

Opinions of School Administrators on the Physical Characteristics of the Schools

The purpose of this study is to examine the opinions of school administrators on the physical characteristics of the schools where they work. The study group is 10 primary school administrators in Aydın/Turkey. Semi-structured interviews were conducted, and inductive content analysis was utilized in the analysis of data. In the study, it was concluded that most of the participants found the physical structure of the classrooms suitable for implementing the curriculum. It was emphasized the deficiencies, such as the size, temperature, lighting, and sound system of the classrooms. Most of the participants found the school garden suitable as a resting area and described the school canteen and school corridors as insufficient. It was revealed that most of the schools had additional rooms that helped the education process. The participants mostly identified the ideal school building with buildings that have multi-purpose meeting and sports halls, offer full-time education, and provide a suitable environment for various educational activities. The features that the participants wanted to change in their schools were shaped according to the qualities they wanted to have in an ideal school.

Keywords: *Case study, physical characteristics of schools, school administrators, school buildings*

Introduction

Many factors affect the effectiveness of the educational process, such as students, teachers, curriculum, environment, and opportunities. The presence, amount, and relationship of these factors can also change the direction and size of this effect. Schools, the environment where education takes place, are one of the most important factors affecting this process. For an effective education to take place in schools, the physical infrastructure of the schools should be in harmony with the achievements and the learning process, and the environment should be designed appropriately (Yenice, 2013). Besides, the school buildings should meet the needs of students, teachers, and administrators (Karasolak, 2009). Physical, educational, and social landscaping should be done in school buildings to meet the needs of all stakeholders (Karasolak & Sarı, 2011).

The environment is created by the combination of educational structures, imagination, and technical knowledge. It is a combination of abstract and concrete values, such as ecological, technological, social, political, moral, and aesthetic (Ministry of Education, 2015). The suitability of the educational environment means that the physical characteristics of the schools, staff, equipment, and tools are consistent with the content and objectives of the curriculum, and they are organized in a way that cooperates with all the elements that affect learning (Arabacı & Çıtak, 2017). Having a suitable physical arrangement in educational environment has functions such as making

1 students learn more easily, making students physically comfortable, and
2 motivating them to the lesson (Işık, 2020). For this reason, examining the
3 suitability of the environment where the education takes place will allow
4 regulating the variables in the physical environment to meet the needs of
5 teachers, students, administrators, and parents. School administrators have an
6 important position as leaders in creating, managing, and maintaining an
7 effective school environment (Helvacı & Aydoğan, 2011). Considering the
8 effect of school administrators on the implementation of the curriculum and the
9 power to influence teachers' relations with the school administration and each
10 other, the opinions of school administrators on the effectiveness of school
11 buildings are important (Şahan & Taşdemir, 2019). In this study, it is aimed to
12 examine the effects of the physical properties of school buildings on the
13 education process in line with the opinions of school administrators. For this
14 purpose, answers to the following questions were sought:

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- What are the participants' views on the adequacy of the physical characteristics of the schools they work at?
- What is the physical perception of the participants as an “ideal school”?

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Literature Review

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Physical Characteristics of School Buildings

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Classroom, laboratory, workshop, meeting room, gymnasium, music room, library, canteen, and school garden are among the important physical equipment in schools (Akbaba & Turhan, 2016; Işık, 2020). In addition, the size of the school, lighting, heat, noise, and color selection are stated as physical features that significantly affect the functioning of education (Akbaba & Turhan, 2016; Aydoğan, 2012). In school buildings, careful planning should be made for classrooms and common areas such as the garden, canteen, gym, and library (Işık, 2020). Karasolak and Sarı (2011) also suggest that there should be usage areas such as sports and conference halls, libraries, and canteens that are structured for the purposes of education in school buildings. These areas should be configured under the common use in schools that are not sufficient size. The features that should be found in school buildings (Işık, 2020) are being suitable for the student population and the developmental structure of the students, giving confidence to the students, being sheltered, clean, well-maintained, and suitable for health conditions, having a garden and closed areas for various activities, and having adequate equipment.

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Considering the effects of school building structures on education, certain features must be present in all school buildings to minimize the negative effects of differences in physical conditions. Some standards have been set by the Ministry of National Education for primary and secondary school buildings in Turkey. It is expected that all schools will be organized under these standards (Gültekin, Aruntaş, & Gün, 2014). According to the Educational Buildings

1 Minimum Design Standards Guide (2015) prepared by the Ministry of National
2 Education, renewable energy sources should be actively used in the design of
3 schools. Maximum use of daylight, natural ventilation, and energy savings
4 should be achieved. The designs should also include innovative facades that
5 vary according to the needs of the district or school. Flexibility and adaptability
6 to allow for future changes are key requirements in the design of a school.
7 Lighting, ventilation, sound, and heat comfort are prerequisites for a successful
8 education. In primary schools, there should be areas and tools that will allow
9 students to engage in various sports activities, and canteens should be planned
10 to be in the schoolyard for ventilation and cleaning (Ministry of National
11 Education, 2003; Yılmaz, 2012). School gardens should be created within the
12 framework of security measures, away from traffic, noise, and air pollution
13 (Ministry of National Education, 2015).

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15 **Reflections of Physical Characteristics of Schools on Education**

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17 Schools need to have a good physical structure to provide effective
18 education (Helvacı & Aydoğan, 2011). Arranging the physical characteristics
19 of schools in accordance with student development is important for them to
20 have a peaceful and productive learning process (Veltri, Banning, & Davies,
21 2006). Achieving the educational goals of schools depends on teachers'
22 professional knowledge and skills, as well as the capacity of schools to respond
23 to external demands (Stosich, 2016). The characteristics of learning
24 environments can have a direct impact on students' motivation, attention,
25 interest, and performance (Miller, Erickson, & Yust, 2001). The physical
26 characteristics of schools affect the quality of education (Kalfa, 2006;
27 Karasolak, 2009), the psychological features of the individuals involved in the
28 education process (Dağlı & Gençdal, 2018), and their healthy development
29 (Yenice, 2013). For students to increase their success level and use their talents
30 in the best way, educational environments that increase their motivation should
31 be created (Terzioğlu, 2005).

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A suitable school environment for educational activities can help increase
33 student success by ensuring that students attend classes regularly (Al Şensoy &
34 Sağsöz, 2015). Baker and Bernstein (2012) also state that collaborative and
35 student-centered learning spaces, which have been rearranged according to
36 changing needs, facilitate the learning processes of students. Creating learning
37 environments suitable for student characteristics positively affects students'
38 performance (Ariani & Mirdad, 2016; Earthman & Lemasters, 2009;
39 Schneider, 2002; Zubrzycki, 2013). In many studies, it is stated that the
40 physical conditions of schools directly or indirectly affect student achievement
41 and learning levels (Al Şensoy & Sağsöz, 2015; Earthman, 2004; Edwards,
42 2006; Lyons 2001; Tanner, 2009). Many physical characteristics of schools,
43 from wall color to ventilation, affect not only student performance but also
44 teachers' performances and motivations (Buckley, Schneider, & Shang, 2004;
45 Earthman, 2004; 2002).

1 The effectiveness of the school garden, which is the resting area of the
 2 students, is effective on the cognitive, social, and emotional development of the
 3 students (Passy, Morris, & Reed, 2010). School gardens arranged to increase
 4 their interest in learning can also improve students' performance in lessons.
 5 Students' creativity, interaction with nature, and cooperation skills become
 6 more effective in such environments (Papadopoulou, Kazana, & Armakolas,
 7 2020). For example, in the study conducted by Malone and Tranter (2003), it is
 8 concluded that students' interactions are better in schools, with greener
 9 landscaping and offering a greater variety of stimuli than in other schools. In
 10 the study of Özdemir and Yılmaz (2008), it is pointed out that schools with
 11 large and green gardens that allow students to do physical activities increase
 12 the quality of interaction between students, and students' body mass indexes
 13 are lower in such schools.

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Methodology

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Research Design

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The Study Group

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The study group of the research comprises school administrators of 10 primary schools in Aydın Province Efeler district. The maximum variation sampling method was used to determine the study group. Semi-structured interviews were conducted with the administrators working in primary schools in Aydın/Efeler, which have different regional characteristics and represent different socioeconomic levels (three low, four middle, and three high socioeconomic levels). The building age of the schools where the participants work varied between 10 and 56 (129 before restoration). The duties of the participants in the institutions, together with their code names, are presented in Table 1.

1 *Table 1. Personal Information about the Study Group*

Code Name	Duty	Socioeconomic Level of the School
Ahmet	Vice Principal	High
Fatih	Vice Principal	High
Kemal	Vice Principal	High
Pelin	Vice Principal	Middle
Engin	Principal	Middle
Erdal	Principal	Middle
Osman	Vice Principal	Middle
Can	Vice Principal	Low
Hakan	Principal	Low
Kenan	Principal	Low

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Data Collection Tools

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5 A semi-structured interview form was used in the data collection process.
6 While preparing the interview form, first, the topics to be discussed in the
7 research were determined through the conceptual framework. General and
8 open-ended questions were prepared in which the participants could present
9 their views on the physical structures of the institutions they work. The
10 questions in the interview form include the adequacy of the physical features of
11 the school buildings (classrooms, additional rooms, equipment, school
12 corridors, garden, and canteen, etc.), the features that should be found in an
13 ideal school building, and the features that are desired to be changed for the
14 physical structure of the institutions. After the expert opinions, the draft of the
15 interview form was edited, and it was given its last form.

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Data Collection and Analysis

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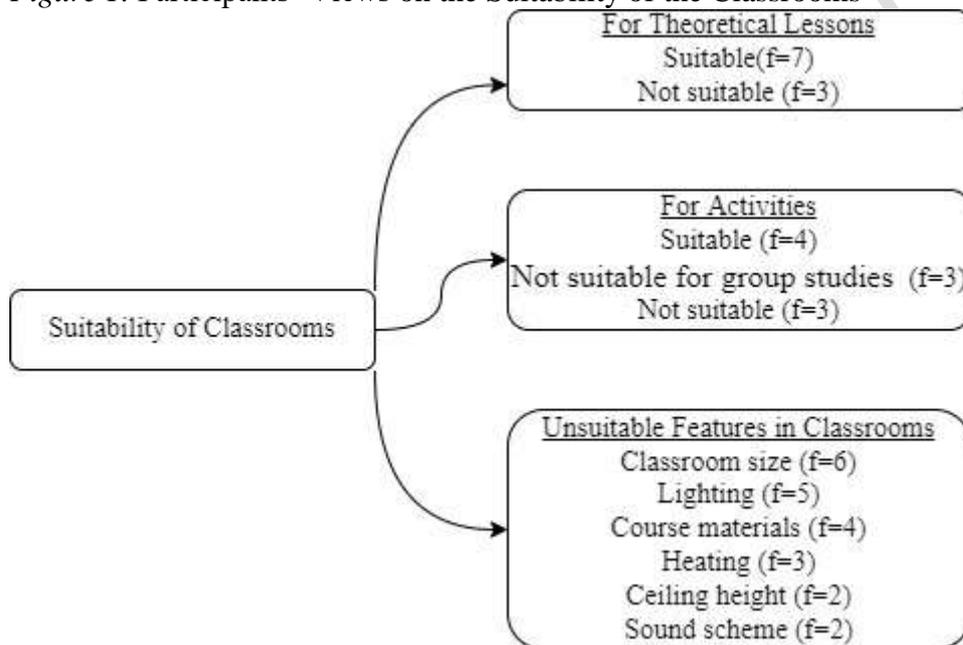
Semi-structured interviews were conducted at the institutions where the
participants work. The timing of the interviews was determined according to
the preferences and workload of the participants. Before the interviews, the
participants were informed about the purpose of the research. The interviews
lasted between thirty and forty minutes. During the interview, the data was
recorded with a tape recorder and then transcribed. In the analysis of data,
qualitative inductive content analysis, which is defined as the systematic
coding of data according to certain themes or categories, was used (Fraenkel,
Wallen, & Hyun, 2012). Before the data was analyzed, codenames were given
to the participants. By reading the written data, meaningful units were
determined in line with the purpose, codes were created and codes related to
each other were synthesized. While determining the codes, the frequency of
recurrence was noted (Creswell, 2013). After this stage, the data was organized
using visuals, and the views of the participants supporting the themes and
codes were included. To ensure transferability and verifiability in qualitative
research, a detailed description of the findings supported by evidence and
presented as describing the setting and participants, quoting participant
opinions and research notes, and maximum diversity in the sample should be

provided (Merriam, 2009). In this research, while creating the data collection tool, expert opinion was sought. The data was described without adding comments, direct quotations were included, and the data collection and analysis process was explained in detail.

Results

The findings of the participants' views on the suitability of the classes to implement the curriculum are presented in Figure 1.

Figure 1. Participants' Views on the Suitability of the Classrooms



The results showed most of the participants found the physical structure of the classrooms suitable for implementing the curriculum (f=7). Participants who had positive opinions cited the low number of students as the reason. All the participants who had negative opinions stated that the class size was above the capacity, they had to add extra desks to the class, and this caused problems in practice (f=3). Two participants who had negative opinions underlined that they converted rooms, such as laboratories, meeting rooms, and libraries into classrooms because of the increase in the number of students. It was seen that the participants who expressed their dissatisfaction with crowded classes attend schools to a higher socioeconomic level. The statements of some participants were:

“Classes are arranged as 30 students, but we also have 38 students. As soon as the number exceeds 30, we have to add extra rows, the classrooms get crowded, and the noise is high. In that case, we find it difficult to teach the lessons, but other than that, I find it appropriate.”(C1)

1 *“It is convenient for our school since we have a small class size. Classes are 12-*
2 *13 people. We have a maximum of 21 students and it is comfortable in that*
3 *respect. But the students are absent at regular intervals. When it's time for*
4 *apples, grapes, and figs, they go to pick them. When they miss the lessons, the*
5 *teacher has trouble explaining, and there is no opportunity to practice.”(C10)*
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7 Some participants stated the classrooms were suitable for individual and
8 group studies (f=4), they were suitable for individual studies but not for group
9 studies (f=3), and they were not suitable for both study patterns (f=3). The
10 participants who had positive opinions stated they found the classrooms
11 appropriate because of the small number of classrooms, while the participants
12 who had negative opinions expressed the classrooms were insufficient due to
13 the crowded classrooms. The examples of some statements were:

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15 *“If teachers are going to have group work, they can organize the class and*
16 *change the shape of the desks. So there is no problem.” (C8)*

17 *“I find it insufficient. There are too many desks in the classroom. We can't*
18 *use anything else so that we practice.”(C2)*
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20 Most of the participants stated the classrooms were small (f=6). Some
21 participants pointed out it was too hot (f=3), too dark (f=3), or too bright (f=2)
22 because of the sun in the summer and the heating in the winter. Some
23 participants indicated there were no deficiencies in their classrooms (f=3). Two
24 participants expressed they had problems with acoustics because of the lack of
25 sound systems. Some examples of the quotes were:

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27 *“The light should hit from the left in the classroom environment, but of course,*
28 *there are also classes where the light hits from the right because of the location*
29 *of the school. The northern classrooms and downstairs are getting dark. Lighting*
30 *fixes the problem, but only up to a point. The Ministry of National Education is*
31 *sending a letter so that if there are 4 lamps in the classroom, turn off two of them.*
32 *In cold weather, they can burn the heaters a lot, then it becomes a bit of a*
33 *problem. We don't have a problem with sound. It's just that sometimes there are*
34 *students who have trouble seeing the board, they sit in the back and we change*
35 *places.” (C1)*

36 *“There are also areas missing regarding the location of the building. Our*
37 *windows are large, and plenty of light enters, but this varies from the location of*
38 *the classroom. The old schools were steeper, and they received better light.*
39 *Classrooms are spacious. The sound system is not available in every classroom.*
40 *The class at the bottom of the speaker gets uncomfortable when an announcement*
41 *is made. The feature of the dome-like structure is that it collects sound, but they*
42 *do not pay attention to it in our buildings. Acoustics is the most efficient way of*
43 *transmitting sound, but it is ignored too.” (C7)*

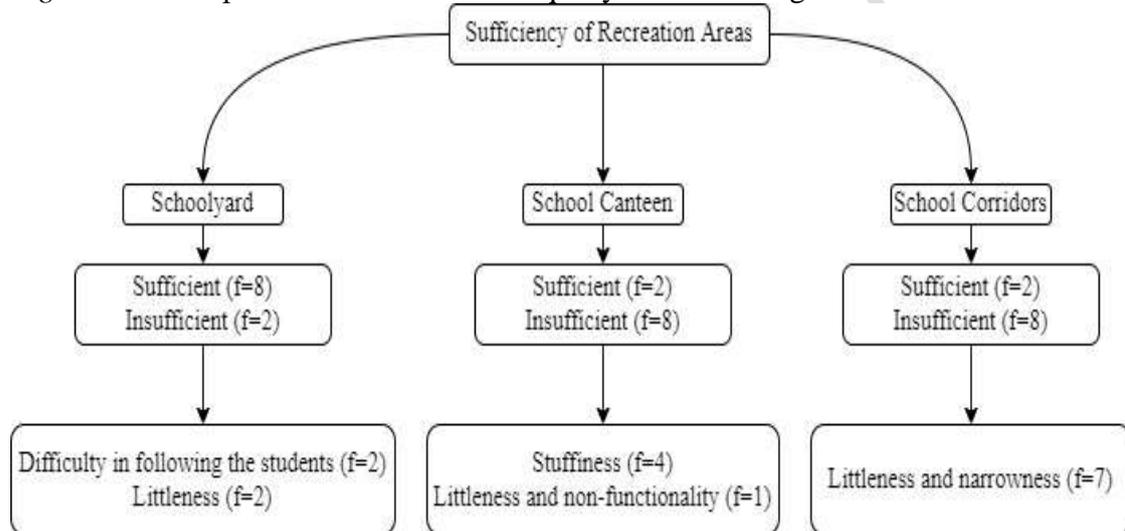
44 *“All classrooms have computers. When the computer first came, nobody wanted*
45 *it, because we did not know how to use it. When the projector came, they couldn't*
46 *do without it. They said how would I work otherwise. If you use these tools and*
47 *prepare the curriculum according to the student, it will be useful. Technology is*
48 *good, but it should be used consciously. The teacher downloads something from*
49 *the internet, brings it, and uses it without even checking it. This should not be*

1 done. The teacher should arrange the curriculum according to the level of the
 2 student in the class.”(C4)

3 “We do not have any equipment in the classrooms other than the blackboard,
 4 maps, and materials prepared by the teacher and the student. We feel the lack of
 5 projector and computer. But the state does not provide them to us and we can’t
 6 afford them. It is expected that this equipment will be delivered in 4-5 years.”
 7 (C9)

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 9 The findings of the participants’ views on the adequacy of the resting areas
 10 are presented in Figure 2.

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 12 *Figure 2. Participants’ Views on the Adequacy of the Resting Areas*



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 15 As seen in Figure 2, most of the participants (f=8) considered the school
 16 garden as a suitable resting area, and they found the school canteen and school
 17 corridors insufficient for resting. Some participants stated they had difficulty in
 18 following the students (f=2) because the school garden was too large (f=2) and
 19 that the school garden was not wide enough (f=2). Considering the usage areas
 20 of school gardens, it was seen that they were only used for sports activities
 21 (f=8). In some schools (f=2), it was stated the garden was used in other lessons
 22 as well. Regarding the school canteen, they expressed their inadequacy because
 23 of reasons such as being stuffy (f=4), small, and dysfunctional (f=1). One
 24 participant declared that there was no canteen in their school. When the
 25 opinions of the school corridors were examined, it was seen that most of the
 26 participants (f=7) thought that there was not enough space in the corridors.
 27 Some participants’ statements were:

28 “Our garden is wide, and we have a carpeted field. There are resting areas, but
 29 because of the 5-minute break for rest, children cannot use the area. The break
 30 ends until the children go down to the garden.” (C4)

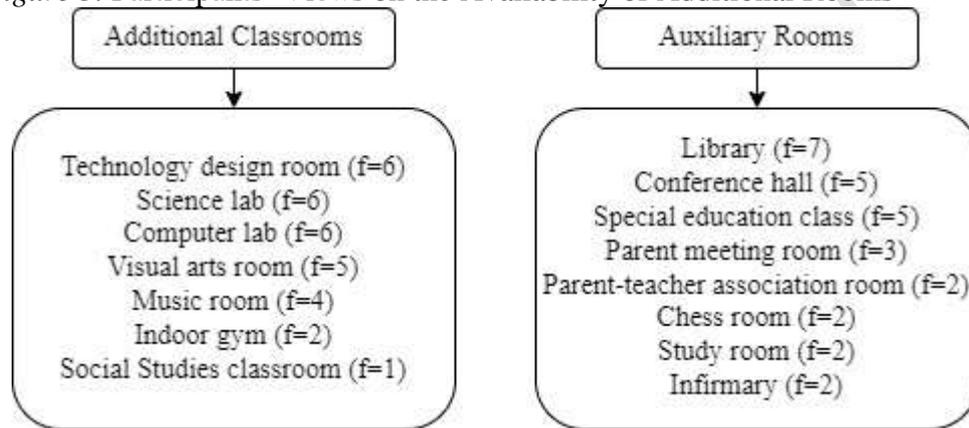
31 “We have basketball, volleyball, football, and badminton courts. The instructors
 32 of fields such as judo and athletics come from the youth sports center and give
 33 courses. With the contribution of the agriculture lesson and science teacher, we
 34 organized the garden and planted saplings.” (C8)

1 “School canteens are always built inside the building on the ground floor in new
 2 buildings. It stinks, even with the ventilation. Our school's canteen was built
 3 outside, with the school's means. There are canteens saved the day, far from
 4 being perfect.” (C7)

5 “Our corridors are not very suitable for activities such as chess and table tennis.
 6 We have adequately equipped boards, and we see it is effective on students.”
 7 (C5)

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 9 The findings of the participants’ views on the availability of additional
 10 classrooms to assist the lessons is presented in Figure 3.

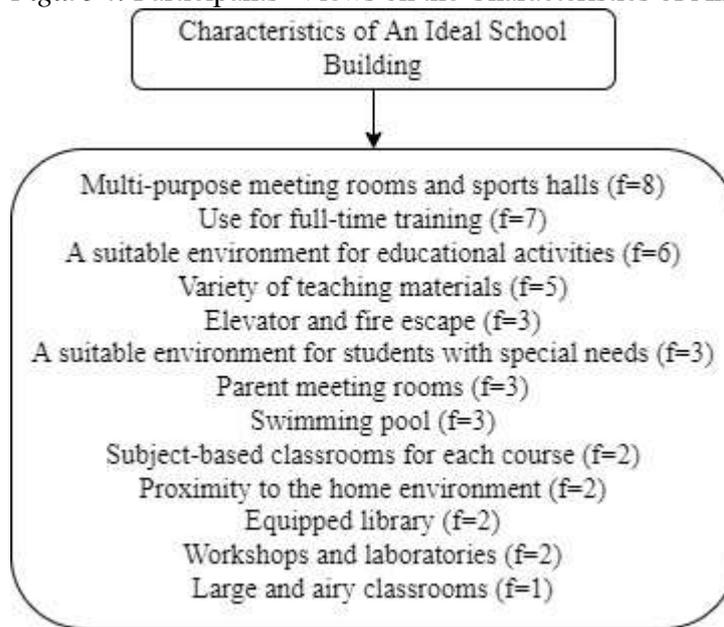
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 12 *Figure 3. Participants’ Views on the Availability of Additional Rooms*



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 15 As seen in Figure 3, it was seen that most of the schools had additional
 16 rooms such as a library (f=7), technology design room (f=6), science laboratory
 17 (f=6), and computer laboratory (f=6). Participants working at schools that had
 18 separate subject-based classrooms for various courses considered these
 19 classrooms were adequately equipped. It was stated by two participants that the
 20 departments reserved for courses such as the science laboratory and the visual
 21 arts room were converted into classrooms because of the crowdedness of the
 22 schools. Participants at schools that did not have a sufficient number of
 23 additional classrooms expressed that this was because of a large number of
 24 classrooms and insufficient economic conditions.

25 The findings of the participants’ views on how the ideal school buildings
 26 should be are presented in Figure 4.

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1 *Figure 4. Participants' Views on the Characteristics of An Ideal School Building*

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The results showed most of the participants stated that ideal schools should have multi-purpose meeting rooms and gymnasiums that enable various educational, sporting, and social activities (f=8), provide full-time education instead of dual education (f=7), and have a suitable environment for various educational activities (f=6). Some participants' views on the characteristics of ideal school buildings included providing the materials and technological equipment to the students for the learning and teaching process (f=5), having a fire escape and an elevator (f=3), suitable features for students with special needs (f=3), parent meeting rooms (f=3), a swimming pool (f=3), a subject-based classroom system (f=2), a well-equipped library (f=2), workshops and laboratories (f=2), and being close to the home environment (f=2). Some examples of the quotes were:

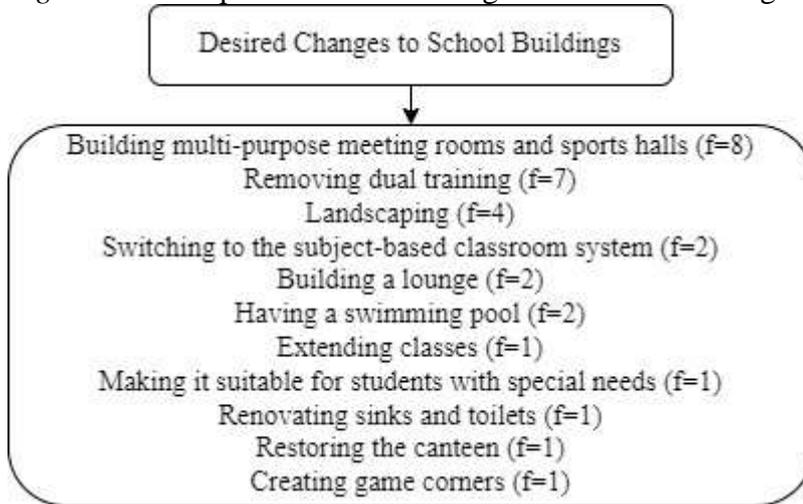
"First, it should be in such a way as to allow full-time education. There must be multiple halls; conference and meeting rooms, and infrastructure installations. Classroom ceilings should be a little high. The gym is a waste when we look at the conditions of the country, but of course, it would be very good. There should be rooms where parents can meet the students alone. For example, the parent-teacher association does not have a special room." (C7)

"There should be a science lab, a music room, and a computer lab. There should be an indoor gym under the building. Better have a conference room. We make parents' meetings in classrooms or the hallway. It should not be like a business center, it should show that it is a school." (C10)

"I can say that our school is ideal. Toilets for the disabled, elevator, ramp at the entrance and exit, separate subject-based classrooms, and gymnasium. These are the features that an ideal school should have." (C8)

1 The findings of the participants' views on the features they want to change
2 in the institutions they work at are presented in Figure 5.

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4 *Figure 5. Participants' Desired Changes to School Buildings*



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7 As seen in Figure 5, most of the participants stated they wanted to build
8 multi-purpose meeting rooms and sports halls (f=8) and to switch to full-time
9 education (f=7). Some participants' views included landscaping for educational
10 activities (f=4), transition to the subject-based classroom system (f=2), building
11 a resting room (f=2), building a swimming pool (f=2), and expanding
12 classrooms (f=1). They indicated they wanted to make it suitable for students
13 with special needs (f=1), renovate sinks and toilets (f=1), restore the canteen
14 (f=1), and create play corners (f=1). Based on this finding, it can be said that
15 the participants wanted changes that could be effective not only for the
16 cognitive development of the students but also for their social, affective, and
17 psychomotor development. These requests were in line with the participant's
18 perceptions of the ideal school. The quotes of some participants were:

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20 *"I would like to build a multi-purpose gym. I would like to make play corners. I*
21 *would like a school that is large enough to allow for full-time education. The*
22 *breaks between lessons are very short, students cannot throw their energies*
23 *away. As school administrators, we have to come very early in the morning and*
24 *leave late in the evening. Children also can't get enough sleep, they have*
25 *nutritional problems which cause learning difficulties."* (C1)

26 *"Education is not about the building. While students do not even bring pencils*
27 *and notebooks, we are trying to bring technology and beauty to the building."*
28 (C4)

29 *"Most of all, I would like to abolish dual education and switch to full-time*
30 *education. Additional works should be possible after 3 o'clock. Teachers want to*
31 *do it voluntarily, but there are no classrooms, they cannot do it."*(C7)

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Conclusion and Discussion

In the study, it was concluded that most of the participants found the physical structure of the classrooms suitable for implementing the curriculum. Negative opinions are usually because of the crowded classrooms. Expressing that the classrooms are inadequate in some aspects, the participants emphasized the deficiencies, such as the size, temperature, lighting, and sound system of the classrooms. Schneider (2002) acknowledges that school buildings affect learning, and physical characteristics of schools such as noise, heat, light, and ventilation are effective for students and teachers. It is reported in various studies that physical school features such as sound system, noise, air quality, crowd, and seating arrangement influence students' performance (Earthman, 2004; Kelting & Montoya, 2011; Lackney & Jacobs, 2004; Usman & Madudili, 2019; Yang, Becerik-Gerber, & Mino, 2013; York, Gibson, & Rankin, 2015). Lyons (2001) states that temperature, heating, air quality, lighting, and acoustics are powerful components that hinder or increase student performance. That the classroom receives natural light and there are two-sided windows in the classroom has the effect of facilitating the learning process and relaxation of the eyes (Tanner, 2009). Crowded classrooms cause problems such as insufficient space and equipment per student, reduced social interaction between students and teacher-student communication, and difficulty in classroom management (Blatchford, 2003; Blatchford, Bassett, & Brown, 2005; Kubanç, 2014; Yaman, 2010). Winterbottom and Wilkins (2009) concluded in their study that lighting higher than the recommended level, which can cause headaches and affect visual performance, was used in most classrooms. Gök and Gürol (2002) and Yılmaz (2012) concluded in their studies that there were more students than the capacity in primary schools, and this caused some inadequacies. Dağlı and Gençdal (2018) concluded that teachers' perceptions of the physical conditions of school buildings were partially sufficient. In Kaplan's (2014) study, it was concluded that the teachers did not find their schools physically adequate; the buildings were not designed for students with disabilities, and they did not meet the needs of both teachers and students.

According to another result of the study, most of the participants found the school garden suitable as a resting area and described the school canteen and school corridors as insufficient. There are also different studies stating that the gardens in school buildings are insufficient to meet the needs of students (Akbaba & Turhan, 2016; Aksu & Demirel, 2011; Işıkoğlu, 2007; Kelkit & Özel, 2003; Vural & Yılmaz, 2018; Yılmaz, 1995). Areas where children can play support their psychological and physical development, help them get to know the environment and socialize, and increase their attention and sense of responsibility (Şişman & Gültürk, 2011). When children interact with nature, they can improve their ability to take responsibility, solve problems, establish social relationships, ask questions, learn, and put what they have learned into action (Uzunali, 2021). Schoolyards should be accessible places where children can do physical activities, play games, and allow children to develop social

1 relations (Pouya & Bayındır, 2021; Tandoğan, 2014). School corridors are
2 transition and focal points within the building. They also should create a
3 positive atmosphere with their width and elements because they are used as
4 play, exhibition, and resting areas (Cilve, 2006). Yılmaz's (2012) research
5 results show that school corridors are not wide enough. In addition, most of the
6 students shop at school canteens and have at least one meal with the products
7 they buy from the canteen. For this reason, school canteens have an important
8 place in students' nutrition and consumption habits (Ateşoğlu, 2011). It is also
9 stated in various studies that school canteens do not meet the needs (Akbaba &
10 Turhan, 2016; Üçeş Harmanoğulları & Yapıcı, 2018).

11 According to the results of the research, it was revealed that most of the
12 schools had additional rooms that helped the education process. Participants
13 working in schools that had separate practice classrooms for various courses
14 considered these classrooms were adequately equipped. In some schools,
15 additional rooms have been used as classrooms because of the large student
16 population. Yılmaz (2012) specified that the libraries and additional rooms
17 were not sufficient in the schools where he conducted his research. Hotaman
18 (2018) stated that schools were insufficient in terms of physical equipment to
19 support students' different intelligence areas. In the study of Şahan and
20 Taşdemir (2019), the lack of laboratories and materials was also expressed.
21 The diversification of the tools in the classrooms in a way that appeals to the
22 different sensory organs of the students is effective in facilitating learning and
23 making it permanent (Yiğit, Alev, Özmen, Altun, & Akyıldız, 2013). In the
24 literature, there are studies that express the effect of teaching lessons according
25 to the branch-based classroom system in schools, facilitating the use of lesson
26 materials and increasing learning (Akgün, 2005; Ersöz, 2012; İbret, Bayraktar,
27 & Kocaman, 2011; Kıryak & Altun, 2019; Özyürek, Pınarkaya, & Taş, 2016;
28 Özyürek, Pınarkaya, Taş, & Apaydın, 2017; Topçu, 2013).

29 In the study, it was concluded that the participants mostly identified the
30 ideal school building with buildings that have multi-purpose meeting and
31 sports halls that allow various educational, sports, and social activities, offer
32 full-time education, and provide a suitable environment for various educational
33 activities. The features that the participants wanted to change in their schools
34 were shaped according to the qualities they wanted to have in an ideal school.
35 In Özenç's (2020) study, classroom teachers expressed the features they want
36 schools to have as being equipped with technology, having design skill
37 workshops and large and spacious classrooms, allocating time for socio-
38 cultural and sports activities, and being like a home environment. In the
39 research conducted by Aktürk-Çopur (2017), primary school students remarked
40 they wanted features such as a gym, pool, playground, separate classrooms for
41 each lesson, more natural areas, zoo, library, information room, smart board,
42 science/experiment corners. In the study of Gökdaş and Ak (2019), it was
43 determined that secondary school students wanted a school garden with more
44 green areas, wide and clean classrooms, and technology-equipped schools.
45 These studies show that teachers and students have a common view of school
46 administrators in many respects regarding the features that should be found in

1 an ideal school building. Schools should offer effective indoor and outdoor
 2 qualities, include new technologies, and connect the learning process to the
 3 outside world to increase students' motivation (Ariani & Mirdad, 2016).
 4 Necessary physical arrangements should be made in school buildings in line
 5 with the needs of children in need of special education and students of all age
 6 groups (Aydoğan, 2012; Karasolak & Sarı, 2011).

8 **Limitations and Implications**

9
 10 This research is limited to the opinions of school administrators working at
 11 primary schools in Aydın Province Efeler district. It can be suggested to
 12 researchers to get the opinions of teachers and students, who are the other
 13 stakeholders of the education process in schools, on the effects of school
 14 buildings on the education process. A semi-structured interview form was used
 15 within the research. It may be recommended to use different data collection
 16 tools in future studies, especially to refer to participatory observations.
 17 Research can be conducted on what can be done to eliminate the deficiencies in
 18 school buildings. Based on the results of the research, it can be suggested to the
 19 practitioners that the design and construction of the school buildings should be
 20 structured under the age group characteristics of the students and in line with
 21 the needs of all stakeholders, and that students should not be admitted to the
 22 schools above the classroom and school capacity. Other suggestions include
 23 arranging the school gardens in a suitable size to allow various activities to be
 24 carried out, using the school corridors not only as a transition area but also as
 25 an auxiliary source for the education and training process, structuring the
 26 school canteens in a way that allow students to have a healthy diet, and
 27 providing the schools with sufficient tools and equipment.

28 **References**

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