises, it provides a better ground for thinking (Richmond et al., 2018). And it facilitates parent-child interaction and increases brain development and improves children's behavior (Halperin and Haley, 2011). It also plays an important role in the development of the nervous system and reduces the child's stress through play (Blotsky-Shearer, et al., 2012). Due to the improvement of social adaptation and verbal skills, it reduces children's inner and outer behavior problems (Pearson, 2008) and allows children to avoid experiences, thoughts, feelings and tendencies that are threatening to them. (Wettington, Hahn et al. 2008) at the end of these questions, how can the design of playgrounds with school grounds affect students' learning? And what are the solutions and criteria for flexible open space design in school yards?

Research Background

Table 1: The theoretical background of the study (learning in open spaces, the flexibility of schools

	The Authors	Year of publication	Title / Text / Theory	Key Concepts
1	Ho, Susanna	2023	Functions and purposes of outdoor education in Singaporean education and society: an instrumental case study	Outdoor education to provide useful learning outcomes, but also to recognize the optimization problems of outdoor education that go beyond the structures and regulations that need to be addressed.
2	Evans, N., & Acton, R	2022	Narratives of teaching in outdoor and environmental education: what can we learn from a case study of outdoor education pedagogy?	Cultivating a broader understanding of self through place-responsive pedagogy and pedagogical agility and examining the practice of an experienced outdoor educator, this research provides insight into the intentional use of a set of teaching and learning strategies in educational outdoor spaces specifically that It expands and strengthens the current context.
3	Fang, W. T., Hassan, A. A., & LePage, B. A	2022	Outdoor education	Outdoor education includes earth education, learning and development education, ecological education, natural awareness, natural experience, locally based teaching and learning, and using environmental materials as learning to integrate the local environment.
4	Sanderud, J. R., Gurholt, K. P., & Moe, V. F.	2022	Didactic sensitivity to children and place: a contribution to outdoor education cultures	Contributing to outdoor education cultures Outside of space is considered pedagogically important to examine the culture of outdoor education that is situated in the Nordic early childhood education framework.
5	Mann, J., Gray, T., Truong, S., Sahlberg, P., Bentsen, P., Passy, R., ... & Cowper	2021	A systematic review protocol to identify the key benefits and efficacy of nature-based learning in outdoor educational settings	This review provides insights into the field of outdoor learning and its associated benefits of development, well-being, and growth, and the systematic review provides insights for institutions, educational policy makers, and frontline teachers to improve the learning experiences of future students.
6	Görkem, A. V. C. I., & Gümüş, N	2020	The effect of outdoor education on the achievement and recall levels of primary school students in social studies course	Determining the effect of outdoor education-based activities in teaching social studies on students' progress and the amount of outdoor recall of teaching social studies courses increases students' success levels and has a positive effect on their knowledge recall.
7	Polat. Sooner. Okçu. Yıldız. Çelik. Çağlar	2019	Creating and utilizing spaces to enhance intergenerational learning at schools and results	Findings about the creation of intergenerational space of these events have been investigated under the headings of re-educational space such as sports, artistic, recreational and educational and the artificial spaces created.
8	Otte, C. R., Bølling, M., Stevenson, M. P., Ejbye-Ernst, N., Nielsen, G., & Bentsen, P	2019	Education outside the classroom increases children's reading performance: Results from a one-year quasi-experimental study	Findings on the increasing use of out-of-classroom (EOtC) education in schools. However, there are currently few studies that evaluate the long-term effects on academic achievement.
9	Kellock, A., & Sexton, J.	2018	Whose space is it anyway? Learning about space to make space to learn	A deeper understanding of the uniqueness of children's individual experiences provides opportunities to re-examine space in alternative ways, to engage creatively with children about space and still support unique yet diverse pathways to learning.
10	Richmond, D., Sibthorp, J., Gookin, J., Annarella, S., & Ferri, S	2018	Complementing classroom learning through outdoor adventure education: Out-of-school-time experiences that make a difference	Research emphasizes the importance of skills, beliefs, and behaviors that support student achievement in the classroom and beyond. Intrapersonal and interpersonal assets (such as persistence, generosity, social skills, efficacy beliefs, and mindsets) are often considered noncognitive factors. are known because they are not directly measured by traditional academic assessments.

Methodology

According to the data collection, this research is descriptive-analytical and among applied research. Since questionnaires and interviews were used in this research to collect the required information, therefore, from another angle, this research can also be considered a survey research. The statistical population of this study was formed among the students of 10 boys' primary schools in Sari city. 57.2% of respondents are between 8-9 years old, 20% are 9-10 years old, 7.2% are 10-11 years old, and 14% are 11-12 years old. Also, it should be noted that most respondents are 8-9 years old. Based on Morgan's table, 250 samples were selected by a systematic random method and directly questioned. The data collected in the form of SPSS software and statistical tests (binomial non-parametric) Kolmogorov-Smirnov and Binomial Test and Pearson correlation of the relationships between the variables have been tested.

MATERIALS AND METHODS

Learning, its environment and experiences

Learning is the result of the interaction between personality and environmental variables, the separation of personality and environmental variables effective in learning is completely unclear, because personality variables are formed in the environment. Environmental variables, in turn, affect, personality variables. Students learn in different ways, some students have a strong desire to learn and understand the material, while other students, it seems, just to pass their lessons. They submit to the minimum necessary learning. (Mortazavi et al., 2018) People in the same situation may have different learning, which can be attributed to the difference in their abilities, motivation or thinking styles. (Yamini et al., 2007) in the late 20th century, due to the prominent presence of new psychological perspectives in the discussion of education and the transformation of school architecture in an interdisciplinary matter, it should be addressed in a systematic and holistic way and from the perspective He avoided one-dimensional (Ghaffari, 2016).

Learning in people is the result of interaction between personality and environmental variables. The separation of personality and environmental variables effective in learning is quite unclear, because personality variables are formed in the environment. Environmental variables in turn affect personality variables (Yamini et al., 2017). Learning environments are an undeniable necessity for society and not only for students, but for all ages and all walks of life Vital for learning environments Adaptability is based on changes and needs. In the learning environment, we do not try to change people, but we try to change their experiences, perceptions or perceptions of their learning (Yamini et al., 2017). Learning environments will consist of elements that become meaningful together, the characteristics and qualities of each of these elements are effective in the formation of different behaviors. We usually remember "learning" with the name of school, but of course, many learning steps take place outside it, such as: parks. School yard, street, rest room, dining tables, corridors, etc. And a combination of several different factors; Suitable usable space is light, weather conditions, color and lighting, etc. (Shafaei and Madani, 2018).

The level of learning of learners is always an integral part of the learning process and according to researchers in the field of education, it should not be such that students tend to focus all their efforts on passing lessons instead of acquiring skills (Muzaffar et al., 2008) Its time is determined or chosen according to the purpose, content and abilities of the students (Mohammadi Bulblan Abad et al., 2008). The learning experience is actually the interaction between the learner and the external conditions in the environment to which the learner reacts, which is created through the active behavior of students and activities and happens in the learning process. Learning approaches are not fixed characteristics in people and they change under the influence of changes in the learning context and are dependent on the context and environment and it is an interaction between

the learner, the teacher and the environment, which means that the learning experience is somewhat dependent Perception is the interests and previous experiences of the learners. Therefore, the learning experience is generally not in the hands of the teacher, although he can control the learning experience by changing the environment, which causes favorable results in learning (Mardomi and Delshad, 2018).

Learning through open educational spaces

Environment-based learning

Environmental interaction during childhood, childhood and adolescence is necessary for the growth and flourishing of people's physical, cognitive and creative abilities, and the living environment of a person during this period has a definite effect on the formation of the foundation of existence and physical and mental growth. The development of human mind and intelligence is not a random thing, but it takes place in harmony and in the same direction with other dimensions of human development. The improvement of the child's environmental conditions provides the possibility of the child's mental and intelligence development, and environment-oriented learning is a new plan for fostering children's creativity (Mozaffar et al., 2008). Children perceive the world in a completely different way. A child creates that is very different from the images that are created in the mind of an adult (Torabi and Qabadlou, 2015), so in the design of open educational spaces where children are the most important users of that space, special attention should be paid to their desire and understanding of There was space so that the environment they needed could be included in the plan.

Open spaces and its relationship with the physical environment

When re-education spaces are used as places for the child to enjoy and perform activities and to provide facilities for interaction with the environment, the game can be considered as educational learning (Mehjoor, 2013) as well as natural stimulating elements and flexibly. Functions - It increases the child's curiosity and motivation to play and participate in group work and provides the basis for his imagination. The flourishing of latent talents and the emergence of creativity, develop cooperation, cooperation and the participation of the child. In this regard, theorists have presented two theories:

The theory of preparing for adulthood: play provides opportunities to acquire skills and functions that are necessary during adulthood. Based on this theory, playing during childhood is one of the unique phenomena and leads to the growth of children's physical and mental capacities.

Social-Cultural Theory: The game is an incentive and stimulus for imaginative thinking

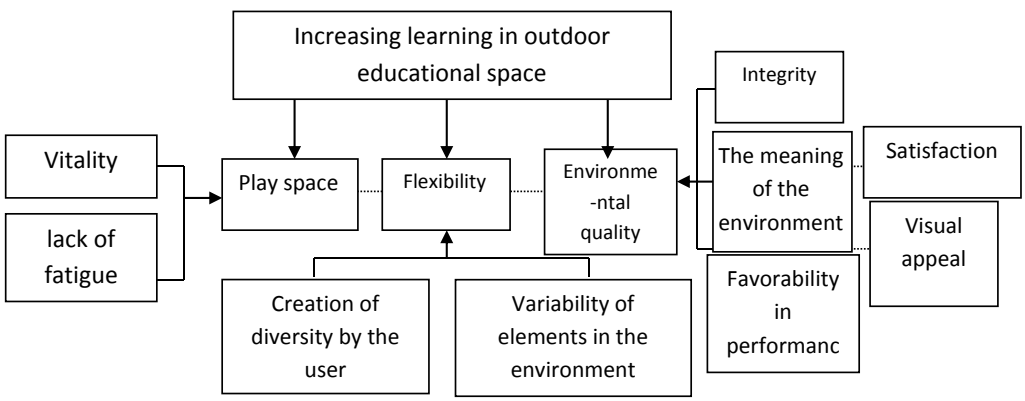


Diagram 1: The relationship between the criteria of the effectiveness of the physical body of open educational spaces in increasing learning (source: Negarandeh, 2023)

and a way to use objects and perform activities in symbolic and symbolic ways. The game helps to mentally recognize the roles of people in society and social rules. This recognition is through playing the role of social figures such as doctor, mother, etc. (Mardomi and Delshad, 2018).

Efficiency of the environment in open educational spaces (school yard)

The open spaces of schools (yards) are a forgotten dimension in learning environments, were paying attention to the needs of students and teachers in re-educational spaces (school yards) are a necessity, and it is necessary to provide spiritual, physical and mental needs. students and the correct implementation of educational programs, the spirit of vitality and vitality throughout the school space, both inside and outside, will be (Haas and Ashman., 2014) re-education spaces and the way of combining its spatial elements with modern space architecture as a systematic and regular framework of development (Herrington and Oliver, 2000) Schoolyards as spaces for the discharge of energy and emotions of children have had a great impact on the growth and learning of children in recent years (Halfon et al., 2016). These environments can be places to study nature, experience science, create and exhibiting art, playing games or performing music, which lead to better learning for children by providing a high-quality environment where they can be discovered and observed (Mardomi and Delgosha, 2018), therefore paying attention to the fact that people instinctively Communicating with the surrounding environment Is necessary and the influence of the environment on the formation of events and cultural and social relations is undeniable (Mege, 2014).

Open and flexible learning environment

The principle of learning (a process with interacting variables) that the type and intensity of interaction follows various changes, considering the nature of the inquisitive and experiential child, was taken into consideration with a newer perspective in order to respond to extensive educational methods, the necessity of using the flexibility factor be in re-education environments (Mardomi and Delshad, 2019) because education is not only influenced by the words of the teacher, but other elements such as non-verbal education and non-expressive behavior play a role in conveying the message more than other factors, so learning does not happen only in the classroom. The most basic needs of modern educational systems are "physical and mental movement" and "social moral growth" (ibid., 110). It is in flexible learning spaces. Although there is a brief and clear understanding of the meaning and purpose of flexibility both within and among the teaching and architecture professions separately, in recent decades there have been steps towards education away from tradition and knowledge. The central learning has been removed (Mohidin et al., 2015), so the need for a flexible solution in the open educational space is almost a task in education (Brook, Osnor, 2008) because the flexible environment in the open educational space, both the teaching process and the form of the educational space It is both a description of a living space and a description of the process in which space is created. The multi-functionality of seeing a space, as well as the possibility of combining, separating and expanding it, are among the most important factors that should be addressed in designing a decadent model (Shams Esfandabad, 2017). "The state of our surroundings" and keep pace with the "speed of changes and progress in the world of educational technology". Therefore, according to the conditions that a flexible environment provides for its users, the following capabilities can be listed for this agent:

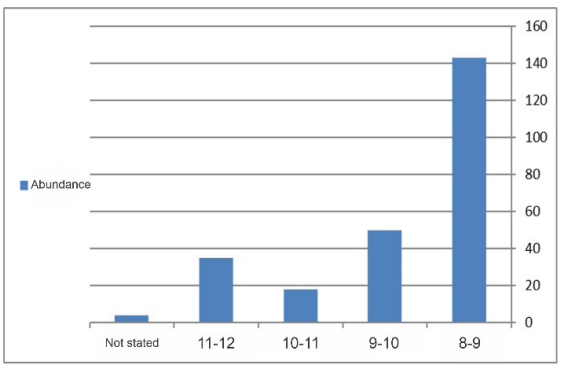
1. Child-centered: A flexible environment is never worth attention by itself and is not considered independently and without human attention, in other words, the basis and focal point of this type of design, development Who and what are his needs?
2. Controllability: The flexibility of the environment by creating opportunities to participate in the creation of the surrounding conditions, responds to the need of "controlling the en-

vironment" in the child, and the possibility of strength b Aversion to social relations in parts of the environment, an opportunity It also has its own area to create a region under its control.

3. Core security: In an educational environment, paying attention to the feeling of safety is as important as paying attention to physical dangers. Children find active presence in the environment when all their senses are balanced.
4. Social acceptability: what's in the environment causes psychological and physical comfort of the users, is a response to their psychological and physical needs (Mardimi and Delshad, 1389, 116).
5. Analysis of the structural model of the research

The graph of the analysis of the structural model of the research in the standard mode, the numbers above the arrows show the values of the standardized coefficient of each of the independent variables that predict the dependent variable.

DISCUSSION AND FINDINGS



Graph 1: Age of the respondents (Source: Author, 2023)

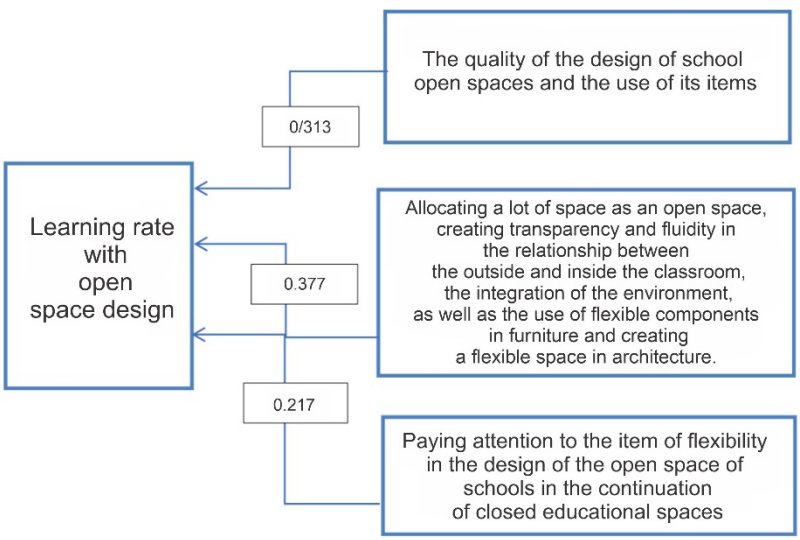


Diagram 2: conceptual model of flexibility in the design of open space in schools (Source: Author, 2023)

Table 2: Frequency distribution of respondents' age (Source: Authors)

Statistical index	8-9 Years Old	9-10 Years Old	10-11 Years Old	11-12 Years Old	Total	Not stated	Total
Abundance	143	50	18	35	246	4	250
Percent frequency	57/2	20	7/2	14	98/4	1/6	100

Checking the normality of the research data

According to the results obtained from the questionnaire completed by the students (schools under research), the significant level for the quality variable of the design of open spaces in schools and the use of its items is equal to 0.062 and the integrity of the environment and the use of flexible components in Furniture and creating a flexible space in Berber architecture with 0.057 and paying Attention to the item of flexibility in the design of the open space of schools in the continuation of closed educational spaces is equal to 0.085 and the learning rate of students is equal to 0.067. Is, as a result, the distribution of the data is normal.

Frequency distribution of the number and percentage of sample responses

In the survey among students regarding the effective components of school playgrounds and its impact on students' learning, they were tested separately and the frequency of the sample responses was examined and ranked using Friedman's test.

Ranking status of variables

It shows the ranking status of items in the flexibility of the open space (yard) of schools on students' learning) from the students' point of view. The mean rank of each item is reported in the table. The comparison of the average ratings shows that the highest average rating (18.98) is in agreement that every part of the school yard should be designed for special activities such as play, rest and solitude, and on the other hand, the lowest average rating (6.22) is for How long do you use the school yard when it rains? Which means that the least important thing is, can you use the school yard when it rains and snows? It is from the point of view of the students. The most important items of the flexibility of the open space (yard) of schools include how much you like to cooperate with your friends to make the school yard more useful and attractive (18/314); To what extent does the quality and shape of the playground affect your interest in sports (18/032); How much would you like your teachers to teach in the quiet parts of the open spaces of the school (17/476); By using educational methods such as showing a lesson film and group work in the yard of Akvadi (16/864); How safe and peaceful do you feel in the schoolyard (16/330); Do you want the walls of the school and the floor of the yard to be of various and colorful colors (952/19); Do you think that the tall and shady trees in the school yard will cheer you up (15/664); Do you like your teachers to teach in open places like the school yard (15/468); If your classroom is held in the yard, how much would you like the tables and chairs to be arranged differently from the classroom (13/15); How much do you use drinking water, green space, sitting place and playground in the school yard (03/15); How much equipment, colors and shapes in the open space of the school are happy and uplifting for you (15/023); Do you want to change the shape of the green space and the color of the

Table 3: Kolmogorov-Smirnov test results to check the normal distribution of data (Source: Author, 2023)

Variable	Level of significance
The quality of the design of school open spaces and the use of its items	0/062
Allocating a lot of space as an open space, creating transparency and fluidity in the relationship between the outside and inside the classroom, the integration of the environment, as well as using flexible components in furniture and creating a flexible space in architecture. and the level of student learning	0/057
Paying attention to the item of flexibility in the design of the open space of schools in the continuation of closed educational spaces	0/085
Student learning	0/067

Table 4: Frequency and Friedman distribution table from the perspective of students (Source: Author, 2023)

Question	Never	Rarely	Some-times	Most of the time	Always	Not stated	Average Rank
How much space do your teachers use in the school yard when teaching?	14	61	138	19	17	2	9.51
	5.6	24.3	55	7.6	6.8	0.8	
Do you feel safe and calm in the school yard?	16	20	50	36	123	6	16.33
	6.4	8	19.9	14.3	49	2.4	
How much do you have in the school yard and specific place to play?	33	72	51	42	50	3	10.66
	13.1	28.7	20.3	16.7	19.9	1.2	
How much do you use the crowded places of the yard in the entertain-ment bells?	27	41	111	34	35	3	10.67
	10.8	16.3	44.2	13.5	13.9	1.2	
To what extent does the quality and shape of the playground affect your interest in sports?	17	8	24	29	168	5	18.03
	6.8	3.2	9.6	11.6	66.9	2	
How long do you use the quiet places and corners of the yard when you are idle?	23	52	90	33	46	7	11.19
	9.2	20.7	35.9	13.1	18.3	2.8	
How much do you use drinking water, green space, sitting place and play-ground in the school yard?	17	24	58	46	102	4	15.05
	6.8	9.6	23.1	18.3	40.6	1.6	
When it rains, how long do you use the school yard?	97	85	46	6	12	5	6.22
	38.6	33.9	18.3	2.4	4.8	2	
How much shapes, colors, silence, strangeness and excitement of the school yard make you more interested in learning?	23	28	56	57	84	3	14.57
	9.2	11.2	22.3	22.7	33.5	1.2	
Do you like your teachers to teach in open places like the school yard?	21	27	35	47	116	5	15.47
	8.4	10.8	13.9	18.7	46.2	2	
Would you like the classrooms to have changeable walls and be connected to the yard with many doors?	64	26	36	25	94	6	12.33
	25.5	10.4	14.3	10	37.5	2.4	
Do you like to see the events in the yard during the classroom?	75	38	37	25	73	3	11.28
	29.9	15.1	14.7	10	29.1	1.2	
How many things, colors and shapes in the open space of the school are happy and uplifting for you?	17	27	43	54	103	7	15.02
	6.8	10.8	17.1	21.5	41	2.8	
How much do you like to cooperate with your friends to make the school yard more useful and attractive?	9	11	31	43	152	5	18.31
	3.6	4.4	12.4	17.1	60.6	2	

Continuation of table 4 Friedman's test table from the perspective of students (Source: Author, 2023)

Question	Never	Rarely	Some-times	Most of the time	Always	Not stated	Average Rank
If you get a chance, would you go from your school to another school that has a more attractive yard?	136	23	31	10	47	4	7.89
	54.2	9.2	12.4	4	18.7	1.6	
Do you think tall and shady trees in the school yard make you happy?	27	18	41	40	118	7	15.66
	10.8	7.2	16.3	15.9	47	2.8	
Do you think you learn better by teaching in a group method with your friends?	21	21	24	39	140	6	17.22
	8.4	8.4	9.6	15.5	55.8	2.4	
How much would you like your teachers to teach in the quiet parts of the open spaces of the school?	17	13	19	50	145	7	17.48
	6.8	5.2	7.6	19.9	57.8	2.8	
Do you want the walls of the school and the floor of the yard to be colorful?	28	22	34	25	134	8	15.95
	11.2	8.8	13.5	10	53.4	3	
Do you agree that every part of the school yard should be designed for special activities such as play, rest and solitude?	4	7	27	32	175	6	18.98
	1.6	2.8	10.8	12.7	69.7	2.4	
Do you want to change the shape of the green space and the color of the school walls according to your taste?	2	27	34	24	113	11	14.66
	16.7	10.8	13.5	9.6	45	4.4	
What is the acceptable size of the school yard in the shape of a simple and uniform rectangle?	89	30	46	21	58	7	10.66
	35.5	12	18.3	8.4	23.1	2.8	
How much would you like your school wall to be so that you can see the sur-rounding streets?	62	25	35	37	85	7	12.64
	24.7	10	13.9	14.7	33.9	2.8	
Do you agree with the use of educational methods such as showing video lessons and group work in the yard?	19	17	40	34	135	6	16.86
	7.6	6.8	15.9	13.5	53.8	2.4	
If your classroom is held in the yard, how much would you like the tables and chairs to be arranged differently from the classroom?	41	16	42	38	110	4	15.13
	16.3	6.4	16.7	15.1	43.8	1.6	
How much do you think the yard and open spaces of the school can help you to learn some lessons better?	23	29	55	60	78	6	13.80
	9.2	11.6	21.9	23.9	31.1	2.4	
How much do you learn to be responsible and respect the rules and rights of others in school?	23	15	31	46	131	5	16.38
	9.2	6	12.4	18.3	52.2	2	

school walls according to your own taste (14/66) and then the item, how interested are you that the wall of your school is such that you can see the surrounding streets (12/64) Do you like the classrooms with changeable walls? And connected to the yard with many doors (12/327), do you like to see what is going on in the yard during the classroom (11/28) how long do you use the secluded places and corners of the yard during your idle time (19) 11/11) How much do you use the crowded places of the yard in the recreation bells (10/668); How much play equipment and place do you have in the school yard (10/664), how much do you agree that the school yard should be a simple and uniform rectangle (10/664), how much of the school yard space do your teachers use when teaching? (9/513) if you get a chance, you will go from your school to another school that has a more attractive yard (7/893) and the lowest rank (6/223) to the item when it rains, how long from the school yard You use it. Also, among the items related to the students' learning, the average ranking is, respectively, do you think you learn the lesson better by teaching in a group method and with your friends (17/223), how much responsibility do you have in addition to school lessons? And you learn to respect the rules and rights of others in school (16/377), how many shapes, colors, silence, strangeness and excitement of the school yard make you more interested in learning (14/574) and what Do you think the yard and open spaces of the school can help you to learn some lessons better (803/13). According to the significance of the Friedman test, it can be concluded that the ranking of the characteristics of the flexibility of the open space (courtyard) of schools on children's learning is meaningful from the students' point of view, and the flexibility of the school's open space (courtyard) on learning. Children have different ratings of students' characteristics.

RESULT AND CONCLUSION

Learning occurs in a social network through observation and imitation, in which the knowledge and thoughts of the individual are also effective. The method of using and arranging educational situations to achieve learning has not been determined learning by providing sufficient time, support, motivation, resources and opportunities for learning to achieve the agreed standards of higher education in an environment fully benefit from the quality therefore learning open educational spaces should be able to respond to the needs of students as much as possible in accordance with the changes in educational patterns and along with the advancement of technology, it can meet the needs of the learner and the teacher over time by creating a flexible space. and this important can be achieved through the design of flexible educational open spaces that are in sync with children's behavioral patterns. The results of the current research are based on the direct effect of flexible physical environments on learning. In this regard, other researchers have emphasized on this effective factor because the favorable and flexible open educational spaces will be the cause of the dynamism of the educational environment, meaning that the favorable environment must be compatible and synchronous with the inevitable changes. have, so that he can continue his life over time. From the point of view of the optimal design of a flexible educational environment should not consist of a soulless and ineffective environment in a learning environment, but should act as a living and effective factor in promoting educational activities, and an optimal environment in In order to respond to the needs of students, in this regard, the group of respondents focused on the factors of the physical environment of open educational spaces such as: diversity in texture, color, light, materials and memorable elements in the design of forms, surfaces and walls, floors and ceilings. semi-open spaces in the open space of schools and the absence of unused spaces in the yard for children and the creation of standard spaces, appropriate to the scale of children, and the flexibility of play and sports spaces in terms of form, the use of familiar cultural and educational elements to create A sense of belonging and memories in the open spaces of schools and the simulation of virgin nature in a part of the

campus, in order to spend their free time and education and to accompany them more with nature and to increase and diversify suitable green spaces as well as flexible furniture in the campus and defined spaces. flexible in the educational open space instead of a soulless cement yard, Watts, in their opinion, the qualitative components in the open educational spaces are of much higher importance than the individual and social components, which emphasizes the need to pay more attention to the optimal design in the flexible educational open environment . In the end, it is proposed to measure the role of each of the factors and sub-factors affecting the flexibility achieved in the present research, in case samples of different educational environments, as an effective component.

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