Wish Poems of Undergraduate Students Related to Physical Environment of Educational Faculty

Canan Demir-Yıldız[1]

[1]Faculty of Education, Muş Alparslan University, Muş, Turkey

Correspondence: Canan Demir-Yıldız, Faculty of Education, Muş Alparslan University, Muş, Turkey.

Abstract

It is seen that studies on learning spaces in higher education institutions are very few in the literature. However, spaces have the power to affect behaviors and interactions with others. This study aims to determine the wishes of university students regarding the physical environment. For this purpose, it is planned to determine the missing things in the existing physical environment according to the "wish poems" of undergraduate students and their related wishes. Accordingly, the sample of the study consisted of 211 participants among the students of the faculty of education at a state university. In the study, for the purpose of revealing the views of the undergraduate students on the physical environment of their school, they were given a semi-structure, open-ended question format as "I wish there were … in my classroom/faculty/campus" and asked to write down 3 wishes regarding the physical environment. The obtained data were analyzed by using the content analysis method. In the study, different numbers of conceptual categories were reached under each sub-title with the method of coding and imaging. At the end of the study, 578 clear responses were obtained, and after examination, these responses were gathered under 35 conceptual categories in total. The categories about which the students had the most wishes were related to the furniture and equipment in their classrooms (f=51, 26.2%), social (f=33, 18.5%) and scientific (f=32, 17.9%) areas at the faculty and green spaces at the campus (f=61, 29.6%). Consequently, as pioneers of social and scientific change, it is important for universities to reevaluate their existing physical facilities based on the wishes of students in terms of feeding their innovative instincts.

Keywords: School building, classroom environment, school yards, education faculties, undergraduates

1. Introduction

Just as natural environments such as forests, coasts have great effects on people, artificial environments such as school buildings, school yards have a significant effect on people whether or not they are aware of it (Playce, 2012, as cited in Cencič, 2017). The shape, lighting and all facilities and areas of a school building become a significant tool in students' studies. For example, organization of the building itself as environmentally friendly may achieve training of students as environmentally friendly individuals in their lives (Sigurđardóttir and Hjartarson, 2011). For this reason, it has been revealed that the school environment and building that are created have an effect on the climate, health and learning performance of the school (Woolner, 2010). Additionally, there are many studies which revealed that the learning environment affects not only learning but also motivation (Woolner, 2010, Demir-Yıldız and Tatik, 2019). Studies have also revealed that the physical environment of schools have a triggering or preventing effect on several unwanted situations such as the behavioral disorders of students and absence at school (Burke, 2005). It was stated that the school building plays a role as a third teacher that establishes a bridge among the teacher, environment and parent and affects students like a passive or silent lesson (Nicholson, 2005; Day & Midbjer, 2007). Day and Midbjer (2007) stated that some of these passive lessons are explicit, while some are given without awareness. For example, while a garbage bin with a label on it encourages the correct separation and disposal of wastes, overflowing garbage bins encourage littering and pollution of the environment. According to Taylor (2009), the school building and environment serve as a three-dimensional textbook. Bida (2012, as cited in Cencič, 2017) stated that the school environment acts as a hidden curriculum that determines learning. At the same time, it was also reported that the physical environment at schools and in classrooms is a significant trigger of the social relationships of students (Barret & Zhang, 2009).

Taylor (2009) stated that the learning environment needs to be able to encourage students to express and reveal their intellect in different forms in connection to Gardner's theory of multiple intelligences (visual, mathematical, bodily,

musical, interpersonal, intrapersonal, naturalist or linguistic). It is important in terms of success to reduce the factors that will decrease the productivity of students, their effectiveness in given tasks and excitement of working within the classroom and lead to stress (Yağcı, 2004).

For providing skills that are expected of future generations, it becomes important to integrate digital environments and the physical environment. In this context, universities should be guiding. Temple (2007) revealed that planning and design of education environments are triggered by new approaches and views experienced in relation to learning and teaching, as well as the latest technological developments, and thus, these need to be reevaluated. Architects who think of school planning in suitability with what technology brings have started their work with classroom planning first (Özbayraktar, 2005). Several studies have reported that it would have significant effects in terms of learning for the classrooms in the designed schools to be flexible for adaptation to various usage cases, achieve formation of individual spaces rather than fixed classrooms, include various equipment, screens, curtains, lighting and audio setups and have a form that can allow large or small groups to work and vary based on different course subjects (Byers, Hartnell-Young and Imms, 2018). Therefore, universities' consideration of the needs of future generations in the physical aspect is seen important in terms of making other education processes easier, too.

1.1 Research Question

According to Wright and O'Neill (2002), for universities to increase their service quality and therefore organizational image, it is vitally important for them to understand student needs in detail and make students the focus of all organizational effort. Considering in this context, the desires and expectations of students should be periodically determined, and their wishes and complaints need to be considered. With this study, it was aimed to determine both the shortcomings of the physical environment and the wishes of students related to the physical environment via their wish statements regarding the physical environment. For this general purpose, answers were sought for the following questions:

1. What are the wishes of undergraduate students regarding the physical environment of classrooms, the school and the school yard?

2. Under which conceptual category can the wishes of undergraduate students regarding the physical environment of classrooms, the faculty and the campus be gathered, and what are the frequency and percentage values of these conceptual categories?

1.2 Importance of the Study

This study gets its importance from two factors. Firstly, university life is a crucial stage in the life of a student. At this stage, students should train themselves well and contribute to the future with a strong educator staff and good opportunities. The fact that an inspiring and motivating environment has an impact on behavior and motivation makes an important contribution to this process. For this reason, it is considered important to determine the demands of the students regarding the physical environment. The second is to identify deficiencies in the current environment and to guide the steps that students will like.

2. Method

This qualitative study adopted a phenomenological approach. For the purpose of in-dept examination of the existing situation, the perceptions of the participants were collected by using "wish" statements. In this context, by determining the perceptions of students of Faculty of Education on their existing classrooms, faculty and campus, this study aims to determine their basic wishes.

2.1 Participants of the Study

This study was carried out in the academic year of 2018-2019 with the participation of 211 students enrolled at the Faculty of Education at a state university located in the provincial center of Muş in Turkey. 68 of the participants were male (32.3%) and 143 of them were female (67.7%). The distribution of the students according to the departments is as follows: 28 students (13.2%) from the 3rd grade of the classroom teaching department; 38 students (18%) from 3rd grade in social studies teaching; 47 students (22.2%) from 4th grade of pre-school teaching; 33 students (15.6%) from 3rd grade of elementary mathematics teaching department; 29 students (13.7%) from the 4th class of science teaching department and 36 students (17%) from the 4th class of Turkish teaching department were included in this study. According to all these results, the majority of the participants (52.9%) were 4th grade students. The ages of the participants varied in the range of 20 to 32 with a mean age of 20.

2.2 Data Collection

For the purpose of revealing the shortcomings of the physical environment at the school according to the students who participated in the study, they were asked to complete the sentences of "I wish there were … in my classroom/faculty/campus." For this purpose, the students were given papers including these sentences and asked to write down three things they thought that were missing and need to be included in their environment. As word, "wish" is used to start sentences that express wishes, referring to longing or regret (www.tdk.gov.tr). Such a list that is created by this technique which is also known as "wish poems" reflects the areas of interest expressed by participants (Sanoff, 2001:39). These compositions that were written down by the own writings of the students were used in this study as "documents".

2.3 Data Analysis

The analysis of the expressions developed by the participants took place in the five following steps: (1) coding and sorting, (2) example image compilation, (3) category development, (4) achievement of validity and reliability, (5) percentage and frequency calculation for quantitative data analysis.

2.3.1 Coding and Sorting

At this stage, the wishes proposed by the participants were firstly turned into a tentative list based on the intensity of the frequency values. For this purpose, whether or not the participants expressed their writings in a certain form was examined. At this stage, to put it simply, the wishes expressed in the paper from each participant were coded (for example, comfortable desks, several bulletin boards, individual lockers, etc.). Instead of expressing a wish or shortcoming about the physical environment of the school, some participants expressed their wishes and complaints about their instructors and classmates. Therefore, at this stage, papers that did not express a shortcoming or wish regarding the existing physical environment and those that were empty were eliminated. A total of 578 clear responses were obtained.

2.3.2 Example Image Compilation

After eliminating the empty papers and papers of the participants that expressed out-of-context wishes and disturbances, a total of 578 valid responses consisting of "wish statements" were included from a total of 211 individuals. At this stage, the wish poems were evaluated for a second time, and each coding was imaged. This list provided a source for gathering the proposed wish sentences under certain categories and would achieve the validity of the data analysis process of the study.

Additionally, the expressions consisted of one sentence each. After these sentences were coded, they were turned into images, and it was aimed to reach a general category. Among some responses used here, those that were significant were quoted. To show the owners of the wish poems that were quoted, the department, class year and gender of the student were given in parentheses. For example, the expression (Class, 3, F) refers to Class teaching, 3rd grade and female.

2.3.3 Category Development

At this stage, the responses given by the participants and the images that were reached were examined based on their common characteristics. During this procedure, a total of 180 images were reached by analyzing them one by one under 3 different titles (classroom environment, school environment, school yard/campus environment). There were 63 images related to the classroom environment, 63 related to the school environment and 54 related to the campus environment. Based on these images, categories were formed under 3 different titles. Accordingly, a total of 12 categories were formed in relation to the classroom environment (for example, classroom tools and equipment, classroom organization, classroom dimensions, furniture and equipment, etc.). A total of 16 categories were developed in relation to the school (for example, scientific spaces, classrooms towards various purposes, studios, school walls, activity areas, etc.). A total of 8 categories were developed in relation to the campus (for example, green spaces, sitting and resting areas, entertainment areas, sports areas, etc.). Afterwards, the wish poems that were expressed by the participants were examined based on their common characteristics in relation to the physical environment of the classroom, school and campus and turned into images. Afterwards, each image was gathered under a category that represented it the best and presented in a table (Tables 1, 2 and 3). These images were also important in terms of showing which characteristics were reflected by the categories. Accordingly, each image in the wish poems was analyzed based on its *subject* and *source* and by looking at the relationship between the two. Afterwards, each image was related to a category. After this stage, frequency and percentage values were calculated based on a total of 35 categories that were obtained, 180 images and 578 responses given by the participants.

2.3.4 Achievement of Validity and Reliability

The most important criteria that are used to achieve the credibility of research results are validity and reliability. In qualitative research methods, reporting the data that are obtained in detail and explaining how the researcher has reached the results are among significant criteria (Yıldırım and Şimşek, 2005:257). To achieve the validity of the results of the study, the data analysis process and how the categories were obtained were explained in detail. Additionally, the frequency and percentage values of all images that were under these categories were given. Images in each category are tabulated in the findings part, and the statements that were found interesting are quoted in the way expressed by the participants.

For the purpose of achieving the reliability of the study, expert opinions were consulted to confirm whether or not the images under the 35 conceptual categories represented the categories in question. The list of images and the list of the 35 conceptual categories were given to a faculty member in the same department and asked to be matched. After this, the matchings made by the expert were compared to those made by the researcher. In the comparisons, the numbers of *agreement* and *disagreement* were determined, and the reliability of the study was calculated by using the formula developed by Miles and Huberman (1994:64) as Reliability=agreement / (agreement + disagreement). In testing the reliability of this study, an agreement rate of 98% was achieved. The expert whose opinion was consulted in this study associated the following statements with different categories: *Presence of music/concert areas, virtual classroom, activity classroom, drama hall.* In this case, the reliability was calculated as=574/574+4=0.98.

2.3.5 Quantitative Data Analysis

After determining a total of 578 wish statements and associating these with conceptual categories that represent these, the frequency and percentage (%) values of all data were calculated. The frequency and percentage values that were calculated are given in Tables 1, 2 and 3. The categories are also given in the form of graphs that show these frequency and percentage values.

3. Results

The students completed the semi-structured question form for "I wish there were … in my classroom/school/campus" to reveal their wishes related to the physical environment at the school, and as a result, 578 valid responses were obtained. By coding all these valid responses, an example image list was created, and each image was gathered under one conceptual category that represented itself the best. 211 students wrote down at least 1 and at most 3 wish statements. Accordingly, the categories were listed from the one with the highest frequencies to the one with the lowest frequencies and are shown in tables alongside the percentage values (Tables 1, 2 and 3). Here, the conceptual categories and the number of responses (frequency) and percentages under the categories are given. This section firstly presents the categories that were created and the images under them (Tables 1, 2 and 3).

3.1. Images that Eepresent the Wishes of University Students Regarding the Physical Environment of Their Classroom, School and Campus and Conceptual Categories

The responses of the students were coded, and those that were repeated the most frequently and had common meanings were turned into an example image. Tables 1, 2 and 3 show the conceptual categories that were created based on these images. According to Yıldırım and Şimşek (2005), in qualitative research methods, categories are formed in three ways. One of these is coding in line with the obtained responses, turning them into example images and forming categories. As a result of the study, it was seen that all conceptual categories were represented in the wish statements used by the students. The list of the 35 conceptual categories formed based on the obtained data and the images that defined them are given below.

Table 1. Wishes of university students regarding the physical environment of the classroom

Categories (n=12)	Images (n=63)	Frequency (f)	Percentage (%)
Technological tools-instruments and equipment	*Projection=5 Tablet=1 Simulation system =1 Speakers=2 Digital board=3 Technological tools-instruments=5 Computers on desks =4 Smart board =20 Internet connection=2*	43	22.1
Furniture and equipment	*Material cupboard=1 Colorful desks and chairs =1 Hangers=1 Movable desks =3 Robust desks =1 Personal (individual) lockers for students=8 Single seats =7 Comfortable seats =3 Sofa=2 Bookshelf=9 Carpet instead of desks =1 Mattress instead of desks =3 Bulletin boards=5 Carpet=6*	51	26.2
Classroom tools and instruments	*Experiment materials =1 First aid kit =1 Visual materials =5 Game materials =1 Newspapers=1 Music instruments=5 More materials =9 All materials =10 School tools-instruments=4 Materials related to department =1*	38	19.5
Classroom organization	*U pattern=2 Lecture hall =6 Completely different, outside the classical classroom =1 Tidy=1*	10	5.1
Classroom climate conditioning system	*Without heating system =1Air conditioner=1*	2	1
Classroom dimensions	*Broad space =5 Large, empty space =1*	6	3.1
Classroom windows and curtains	*Curtain=5, Smart curtain =1*	6	3.1
Classroom walls (surroundings)	*Colorful walls =1 Pictures from our history =1 Paintings=1*	3	1.5
Classroom size	*Fewer students =7*	7	3.6
Classroom sections	*Painting studio =1 Science center =1 Dramatic play center =1 Laboratory/ experiment space =4 Activity corners =3 Art corner =1 Plant corner =3 Question corner =2 Sand pool =3 A small garden =1*	20	10.3
Classroom health	*Lavatory=1 Spacious =1 Clean=1,2*	4	2
Classroom aesthetics	*Grass=1 Bird houses =1 Flowers=1,2*	4	2
Total N=12	*Images N=63*	194	100%

Matching was carried out by looking at the categories that were accordingly formed and their properties. Some categories were made more specific. Unrelated responses were removed, and a total of 194 clear responses about the classroom environment were obtained. Based on the data that were obtained, the students had the highest numbers of wishes related to the furniture and equipment in their classrooms (f=51, 26.2%). In general, the students wanted there to be lockers where they could leave their materials, books and personal belongings in their classrooms, as well as single, comfortable and movable seats. Therefore, it may be concluded that, in the classrooms of the faculty of education that was selected as the area of the study, there were no student lockers or bookshelves, and the seats were not single seats or comfortable. Accordingly, it may be stated that the wishes related to classroom furniture were more frequent than others. Moreover, technological tools-instruments and equipment (f=43, 22.1%) were the second

most wished category. The most interesting image under this category was about smart boards (f=20). Therefore, it may be stated that some classrooms lacked smart boards. As we are entering a digital period, it may be stated that the students wanted to have their classes in environments with all technological facilities including digital or smart boards and computers for every student. It was also an important finding that a large number of students used wish statements regarding other tools-instruments, materials and equipment in the classroom (f=38, 19.5%). This shows that shortcomings were experienced in the classrooms.

Table 2 shows the imaged and category-matched forms of the wish statements of the participants regarding the school along with their frequency and percentage values. The responses of 9 participants were removed as they were not related to the school environment, while others were removed because they were left blank. A total of 178 clear responses were obtained regarding the school environment.

Table 2. Wishes of university students regarding the physical environment of the faculty

Categories (n=15)	Images (n=63)	Frequency (f)	Percentage (%)
Social spaces	*Social spaces=11 Movie theater =8 Conference hall =2 Library=12*	33	18.5
Scientific spaces	*Planetarium=1 Science center =2 STEM science room =3 Laboratory=24, Study rooms for areas of interest =2*	32	17.9
Classrooms for various purposes	*Activity classroom =4 Application classrooms =3 Classrooms for different subjects/topics =3 Drama hall =5 Lecture halls =1 Technology education classroom =1 Computer classrooms =1 Book reading classroom =1 Music classroom =2 Open-air classrooms =1 Hobby classrooms=1 Material classrooms=4 Amphitheater=1Virtual classroom =2*	30	16.8
Sports areas and equipment	*Sports equipment=1 Swimming pool=6 Pitches=1 Bicycle=1 Astroturf=1,2 Gymnasium=10*	21	11.7
School tools and equipment	*Stationary store for every faculty=1 Materials=6 Music instruments=2 Recycling bins=4*	13	7.3
Green spaces	*Better landscaping=1 Garden=10 Plant corner=1*	12	6.7
Entertainment spaces	*Game areas=2 Game room=2 Activity/Entertainment areas=5 A large school market=1*	10	5.6
School aesthetics and design	*Aquarium=2 Colorful=3 One-Story=1 Elevator=1*	7	3.9
Technological tools-instruments and equipment	*Computer=1 Everything for technology=1 Smart board=2 Internet=1*	5	2.8
School walls	*Polished walls=1 Meaningful writings on walls=1 Portraits and poems of famous poets=1 Paintings on walls=1*	4	2.2
Resting areas	*Sleeping room=1 Benches=1 Areas to stay alone=1*	3	1.6
Eating-Drinking areas	*Kitchen=2 Burger King=1*	3	1.6
Studios	*Art studio=1 Toys studio=1*	2	1.1
Furniture and equipment	*Individual lockers=1 Carpet=1*	2	1.1
Heating system	*Natural gas=1*	1	0.5
Total n=15	*Image N=63*	178	100%

As seen in Table 2, the most significant wishes of the students regarding their school in their wish poems were respectively related to social (f=33, 18.5%), scientific (f=32, 17.9%) and sports-related (f=21, 11.7%) areas. The students wanted to have libraries, social spaces and movie theater among social areas the most. Among scientific spaces, they wanted laboratories (f=24) the most. Among sport-related areas, they wanted a gymnasium (f=10) and sports pitches the most. It may be stated that the students wanted a school building where they could carry out social, sports-related and scientific activities together. Accordingly, it is understood that there was a shortcoming regarding the social, scientific and sports-related spaces at the school, and the students felt a need towards this issue.

One of the most important findings regarding the school was related to classrooms for various purposes (f=30, 16.8%). The students were observed to wish for classrooms at the school for different purposes such as a drama classroom, activity classroom, material classroom, book reading classroom and virtual classroom. In this case, it may be stated that, instead of a single type of classroom and classrooms only for courses at schools, it is a desired situation to have differentiated and enriched, different classrooms for faculties of education. It may be clearly stated that this is also a necessity for faculties of education for pedagogic achievement of objectives related to subjects and activities.

Table 3 shows the imaged and category-matched forms of the wish statements of the participants regarding the campus along with their frequency and percentage values.   206 clear responses were obtained from among the responses related to the school campus, and other responses were removed as they were not related.

Table 3. Wishes of university students regarding the university campus

Categories (n=8)	Images (n=54)	Frequency (f)	Percentage (%)
Green spaces	*Forest=2 Fruit trees=7 More flowers=15 More trees=26 Greening=6 Roses=3 Grass=1 Fruit and vegetable fields=1*	61	29.6
Sports areas	*Walking paths=1 Pool=4 Stadium=1 Tennis court=1 Cycling area=1 Cycling path=1 Ball pit=1 Sports areas=6 Sports equipment=6 Gymnasium=6 Astroturf=3 Football and volleyball pitches=12 Basketball court=5*	48	23.3
Entertainment areas	*Game facilities=1 Hobby gardens=1 Sand pool=4 Amusement park=1 Play pools=1 Toys=1 Game areas=29 Game parkours=2 Park=9 Things to spend time with=1 Game drawings=1 Climbing walls=2*	43	20.8
Sitting and resting areas	*Benches=14 Resting areas=1 Mattresses for sitting=1 Booths=10 Hammock=1*	27	13.1
Scientific activity areas	*Scientific materials=1 Areas to read books=1 Various activity equipment=1 Stable=1 Sowing areas=3 Greenhouse areas=2 Animals=3*	12	5.8
Social areas	*Picnic areas=1 Music/concert areas=1 Zoo=2 Shopping mall=2*	6	2.9
Aquatic areas	*Ponds=4 Waterfalls=1*	5	2.4
Visuality and visual tools	*Historical statues=1 Larger=1 Cultural pictures on walls=1 Tidy=1*	4	1.9
Total n=16	*Image N=54*	206	100%

As seen in Table 3, the wish statements of the students were mostly about green spaces (f=61, 29.6%). Accordingly, the students wanted to see more trees (f=26) and flowers (f=15) at the campus. Secondly, they stated their wishes

about sports areas (f=48, 23.3%). It is seen that they wanted sports areas and areas where they could play football, volleyball and basketball. In this context, it is understood that there were shortcomings at the school's campus regarding sports-related areas. Another issue that was felt incomplete at the campus was related to entertainment areas (f=43, 20.8%). Especially game areas (f=29) and parks (f=9) were found to be the most frequently preferred ones under this category. Therefore, the wish statement of the students was found to be transforming the school's campus into a space where green, sports-related and entertainment activities are provided.

Some examples of the responses of the students related to the physical environment are given below. The wish statements that were selected were randomly taken from the papers of each department.

"I wish there were empty spaces in my classroom where we could take part in activities" (Class, 3, F).

"I wish there were STEM rooms at my school" (Class, 3, F).

"I wish there were a small amusement park at my school" (Class, 3, F).

"I wish there were flowers, camellias in our garden" (Soc.,3, M).

"I wish there were fewer students in each classroom" (Soc.,3, F).

"I wish there were a gymnasium at my school" (Soc., 3, M).

"I wish there were game classroom at my school" (Class, 3, F)

"I wish there were lockers in my classroom" (Class, 3, F)

"I wish there were hobby classrooms at my school" (Pres., 4, F)

"I wish there were climbing walls in the school yard" (Pres., 4, M)

"I wish there were toys studies at my school" (Pres., 4, F).

"I wish there were game areas and a gymnasium in the school yard" (Pres., 4, F).

"I wish there were mattresses for sitting in the school yard" (Turk., 4, F)

"I wish there were classrooms for every course at my school" (Turk., 4, F).

"I wish there were a bookshelf in my classroom, I could easily find and read books" (Turk., 4, F)

"I wish there were nice resting areas in the school yard" (Turk., 4, M).

"I wish there were a science center in the school yard" (Sci., 4, M).

"I wish there were more trees in the school yard" (Sci., 4, F).

"I wish there were a flower and plant corner in my classroom" (Math., 3, F).

"I wish there were activity areas at my school" (Math., 3, M).

"I wish there were sowing/plantation areas in the school yard" (Math., 3, M)

Considering the sentences above, it is seen that the students expressed their wishes about the physical environment based on their needs. Thus, while the statements of the students reflected the situations they desired, they also reflected the shortcomings in the existing physical environment.

4. Conclusion

In this study, it was aimed to reveal the shortcomings of the physical environment of the classrooms, school and campus of university students enrolled at a faculty of education based on their "wish poems". In the study that took place with the participation of a total of 211 students, 578 clear responses were obtained, and by examination, these responses were gathered under 35 conceptual categories. Among the categories, the following were about the classroom: Technological tools-instruments and equipment, furniture and equipment, classroom tools and instruments, classroom organization, classroom climate conditioning system, classroom dimensions, classroom windows and curtains, classroom walls (surroundings), classroom size, classroom sections, classroom health and classroom aesthetics. The categories here such as furniture and equipment, technology, classroom tools and instruments, classroom aesthetics and classroom size were similar to the issues found in the literature. The following categories were about the faculty (school): Social spaces, scientific spaces, classrooms for various purposes, sports areas and equipment, school tools and equipment, green spaces, entertainment spaces, school aesthetics and design, technological tools-instruments and equipment, school walls, resting areas, eating-drinking areas, studios, furniture and equipment and heating system. Furthermore, the following categories were about the campus of the school: Green spaces, sports areas, entertainment areas, sitting and resting areas, scientific activity areas, social areas, aquatic

areas and visuality and visual tools.

This study contributes to the understanding of the expectations of undergraduate students related to the physical environment of faculty of educations at universities. At the same time, the study enables to the authorities to identify needs in the physical sense. It helps to understand the ideal physical setting for undergraduates especially in faculty of educations as it is important to understand what makes the students more eager and motivated in terms of environment. The lecturers, administrators and the authorities should be aware of the power of environment as it affects the behaviors and wellness of students at the same time it facilitates the learning and being more creative.

4.1 Limitations of the Study

This study has some limitations because there are above one hundred universities in Turkey and most of them have a faculty of education. Further they have different architectural design for the buildings, different classroom settings and different landscaping arrangements for campus. However, all state universities have a large and good landscaping arrangements and buildings in general. Therefore, in this study, the physical environment is restricted for only one faculty of education of a state university. The students who have participated in the study may have indicated only their dreams with their wish poems or realities, this is not clear.

5. Discussion

Considering the wishes of the university students in general, it is seen that they included wish statements for opportunities that existed at the university, faculty and classrooms although they existed. For example, there were smart boards and projection in the classrooms, internet and STEM studio at the school, booths, green spaces, tress, flowers and hobby gardens at the campus. The statement of existing opportunities by the students may be interpreted as that these opportunities were inadequate, or they were not sufficiently utilized. Likewise, the students might have not utilized these opportunities or noticed them. Considering all three possibilities, it is seen that there is a need to provide opportunities by which the students could comfortably utilize these facilities and reevaluate the existing facilities.

While the participants firstly stated their wishes about the physical environment of the existing classrooms, they also stated the things they thought were shortcomings. Accordingly, the most frequently stated wishes were in the "furniture and equipment" (f=51, 26.2%) category. It is seen in general that they wanted there to be lockers in the classrooms where they could leave their materials, books and personal belongings and their desks to be single-seat, comfortable and movable. It is therefore concluded that there were no student lockers or bookshelves at the selected faculty of education, and the desks were not single-seat, comfortable or movable. Nevertheless, Soderberg (1976) stated that we are now transitioning from teacher-centered learning environments into student-centered learning environments, and for this, desks and seats in the classroom should be movable to allow easy organization for different learning-teaching activities, or in other words, be flexible. As different classroom organizations serve different pedagogical approaches, classrooms need to be made more flexible (Demir-Yıldız and Tatik, 2019). Developments on the environment may provide time savings, and therefore, become more appropriate for learning. It is important for both teachers and students to have 'individual spaces and tools.' Some physical instruments in the classroom improve comfort, wellness and learning and instruction approaches, and they may therefore increase success (Higgins, Hall, Wall, Woolner and McCaughey, 2005:7). Butin (2000) also stated that student desks are usually seen as the most important part of the furniture and equipment in the classroom. This is because students either work individually in their own desks or organize their desks to form small groups, and this allows them to sit separately. Movable desks allow students to move comfortably within the classroom. Hence, especially desks and seats have great importance in not only formation of an effective learning and teaching environment but also increasing the productivity of students.

The wishes stated by the university students regarding the school were observed to be mostly about social spaces. By stating these wishes, the students showed that there were shortcomings at the school regarding social spaces, or they had a higher desire for social spaces. Similarly, Turkkahraman (2015) stated that schools can survive only as long as they improve the individuality of students and contribute to their socializing. In summary, any education activity or event that takes place at the school should be considered within the entirety of the social structure. A study on primary schools revealed that lack of social spaces at schools affected the learning environment negatively (Wambua et al., 2018). The results of many studies on different course subjects also showed that success rates are higher at schools that have physical facilities such as libraries, game areas and laboratories (Murungi, 2012, Steelcase, 2013). On the other hand, Openshaw (2008) argued that the primary priority of education is to educate students, not providing students with social services, and they stated that social facilities are secondarily important. Although the priority of the social environment is to serve individuals, it also contributes to formation of student groups and their

mobilization as a group.

According to the results obtained from the responses regarding the campus at universities, green spaces, sports spaces and entertainment spaces have had prominence. The physical form of campuses is one of the most important factors that are effective in creating a positive first impression for an institution (Griffith, 1994). Therefore, it may be stated that students desire a campus that can be a living space for them where they can spend time. Similarly, in their correlational study at higher education institutions, Huang (2012) revealed that the learning environment at the campus has a significant role on not only the academic inspirations of students but also their general satisfaction levels. Having areas where students can participate in recreative (cultural, sports-related and art activities, free time activities that can take place in students' spare time) activities allows the individual to obtain pleasure and satisfaction, have fun, rest and socially and individually develop (Karaküçük, 2001). Likewise, Emir (2012) revealed that one of the obstacles to university students' participation in free time activities is related to limited campus opportunities. Similarly, in this study, it was seen that the students wanted to have areas where they could participate in recreative activities they could spend time with.

Today's universities want students to show leadership characteristics and gain critical thinking and communication skills. For students attending university to be ready to keep up with hyper changes, their innovative instincts need to be fed. For this reason, faculties and universities should be able to connect with new trends naturally and fast. To show their expertise in innovation in the competitive environment, universities and faculties of education need to improve infrastructure and technology. In this context, campus design and architecture will be the main catalyst of transforming the society into growth engines (Vel and Higa, 2016). Moreover, the physical environment of universities, which are a dimension of their organizational image, is a noteworthy factor at the stage of student's preference of the university (Ivy, 2001). Therefore, it is recommended to determine the physical shortcomings about the university and faculty environment and adopt an architectural approach based on the wishes of the students. This way, it is expected for student participation, success and sense of belonging to increase. Hence, for faculties of education at universities, the following recommendations may be provided:

• Equipping classrooms with flexible and ergonomic furniture and reorganization of existing equipment in a way to support student comfort and pedagogical approaches may be recommended. It is important to provide areas that will offer students individual spaces and various elements that will increase their sense of belonging such as individual lockers. Additionally, bringing technological tools and instruments, infrastructure and equipment to a higher level and presence of various materials will help students carry out them in-class activities.

• The presence of social areas such as movie theaters and conference halls at faculties of education will make it easier for students to carry out education activities and help them increase their social communications. Formation of various activity rooms and studies at the faculty building based on students' wishes may be recommended. The presence of especially various laboratories where educations of different disciplines can take place will also provide a significant contribution. However, importance should be paid to make it easier for students to access these spaces and make usage of various studios prevalent.

• Provision of areas where students can take part in various social, cultural and sports-related activities by campuses of faculties of education will provide important contributions in terms of organizational image, global competition and success. It is also recommended to increase the green spaces where students can rest.

• For encouraging self-learning (heutagogy-self-determined learning), it is strongly recommended for the physical environment of schools to be more modular and suitable and adopt new technologies and sustainable practices. It is clear that universities that offer a good architecture and landscape will allow individuals to be happy and successful.

Acknowledgements

References

Barett, P. & Zhang, Y. (2009). Optimal Learning Spaces Design Implications for Primary Schools. *SCRI Research Report* /on line/. Retrieved from http://www.oecd.org/dataoecd/38/47/43834191.pdf

Brennan, A., Chugh, J. S. & Kline, T. (2002). Traditional Versus Open Office Design: A longitudinal field study. *Environment and Behaviour, 34*(3), 279-299. https://doi.org/10.1177/0013916502034003001

Brenner, W. A. (Mayıs 2009). A Principal's Guide to On-Site School Construction. *Naitonal Clearinghouse for Educational Facilities*, 1-5. Retrieved from https://files.eric.ed.gov/fulltext/ED508014.pdf.

Burke, C. (2005). *The Edible Landscape of School. In M. Dudek* (Ed.), Children's spaces (pp. 245–277). New York: Routledge. Retrieved from https://www.academia.edu/1321887/Children_Spaces.pdf

Butin, D. (2005). Classrooms. *National Clearinghouse for Educational Facilities.* Washington. http://edfacilities.org/pubs/classrooms,pdf

Byers, T., Hartnell-Young, E. & Imms, W. (2018). Empirical evaluation of different classroom spaces on students' perceptions of the use and effectiveness of 1-to-1 technology. *British Journal of Educational Technology, 49*(1), 153-164. https://doi.org/10.1111/bjet.12518

Cencič, M. (2017). To what Extent Do School Leaders in Slovenia Understand Physical School Environments as a Learning Factor? *C.E.P.S Journal, 7*(2), 141-162. - URN: urn:nbn:de:0111-pedocs-146018

Clabaugh, S. (2004). *Classroon Design Manual: Guidelines for Designing, Constructing, and Renovating Instructional Spaces at the University of Maryland.* The University of Maryland Classroom Design Manual. Version 4.0, Retrieved from https://www.academia.edu/6327938/Classroom_Design_Manual

Day, C. & Midbjer, A. (2007). *Environment and Children: Passive Lessons from the Everyday Environment*. Amsterdam etc.: Elsevier Ltd. Retrieved from https://issuu.com/suhaimimusa/docs/children_and_environment.

Demir-Yildiz, C. & Tatik, R.S. (2019). Impact of Flexible and Non-flexible Classroom Environments on Learning of Undergraduate Students. *European Journal of Educational Research, 8*(4), 1159-1173. https://doi.org/10.12973/eu-jer.8.4.1159

Firlik, R.(1997). Designing New Schools: The Race for Space. *Principal, Mart*, 38-41. ERIC Number: EJ540805

Griffith, J.C. (1994). Open space preservation: An imperative for quality campus environments, *The Journal of Higher Education, 65*(6), 645-669. https://doi.org/10.1080/00221546.1994.11774745

Guillemette, Y. (2005). School Class Size: Smaller isn't better. C.D Howe Institute Commentary, *The Education Papers*, 215. 11-12 [Electronic version] Retrieved from www.cdhowe.org

Hause of Commons Education and Skills Committee (2006-07). Sustainable Schools: Are we building schools fort he future? *Seventh Report of Session*, 1 Retrieved from http://www.educationengland.org.uk/documents/pdfs/2007-cesc-sustainable-schools.pdf

Heschong Mahone Group (2003). Windows and Classrooms: As study of student performance and the indoor environment. *California Energy Commission.* https://doi.org/10.13140/RG.2.2.26759.44964

Higgins, S., Hall, E., Wall, K., Woolner, P. & McCaughey, C.(2005). The Impact of School Environments: A literature review. Design Council, University of Newcastle. *Research & Development*, 1-47. http://hdl.handle.net/1822/55980

Huang, S.L. (2012). Learning environments at higher education institutions: Relationships with academic aspirations and satisfaction. *Learning Environments Research, 15*,363-378. https://doi.org/10.1007/s10984-012-9114-6

Ivy, J. (2001). Higher education institution image: a correspondence analysis approach. *International Journal of Educational Management, 15*(6), 276-282. https://doi.org/10.1108/09513540110401484

Karaküçük S. (2001). *Rekreasyon boş zamanları değerlendirme.* Gazi Kitabevi, Ankara.

Montello, D. R. (2007). The Contribution of Space Syntax to a Comprehensive Theory of Environmental Psychology. Proceedings, *6th International Space Syntax Symposium,* İstanbul. Retrieved from https://geog.ucsb.edu/~montello/pubs/SpaceSyntax_invited.pdf

Murungi, C.G. (2012). Early childhood education for the pre-school age going children: The Issue of Low Enrolments in Kenya. *Journal of Education and Practice, 3*(6), 48-49. Accessed from http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.970.9117&rep=rep1&type=pdf

National Association of School Nurses. (Haziran 2000). National Accociation of School Nurses Position Statement: *Indoor Air Quality*. http://www.nasn.org/positions/indoorairquality.htm (Erişim Tarihi:01.04.2010).

Openshaw, L. (2008). *The Role and Function of the School Social Worker. İn Social Work in Schools: Principles and*

Practice. New York: Guilford Publications. Accessed from https://www.guilford.com/excerpts/openshaw.pdf?t

Özbayraktar, M. (2005). Bilgi Teknolojilerinin Öğrenim Alanı Planlamasına Etkileri-İlköğretim Okullarının Derslik ve Kütüphane Mekânları Örneğinde. *The Turkish Online Journal of Educational Technology-TOJET, 4*(3),101-108. http://www.tojet.net/articles/v4i3/4314.pdf

Rayner, A. J. (2005). *Overview of the possible causes of SBS and recommendations for improving the internal environment. Rostron, J.* (Ed.) Sick Building Syndrome, Concepts, issues and practice. (5-29). London and New York: An Imprint of Routledge. E&FN SPON. Retrieved from https://books.google.com.tr/

Sanoff, H. (2001). *School Building Assessment Methods. National Clearinghouse for Educational Facilities*. United States, Washington (ERIC No: ED448 5889).

Sigurđardóttir, A. K. & Hjartarson, T. (2011). School Buildings for the 21st Century – Some Features of New School Buildings in Iceland. *CEPS Journal, 1*(2), 25–43. Retrieved from https://www.pedocs.de/frontdoor.php?source_opus=6090.

Sommer, R. & Olsen, H. (1980). The Soft Classroom. *Environment and Behavior, 12*(1), 3-16. https://doi.org/10.1177/0013916580121001

Soderberg, B. (1976). *Classroom Furniture For Ethopian Elementary Schools.* Rural Projects Agency, Ministery of Public Works. Addis Ababa.

Steelcase Learnlab shapes 21st-century Learning at Richland College (2013) (Rep.). Retrieved from http://www.steelcase.com/en/products/Category/Educational/casestudies/Documents/Richland-LearnLab-Case-Study.pdf

Taylor, A. (2009). *Linking Architecture and Education: Sustainable Design for Learning Environments.* Albuquerque: University of New Mexico Press. Retrşeved from books.google.com

Temple, P. (2007). *Learning spaces for the 21st century: A review of the literature.* Published online by the Higher Education Academy. https://www.heacademy.ac.uk/resource/learning-spaces-21st-century

Theimer, J. E. (17 Mayıs 2009). A Design That Inspires All. Education by Design: Part III. *DesignShare Reports.* ERIC Number: ED507919 Retrieved from https://files.eric.ed.gov/fulltext/ED507919.pdf

Tunay, M., Melemez, K & Dizdar, E. N. (2005). Yüksek Öğrenimde Kullanılan Okul Sıra ve Masalarının Antropometrik Tasarımı (Bartın Orman Fakültesi Örneği). *Journal of Technology, 8*(1), 93-99. URL: http://technology.karabuk.edu.tr/

Turkkahraman, M. (2015). Education, Teaching and Social Organization. *Procedia-Social and Behavioral Sciences,* 186, 381-387. https://doi.org/10.1016/j.sbspro.2015.04.044

Wambua, M.M., Murungi, C.G., Mutwiri, C. (2018). Physical facilities and strategies used by teachers to improve pupils' performance in social studies in Makueni County, Kenya. *Int J Pregn & Chi Birth*, *4*(6), 241–245. https://doi.org/10.15406/ipcb.2018.04.00134

Woolner, P. (2010). *The Design of Learning Spaces: Future Schools.* London: Continuum International Publishing Group. Retrieved from https://books.google.com.tr/

Wright, C. ve O'neill, M. (2002). Service quality evaluation in the higher education sector: an empirical investigation of students'perceptions. *Higher Education Research & Development, 21*(1), 23-39. https://doi.org/10.1080/07294360220124639

Vel, J. & Higa, K. (2016). Designing Innovative Campuses for Tomorrow's Students. *Planning for Higher Education Journal, 44*(4), 11-21. https://www.scup.org/phe/

Yağcı, Y. (2004). Bilgi ve Belge Uzmanlarının Organizasyonel Çalışmalarında Bir Olgu: Stres. *Türk Kütüphaneciliği, 18*(4), 446-449. Retrieved from file:///C:/Users/Murat/Downloads/239-454-1-SM.pdf

Yıldırım, A. & Şimşek, H. (2005). *Sosyal Bilimlerde Nitel Araştırma Yöntemleri.* Ankara: Seçkin Yayınevihttp://www.tdkterim.gov.tr/bts/?kategori=verilst&kelime=ke%FEke&ayn=tam (Accessed on 03.04.2015).