International
JOURNAL OF SOCIAL,
HUMANITIES AND ADMINISTRATIVE SCIENCES
Open Access Refereed E-Journal & Refereed & Indexed

Article Type
Research Article
Subject Area
Architecture

e-ISSN: 2630-6417
International Journal of Social, Humanities and Administrative Sciences (JOSHAS JOURNAL)

Vol: 8 Issue: 58
Year: 2022 Novomber
Pp: 1488-1498

Arrival
20 September 2022
Published
30 Novomber 2022

Article ID
65850
Article Serial Number
02

DOİ NUMBER
http://dx.doi.org/10.29228/JOSHAS.65850

How to Cite This Article
Büyükşahin, S. ve Arat, Y. (2022). "Principles of Physical Growth in Campus Settlements: Assessment of Alaaddin Keykubat Campüs", Journal of Social, Humanities and Administrative Sciences, 8(58):1488-1498

Principles of Physical Growth in Campus Settlements: Assessment of Alaaddin Keykubat Campüs[1]

Süheyla Büyükşahin Yavuz Arat

[1-2] Associate. Prof. Dr., Necmettın Erbakan Unıversity, Faculty of Fine Arts and Architecture, Department of Archıtecture, Konya, Turkey

ABSTRACT

Universities, among the educational institutions where qualified manpower to shape the future of a society are trained, means a collection of buildings in which education and research activities take place physically. As a contemporary educational environment, universities are required by the education system that develops apart from the basic functions of education, research and knowledge production; It includes physical formations that will respond to functions such as work, nutrition, shopping, entertainment, sports, recreation and health. The socio-economic, cultural and recreational needs of the society, which change and develop over time, have made it necessary for universities to be planned as new settlements away from the city centers. Thus, the concept of "campus" emerged and universities began to be established in large areas in areas open to development, based on certain systems. Campus settlements, which have the characteristics of a city in themselves and therefore have a structure that changes and develops over time, are expected to serve for many years, and in this sense, they should be planned in a way that can meet their development and growth needs. In this study discussing the physical growth and change process of Selcuk University Alaaddin Keykubat Campus it is aimed to evaluate the sample area by considering the growth and flexibility criteria of university campuses. As a result, it is possible to say that both the chosen settlement system and the adopted design criteria can directly or indirectly affect the physical growth and development opportunities on campuses, starting from the pre-planning stage. It is important for universities, which are expected to serve in the long term and are important for the development of the society, to accurately determine the physical growth and development opportunities in the campuses and to support these determinations with the appropriate settlement system and design criteria, so that they can fulfill these responsibilities in favor of the society for a long time.

Keywords: Campus, Campus Planning, Campus Settlement Systems, Physical Growth

1. INTRODUCTION

As a contemporary educational environment, universities are required by the education system that develops apart from the basic functions of education, research and knowledge production; It includes physical formations that will respond to functions such as work, nutrition, shopping, entertainment, sports, recreation and health. In the historical process, the search for different physical formations emerged as the madrasahs in our country and the universities based on the church in Europe were stuck in the urban fabric as a result of the rapidly increasing urban population and urbanization movements at the beginning of the 20th century. The socio-economic, cultural and recreational needs of the society, which change and develop over time, have made it necessary for universities to be planned as new settlements away from the city centers. Thus, the concept of "campus" emerged and universities began to be established in large areas in areas open to development, based on certain systems. Today, university campus settlements are multifunctional small city models that include higher education buildings, housing units such as dormitories and lodgings, social facilities and the transportation scheme connecting these units to each other, as well as vehicular and pedestrian roads, green areas, sports fields, inner courtyards and squares.

Universities, which are an important tool in social development, have gained a widespread and growing quality with the thought of meeting the increase in demand for vocational education and scientific research activities, which is caused by the rapid increase in population and the effect of technological and socio-cultural progress over time; This situation has brought with it the necessity of growable and formative planning that can adapt to the constant change. Campus settlements, which have the characteristics of a city in themselves and therefore have a structure that changes and develops over time, are expected to serve for many years, and in this sense, they should be planned in a way that can meet their development and growth needs. The ability of university campuses to adapt to this change will be possible by implementing the concepts of flexibility and growthiness in planning. For this reason, considering the

[1] Part of this article was published as a chapter with a different title in a memory book named "Kerim Çınar'a Armağan" in Turkish in 2022.

targets determined in the preliminary study, it is important to choose a settlement system that can meet this need in the future, and to foresee growth plans at micro and macro scales.

In this study discussing the physical growth and change process of Selcuk University Alaaddin Keykubat Campus - which was started to be built with the settlement plan prepared in 1985 - was planned based on the widespread type settlement system and continues to develop today; It is aimed to evaluate the sample area by considering the growth and flexibility criteria of university campuses. Within the scope of the study, a literature search was conducted that directly or indirectly addressed the research topic, theses, books, national and international research articles, previous research and evaluation studies on the study area were used. In addition, satellite photographs of different years and technical drawings of the campus were used for analysis, and the data obtained by using on-site detection and examination and photographing methods in the sample area were evaluated in chronological order.

2. PHYSICAL GROWTH OF CAMPUS SETTLEMENTS

According to Hasol (1998), campus is defined as large areas where university education buildings, student dormitories, faculty member lodgings, sports and social facilities are located collectively. Also Türeyen (2002) expressed the campuses as self-sufficient university cities whose functions are education, research and application, providing the necessary living conditions (housing, entertainment, shopping, sports, health, and recreation) for their users. Over time, campuses have gone beyond being just educational institutions and have turned into a living space that includes science production activities with students and academic staff, service activities with administrators and support staff, as well as other vital activities such as socialization, cultural and sports activities. Today, the word "campus" is defined to include all the buildings within the borders of the university and the whole including the spaces between the buildings (Açıkay, 2015).

Çınar (1998) stated that the planning of a good university campus should be based on the principle of determining the social needs of the country and region where the university is located and developing the planning based on these data. Prospectiveness and adaptability to developments, which are foreseen in developing societies, as well as the natural result of these features in planning, the character of change and the possibilities of growth are among these requirements.

When future changes and developments are not considered in the planning phase of universities, the establishment of which requires huge financial resources, campuses will not be able to fulfill their duties efficiently in the long run and may cause great damage to the country's economy. In this sense, calculations and predictions about the growth and development opportunities of universities should be made scientifically (Erkman, 1990; Çınar, 1998). Since the estimates made are not precise, the target should be to respond to the requirements at the highest rate. Planning based on these predictions will bring cost, design and usage difficulties. In what form and at what rate the flexibility to be provided while making calculations and estimations regarding planning, and how the new structuring and growth will be for the future needs, are important questions that need to be answered (İnceoğlu, 1987).

According to Gürün (2003), the design of university campus areas, which are planned in a city model, should be considered at the urban design scale. One of the most important features of universities, which by their nature aim to develop to the highest level they can reach, is the desire for growth. In universities, which are accepted as innovative institutions reflecting contemporary approaches, production is continuous, and continuous production brings continuous growth and development (Doğan, 2005).

It is possible to consider the growth in universities as the growth in the organizational structure and the growth in the physical structure. Organizational growth includes new faculties, laboratories and institutes to be added to the university, as well as the growth of some of the system elements. Due to the flexibility of the physical environment, it can be said that the growth in the organizational structure is not directly reflected in the physical structure, and this understanding of flexibility is always a factor, especially in university designs (Erkman, 1990). In cases where the growth cannot be met within the building flexibility limits, the growth in the organizational structure is followed by the growth in the physical structure; this growth is read through the shell that surrounds the organizations, that is, from the building and building systems (İnceoğlu, 1987).

The reasons for the growth of campuses are discussed under two headings (Karaaslan, 1979):

- ✓ Uses require new and more space within themselves (Micro Growth): In this growth, which is considered at the building scale, with the increase in the university population, the capacities of the existing uses may be insufficient, and this situation can also be defined as capacity increase. In addition, the development of existing branches of science brings the formation of new spaces as well as capacity increase.

- ✓ Need for new uses (Macro Growth): In universities, which have a dynamic structure, new unforeseen uses may emerge with the developments experienced over time, and new spatial uses are required for new branches of science that have emerged with the development of science and technology.

The reasons for the growth of universities in the micro and macro scales described above in general terms can be detailed as follows;

- ✓ Change in educational goals and methods,
- ✓ Change in research purposes and methods,
- ✓ Additions to existing branches,
- ✓ Development of teaching fields,
- ✓ Opening of new teaching areas,
- ✓ Establishment of new faculties and vocational schools,
- ✓ Increase in the number of students.

Apart from these items expressing the increase in business volume, the application of a new technique, socio-psychological changes such as prestige and status may also create the need for additional space and require growth (Şen, 1987).

According to Erkman (1990), the growth in the structure of universities causes physical growth in the campus. In other words, change is only possible with growthiness. Karakaş (1999) states that the development and growth of university campuses depends on the physical conditions of the area. In this context, it is of great importance to make the right decision for site selection. It is also important that the campus and its units have a structure and texture that can grow in order for the university campus areas to be large enough to accommodate predictable or unpredictable developments and to ensure growthiness (Yıldızoğlu, 2006).

In a dynamic subject such as education that is constantly changing, it is not possible to determine all the changes and growth needs that may arise in the future precisely at the planning stage and to shape the design based on this. The design of spaces and buildings in different sizes to serve different numbers of people and their flexibility to meet various functions and requirements has become one of the increasingly important criteria in the design of university buildings. Just as the growth in campuses is a return of development, in the same way, "change" requires "flexibility" (Ak, 2007). The ability of university campuses to keep pace with development and change will be possible by implementing the concepts of flexibility and growthiness, which are known to be in close relationship with each other (Irgatoğlu, 2011). Flexibility is a feature sought in university buildings at the spatial scale, as well as the general layout of the campus and its entire infrastructure. Flexibility should be brought to the fore especially in infrastructure decisions, and the current inadequacy of infrastructure should be prevented from causing greater economic problems (Çınar, 1998).

The first settlement planning of a campus may not include all the changes and developments that may occur over time. Depending on the ever-evolving technology, unpredictable changes may also occur. However, the campus plan should be prepared in a way that can respond to the developments and changes that may occur later. The increase in the number of students over time, the developments in the fields of science and the emergence of new branches of science require that the campuses be designed as expandable (Karakaş, 1999). In this sense, while the campuses develop and grow in line with their needs, the integrity of the new structures created should be ensured with the existing and future ones. In order for a healthy development to occur, a development plan should be prepared and its compatibility with the existing campus should be ensured (Dober,1992; Karakaş,1999). In the light of the information discussed up to this point, it is possible to say that the concepts of growth and development also bring the concept of "stage". For a newly established university that started education with a certain number of educational buildings and a small number of students and developed over time, the construction of the entire campus at once is a negative planning approach in terms of time and cost. In this sense, a growth that takes place in stages is considered as the construction of certain parts of a pre-designed whole in certain stages and finally reaching integrity. This means that the future and goals are planned and designed; there is no random and unlimited growth (Kortan, 1981).

3. PLANNING FOR GROWTH AND DEVELOPMENT ON CAMPUSES

Growth plans based on estimations show the extent of growth over time, and the estimation precision decreases inversely as the time lengthens. Planning for shorter maturities may be more precise due to the health of the forecasts. As can be understood from here, the time factor constitutes an important data for growth planning.

Linde (1971) proposes plans for growth according to the degree of certainty:

- ✓ Land use plan (15 years and above)
- ✓ Guiding plan (7-15 years)
- ✓ Grouping plan (5-7 years)

Accordingly, the land use plan includes decisions over 15 years and the degree of certainty is low. Here, the locations and sizes of the main usage areas, the main access roads are shown. The guiding plan is organized for 7-15 years. The degree of certainty is higher than the land use plan. In this plan, the locations, densities, inter-functional relations of faculties, common facilities, transportation networks, micro-growth areas are shown. The validity period of the grouping plan is 5-7 years. It is more precise than the other two plans. This plan includes details such as the number of floors, heights, planning system, growth opportunities, installation and transportation principles related to the building and building groups (Linde, 1971).

While the campuses develop and grow in line with their needs, the integrity of the new structures with the existing and future ones should be ensured. In order for a healthy development to occur, a "development plan" should be prepared and its coordination with the existing campus should be established. While making a development plan; The definition and dimensions of the future physical development of the university should be determined in general and estimated cost calculations should be made (Dober, 1992). For this, it is possible to list the primary things to do as;

- ✓ Knowing the academic plan, educational goals and functions to be included,
- ✓ Identifying the development opportunities of the campus area, circulation system, infrastructure and structures on the campus,
- ✓ Making a design plan for how developments will be organized,
- ✓ Determining the order in which the developments to be implemented will be made,
- ✓ Estimated cost calculations for the application,
- ✓ And the preparation of documents supporting different proposals (Dober 1963).

There are 4 different growth models according to the settlement systems on the campuses:

Single-center growth model: The central region is a closed area defined by the smallest circle area in the middle and formed by the enclosing of concentric rings that develop outward. In this model, micro growth can be achieved, albeit partially, outside the center, but macro growth is not possible (Karaaslan, 1979).

Spontaneous growth model: In the settlements where the usage areas are arranged in isolation from each other, additional settlements are made in the large spaces left in between, and new usage areas are settled in the empty spaces in the surrounding, in line with the growth of these usage areas. In this growth model, there is the possibility of micro and macro growth, but the possibilities here are limited. Due to the disconnected settlements, the hierarchy within the university cannot be achieved and the transportation distances are increasing (Karaaslan 1979, Karakaş 1999).

Molecular growth model: The university provides its development with molecules that can be added later. Molecules necessary for growth are added to the spaces left between the masses that make up the current university. When the space between the masses is not sufficient for the molecules in the university settlement, the desired development towards any aspect of the university is provided. In this growth model, macro and micro growth can be achieved (Karaaslan 1979, Karakaş 1999).

Linear growth model: In the open-ended model, which defines the pedestrian allele with the usage areas arranged parallel to both sides of the main axis, the growth can take place in the desired direction at the two open ends of the pedestrian axis. This growth is macro growth. The growth that can be performed perpendicular to the pedestrian axis is micro growth (Karaaslan 1979, Karakaş 1999).

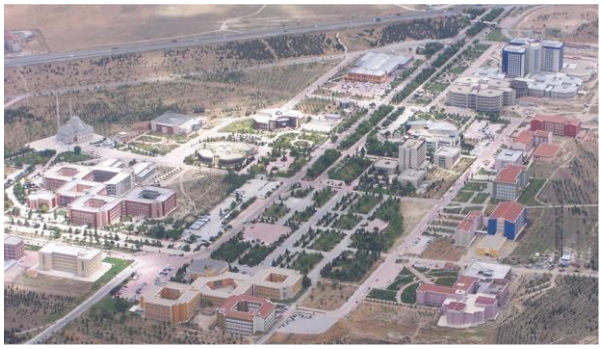
Erkman (1990) states that a controlled growth planned for a university campus has different characteristics. And he ranks them as growth (i) by density, (ii) by axis, (iii) by direction, (iv) by relationship with time, (v) by form. Growth according to density will be by condensation or spreading. Concentration is important in terms of land use, transportation and infrastructure economy. Growth can be vertical or horizontal relative to the axis. As a result of the growth in the vertical axis, the need for technical auxiliary tools such as the use of elevators may arise, while the growth in the horizontal axis may force the transportation and infrastructure. In directional growth, there is a growth

in or out of the regulated environment. Measures such as the addition of mezzanines and changing the way of use can provide a solution at the building scale. On the campus scale, it will be possible to grow towards the gaps left between the building and the building groups and the infrastructure systems have been completed. On the campus scale, outward growth is the growth that can occur around existing structures. Growth by relationship over time can be at a constant rate. It is also possible to grow with certain pauses. Growth according to the form can be considered as one of the radial growth, linear growth, clustering and spiral growth forms (Ak, 2007).

4. PHYSICAL GROWTH AND CHANGE AT ALAADDIN KEYKUBAT CAMPUS

The establishment of a university in Konya was first brought to the agenda with the establishment of the Association for Establishing and Sustaining a University in Konya in 1968. With the efforts of the aforementioned association, this educational institution, which started to serve in a building belonging to the Child Protection Agency in the 1970-71 academic year, was named Konya State Engineering and Architecture Academy in 1971. Selcuk University, whose development is based on two institutions established in 1962 and the School of Engineering and Architecture, was established in 1975 in accordance with the law numbered 1873, and was put into service with two faculties, the Faculty of Science and the Faculty of Literature, in the 1976-77 academic year. The Faculties of Science and Literature were merged for the first time in Selçuk University, which entered a period of rapid development in 1982 with the Higher Education Law No. 2547 and the decree-law no. 41. Later, the status of Selcuk Education Institute, Konya State Engineering and Architecture Academy and High Islamic Institute were changed into faculties and connected to the university. The Girls' Art Higher Teacher School, which was opened in 1976 under the Ministry of National Education, was connected to the education faculty as the Girls' Art Education High School, and the Faculties of Medicine, Agriculture and Veterinary Medicine were opened in the same year (Önder and Kara 1998). Selcuk University, which continues to develop and grow, continues to provide education with 23 faculties, 7 institutes, 5 colleges, 1 conservatory, 22 vocational colleges, 54 research and application centers and more than 68000 students. (Figure 1).

Campus overview, 2000. Source: Archive, 2011



Campus overview, 2006. Source: Archive, 2011

General view of Alaaddin Keykubat Campus from the west (left) and southeast (right)-2019. Source: web address 1

Figure 1. General views from the campus development process

When we look at the spatial arrangements of the educational institutions at that time, it is seen that the Selcuk Education Institute and the Higher Islamic Institute, which were among the first established educational institutions, started to provide education in the buildings built for them in Meram district. However, the faculties established later on started education in temporary buildings belonging to other institutions in different places in the city. The fact that the Faculty of Agriculture, which was later established in a building belonging to the Child Protection Agency of the Engineering and Architecture Academy, served in the barracks belonging to the municipality, and the Veterinary Faculty served in the Animal Health Vocational High School. With the increase in the number of faculties and departments that were opened, the existing buildings became insufficient and it was felt that all faculties should be gathered in one area. As a result of this, with the allocation of the land belonging to the treasury and the expropriation

of the private land in 1979, a campus area was established on an area of 9200 decares on the Afyon highway, 20 km from the city center. Another 6200 decare land was added to this area in 1997 (Büyükşahin and Çınar, 2012).

The planning of the university, the project of which was undertaken by the TEKSİS group, started with a preliminary study, and it was aimed to prevent the problems and inadequacies that may arise in the physical planning process. Thus, a series of reports were prepared under the name of 'Campus Planning and Programming Research' in 1980 (Anonymous, 1980). As a result of this preliminary study, the current and future status of Selçuk University, its relationship with the city and the services it will provide to its surroundings have been determined, taking these into consideration data was provided for the stages of planning, programming, determination of settlement criteria, creation of requirement programs, production of construction systems. In the continuation of the preliminary study, which is the first stage research, alternatives were prepared for the first general settlement plan of the campus area in the sense of an idea project in 1980-81 (Figure 2a,2b, 2c). With some changes made in these 1/5000 and 1/2000 scaled first settlement plans, final projects were prepared in 1983 (Figure 2d) and construction started on the campus in the same year (Önder and Kara 1998). Looking at the 2005 settlement plan of the campus (Figure 2e), it is seen that it has settlement characteristics based on a widespread type settlement system. The buildings are located randomly, with low density outside the Faculty of Dentistry and the Rectorate area, without being affected by the topography. It is seen that the administrative region, academic region and accommodation area have developed around the common use area (cafeteria, Süleyman Demirel Cultural Center, library) located in the center (Büyükşahin and Çınar, 2012).

Figure 2a. S. U. Alaaddin Keykubat Campus idea project December-1980. Source: Archive, 2011

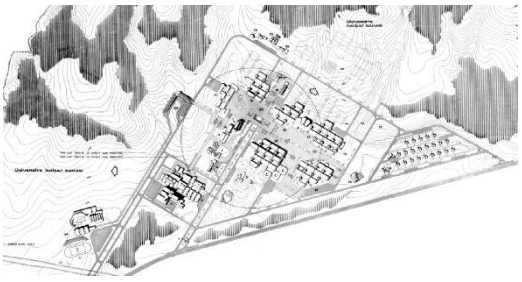


Figure 2b. S. U. Alaaddin Keykubat Campus idea project January-1981. Source: Archive, 2011

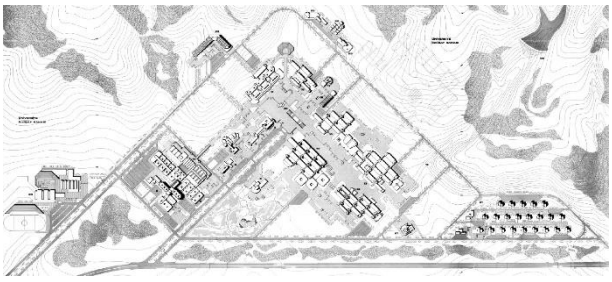


Figure 2c. S. U. Alaaddin Keykubat Campus idea project February-1981. Source: Archive, 2011

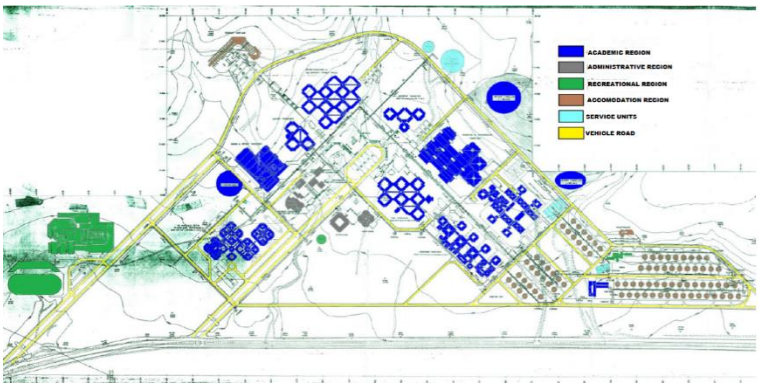


Figure 2d. General layout plan of S. U. Alaaddin Keykubat Campus 1984. Source: Archive, 2011.

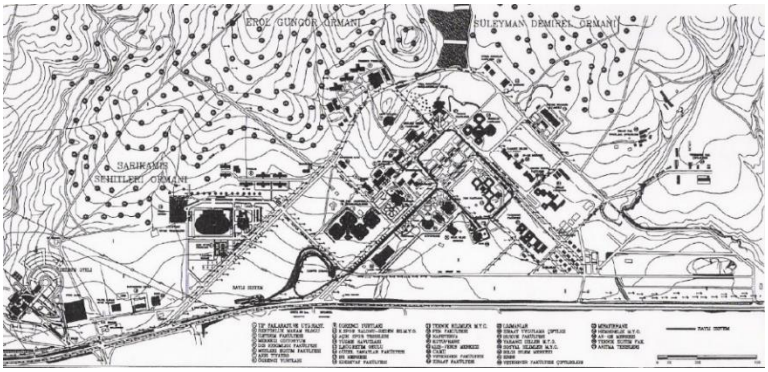
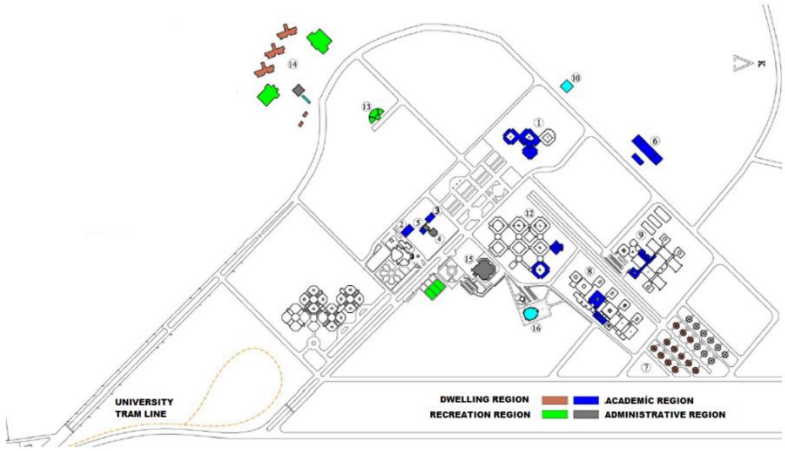


Figure 2e. S. U. Alaaddin Keykubat Campus site plan. Source: Büyükşahin and Çınar, 2012

In widespread type settlement systems, growth occurs in the form of filling the gaps left between the units placed on the land in a dispersed manner, and macro and micro scale growth can be easily achieved for all building groups through these gaps. When the growth in these spaces is completed to a certain extent, it is possible to talk about the growth through the boundaries. It is a positive feature that the construction can be continued at the same time in different parts of the land during the construction phase, and spatial integrity can be achieved at the end of a long process since filling the gaps can take a long time (Linde, 1971; Erkman, 1990; Yekrek, 1999; Türeyen, 2002). When the physical growth and development of Alaaddin Keykubat Campus is considered in general from the past to the present; It is possible to say that the growth needed in the administrative and common use areas primarily occurs in the spaces between the units, the growth in the academic area takes place in the close vicinity of the building in additions to the buildings, in the construction of new faculties, near the land perimeters, and the growth in the housing areas takes place towards the periphery around the existing housing areas.

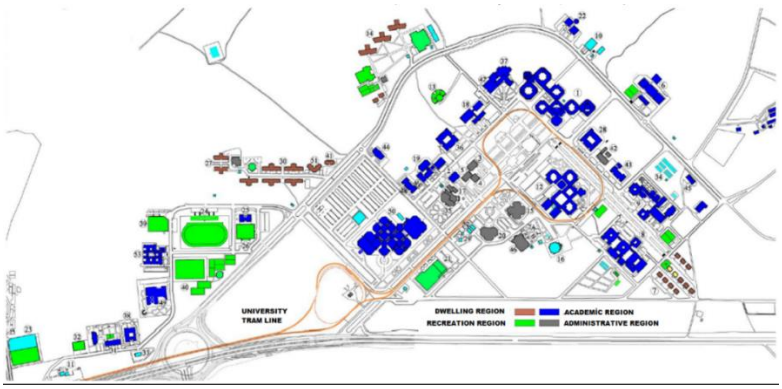
As it can be seen in Table 1; With the simultaneous construction of the Faculty of Science and Literature (1), the Rectorate (4) and lodgings (7) in the Alaaddin Keykubat campus in 1983, the development process of the academic, administrative and accommodation areas began, and in 1988, the common use area was included in the process with the construction of the central cafeteria (15). When the development and growth process from its beginning to 2003 is examined, it is possible to say that the growth criteria of the campus were realized within the boundaries of 1984 planning. Gökkuşağı Shopping Center (21), which was built in 1999 and is within the scope of the common use area, has created an exception in this growth phase with its remote location from the center and the academic area. However, the physical growth that took place after 2003 was not realized in the gaps between units, especially in the academic region, but in points close to the outer borders of the campus. The fact that the Faculty of Fine Arts (53), Dilek Sabancı State Conservatory (49) and Faculty of Health Sciences (44) buildings, which were completed after 2005, are located away from the academic district that existed in the initial development scheme is an indication of this situation.

Table 1. The physical growth process of Alaaddin Keykubat Campus between 1984-2011



Physical growth schema of Alaaddin Keykubat Campus between 1984-1995. Source: Kuyrukçu, 2011

Physical growth schema of Alaaddin Keykubat Campus between 1995-2003. Source: Kuyrukçu, 2011

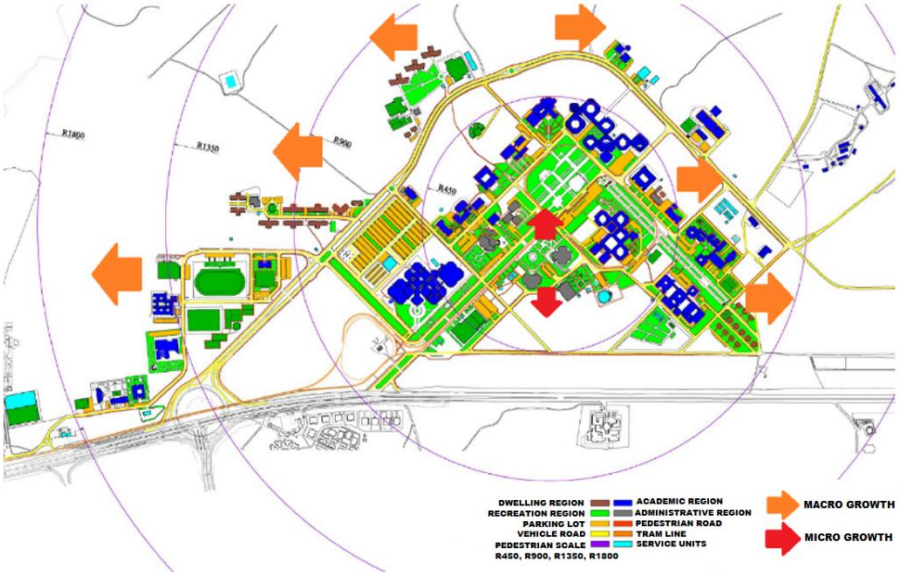


Physical growth schema of Alaaddin Keykubat Campus between 2003-2011. Source: Kuyrukçu, 2011

In the physical development process of Alaaddin Keykubat campus between 2011-2022 (Table 2), it is seen that the growth in the administrative and common areas mainly took place in the gaps between the units, while the academic and accommodation areas grew at the points close to the land perimeters far from the center. When the growths inside the development circle with a radius of 450 meters taken from the center are considered as micro growth, and the growths outside this circle are considered as macro growth; It has been observed that the Alaaddin Keykubat Mansion cafeteria belonging to the common use area, the museum, the new Rectorate building belonging to the administrative area and the Nursing Faculty Common Classroom building, which is a part of the academic region, are located in the spaces between the units within the micro-growth boundaries. On the other hand, Faculty of Islamic Sciences, Faculty of Economics and Administrative Sciences, dormitories, guest house, rector's residence, mosque, hobby gardens, new research centers and Animal Hospital are located close to the periphery of the land within the macro growth limits. It has been observed that over the years, as the gaps between the units in the micro-growth region close to the center are filled, the growth opportunities are exhausted, and even the units belonging to the accommodation area and the academic region, which should be located close to the center, were separated from the center and built at distant points from other academic units. This situation brings along transportation and access problems and is an indication that Alaaddin Keykubat Campus, which was planned on a large land in the widespread settlement system, has reached its growth limits.

As a result of the evaluations made in the study area, it is possible to say that the Selcuk University Alaaddin Keykubat Campus, which is planned based on the widespread type settlement system on a large land, has fully utilized the micro-growth opportunities within the physical development process that has taken place for 37 years since its establishment. In accordance with the settlement model chosen at the first planning stage, the campus settlement, which is widespread in the land, but has a settlement scheme to form building groups when considered on the basis of academic, administrative, accommodation and common uses, has experienced disconnections in academic district units, especially within the last 10 years of physical growth. As the areas in the micro-growth zones have been utilized for the physical growth of the units belonging to the administrative and common-use zones, the physical growth opportunities in the central area of the campus have been exhausted. With the data obtained, it is possible to predict that if the physical growth process of the university continues in the future, the disconnection that occurs in the academic region can also be seen in other functional regions. In this case, it may come to the fore to develop new transportation alternatives (such as on-campus ring services) so that the disconnections that may be experienced do not constitute an obstacle for the university to continue its functions efficiently.

Table 2. Physical growth process of Alaaddin Keykubat Campus between 2011-2022



Alaaddin Keykubat Campus Layout Plan-2011. Source: reorganized by the authors based on the image taken from Kuyrukçu (2011).

Satellite image of Alaaddin Keykubat Campus-2011. Source: Google.earth

Satellite image of Alaaddin Keykubat Campus-2022. Source: Google.earth

After the establishment of Konya Technical University in 2018, some of the faculties and their buildings are transferred to that university such as the Faculty of Engineering, Alaaddin Mansion etc. Today there are buildings of two different universities in the same campus area. This situation already causes many problems in security, usage, land use, pedestrian and vehicle access and so on. As the new campus area for Konya Technical University is not determined yet, it is obvious that these two universities will continue to share the same campus area for years.

5. CONCLUSION

Universities are of great importance for countries to develop socio-economically and to maintain their position in international relations. Universities, which train professionals in terms of professional workforce in the service areas needed by the country, emerge as environments where specialization in the fields of interest and occupation becomes evident, information is produced in the most neutral and fluid way, and polyphony gives a dynamic structure with its structure based on research and knowledge production. Economic, political, cultural and scientific developments and

changes, which are inevitable over time, also have an impact on university structures, and campuses are planned with physical growth opportunities that can adapt to this change.

The university campus, which is like a city and has a rapidly changing and developing structure, is expected to serve for many years. For this reason, university campuses should have the qualifications to meet their growth, development and flexibility needs. Adaptation of buildings to today's rapidly developing conditions is only possible if they are equipped with a number of abilities. Developments and changes in economic, political, cultural and scientific fields over time are inevitable. The ability of university campuses to keep pace with change will be possible by realizing the concepts of flexibility and scalability, which are known to be in close relationship with each other.

It is important that the selection of the area and settlement system is made in accordance with the objectives of the university in order to provide all the development, growth and flexibility opportunities that may be needed in the campus settlements, without disturbing the basic features, structure and integrity of the campus. In the selection of the settlement system, the physical growth opportunities foreseen in line with the data obtained in the preliminary planning studies should support the planning decisions. Due to the importance of transportation, access and social interaction at the pedestrian scale, the chosen settlement system should be able to provide these opportunities at different physical growth stages. Regardless of the chosen settlement system, micro-growths occur in the spaces left between buildings in a way that does not disrupt their functions, while macro-growths occur in larger-scale spaces left in the land. However, it should not be thought that every space left on the land is a growth and development area. It is important that these gaps are the areas left in line with the physical growth opportunities foreseen from the pre-planning stage. In order for the functions within the campus to grow as independently as possible and to prevent functional disruptions, it should be considered which regions of the university may need to grow differently and faster than the others, and priority should be given to these regions. The vehicle and pedestrian transportation system, which is of great importance in ensuring the efficient functioning of all on-campus functions, should be designed in a way that can adapt to change after the foreseeable physical growth process and not cause disruptions.

As a result, it is possible to say that both the chosen settlement system and the adopted design criteria can directly or indirectly affect the physical growth and development opportunities on campus campuses, starting from the pre-planning stage. It is important for universities, which are expected to serve in the long term and are important for the development of the society, to accurately determine the physical growth and development opportunities in the campuses and to support these determinations with the appropriate settlement system and design criteria, so that they can fulfill these responsibilities in favor of the society for a long time.

REFERENCES

1. Açıkay, S. H. (2015). "Kent İçi Üniversite Kampüslerinin Ekolojik Peyzaj Tasarım İlkeleri Kapsamında İrdelenmesi", Yüksek Lisans Tezi, İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul.
2. Ak, S. (2007). "Üniversite Kampüslerinde Tasarım Kriterlerinin ve Yerleşim Sistemlerinin Büyüme ve Gelişme Olanakları Bağlamında İrdelenmesi", Yüksek Lisans Tezi, Yıldız Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul.
3. Anonymous, (1980). Konya Selçuk Üniversitesi Kampüs Planlama ve Programlama Araştırması Ön Hazırlık Raporu, Konya.
4. Archive, (2011). Selçuk Üniversitesi Yapı İşleri ve Teknik Daire Başkanlığı, Konya.
5. Büyükşahin Sıramkaya, S. & Çınar, K. (2012). Üniversite kampüs yerleşkelerinde ortak kullanım mekanlarının incelenmesi: Selçuk üniversitesi Alâeddin Keykubat Kampüsü Örneği. S.Ü. Müh.-Mim. Fak. Dergisi, 27(3), 61-72.
6. Çınar, E. (1998) "Üniversite Kampüs Planlaması ve Tasarımı Üzerine Bir Araştırma", Yüksek Lisans Tezi, İstanbul Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul.
7. Dober, R. (1963). Campus Planning, Reinhold Publishing Co., Mass., ABD
8. Dober, R. P. (1992). Campus Design, New York USA.
9. Doğan, H. H. (2005). Evrenkent Yerleşkeleri ve Kent Yaşamındaki Önemi Örnek olay: İnönü Üniversitesi, II. Ulusal Üniversite Yerleşke Planlaması ve Çevre Düzenlemesi Çalıştayı, 9–10 Haziran, Kahramanmaraş.
10. Erkman, U. (1990). Büyüme ve Gelişme Açısından Üniversite Kampüslerinde Planlama ve Tasarım Sorunları, İstanbul.

11. Gürün, D. K. (2003). Kahramanmaraş Sütçü İmam Üniversitesinin Tanıtımı, Üniversite Yerleşke Planlaması ve Çevre Düzenlemesi I. Ulusal Çalıştayı, 16–17–18 Ekim, Malatya.

12. Hasol, D. (1998). Ansiklopedik Mimarlık Sözlüğü, İstanbul.

13. Irgatoğlu, A.N. (2011). Üniversite Kampusları Fiziksel Gelişim Planlaması Ve Tasarımı: Yozgat Bozok Üniversitesi Erdoğan Akdağ Kampusu Örneği, Yüksek Lisans Tezi, Ankara Üniversitesi Fen Bilimleri Enstitüsü, Ankara.

14. İnceoğlu, N. (1987). Halkalı Kampusu Ön Planlama ve Programlama Çalışması, Araştırma Çalışması, İstanbul.

15. Karaaslan, M. (1979). Üniversite Kampüs Planlaması, Edirne.

16. Karakaş, N. B. (1999). Üniversite Kampüslerinin Fiziksel Gelişim Planı Hazırlama Süreci Ve Bartın Orman Fakültesinin bu Bağlamda Değerlendirilmesi, Yüksek Lisans Tezi, Zonguldak Karaelmas Üniversitesi Fen Bilimleri Enstitüsü, Bartın.

17. Kortan, E. (1981). Çağdaş Üniversite Kampüsleri Tasarımı, Ankara.

18. Kuyrukçu, Z. (2012), Kampüslerde Fiziksel Değişim Üzerine Bir Araştırma: Selçuk Üniversitesi Alaeddin Keykubat Kampüsü Örneği, Yüksek Lisans Tezi, Selçuk Üniversitesi Fen Bilimleri Enstitüsü, Konya.

19. Linde, H. (1971). Hochschulplanung, Dusseldorf.

20. Önder, S & Kara Z. (1998). Selçuk Üniversitesi Aleaddin Keykubat Kampüs Alanı Alan Kullanımı ve Planlaması Üzerinde Bir Araştırma, Konya.

21. Şen, İ. (1987). Üniversite Kampus Planlamasında Aktiviteler Cins ve Organizasyonu, Yüksek Lisans Tezi, Yıldız Teknik Üniversitesi Fen Bilimleri Enstitüsü İstanbul.

22. Türeyen, M. (2002). Yükseköğretim Kurumları- Kampuslar, İstanbul.

23. Yekrek, T. (1999). Üniversite Kampüsleri Yerleşim Sistemlerinin Fiziksel Planlamayla Olan İlişkisi ve Önemi, Yüksek Lisans Tezi, Yıldız Teknik Üniversitesi Fen Bilimleri Enstitüsü, İstanbul.

24. Yıldızoğlu, Z. (2006). Üniversite Yerleşkeleri Fiziksel Gelişim Planlaması Ve Tasarımı: Çanakkale Onsekiz Mart Üniversitesi Terzioğlu Yerleşkesi Örneği, Yüksek Lisans Tezi, Çanakkale Onsekiz Mart Üniversitesi Fen Bilimleri Enstitüsü, Çanakkale.

25. Web Address 1, https://kamfi.net/selcuk-universitesi-alaeddin-keykubat-kampusu-fotograflari/, erişim tarihi 05.11.2021.