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CLASSROOM TEACHERS' VIEWS ON THE PHYSICAL LEARNING ENVIRONMENTS OF PRIMARY SCHOOLS IN TURKEY

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Abstract

School buildings with inadequate infrastructure and old-fashioned architectural styles cause problems, especially in developing countries. This study aims to examine the views of primary school teachers on the physical learning environments of primary schools. A case study method was adopted in this study. The participants of the study consisted of 14 classroom teachers working in rural and urban areas. The synchronous online focus group interviews were conducted using Zoom, a commercial web conference service, as a data collection method. A content analysis method was used in the analysis of the data. The analyses of the semi-structured interviews with the classroom teachers produced four categories-i.e., planning-related shortcomings, infrastructure deficiency, child-friendly schools, and the advantages of these schools. Responses of classroom teachers working in urban areas mostly focused on the crowding of schools. On the other hand, the answers from the classroom teachers working in rural areas mostly focused on the physical infrastructure of primary schools. Furthermore, suggestions from all participants pointed out that primary schools must have a more child-friendly characteristic. The physical learning environments of primary schools require compliance with the needs of modern pedagogy. In light of the findings, some suggestions were have been made for primary schools in Turkey.

Keywords: The physical learning environment, primary school, school buildings.

INTRODUCTION

The term "learning environment" refers to visual, auditory, and kinesthetic factors enhancing the physical aspects of human comprehension (Kopec, 2006). The learning environment influences human behavior and has both direct and indirect impacts on learning and teaching performance (Higgins, Hall, Wall, Woolner, & McCaughey, 2005; Stricherz, 2000; Şensoy & Sağsöz, 2015; Trosper, 2017), which can contribute to holistic development of children (Nair & Fielding, 2013). The learning environments of modern school buildings have been described as aesthetic, appealing, child-friendly, and providing learning pathways (Craissati, Devi Banerjee, King, Lansdown, & Smith, 2007; Higgins et al., 2005), which attracts more attention in the literature and in the school reform initiatives. Within the growing shifts in school facilities, the physical environments of the school include the whole physical spaces of the school where intentionally support comprehension and teaching (Churchill, 2014). From this perspective, stereotyped old-fashioned schools do not allow for multiple interactions between space and pedagogy. Only schools embracing new learning environments could allow to social and individual learning (OECD, 2013). These schools have a powerful effect on developing specific teaching strategies or the discipline in a way that stereotyped old-fashioned schools could not (Wright, Thompson, & Horne, 2021). Therefore, the pedagogy, cognition, and perception play a vital role in the function of the physical learning environment of schools (Pereira, Kowaltowski, & Deliberador, 2018).

The pedagogy plays a decisive role in remodeling school buildings and the function of school places. Today, constructivist approaches (i. e. student-centered education) are adopted, which impacts on the teacher role and the style of use of the physical space. Constructivist approaches focus on the subjective nature of knowledge, individual experience, constructivist activity, teacher-student interaction, and social activity (Stipanovic & Pergantis, 2018). The constructivist approach supports deliberate interactions between students and, in turn, affects the styles and strategies of teaching, like group work and individual work, affecting the physical spaces and places of schools which play a role in facilitating or restricting human actions (Benade, 2019). Thus, modern pedagogy has an extensive demand for redesigning physical learning environments. Nair and Fielding (2013) stressed that the current physical environments of schools should meet the following learning approaches (p.19): Independent study, peer tutoring, team collaborative work, one-on-one learning with teachers, project-based learning, technology-based learning with mobile computers, distance learning, research via the internet with wireless network, student presentations, performance and music-based learning, seminar-style instruction, community service learning, naturalist learning, social/emotional learning, art-based learning, learning by building.

As mentioned above, the current learning environments need common areas where students can work together. In specific corners of the school, students can relax, do reading activities and work independently. Learning areas such as science and art centers and workshops can certainly enhance student's learning. Therefore, the physical learning environments of schools should be developed within the entire school infrastructure. Modern schools that allow the development of 21st-century skills to learners have flexible learning spaces and sustainable design, and provide meaningful community participation (Hanover Research, 2011). Aiming to be more flexible, inclusive, and sustainable, 21st-century school buildings often feature open learning spaces rather than traditional square-shaped classrooms. Physical learning environments are used as optimized by combining various activity areas or replacing them in a multi-purpose way (Bardone & Gargiulo, 2014).Despite improved understanding of the modern school buildings and learning environments, school buildings, having inadequate infrastructure and old-fashioned architectural styles, remain problematic in developing countries such as Turkey (Akbaba & Turhan, 2016; OECD, 2018). However, some school reform initiatives in Turkey have gained momentum in recent years. Some steps have been taken by the Republic of Turkey Ministry of National Education to improve the schools. The Private Education Institutions Standards Directive, including the optional and compulsory spaces in primary schools, is one of them (Republic of Turkey Ministry of National Education, 2020). The Let Schools Be Life Project, like the other, aimed to make schools a livable and safe area as a social center. For this purpose, amongst the Ministry of National Education the Ministry of Forestry and Water Affairs, the Union of Municipalities of Turkey was signed a protocol and was given to the coordination of the Ministry of National Education General Directorate of Lifelong Learning, located in all provinces in Turkey and has been active since the 2011 school year. Let Schools Be Life Project aimed to open schools affiliated with the Ministry of Education to the service of parents and the neighborhood, to transform students and parents into living safe areas, to use schools for sports, cultural and social services, and to reorganize school gardens with afforesting (Republic of Turkey Ministry of National Education, 2020a). Furthermore, Educational Buildings Minimum Design Standards Guide was revised by the Republic of Turkey the Ministry of Education in 2015. This guide stated that its goal was to "construct repaired education and training facilities to meet the expectations and needs of today, by developments in technology in education and training, by the current legislation, region, and plot conditions, in a safe, economical, aesthetic, and accessible environment for everyone to improve the quality of education" (Republic of Turkey Ministry of National Education, 2015, p. 2). In the Republic of Turkey Ministry of Education's 2015-2019 Strategic Plan, the priorities of education venues were to provide sufficient areas for sports and cultural activities (Directorate of Strategy Development, 2015). In addition to these studies, in the Republic of Turkey Ministry of Education's 2019-2023 Strategic Plan document, "school building, garden, gym, laboratories, and other such

facilities" have been stated in the priority areas (Republic of Turkey Ministry of National Education, 2019b).

Although given educational policies can evaluated as positive developments, the literature indicated the need to improve the physical conditions of primary schools in Turkey (Başar, 2000; Akbaba & Turhan, 2016; Radmard, Karataş, & Öksüz-Gül, 2021; Yılmaz, 2012). Schools need to meet the requirements of modern education. The school buildings are typical and old-fashioned. Schools should be restructured to develop individualized education and to support teaching and learning since the functionality of the learning environment depends on how it is structured and organized. A well-designed school encourages better student performance and makes a strong statement to the general public about the importance of education. For this reason, school buildings are a crucial factor in educational growth (Mcmichael, 2004). Given the importance for educational growth of the physical learning environments, restructuring of current school buildings is essential and this study sought to understand the classroom teacher's views that might help to alleviate the problem of school reconstruction. Although an increasing number of scientific studies focusing on the importance of physical conditions of schools, knowledge on the conditions of primary schools (according to rural and urban schools) is insufficient. Correspondingly, this study aimed to examine the views of primary school teachers on the conditions of physical learning environments of primary schools. To this end, the authors sought to answer the following questions:

1. What are the views of classroom teachers working in a rural area and those working in an urban area about the conditions of physical learning environments of primary schools?
2. What do classroom teachers working in a rural area and those working in an urban area suggest for enhancement of physical facilities of primary schools?

METHOD

Research Design

In this study, a qualitative approach was adopted to provide a deeper understanding of the views of classroom teachers regarding the conditions of the physical learning environments of primary schools in Turkey. The study was designed by a case study method, exploring a bounded system or multiple bounded systems (Merriam, 2009). This methodology allows for researchers to understand the case themselves through an interpretation of the data (Creswell, 2007). This is why, in this study, each condition of rural and urban primary schools is specified as 'the case'. A case study requires the study of a real-life, a contemporary context or setting; because of that, interview techniques, focus group interviews, and document analysis are used predominantly (Creswell, 2013).

Participants

The participants of the study consisted of 14 primary school teachers who participated voluntarily. The participants were chosen using maximum variation sampling, one of the purposeful sampling strategies, providing 'high-quality, detailed descriptions of each case useful for documenting uniqueness, and important shared patterns that cut across cases and derive their significance from having emerged out of heterogeneity' (Patton, 2002, p. 235). The participating teachers were determined through criterion sampling. The study inclusion criteria for participants were (1) voluntary participation, and (2) serving as a classroom teacher in rural and urban areas. The participants of the study were divided into two groups as those working in a rural area and those working in an urban area in order to be able to compare the views of the participants more clearly. The descriptive information of the participants was presented in Table 1.

According to Table 1, three of the participants were women. Six participants have completed a master's degree. All participants have been teaching primary school students for at least four years. Six of them have been working in rural areas. Primary school teachers from the western and eastern regions of Turkey participated in the study.

Table 1. Participant's descriptive information

Participant	Gender	Grade	Education Level	Professional Experience (Year)	Location
Emrah	Male	1	BSc	13	Adıyaman (in an urban area)
Serhat	Male	4	MSc	16	Adıyaman (in a rural area)
Hasan	Male	3	BSc	18	Adıyaman (in an urban area)
Çağrı	Male	4	BSc	4	Ağrı (in a rural area)
Suat	Male	2	MSc	4	Ağrı (in a rural area)
Özge	Female	1	BSc	11	Çanakkale (in an urban area)
Seniha	Female	2	BSc	13	Çanakkale (in an urban area)
Gökhan	Male	4	BSc	36	Çanakkale (in an urban area)
Mehmet	Male	3	BSc	30	Çanakkale (in an urban area)
Faruk	Male	3	BSc	10	Gaziantep (in a rural area)
Murat	Male	4	MSc	16	Gaziantep (in an urban area)
Aslı	Female	2	MSc	16	İstanbul (in an urban area)
Kenan	Male	2	MSc	13	Kahramanmaraş (in an urban area)
Veli	Male	4	MSc	15	Malatya (in an urban area)

* The names of the participants replaced with pseudonyms.

Data collection

In the study, an introductory form and standardized interview techniques were used to collect data. The interview questions were prepared by the researchers after literature reviews. In the literature, 21st-century learning environments are depicted as a social environment, physical environment, and digital environment (EDUSPACES21, 2016). In the study, the interview questions focused on the physical learning environments of primary schools. The interview consisted of five open-ended questions.

The synchronous online focus group interviews were conducted using Zoom, a commercial web conferencing service, as a data collection method. The focus group interview was used to obtain in-depth information through a discussion and unstructured interview, using the effect of group dynamics in an environment where individuals can express themselves freely. The focus group interview aims to collect rich data in a social context (Patton, 2002). The interviews lasted 90 minutes, totaling 180 minutes. Interviews were finished once data saturation had been achieved. All interviews were videotaped and transcribed with the permission of participants.

Data analysis

In this study, a content analysis method was used, referring to 'any data reduction and sense-making effort that takes some qualitative material and attempts to identify core consistencies and meanings' (Patton, 2002, p. 453). When analyzing the data, the researchers followed three steps as suggested by Merriam (2009); creating categories, sorting categories, and naming categories. After all interviews were transcribed to the Microsoft Word program, the researchers independently encoded the data, and categorized it according to themes to ensure reliability. Second, they reviewed their codes and themes together. Lastly, codes and themes were edited and interpreted. In order to provide internal validity of the study, the member control technique was used during data collection. Direct quotes from classroom teachers were added to study to ensure external validity.

FINDINGS

In this section, the themes emerging from the data within the scope of the research questions were presented under two topics; views on the physical learning environments of primary schools, and suggestions for enhancement the physical facilities of primary schools.

Views on the physical learning environments of primary schools

The teachers were asked what their views were regarding the physical learning environments of primary schools. The analysis of their responses shows that the responses from both groups can be divided into four categories: planning-related shortcomings, infrastructure deficiency, child-friendly schools, and the advantages of these schools. The views on the physical learning environments of primary schools were presented in Table 2.

Table 2. Views on the physical learning environments of primary schools

Primary school teachers working in urban area		Primary school teachers working in rural area	
Answers	***f***	**Answers**	***f***
Planning-related shortcomings		*Planning-related shortcomings*	
Schools with shared yards	2	Schools with shared yards	2
Transforming secondary and high schools into primary schools	2	Adding a new school building to the school area	1
Overcrowded schools	4	Overcrowded schools	2
Total	8	School location	1
Infrastructure deficiency		Total	6
Acoustic insulation	1	*Infrastructure deficiency*	
Classrooms and other physical learning areas (art, sport, and welcoming areas)	11	Classrooms and other physical learning areas (art, sport, and welcoming areas)	6
Heating	2	Heating	3
Technology	1	Technology	2
Equipment	5	Equipment	5
Security	2	Hygiene	2
Total	22	Total	18
Child-friendly schools		*Child-friendly schools*	
Attractiveness	5	Attractiveness	4
Green spaces and soil at the school courtyard	7	Green spaces and soil at the school courtyard	2
Child-scale areas	4	Child-scale areas	1
Community-connected areas	1	Community-connected areas	2
A building with minimal floors	3	Sports, culture, and arts	2
Total	26	Total	13
Advantages		*Advantages*	
Technology	3	Technology	1
Large playground	1	A building with minimal floors	1
Hygiene	1	Indoor sports hall	1
Indoor sports hall	1	Total	3
Visual art room	1		
Drama room	1		
Total	8		

The answers about planning-related shortcomings pointed out primary and secondary school buildings with shared yards, transforming secondary and high schools into primary schools, overcrowded schools, and adding a new school building to the school area. The participants stated that the proximity of primary and secondary school buildings create some problems for all students to benefit from the playground. The answers given by Çağrı, and Emrah were as follows:

> *The primary school and secondary school, unfortunately, share the same building. We see the disadvantages of this, especially during the breaks, that primary and secondary school students cannot move comfortably* (Çağrı).

> *We use the playground with middle school. We are experiencing the troubles that middle school students suffer. All students find it challenging to benefit from the same playground* (Emrah).

Transforming secondary and high schools into primary schools also causes primary school children to be educated in a school that does not meet their developmental needs. A similar planning issue restricting to meet the developmental needs of students is to add a new school building to the school area, causing the schoolyards to shrink. In addition, the location and environmental conditions of the school are mentioned in the teacher response. The answers from Murat, and Serhat were as follows:

> *Our school was first a high school building. It became primary school later. The trucks are passing in front of our school* (Murat).
>
> *The population of Kahta district is 80,000-90,000. Although some regions are newly developed, there is no detailed planning. For example, a new school building is added to a standard schoolyard* (Serhat).

The overcrowding of schools is the main problem affecting directly students' learning and childhood development. The participants' views demonstrate that primary schools in an urban area are the most affected by this problem. Overcrowding of schools can restrict the provision of education and training in classrooms, resulting in insufficient playgrounds areas and security problems. The responses of participants show that schools were more crowded in urban areas. The answers given by Serhat and Veli were as follows:

> *There are 20 classrooms in our school. Several classes overlap as students step onto the playground for physical education class* (Serhat).
>
> *Especially in Adıyaman, Urfa, and Gaziantep, there is an increase in the number of students due to immigration. Besides, there is migration from villages to cities. The number of students in village schools is fewer, and the number of students in central schools is very high* (Veli).
>
> *The place that causes bullying among students at school is mostly the school canteen. In the school canteen, older students challenge younger students. In our school, living spaces are lacking, with constantly limited opportunities, there is inevitably tension among the children at school. There are 700-800 students in primary school. The school capacity is not enough for this number of students. We cannot do education and training under these circumstances. When the bell rings, it becomes very difficult to observe our students due to the crowd* (Kenan).

The answers about infrastructure insufficiency of primary schools include acoustic insulation, inadequate physical learning environments, heating, technology, equipment, security, and hygiene. The lack of infrastructure of primary schools in rural and urban areas points to crucial points regarding the effective learning and teaching practices in schools. The answers from the participants were as follows:

> *Since our school building is older, physical environments are not sufficient. The school was built in 1975. There is no place for sports, artistic performances, storage* (Mehmet).
>
> *We did not have a library at the school. We have only an archive room. We are trying to get our radiators repaired* (Suat).
>
> *There are no empty classrooms or rooms in our school. There were three under the stairs to store the belongings found in our school, we organize them as storage. We even arranged the staircase on the ground floor like a tea room. Unfortunately, we do not have any room for a playground, or library or any activity outside the classroom* (Faruk).
>
> *There are 11 stair ramps on five floors of the school. Therefore it is not safe. Students occasionally fall and get injured. The school is old and not earthquake-proof. In the last two or three years, There have been major earthquakes in Elazığ and Malatya in the last 2-3 years. Our school was also affected by these earthquakes. The cracking occurred in the walls. The inspectors stated that this was okay* (Hasan).

> *We don't have a place for theater or music at school. However, the families in the school where I work are sending their children to courses outside of school because of the high economic situation, and make up for this deficiency of the school* (Kenan).

According to teachers' views, child-friendly schools include attractiveness, green spaces and soil at the school courtyard, children-scale areas, community-connected areas, a building with minimal floors, as well as sports, culture, and arts. The views of participants were presented as follows:

> *The school is built as a rectangular box and the school architecture is unappealing. Right and left classes are lined up, the classic school is here* (Hasan).
>
> *More vivid and interesting colors should be used in primary schools. The classroom environment should be transformed into environments where the imagination and creativity of children are supported by removing only the table and the board* (Özge).
>
> *In our student days, the classes turned it into reinforced concrete due to the mud. This was good for cleaning but not for children's games* (Kenan).
>
> *We have a 6-storey building. The playground covered by asphalt is a problem for children. There is no green space in our school* (Aslı).
>
> *The desks in the classrooms are quite old, some high and some low; they are not suitable for students. There is only one basketball hoop in the playgrounds and it is not suitable for children. For this reason, children do not enjoy the game they play* (Kenan).
>
> *I think the school where I work is small and has few floors, which is suitable for primary school children* (Seniha).
>
> *We can only host parents in our classrooms or use areas such as a warehouse. This situation affects parents' opinions about the school. We do not have an area where we can organize activities with parents outside of school, and we do not have such a point of view* (Kenan).

The participants' responses point out how primary schools in urban areas have more advantages in terms of physical learning environments. Many schools in the city have a sports halls, drama rooms, and libraries. The participants' answers about the advantages of their schools are as follows:

> *There is an English class, gym class, painting class. I think these areas are beneficial for children* (Seniha).
>
> *There is a theater area (stage) in the basement of the school. We use this scene on certain days and weeks* (Aslı).
>
> *It is an advantage that our school has two floors. Children do not have difficulty entering the classroom during break. The school where I used to work was a five-storey school. It was not a suitable building for primary school students. Compared to other schools in the district center, our school has enough school courtyards* (Hasan).
>
> *In recent years, large investments such as Fatih Project have been made by the government to improve the physical and technological infrastructure of schools. However, it is still not enough. The technological infrastructure of schools in rural areas needs to be improved* (Veli).
>
> *We bought projectors and computers for our classes with our own means. Many teachers at my school use their own projectors and computers. By the way, there is an effort to bring smart boards to the classrooms within the Fatih Project, and this is a good development* (Hasan).

Suggestions for enhancement of physical facilities of primary schools

The answers of participants delineated that although primary schools in urban areas were more crowded, rural primary schools have more infrastructure deficiency. Child-friendly areas are needed for both schools. To minimize these problems, suggestions for improving the physical facilities of primary schools were given in Table 3.

The participants' suggestions are as follows:

> *We cannot provide the education we want due to the physical inadequacy of the school. We can provide classical/traditional education* (Gökhan).
>
> *We organize competitions, trips to support children's social interactions. We arrange folk dances, choir, gymnastics courses, and intelligence games. With these activities, the physical conditions of our schools have improved over the last five years* (Mehmet).
>
> *There is no point in having a single school entry. An entire building should have more than one exit door. It doesn't make much sense to me that children enter and exit the same door in a restricted way. If there is more than one exit door, it will provide us much more comfort for evacuation in an event such as an earthquake* (Kenan).

Table 3. Suggestions for improving the physical facilities of primary schools

Primary school teachers working in urban area		**Primary school teachers working in rural area**	
Answers	***f***	***Answers***	***f***
Elimination of physical infrastructure deficiencies	7	Elimination of physical infrastructure deficiencies	4
Supporting the physical environments to modern education approaches	2	Supporting the physical environments to modern education approaches	2
Renovation, the rebuilding of the school		Renovation, the rebuilding of the school	
Increasing teacher competencies for effective use of learning spaces	2	Increasing teacher competencies for effective use of learning spaces	2
Not rushing to open schools if the infrastructure is not completed.	2	Not rushing to open schools if the infrastructure is not completed.	1
Tracking the shortcomings of newly opened schools	2	Tracking the shortcomings of newly opened schools	1
Determining the number of students in schools according to the capacity of the school	4	Supporting the curriculum the effective use of learning spaces	1
Schools have multiple entrances	2	Areas reserved for out-of-class activities	1
Taking stakeholders' views in the design of school buildings	2	Total	12
Covering the school floor with soft material	2		
The playgrounds in kindergartens for primary schools	1		
Wider classes	1		
Using every area of the school as a learning area	1		
Reflection of regional features to the architectural structure	1		
Teachers' room where students can be observed	1		
Total	30		

DISCUSSION and CONCLUSION

Today, the developing understanding of physical learning environments has provided the basis for the restructuring of schools around the world. Nevertheless, there are steps that must be taken in primary school buildings, especially in developing countries, to support the physical learning environments to encourage the development of children. This study aimed to investigate primary school teachers' views on the physical learning environments of primary schools. For this purpose, six classroom teachers working in urban areas, and eight classroom teachers working in rural areas were interviewed. Teachers' views on the physical learning environments of primary schools are divided into four categories: as planning-related shortcomings, infrastructure deficiency, child-friendly schools, and the advantages of these schools. The answers from the classroom teachers working in urban areas mostly

focused on the crowding of schools and classrooms. On the other hand, the answers of classroom teachers working in rural areas generally focused on the physical infrastructure of primary schools. The participating teachers specifically cited the deficiency of physical infrastructure facilities. This result is compatible with PISA 2015 report results emphasizing the lacking of educational materials and the physical infrastructures of schools of Turkey. This report pointed out that the lack or insufficiency of textbooks, technology equipment, library, or laboratory materials and the physical infrastructure of the school disrupt the educational activities (Hacettepe University, 2020). A vast body of research utters a truism about the importance of the school infrastructure to meet the needs of modern schools. Even though scientific studies do not indicate a direct link between student achievements and advanced facilities, it indicate that student achievement is lower in poor school infrastructure (Stricherz, 2000). It is alarming that the findings reflect the quantitative fact about school facilities over a decade ago and implicate urgent needs of school infrastructures.

A key finding from this study that multi-storey school buildings, the transformation of high schools or secondary schools into primary school buildings, and the lack of large space allocated for schools, crowded student population minimize the use of the physical learning environments effectively. These findings are very valuable in that the physical structure of the school can affect students' attitudes and behaviors as well as social interaction (Frith, 2015). Various studies conducted in Turkey pointed to similar results obtained from this study. Highlights of the literature with the results of this research include; insufficient support of physical learning areas to learning (Akbaba & Turhan, 2016; Yılmaz, 2012); technological infrastructure deficiency (Göçen, Eral, & Bücük, 2020), crowded schools (Köse & Barkul, 2012); the deficiencies of playgrounds (Akbaba & Turhan, 2016; Işıkoğlu-Erdoğan & Şimşek, 2014; Şişman & Gültürk, 2011). The findings of the study revealed that the school was crowded in indoor circulation areas. Furthermore, the responses of the participants pointed out that the indoor circulation areas of the schools should be large and allow for freedom of movement. Furthermore, physical spaces should allow for flexible arrangements in the classroom to minimize infrastructure problems and make the optimum use of school and (or) classroom spaces. Şensoy and Sağsöz (2015) on the design of flexible classrooms; proposed that two classrooms can be combined as needed, and that physical space arrangement can be made for collaborative work through moving walls to better implement the constructivist teaching approach in learning areas. These results reveal that the building structure characteristics of primary schools in both rural and urban areas strongly impact the provision of contemporary education and training. The answers from the teachers on the advantages pointed out that the FATİH project contributed to schools in terms of the technological infrastructure.

As another critical finding of the study is that primary school buildings should have a structure that supports the physical, affective, cognitive, kinesthetic, and intellectual development of primary school children, that is; primary school buildings should be child-friendly. Child-friendly schools envisage making a physical arrangement that meets the needs of the child for different learning styles and physical characteristics. For this, there should be areas, classrooms, and equipment suitable for children between the ages of 6-10 in primary schools. A child who has just started primary school should be able to participate in a wide learning community with the school's facilities. Schools should support the interaction between children and adults positively to adapt to social life. The prominent concept at this point is that spaces allow interaction, in other words, they contain community-related areas (Nair & Fielding, 2013). Schools allow direct or conscious interactions with the community, making it easier for children and adults to be included in the school community on certain days and events. The community-related areas of school can make it easier for children to model school belonging and positive behavior patterns. Similarly, Güner and Kartal (2020) recommend that the physical learning environments of schools should support teacher-child-family interaction.

Another critical finding of the study is attractiveness. Teachers stated that primary school-age children do not perceive schools as attractive places. The teachers reported that they paid attention to the attention of children in terms of classroom layout, color of the cabinets, shape and color of the

materials used. Additionally, the answers from teachers showed that the architectural characteristics of the school are not very suitable for children. The fact that schools are arranged attracted and suitably is related to a positive attitude towards schools (Adıgüzel, 2012), which in turn, has the potential to enhance student learning (Higgins et al., 2005). It can be stated that after pre-school education, primary schools are a less attractive and motivating place for pupils in Turkey. Similarly, Göçen, Eral, and Bücük's (2020) study reveal that the architecture of buildings and the characteristics of physical learning environments should encourage children to develop positive attitudes towards learning. Thus, these results provide important clues for redesigning primary schools according to the aesthetic tastes of the child.

The findings of the study also revealed that the most important learning area emphasized by the participants emerges as the playground, where children socialize by playing. It was emphasized by the participants that the playgrounds should be especially rich in equipment; the ground should be covered with soft surfaces such as grass, soil or rubber. Many participants reported that there were no toys or benches in the playgrounds. One participant (Aslı) stated that having a park-like playground in kindergartens would be very valuable for primary school children. The participants stressed that the playgrounds should provide opportunities for children to learn about ecology and nature. The Turkish primary school curricula aim to develop knowledge, skills and attitudes about science literacy of children. For this purpose, out of school activities such as planting seedlings and growing vegetables in playgrounds have the potential to support children's learning in various ways. However, further understanding of the potential contribution of this subject to the child development in primary school contexts is needed. Thus, Radmard, Karataş, and Öksüz-Gül (2021) stressed that to improve students' environmental literacy and to provide more sustainable schools and ecological learning concepts should have a more prevalent place in academic works in Turkey. Primary schools should create opportunities for the implementation of eco pedagogy.

The last findings of the study were suggestions offered by teachers to improve the quality of physical learning environments of primary schools. All participating teachers agreed that physical infrastructure deficiencies should be eliminated, physical learning areas should support modern educational approaches, and old schools should be rebuilt. Furthermore, teacher competencies should be increased to benefit from learning areas in the most effective way. In this context, the views of the participants revealed the security problem of schools, crowdedness, and improvement of the playground. The participants expressed the views on reflecting regional features to the architectural structure, taking the views of teachers in the design of the physical learning environments of the schools, and the children's scale of the schools (small, low-rise, the suitability of the materials to children). It has been reported that the curriculum should especially support activity areas where children can interact with the community. These results are compatible with the literature. The scientific studies indicated that the arrangement of primary school buildings and classrooms contributes the development of students' basic language skills (Tanner, 2009), and wider and more orienting corridors resulted in better learning progress. Thus, the physical areas of school should be wider to movement and circulation. In this study, participants stated the importance of wider scale areas for student development. Besides, participants indicated the using of individual display to promote child's interest for school. Previous studies have confirmed that individual display also plays a role in developing a sense of belonging of children, and the layout of classroom impacts on attitudes to express of children, and the importance of environmental arrangements for individual differences (Barrett, Davies, Zhang, & Barrett, 2015). Finally, the findings of this study pointed out the conflict between the current teaching approach and learning environments, similar to the findings of previous studies (Mellor, 2016).

Limitations of the Study

Although this study descripts the views of classroom teachers, it had some limitations. First of all, the study was designed with a case study; the data collection method was focus group interviews only. The data triangulation may contribute to achieving a broad picture of the conditions of primary schools. The second limitation of the study is the sample size. Despite the maximization of participants

working in rural and urban schools from the east and west regions of Turkey have the potential to give some common and exclusive findings, the sample size (the participants) could be larger to provide a higher level of data saturation. Despite the qualitative study allow analytical generalization to draw theoretical inferences from the findings (Yıldırım & Şimşek, 2016), fewer participants can be at risk for data saturation.

Implications and Recommendations

The following implications can be given for the physical learning environments of primary schools:

- First of all, the infrastructure problems of the schools should be solved and the schools should be restructured.
- Classes should be large enough to accommodate individual and group work.
- Primary schools should not be crowded.
- Primary school buildings should have minimal floors.
- Primary schools should be an area of interest for students. Therefore, students' views should be taken into account in the architectural and physical space arrangements of the school. 21st-century schools can be the basis for necessary adjustments.
- Primary schools should be an area where students socialize. For this, the playground, classrooms and common areas of the school should meet the social needs of the students.
- Schools must be safe. Safe schools should not be thought of as places only monitored by cameras. Furthermore, the fact that the interactive environments in the school allow social interaction, adult support, and more activities for children to help create a safe school.
- The school and the ground should be environmentally compatible and sufficient to facilitate the curriculum.
- Cafeterias should be large enough to reduce crowded accommodation.
- There should be special areas in the school that welcome parents.
- Playgrounds should be large so that primary and secondary school students can be separated from each other.
- Teachers should be informed about the arrangement of learning environments so that they can effectively benefit from all areas of the school.

Ethical Considerations

An ethical approval was obtained from the Ethics Committee to conduct the study (Project number: E-30237869-050.99-66327).

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