Library Use of Undergraduate Students in the Distance Education Process Due to the Covid-19 Pandemic: The Case of Bartin University

Covid-19 Pandemisine Bağlı Uzaktan Eğitim Sürecinde Lisans Öğrencilerinin Kütüphane Kullanımı: Bartın Üniversitesi Örneği

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ABSTRACT

The Covid-19 pandemic has had a negative impact on the world in many areas, including on the economy, education, tourism industry, and health field. To overcome this disease and minimize losses, most businesses and educational institutions have started to offer online services by moving to a virtual environment with the help of technology. Bartin University Library is one such institution which carried out its services on online platforms in this process. In this study, the use of the electronic resources and online library services offered by the Bartin University Library during the distance education process due to the Covid-19 pandemic were examined in the context of its undergraduate students. Moreover, whether the students of Bartin University changed their information-seeking behaviors during the Covid-19 pandemic was scrutinized. In the study, the YORDAM Library Automation System and the DeepKnowledge Remote Access Portal of the Bartin University library were used to obtain the data, and the results are given under the title of "Findings and General Evaluation" of the research.

Keywords: Covid-19, Pandemic, Distance education, Library usage behavior, Information-seeking behavior, Bartin University

ÖZ

Covid-19 pandemisi ekonomi, eğitim, turizm ve sağlık gibi birçok alanda dünyada olumsuz bir etki yaptı. Bu hastalıktan kurtulmak ve kayıpları en aza indirmek için çoğu işletme ve eğitim kurumu teknolojinin yardımıyla sanal ortama geçerek online hizmetler sunmaya başladı. Bartın Üniversitesi Kütüphanesi de bu süreçte hizmetlerini online platformlarda yürüttü. Bu çalışmada, Bartın Üniversitesi lisans öğrencilerinin Covid-19 pandemisine bağlı uzaktan eğitim sürecinde Bartın Üniversitesi kütüphanesinin sunduğu elektronik kaynakları ve online kütüphane hizmetlerini kullanma durumları ve Covid-19 pandemisi sürecinde Bartın Üniversitesi öğrencilerinin değişen bilgi arama davranışları incelenmiştir. Çalışmada verilerin elde edilmesinde, Bartın Üniversitesi kütüphanesinin sahip olduğu YORDAM Kütüphane Otomasyon Sistemi ve DeepKnowledge Elektronik Kaynaklara Uzaktan Erişim Portalı'ndan yararlanılmış, elde edilen sonuçlar araştırmanın "Bulgular ve Genel Değerlendirme" başlığı altında verilmiştir.

Anahtar Kelimeler: Covid-19, Pandemi, Uzaktan eğitim, Kütüphane kullanım davranışı, Bilgi arama davranışı, Bartın Üniversitesi

Introduction

One of the worst pandemics recorded in human history has been experienced across the globe due to the Covid-19 virus. The World Health Organization declared this virus, which first appeared in Wuhan, China in December 2019, as a public health emergency, that is, a pandemic of international concern, on March 11, 2020 (World Health Organization, 2020). The Covid-19 pandemic has also affected the corporate ecosystem, and the work culture of many areas, such as travel, entertainment, and education, has changed drastically. This process has caused many changes in the traditional methods in which businesses operate. Working from home is now considered the new normal, and a flexible working week has been implemented to solve the issue of dense population to enable social distancing (Noh, 2021). Measures, such as quarantine, social distancing, isolation of the infected population, and temporary closure of educational institutions, were implemented in most countries to reduce the health and economic effects of the epidemic and slow its spread. After March 11, 2020, travel restrictions were introduced all over the world and many countries decided to close their borders.

The first case in Turkey was detected on March 11, 2020, and in line with the decisions taken by the Ministry of Health of the Republic of Turkey, other public institutions and organizations began to take measures against the spread of the Covid-19 virus. As in other sectors, restrictions started in the education sector, and with the decision of the Council of Higher Education (YÖK) on March 23, 2020, universities suspended face-to-face education for three weeks and continued education remotely in the electronic environment (Higher Education Council, 2020a). In another press release made by the Council of Higher Education on March 26, 2020, it was announced that the decision to carry out the education process with distance education and digital education opportunities in the spring semester was taken (Higher Education Board, 2020b). Despite the restrictions and closure decisions, the institutions and organizations continued their education, as the infrastructures of the universities were ready for distance education. This provided a rapid transition into the remote education process.

During the Covid-19 pandemic, where formal education was interrupted and physical buildings were closed, libraries were forced to continue their services online. The pandemic required innovation not only in the online teaching of higher education but also in the effective ways in which academic libraries can deliver their services virtually. The Covid-19 pandemic also forced libraries to offer services that support e-learning. In this process, the biggest supporters and guides for libraries have been national-international professional associations. Chief among these associations is the International Federation of Library Associations and Institutions (IFLA). Since the very beginning of the pandemic, IFLA listed the Covid-19-related practices of libraries in different countries on its web page and announced different practices around the world (IFLA, 2020). In this sense, when we look at the professional organizations in Turkey, a letter from the Turkish Librarians Association dated March 16, 2020, describing the

situation was sent to the Council of Higher Education. In the letter, it was stated that "there are still university libraries open and even the book loan-return services continue" and a demand was made to stop these services (Çimen, Gürdal, Çuhadar, & Akbaytürk Çanak, 2020, p.175).

During the Covid-19 pandemic in Turkey, precautions and practices to improve the workflow were also put forward by the Association of the Anatolian University Libraries Consortium (ANKOS). ANKOS signed the statement, entitled "ICOLC Statement on the Global COVID-19 Pandemic and Its Impact on Library Services and Resources" that was prepared by the International Coalition of International Consortia (ICOLC) and became a party to the practices put forth therein. In addition, it declared the announcements of open access resources by publishers to relevant persons and institutions, postponed the annual international ANKOSLink meeting, introduced new practices to increase the sharing of information resources between libraries, and organized various webinars that would support the professional development of librarians and contribute to their knowledge and skills (ANKOS, 2020).

During the Covid-19 pandemic, library users had to access the resources they needed online and meet their information needs with the digital services offered by the library. In this process, many libraries in Turkey had to move their services to digital media in a short time. One of these libraries is the Bartin University Library, which is examined as an example in the study. Bartin University was established in 2008. The Bartin University Library has been operating since the foundation of the university. Although the Bartin University Library does not have an action plan against epidemics and disasters, due to its technical infrastructure being ready, it was possible to take quick action during Covid-19 and move its services online (Bartin University Library and Documentation Department, 2021). In this study, the use of the services provided by the Bartin University Library and the information-seeking behaviors of the undergraduate students of Bartin University during the distance education process of the Covid-19 pandemic were examined.

Covid-19 and Libraries

While traditional libraries consist of places where printed and manuscript works are located, with the advancement of technology, information technologies have developed and new ways of storing and accessing information have emerged, with libraries transforming their services accordingly (Zhou, 2021). Thanks to these technological opportunities, libraries have moved their services to digital platforms and have started to offer technology-based information resources and services to ensure that users can always access relevant information. Digital libraries are also the biggest supporters of education as they provide up-to-date materials, provide instant access to a wide variety of resources that do not exist physically, and provide access to resources to anyone with an internet connection from anywhere at any time (Vrana, 2017). The increasing availability of digitized resources has allowed educational institutions

to provide students with more diverse, more accessible, and richer teaching materials than ever before. The relationship between digital library services and e-learning is quite simple. Digital library services as networked information systems are already a part of the learning process. E-learning is not possible without learning materials, which is where digital library services and resources come in to assist. In addition, digital libraries facilitate knowledge sharing among stakeholders in the learning process and encourage them to "work together."

The sudden outbreak of Covid-19 and its impact on the whole world forced educational institutions to switch to distance education despite many fears and prejudices. Accordingly, libraries carried out their services through online platforms in this process. Libraries had to adapt to this process in order to survive the unexpected closures and restrictions caused by the pandemic, to meet the information needs of users, and to ensure continuous learning during the pandemic. The fact that library services are available online and the technical infrastructure of many libraries is advanced has allowed libraries to take quick action in the Covid-19 pandemic. In this process, national and international professional organizations, non-governmental organizations, and professional leaders have carried out numerous guiding and informative studies. The International Federation of Library Associations and Institutions (IFLA), which has taken immediate action since the first days of the epidemic, created the "COVID-19 and Global Library Field" web page, where information and data about the practices of different libraries regarding Covid-19 are shared with all stakeholders. IFLA did not provide a definitive opinion on the complete closure of libraries or the restriction of services, leaving the implementations to the initiative of regions or countries according to the course of the pandemic (Çimen, Gürdal, Çuhadar, & Akbaytürk Çanak, 2020; IFLA, 2020). Moreover, suggestions were made by IFLA regarding the uninterrupted remote management of library services, ensuring social distance and hygiene within the library, ensuring safety at home and at work, keeping in touch with users, partnerships with libraries and relevant professional organizations, and the worldwide reopening process.

Another study that contributed to libraries during the difficult Covid-19 process was presented by the International Coalition of Library Consortia (ICOLC). The Association issued the "Statement on the Global COVID-19 Pandemic and Its Impact on Library Services and Resources" on March 13, 2020, calling on publishers and content producers to perceive how the Covid-19 pandemic affected the worldwide information community. In addition, it asked publishers to support open access to facilitate research, guide the public health response, accelerate discovery on Covid-19 vaccines and treatments, and remove all concurrent user limits on licensed digital content of an institution (library) as universities go online (ICOLC, 2020). ICOLC is a group of approximately 200 library consortiums in North and South America, Europe, Australia, Asia, and Africa, with the Anatolian University Libraries Consortium (ANKOS) being a member of this group. ANKOS is among the organizations that signed the

declaration prepared for the above-mentioned publishers and libraries by the International Coalition of Library Consortia.

Professional organizations and libraries operating in Turkey and around the world took an active role in the Covid-19 pandemic, guiding their stakeholders to manage this process most smoothly and to offer their services uninterrupted. In this process, information sharing was provided by organizing pieces of training by the University and Research Librarians Association (ÜNAK), Anatolian University Libraries Consortium (ANKOS), Turkish Librarians Association, and various professional institutions. Additionally, a guide on "Reopening University Libraries After the Covid-19 Pandemic" was prepared in cooperation with ANKOS and the Ihsan Dogramaci Bilkent University Library. In the guide, information was offered about the measures to be taken when it comes to reopening the libraries during the Covid-19 pandemic, as well as national and international resources related to the topic.

During the Covid-19 pandemic in Turkey, universities switched to the distance education process after the statement made by the Council of Higher Education on March 18, 2020 (Higher Education Council, 2020). As of the specified date, Bartin University announced to its stakeholders that it would act in line with the decisions to be taken by the Turkish Council of Higher Education (Bartin University, 2020) and suspended face-to-face education, moving its courses to the online platform. Bartin University Library, which has continued its activities since the university was founded in 2008, also issued an announcement on the website and the social media accounts of the library, which included how to access the electronic resources provided by the library remotely and how stakeholders could benefit from the library services, in addition to the ongoing online services available during the process (Bartin Üniversitesi Kütüphane ve Dokümantasyon Daire Başkanlığı, 2020a). Bartin University Library also created an inclusive education plan for all its stakeholders, initiating it on the YouTube platform on April 1, 2020 (Bartin Üniversitesi Kütüphane ve Dokümantasyon Daire Başkanlığı, 2020b). In addition, pieces of training were provided to all stakeholders by various databases (Rosetta Stone, Al Manhal, etc.) that the library purchased and accessed. To meet the resource needs of its stakeholders during the Covid-19 pandemic, in addition to its existing electronic resources, Bartin University Library opened trial access by making interviews with many database companies and publishers, requested free access to additional collections for its stakeholders, and produced additional collections about the Covid-19 virus, all of which were announced to the stakeholders.

Library Usage by University Students

The Covid-19 pandemic, which emerged in Wuhan, China in December 2019, affected all sectors of the global economy, including travel, entertainment, and tourism. One of the most affected sectors during the epidemic process has been the education sector. Many countries

around the world took a compulsory break from face-to-face education and decided to continue their education activities online (Erkut, 2020). Distance education is a form of education in which students and teachers are physically separate and communication is enabled using various technologies (Zhou, 2021). Libraries have been the biggest supporters of this process. Al and Madran (2004) indicate that the basis of the distance education process is the transformation of written and printed resources into digital formats thanks to technological means, so that they can be easily reproduced, distributed, and accessed. The fact that libraries have electronic resources and make these resources available to their stakeholders via the internet has also been the biggest supporter of the distance education process.

The Covid-19 pandemic has affected digital library services, users, and library professionals who provide these services in many ways. Librarians brainstormed ways to notify users promptly of changing library services to address the urgent needs arising from the pandemic and to reschedule library services during the pandemic. The global pandemic first drove an increased need for libraries to serve faculty and students, who realized the importance of digital library services more than ever (Mehta & Wang, 2020). During the Covid-19 pandemic, libraries played an essential role in supporting e-learning in universities by improving academic communication, allowing students to reach their resources from anywhere, creating a gateway to access knowledge resources, consolidating online resources, and storing and managing large volumes of digital content. Thanks to the databases, e-books, e-journals, and online catalogs offered by the libraries during the distance education process due to the Covid-19 pandemic, faculty members, students, and researchers were able to access the information resources they needed simultaneously and free of charge.

The emergence of the Internet at the borders of distance education affected the delivery of education in more than one way. Additionally, distance learners have critical difficulties in searching for information effectively and using this information in learning and research scholarship. Furthermore, efforts by the library and related information professionals are required to successfully collect and manage information and guide distance learners in this digital age. The literature underlines that undergraduate students need help from the library in selecting and evaluating resources and using information ethically, which is one of the main ways of doing research, especially in the distance education process due to the Covid-19 pandemic (Hassan, Abd Aziz & Siew Lee, 2016). In this age of multiple information sources and various communication channels, libraries are always responsible for providing their users with the most valid and accurate information. Supporting researchers, students, and faculty members by providing information about the latest developments, research, and literature, as well as meeting the basic needs of regular library users, are also among the roles of libraries during the pandemic process (Ali & Gatiti, 2020).

The academic library is considered the heart of a higher education institution and is designed

to meet the information needs of students and faculty. The contribution of libraries that support teaching, learning, and research activities to the success of students in their academic activities cannot be ignored (Jan & Anwar, 2019). For this reason, the library plays an important role in students' orientation to education and helps them to be successful in their academic careers. The frequency of library visits or library usage habits of students can also affect their success.

Students and other stakeholders could not physically visit the library during the Covid-19 pandemic. However, they were able to access the electronic resources offered by the library remotely via the internet and benefit from these resources and other online services. This study examined the library use behaviors of Bartin University undergraduate students during the distance education process due to the Covid-19 pandemic and made suggestions for the measures that libraries should take against natural disasters such as the epidemic process.

Aim, Scope and Method of the Study

In the study, the use of electronic resources and online library services offered by the Bartin University Library during the distance education process, specifically due to the Covid-19 pandemic, and the changing information-seeking behaviors during the pandemic were examined in the context of the university's undergraduate students. The purpose of choosing the sample group from undergraduate students is that due to the distance education process of universities during the Covid-19 pandemic, the students moved away from the campus and had to take advantage of online services.

With the Covid-19 pandemic, universities' suspension of face-to-face education has revealed that libraries have moved their services online. From this point of view, the study was based on the hypothesis that electronic resources were used more intensively compared to the previous period, as physical usage rates of libraries decreased.

The case study design, which is one of the qualitative research designs, was used in the study. For data analysis, descriptive and comparative analysis methods were used, which can be described as "explaining a situation, making evaluations and revealing the relationships between events" (Çepni, 2005, p.20). The study seeks to answer the following questions:

- Are there any changes in the behaviors of Bartin University undergraduate students towards using library services during the Covid-19 pandemic?

- Are there any changes in the efforts of Bartin University students to seek and access information during the Covid-19 pandemic?

In the first part of the study, there was an attempt to answer these questions by collecting data and analyzing the previous studies and literature with the help of technological equipment and devices (DeepKnowledge Remote Access to Electronic Resources Portal and YORDAM

Library Automation System) owned by the Bartin University Library. In the next part of the study, covering the findings and the general evaluation, the statistics obtained through the "DeepKnowledge Remote Access to Electronic Resources Portal" (registration to the portal, the number of views on the portal, and the usage status of the electronic collections) and the book loan and return data obtained through the YORDAM Library Automation System statistics, as well as the physical building usage (door passage) data will be answered by considering the Covid-19 pandemic process and the date ranges before and after (2018-2021). The data obtained were analyzed using Microsoft Excel and presented thematically using tables and figures according to the purposes of the study.

Findings

The data in Graphic 1 below shows the registration statistics of Bartin University undergraduate students from the beginning of the Bartin University Library DeepKnowledge Remote Access Portal to Electronic Resources until today (between 2018 and 2021).


Graphic 1: *Number of Students Registering to Deepknowledge Portal*

When the data in Graphic 1 is examined in general, it is seen that the demand for the Deepknowledge portal by Bartin University undergraduate students was low from the beginning (from 2018) until March 11, 2020, when the pandemic started in Turkey. However, with the declaration of the pandemic in the country in March (March 2020), universities switched to distance education and Bartin University closed its doors as of March 16, 2020. Bartin University Library took swift action on this date, prepared online user guides for remote access to library resources, shot training videos, and gave library training over the Zoom platform. Thus, the number of undergraduate students enrolled in the Deepknowledge portal increased after the beginning of the pandemic and the transition to distance education.

The data in Graphic 2 presents the statistics of Bartin University undergraduate students logging into the Bartin University Library DeepKnowledge Electronic Resources Remote Access Portal from the beginning until today (between 2018 and 2021).
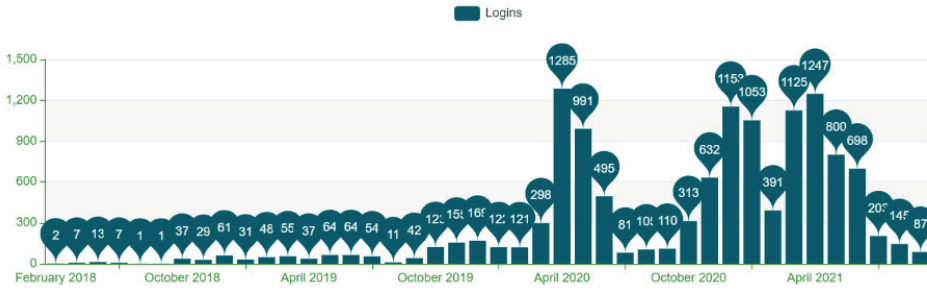
Graphic 2: *Number of Students Logging into Deepknowledge Portal*

According to Graphic 2, the number of undergraduate students logging into the remote access portal to resources does not indicate an increase until the pandemic period. However, a significant increase has been observed in the number of people logging into the portal since March 2020, when the pandemic process started. For example, while 121 undergraduate students entered the portal in February 2020, 298 undergraduate students entered the portal in March and 1,285 in April. The number of students logging into the portal decreased during the summer break (June, July, and August) and during the winter break (February). Although it was decided in September 2021 that education would be conducted face-to-face at Bartin University, when the data is analyzed, it is seen that the number of undergraduate students using the portal has been high after this date as well. Hence, it is possible to claim that students' active use of the portal in accessing electronic resources continues.

The data in Graphic 3 demonstrates the viewing statistics of Bartin University undergraduate students from the beginning of the Bartin University library DeepKnowledge Remote Access Portal to Electronic Resources until today (between 2018 and 2021).
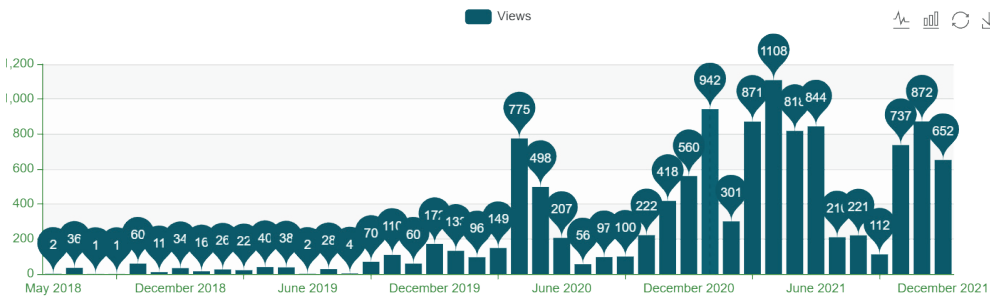
Graphic 3: *Number of Views for Resources on the Deepknowledge Portal*

Graphic 3 displays the viewing data of Bartin University undergraduate students into the library's remote access portal. The data exhibits that the number of students visiting the portal was low before the pandemic process, with the number of students visiting the portal increasing with the pandemic process. However, it can be said that the number of students visiting the remote access portal for Bartin University is still low, as the university has 17,831 students as of 2021.

The data in Graphic 4 illustrates the usage status of the collections accessed through the DeepKnowledge Electronic Resources Remote Access Portal of the Bartin University library by undergraduate students before the pandemic (from 2018 to March 2020) and during and after the pandemic period (from March 2020 to the present).

Before the Pandemic   **After the Pandemic Started**
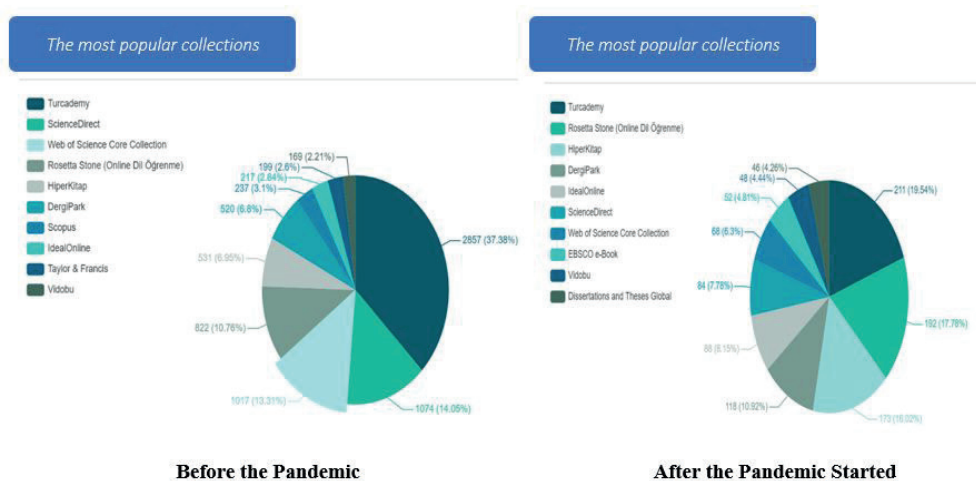
Graphic 4: *Most Popular Electronic Collection Usage in the Pre-Pandemic – Pandemic Periods*

Looking at the data in Graphic 4 in general, it is observed that the collections that Bartin University undergraduate students accessed and used on the portal in the pre-pandemic period are foreign language-based sources, such as ScienceDirect, Web of Science, and Rosetta Stone. After the beginning of the pandemic period, Turkish collections began being used more intensely, including Hiperkitap, Dergipark, and IdealOnline. This situation can be interpreted as the portal usage status of Bartin University students, whose language of instruction is Turkish, being more frequent after the pandemic.

The data in Graphic 5 provides information about the publishers of the collections accessed by undergraduate students before the pandemic (from 2018 to March 2020) and after the start of the pandemic (from March 2020 to the present) through the Bartin University Library DeepKnowledge Portal.
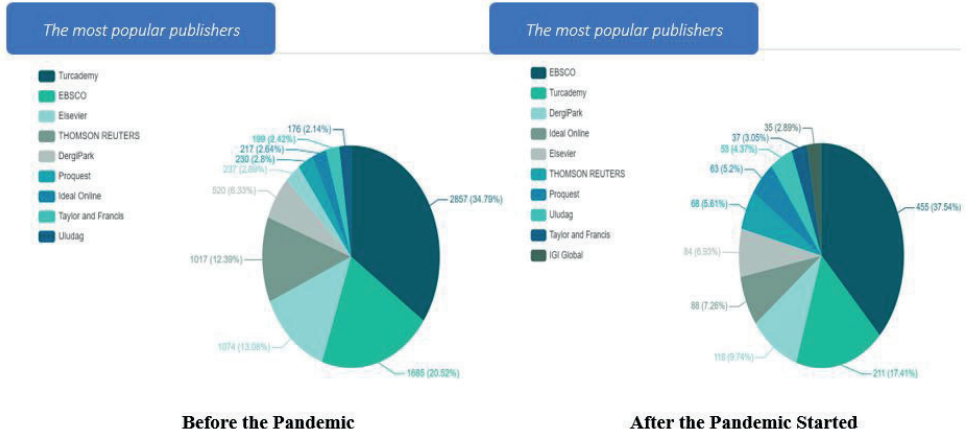
Graphic 5: *Most Popular Electronic Publishers in the Pre-Pandemic – After the Pandemic Periods*

As Graphic 5 reveals, while the publishers of the collections that Bartin University undergraduate students accessed and used on the portal in the pre-pandemic period were those in foreign languages, such as Elsevier and Thomson Reuters, after the outbreak of the pandemic, the usage rates of publishers containing mostly Turkish language collections, such as Dergipark and IdealOnline, was high. Again, this situation can be interpreted as the portal usage status of Bartin University students, whose language of instruction is Turkish, being active during the pandemic period.

The data in Graphic 6 presents the physical building usage (door passage) data of undergraduate students obtained from the YORDAM Library Automation System of the Bartin University Library, taking into account the date ranges before and after the Covid-19 pandemic process.
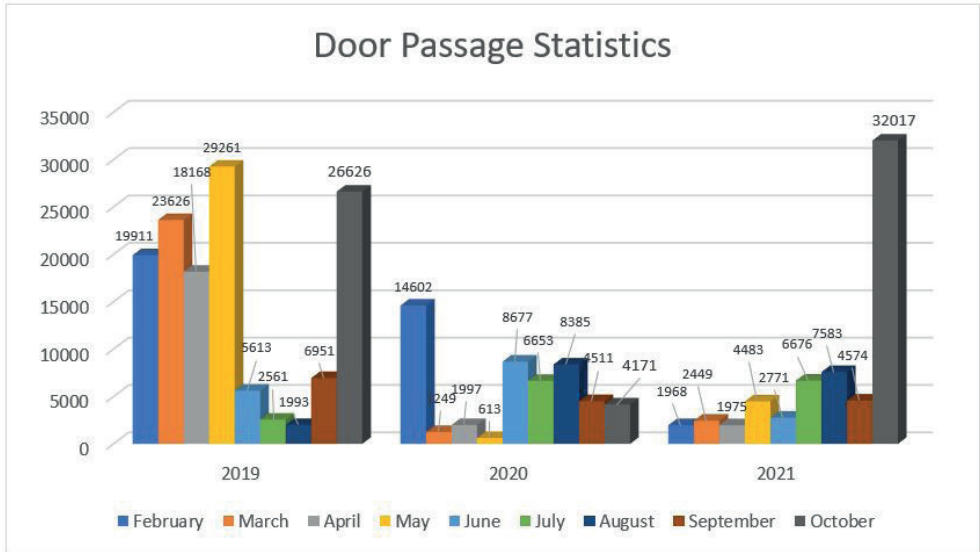
Graphic 6: *Bartın University Library Physical Library Usage (2019-2021 Gate Pass)*

Graphic 6 shows that the number of visits to the library building by the undergraduate students of Bartin University was high in the pre-pandemic period, with the number of visits decreasing during the summer and winter holidays when education was interrupted. In addition, it is seen that the number of visits to the library building decreased with the transition to distance education as of March 2020, excluding the holiday period. In this process, the use of the library was mostly made by academics, administrative staff, and international students living in Bartin. On the other hand, examining the data, there is an increase in the library building gate passes in June, July, and August 2020. This is due to the fact that the library of Bartin University was moved to its new central building at the Kutlubey Campus during the pandemic period, with the people of the region visiting the library after that. With Bartin University beginning face-to-face education again on September 27, 2021, the data demonstrates that the rate of physical library use increased after October 2021. Based on the data in the graphic, it can be interpreted that the physical use of the library by undergraduate students was low during the pandemic process.

The data in Graphic 7 provides the physical building usage (book loan) data of undergraduate students obtained from the YORDAM Library Automation System of Bartin University Library, taking into account the date ranges before and after the Covid-19 pandemic process.
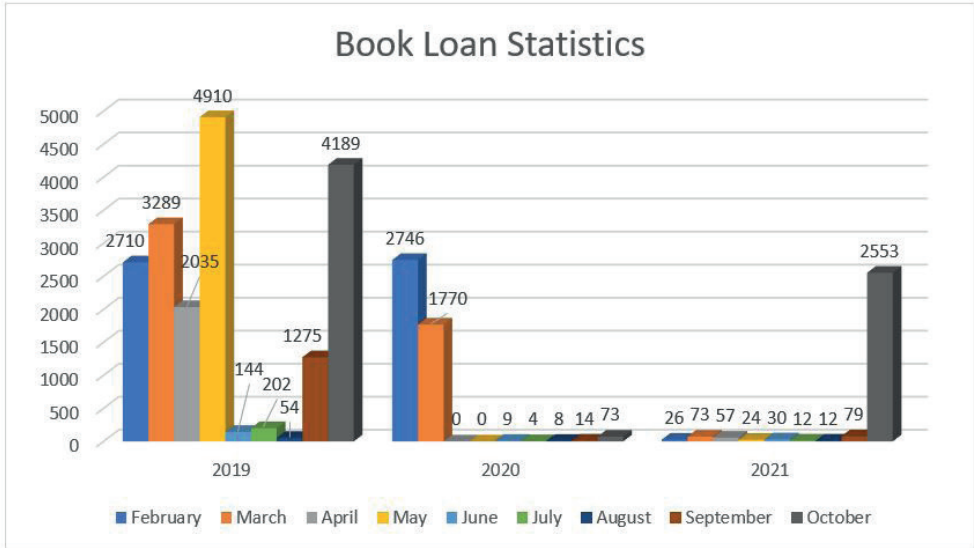
Graphic 7: *Bartin University Library Book Loan Statistics (2019-2021 Statistics)*

Graphic 7 affirms that the book borrowing data of Bartin University undergraduate students coming to the library building in the pre-pandemic period is low during the summer months when education is interrupted (June, July, August) and high in other months. However, with the onset of the Covid-19 pandemic process, it has been observed that students' book borrowing data decreased after March 2020. With the re-initiation of face-to-face education at Bartin University on September 27, 2021, it has been determined that the library use status of undergraduate students has increased again, much like in the pre-pandemic period. Based on the data in the graphic, it can be interpreted that the physical use of the library (borrowing books) of undergraduate students during the pandemic process was low, and this number increased with the start of face-to-face education again.

Conclusion and Recommendations

The Covid-19 pandemic not only affected education and training globally, but also affected the library services, users, and library professionals, who provided these services under the roof of educational institutions, in many ways. With the declaration of the pandemic in Turkey, universities decided to switch to distance education, and libraries, like many institutions, moved their services to online platforms. During this process, it was extremely important for libraries to move services to the virtual environments, to increase the quality of services in the virtual environments, to increase the number and scope of electronic resources, to actively reach users who need information, and to include students in the library services. In this context,

this study examined the information-seeking behaviors of Bartin University undergraduate students during the Covid-19 pandemic and the obtained data were evaluated in the previous section. In light of the data, it is possible to assert the claims below:

Bartin University Library does not have an emergency action plan for extraordinary situations such as the Covid-19 pandemic,

Nevertheless, since the library services were adaptable to the online environment, Bartin University Library took quick action in this process and continued to serve its users online,

- Bartin University Library has digital platforms to access library e-resources and digital library services off-campus without any problems,

- The data types and information-seeking behaviors used by students have turned into the use of electronic and online resources,

- Bartin University has a digital library that improves remote access and distance learning by integrating library services into the virtual environment,

- Students can access digital library services from anywhere, as long as they are connected to the Internet.

When evaluating the data obtained are evaluated in general, it becomes pertinent to ask whether there were any changes in the behaviors of Bartin University undergraduate students towards benefiting from library services during the Covid-19 pandemic and in their efforts to seek and access information. In response to this question, it has been revealed that Bartin University undergraduate students used the online resources of the Bartin University Library more in their information seeking behavior and in accessing the information they need during the pandemic. In this context, the hypothesis that the increase in the use of electronic resources in the Covid-19 pandemic and, accordingly, the undergraduate students use of the library's online resources more intensively in order to access scientific information resources has been confirmed.

As a result, in the study, with the suspension of face-to-face education in universities during the Covid-19 pandemic, libraries have also moved their services to the online environment and the rate of use of electronic resources has increased. The Covid-19 pandemic has shown that university libraries should improve and digitize their existing services, add new digital services to their services, employ more information professionals with Information and Documentation Management graduates, use new technologies by following the developing technology, and take into account the copyright concerns to meet the increasing demand for information and expand their digital resources.

Based on the results of the study, the following recommendations can be made:

- Libraries should exhibit an egalitarian behavior between printed and electronic resources, taking into account extraordinary situations such as pandemics, while planning collection development,

- User training should be provided to use resources effectively and to avoid problems with accessing the systems,

- Guides should be prepared for users who are not familiar with the access and use of electronic resources,

- Online user services and reference services should be developed,

- Users should also be informed about external resources that can be used free of charge,

- Collaborations between libraries and even publishers and information centers should be developed,

- The Covid-19 pandemic has once again demonstrated the importance of open access and open science in accessing information resources,

- Budgetary support should be provided to secure digital content,

- Publishers can provide free e-books and e-journals to libraries for a limited time,

- Paid educational content can be provided free of charge for a certain period,

- Temporary copyright agreements can be made for works and artefacts,

- Libraries are among the essential institutions for people to distinguish the true information from the false, so they can organize information and media literacy training,

- Libraries must negotiate with publishers to provide free access to most electronic information resources in emergencies such as the Covid-19 pandemic,

- Libraries should inform their users about their services using various media,

- Libraries should enrich their collections by considering the education language of the educational institution they are affiliated with,

- Libraries should be suitable to develop their services in line with the demands of their users and the conditions of the day,

- The information technology infrastructure of libraries should be robust and ensure uninterrupted remote access to electronic information resources,

- Libraries should employ Information and Documents Management people with technical skills who are experts in the field.

Librarians need to be in steady cooperation with other libraries, their colleagues, and distance education actors to meet the information resource needs of their users. Moreover, librarians must be open to innovation and creativity when delivering services in this new era to maintain interaction with users and maximize the role of libraries. In the future, libraries should establish a digital library that will make it easier for users to access it in the event of negative situations that may arise from damage such as epidemics and natural disasters. In order to prevent data loss due to disasters, they should save data and library resources in reliable repositories and back up these records.

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