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Distance Learning: The Motivators, the Preventers and the Neutralizers for Faculty Members and Students

Uzaktan Eğitim: Öğretim Üyeleri ve Öğrenciler için Motive Ediciler, Önleyiciler ve Etkisizleştiriciler

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DISTANCE LEARNING: THE MOTIVATORS, THE PREVENTERS AND THE NEUTRALIZERS FOR FACULTY MEMBERS AND STUDENTS

ABSTRACT:

Technological developments have closed up the distances so far. Compared to 50 years ago, people can reach anything from all over the world thanks to internet. Not only products, but also any service can be provided online such as purchasing, accommodation, health services, catering and so on. One of these services is education. Especially in state of emergency such as natural disaster, war or in today's case, pandemic when social distance is necessary, internet based distance learning becomes a necessity more than an option. This study examines the weights of factors affecting the motivation of both faculty members and doctoral students, who are two important parties of education, for distance learning. For this purpose two models are formed for parties. In the first model developed for students, there are three main criteria and 12 sub-criteria; while in the second model developed for faculty members, there are three main criteria and 14 sub-criteria in total. Criteria for both models were decided either by literature review, authors' observations and interviews with participants. Analytic Hierarchy Process was used in analysis. Results of this case study showed that for both parties, formal education type is the most preferred one. While expression difficulty in quantitative courses is the most determined one of the motivation for academicians, accessing problems of exams and courses is for doctoral students. In discussion part results of both faculty members and students are compared considering both theoretically such as motivational theories and empirically such as the education system of both Turkey and the developed countries.

Keywords: *Distance Learning, Analytic Hierarchy Process (AHP), Formal Education, Hybrid Education, Motivation*

UZAKTAN EĞİTİM: ÖĞRETİM ÜYELERİ VE ÖĞRENCİLER İÇİN MOTİVE EDİCİLER ÖNLEYİCİLER VE ETKİSİZLEŞTİRİCİLER

ÖZ:

Son zamanlarda teknolojik gelişmeler ulaşılması zor pek çok mesafeyi kapatmıştır. 50 yıl öncesine göre kıyaslandığında, insanlar dünyanın her yerinden her şeye internet sayesinde ulaşabilmektedir. Sadece ürünler eğil, satın alma, konaklama, sağlık hizmetleri, yemek gibi her türlü hizmet de çevrimiçi olarak sunulabilmektedir. Çevrimiçi olarak sunulan hizmetlerden biri de eğitimdir. Özellikle

doğal afet, savaş gibi olağanüstü hallerde ya da günümüzün pandemi koşullarında sosyal mesafenin gerekli olduğu durumlarda, internet tabanlı uzaktan eğitim bir seçenekten çok bir zorunluluk haline gelmektedir. Bu çalışma, yüksek öğretimin iki önemli tarafı olan öğretim üyeleri ve doktora öğrencilerinin uzaktan eğitime yönelik motivasyonlarını etkileyen faktörlerin önem derecelerini incelemektedir. Bu amaçla, taraflar için iki model oluşturulmuştur. Öğrenciler için geliştirilen modelde üç ana kriter ve 12 alt kriter; öğretim üyeleri için geliştirilen modelde ise üç ana kriter ve 14 alt kriter bulunmaktadır. Her iki modeldeki kriterlere; literatür taraması, yazarların gözlemleri ve katılımcılarla yapılan görüşmeler neticesinde karar verilmiştir. Analizlerde Analitik Hiyerarşi Prosesi kullanılmıştır. Bu vaka çalışmasının sonuçları, her iki taraf için de örgün eğitim türünün en çok tercih edilen tür olduğunu göstermiştir. Öğretim üyelerinin motivasyonunu en çok etkileyen faktör sayısal derslerde ifade güçlüğü olurken, doktora öğrencileri için bu faktör sınav ve derslere erişim problemi olmuştur. Tartışma bölümünde ise öğrenciler ve öğretim üyeleri için elde edilen bulgular hem motivasyon teorileri kapsamında teorik olarak hem de Türkiye ve diğer gelişmiş ülkelerdeki eğitim sistemi nezdinde pratik bağlamda karşılaştırmalı olarak ele alınmıştır.

Anahtar Kelimeler: *Uzaktan Eğitim, Analitik Hiyerarşi Prosesi (AHP), Örgün Eğitim, Karma Eğitim, Motivasyon*

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INTRODUCTION

The 21st century, which is also called as "information age" has started to manifest itself with the widespread use of information technologies in all areas of our lives. Technology provides people with access to products, services and information from all over the world with the help of the network connections by offering the internet. The possibilities offered by the developing technology are frequently preferred by people due to their advantages such as being easy and safe and providing time. The effect of Generation Z in realizing the supply and demand of technology at an astronomical speed and ensuring adaptation at the same speed is an indisputable element (Altunbay and Bıçak, 2018: 132). Especially the fact that Generation Z quickly grasps technology, adapts and integrates it in all areas of life (Turner, 2015: 106), is a factor that ensures the economic balance of technological innovations. People, businesses or countries that are able to use technology and its fast processing advantage, especially effectively in social elements are always one step ahead. The historical process shows that every innovation, development or revolution opens a new page in human history. Similarly, technological developments have made a technological transformation by converting face-to-face service understanding into online service (banking, shopping, official transactions, etc.)

applications. One of these technological services is education. The traditional understanding of education has been continued face-to-face from Plato's academy in ancient Greece to the academic lectures given by Hypatia in the library of Alexandria during the Roman period, and finally to today's modern universities. Because, changing and developing technology struggles to make human life easier, more comfortable and more accessible (Şenel and Gençoğlu, 2003: 47). In this sense, education has transformed from notes to the manuscript of Plato's time to books reproduced in the printing house and into a digital e-book form today. However, every century left behind in history has also made change in education compulsory. Smart boards used in many educational institutions and online libraries offered by universities are also good examples of this transformation. The adventure of the change process in the field of education, which started with distance education, continues with the online education becoming one of the rising trends.

Technology has unquestionably contributed to the creation of flexible educational opportunities that allow students to gain information remotely (Alghamdi et al., 2020: 214). More clearly, it provides many advantages such as time and spatial flexibility, easy access to course materials, low-cost education opportunity, energy and effort saving, easy access to professional knowledge (Andrade et al., 2019: 37; Koç, 2020: 30; Wei and Chou, 2020: 3). In addition to these advantages, it provides uninterrupted training in emergency situations such as war, natural disasters and epidemics. In our country, the presentation of the courses given under the title of common courses in universities to open access through an interface called "YÖK (The council of Higher Education) Courses Platform" (YÖK, 5/i) can be seen as an indicator of being sensitive to the requirements of the changing era and benefiting from the opportunities of technology. While distance education continued to be partially implemented in its current form, an urgent transition to distance education was made in all higher education institutions across the country due to Covid-19. When it was determined that the pandemic process would be prolonged after the short-term holidays of the schools, distance education was quickly chosen for education which has an important place among the social elements. It has been reported that support will be provided in topics such as legislation, infrastructure, human resources, content and implementation by receiving feedback from schools within the scope of the road map created by YÖK since the decision was taken (YÖK, 2020). As the pandemic process extended to the fall period of 2020-2021, it was decided to continue distance education. This shows us that distance education is actually moving towards a critical point where it can provide continuity in terms of both the current emergency and the future of education. The point reached thanks to technology signals that distance education is on the way to create the alternative with a large percentage of the future. In line with this goal, students and teachers are of great importance for the future of distance education. The importance of education is undeniable in terms of building the future and

raising individuals who can benefit society. Similarly, universities that undertake the task of producing and developing knowledge manage present day and the future. In this context, determining the factors affecting the motivation of faculty members and students for distance education, which are two important parts of academic education, and the weights of these factors are important to make those factors outstanding as they affect the motivation of students and faculty members towards distance education positively at most, and similarly, to identify negative factors that have significant effects and make improvements. For these reasons, PhD students and faculty members in the business administration department of a public university were chosen to carry out this study. In the research, the reason of why business department was chosen is because business department is in 2nd place of most used sections of distance education in Turkey (Yavuzalp et al. 2016: 766). Instead of including undergraduate and master students, we preferred PhD students based on their sense and rationality level and also the environment that provides more discussing issues for this sample.

In the process when Covid-19 emerges as a crisis (Sarı and Sarı, 2020: 51), ensuring the sustainability of education with distance education can be expressed as a part of crisis management. Crisis periods are divided into incubation period, explosion of the crisis, peak period, regression period and the opportunity period created by the crisis (Kadıbeşegil, 2001: 95; Aksu, 2009: 2437). In this context, it is necessary to carry out new studies in order to obtain the opportunities that distance education will create after the crisis and to ensure the quality, efficiency and standardization of distance education. At this point, it is important to improve the outputs of the distance education system applied in universities. The experiences and motivations of the distance education system stakeholders will play a key role in the system's improvement process. For this reason, the main purpose of the study is to determine the positive, negative and bidirectional factors affecting the motivation of business administration students and faculty members in the application of distance education in a public university offering higher education, and to ensure that future improvements can be made within the scope of the advantages and disadvantages of the system.

DISTANCE LEARNING

The concept of distance education is defined by UNESCO (2011) as "it is characterized by its focus on open access to education and training, it frees students from the constraints of time and place, and offers flexible learning opportunities to individuals and groups of students". Its progress by constantly updating itself since the 1700's shows that the concept of distance education has a unique history. Taylor (2001: 2) made a classification by taking into consideration the change, models, quality and characteristics of learning in distance education. The classificati-

on is composed of first generation which includes Correspondence Model based on printing technology, second generation which includes Multi-media Model based on printing, audio and video technologies, third generation which includes Tele-learning Model based on telecommunication applications to enable simultaneous communication, fourth generation which includes Flexible Learning Model based on online application via the Internet and the fifth generation which includes Intelligent Flexible Learning Model that is a derivative of the fourth generation and web-based applications. The historical development of distance education is briefly explained below in the light of Taylor's classification.

It is known that the first application of distance education, which has a history of 300 years, was carried out by letter in Sweden (Çoban, 2012: 2). Later, similar practices started to be seen in Europe and different geographies. The distance education adventure, which started through letters, gained mass after the radio began to be used as an education tool in the USA in the 1920s (Kırık, 2014: 81). In the 1930s, the developing mass communication tools also changed the form of distance education and television broadcasting was first used in distance education in the USA (Kaya, 2019: 67). It was aimed to encompass the education with the concept of "open university" by performing the courses completely on television broadcast (Bozkurt, 2019: 257). In the 1960s and later, this low-cost and subscriber-based system has become widespread in many countries (Casey, 2008: 46). With the development of information and communication technologies, distance education has also developed and changed its shell. In the 1990s, the Internet, which was used for military purposes in the beginning, was the changing face of distance education by trying to increase the quality of distance education by broadcasting through fiber optic cable computers in state universities in the USA (Pant, 2014: 66). In fact, the internet is an added value for education, as it is used for military purposes at first, just like operations research. The inclusion of computers and the internet in distance education has been an opportunity to ensure the participation and control of many students through web-based audio and video conferences (Simpson and Anderson, 2012: 5). Although technology-based distance education practices started and developed in the USA, their popularity have been accepted and applied in many countries.

Development of distance education as the whole world has gone through has a similar process in Turkey even though delayed. Bozkurt (2017: 87-88) adopted the classification made by Taylor (2001) by examining the development of distance education in Turkey in four phases such as:

- Phase 1 - The period when distance education was discussed (1923-1955)
- Phase 2 - Distance education period implemented through letters (1956-

1975)

- Phase 3 - Using radio and television in distance education (1976-1995)
- Phase 4- Internet and web-based distance education applications (1996-…)

With the establishment of the republic, the foundations of distance education which was planned as "education by letter" with the aim of increasing the literacy rate, could be laid after 1956 after a long discussion process (Özbay, 2015: 387). Distance education programs were started to be implemented in the Banking and Commercial Law Research Institute in 1956, and a Higher Education Center by Letter was established in 1974 (Kırık, 2014: 83). In 1982, distance education entered a new era with the Radio and Television Education Center, which aims to provide education through radio and television, which is defined as the third stage (Papi and Büyükaslan, 2007: 3). In 1982, an Open Education Faculty affiliated to Anadolu University was established and the period of breakthrough in distance education started. Internet-based distance education applications, which is the last phase, started in 1996 with Web-Based Asynchronous Education at METU (Çukadar and Çelik, 2003: 33). In later years, public universities such as Sakarya and Anadolu University also used web-based distance education applications. As a matter of fact, YÖK (2013) stated that some programs can be delivered through distance education and that they can benefit from radio, television and offline technologies in the implementation of the courses. This decision can be interpreted as a step towards supporting distance education in the reflection of technological developments. The development of technology has a profound effect on the distance learning experience (Weidlich and Bastiaens, 2018: 225). Technology provides us with contributions such as removing time constraints, giving flexibility to education and increasing demand for lifelong learning (Chen et al., 2002: 38). There are many advantages such as easy access to information, low-budget education, use of modern tools and techniques, and comfort (Mitchell and Delgado, 2014: 379; Dumford and Miller, 2018: 462). However, although online education has goals such as paying attention to the various needs of students and expanding this student population, negative approaches to online education also manifest themselves in the pandemic process we are currently in (Andrade et al., 2020: 37). The fact that the online education system does not have a strong infrastructure, software problems, less interaction, and the lessons being mechanized negatively affect perceptions and approaches to online education (Koç, 2020: 33; Shelton et al., 2017: 60). When the historical process of distance education is examined, it is possible to say that it has a potential for change that cannot be ignored. It is expected that in this digital education era, online education will become worldwide until 2025 (Palvia et al., 2018:233). The Covid-19 disaster has the potential of speeding this

timeline. Hence, the current problems of distance education which constitutes the strong alternative of the future, are similar to the resolution process at the beginning of the change in Lewin's (1947) Theory of Change. The dissolution step is the process in which the current situation is insufficient, confusion and change is felt necessary (Koçel, 2020: 686; Moralista and Oducado, 2020: 4739). It is possible to experience problems in the area where change takes place during the resolution process, but it can be handled by overcoming motivation and possible concerns (Wirth, 2004: 2). There are some problems, prejudices and concerns in the current situation of distance education, which we liken the process of being solved. There are many studies on this problematic basis in the literature. The common ground of these researches is to invest in the future of distance education and ensure its improvement.

LITERATURE REVIEW

When the national literature is examined, it is seen that there are studies that deal with the phenomenon of distance education within the scope of universities and present students' views on the subject in different ways. Similar results were obtained in two studies (Keskin and Özer Kaya, 2020; Üçer, 2020) examining the issue of university students' feedback in distance education, and it was concluded that students were satisfied with using web-based distance education, found it easy and comfortable, but dissatisfied with the system's infrastructure. On the other hand, in the study of Karadağ and Yücel (2020), who examined the satisfaction perception of undergraduate students in distance education, it was concluded that students were dissatisfied with digital content, guidance and information in the distance education process, and faculty members due to lack of technological knowledge. Similarly, in studies that examine students' perspectives on distance education (Akçay and Gökçearslan, 2016; Balıkçıoğlu et al., 2019; Akgün, 2020; Serçemeli and Kurnaz, 2020), problems such as interaction, internet connection problems and problems experienced in courses that require digital or visual representation should be improved. They concluded that distance education would be beneficial, but not a substitute for face-to-face education. Sırakaya et al. (2015) concluded that students have a positive attitude towards the online exam in their study which is made with associate degree students. Despite of positive attitude, interestingly the measures to be taken to ensure exam security were also emphasized.

There are also international studies that address the subject within the scope of students. In the study of Bolliger and Halupa (2018), they investigated the distance education perceptions of students studying at a private university. It was determined that the participation of students in the course facilitated the interaction among themselves. In contrast with this finding, in Shelton et al. (2017), study that predicts student achievement through student interaction in distance education,

found that the interaction was weakened, students' success decreased, and so they proposed a model that informs with an early warning system that the interaction has decreased. Wei and Chou (2020) conducted a research on the effect of students' online learning perceptions and learning readiness on online learning performance. As a result of the research within the scope of undergraduate students, it was determined that the internet and computer proficiency of the students have a positive effect on learning motivation and course satisfaction. Similarly, as a result of the research of Unger and Meiran (2020) which aims to study the undergraduate students' attitudes and anxiety towards emergency distance education, 91.5% of the students stated that their anxiety towards distance education decreased after the first few weeks, but that distance education cannot be like face-to-face education have achieved. For a similar purpose, Peloso et al. (2020) conducted a study to examine undergraduate students' concerns about distance education. Unlike Unger and Meiran (2020), results showed that students were worried about the pandemic, did not enjoy distance education and were worried that vocational education would be disrupted thanks to practical lessons. In the study of Akbal and Akbal (2020), which is similar to the method in our study, it was concluded that the most important problem of distance education is physical conditions in their study where they rate the problems experienced in distance education with AHP method. Physical conditions consist of sub-criteria such as lack of working environment, inability to access educational materials and lack of technological equipment to access education.

There are similar studies (Gürer et al., 2016; Aras and Karakaya, 2020; Gök and Çakmak, 2020; Koç, 2020; Sayan, 2020) examining the perceptions and evaluations of instructors on distance education within the scope of universities. These studies are similar in terms of results such as faculty members finding face-to-face education more successful, experiencing technical support in distance education, weak interaction, and low student interest. Abazaoğlu and Umurhan (2015) investigated the factors that encourage faculty members to teach in distance education in their study. As a result, it was concluded that faculty members were encouraged by reasons such as access to the masses who do not have access to face-to-face lectures, flexible working conditions, time and place independence. In the study of Korucuk (2020), which is different in scope but similar in terms of method with our study, an application was made for grading distance education satisfaction factors for classroom teachers with AHP method. According to results it was determined that the most important satisfaction factors in distance education are program evaluation, learning and materials. As with students, there are also international studies examining faculty members within the scope of distance education. Lewis and Abdul-Hamid (2006) investigated the strategies employed by lecturers to be successful in online distance education. As a result of the research, it was concluded that the teaching staff adopted strategies such as encouraging interaction, taking care of

providing feedback, making effort to facilitate learning and keeping students' desire to learn alive. In their study, Moralista and Oducado (2020) examined faculty members' perceptions of online education and concluded that faculty members were hesitant about online education. Faculty members state that online distance education is an acceptable practice if problems such as technological support problem, assessment and evaluation problem, cheating or academic dishonesty are prevented. Johnson et al. (2020) found that all faculty members with and without experience were able to focus on distance education in the study, in which they investigated the adaptations of faculty members to the transition to emergency distance education, and that the standards of lecturing and exam formats were changed with distance education. In addition, they also stated that faculty members decreased the work volume of students and experienced problems such as interaction and access to digital material. Cutri and Mena (2020) investigated the readiness of lecturers for online distance education. Results showed that the lecturers are effective in the adaptation of structural (such as technical problems, access to material) and cultural forces (such as being used to face-to-face education, not feeling the interaction).

When the studies in the literature are examined, it is striking that the point of view on distance education is addressed unilaterally (student or instructor). It can be said that the comments to be made will be insufficient when the problems identified or the advantageous aspects highlighted for the purpose of improving distance education are determined unless based on two main components of distance education at same time. Because, the opinions of students and instructors who use distance education as common but different parties will cause the distance education system to be used more effectively and successfully. In addition, the findings obtained in the studies discussed are given in general, and it will not be possible to pay attention to all the advantages and improve all the disadvantages due to the scarcity of time, human and financial resources. Although there are studies that weight these factors (Akbal & Akbal, 2020; Korucuk, 2020), these studies only dealt with the subject in one direction within the scope of the elements of education. There is only one research met in the literature (Zaied, 2021) that investigated the satisfaction perspectives of both university students and instructors to support evaluation and selection of e-learning technologies, which is similar to our study. Nonetheless, in that study, in addition to different purpose there is only one model developed which involve the factors affecting students and instructors at same time.

METHODOLOGY

In this research, to determine the weights of criteria for each group Analytic Hierarchy Process (AHP) was used. In the following parts, more details will be given about the technique used, sample and how the criteria were determined.

Participants

In this study it was aimed to determine which criteria affect most positively, negatively and bilaterally of the motivation for distance learning for either doctoral students or academicians. To determine the weights, AHP technique was used. In multi criteria decision making models (MCDM), quality of the sample is much more important than the quantity (Triantaphyllou and Mann, 1995: 37; Surapati and Mukhopadhyaya, 2011: 26). Hence, choosing the sample requires a great importance in MCDM techniques. They either need to be expert in the research question or they should have considerable experiences in the field. This study was prepared relatively late even though there has been a year more or less since Covid-19 appeared and education system was transformed into distance education in order to let the experience coefficient of the participants be matured. With respect to this issue, two important components of the education system are required to constitute the sample. These components are students and the teachers. Regarding education, universities both play an important role and have the top position of the system. Thus, 7 academicians of different titles such as assistant professor and lecturer; 13 doctoral students in business department of a public university took place in this study.

Analytic Hierarchy Process (AHP)

Developed by Saaty in 1977, AHP is one of the most preferred techniques among MCDM techniques due to its enabling direct influence of subjective judgements of decision makers within the scope of the problem (Saaty and Zoffer, 2012: 218), enabling sensitivity analysis (Ünal, 2011: 18) and providing opportunity to evaluate quantitative and qualitative variables together (Dong and Cooper, 2016: 525). Basic components of technique are objective, decision makers, criteria, sub-criteria (if exists) and alternatives (if exists) (Saaty, 1990: 259). This technique provides a hierarchical order of factors or criteria based on the pairwise comparison which should be relied on the scale shown in Table 1 made by decision makers, moreover if exists, allow decision makers to choose one among the alternatives based on the criteria weights. The technique has some axioms (Saaty, 1986: 844-847) such as reciprocal which means that if the importance degree of criterion x to criterion y is equal to cxy = i then the importance degree of criterion y to criterion x should be equal to cyx=1/i; homogeneity which means that criteria of similar characteristics only

shall be compared; independence which means none of the criteria within the structure is related to and dependent on each other and expectation which means each criterion and alternative (if exists) should be placed in the hierarchical structure.

Table 1. Ahp Scale

Numerical Expression	Verbal Expression	Explanation
1	Equally important	If criterion x is equally important to criterion y
3	Moderately important	If criterion x is moderately more important than criterion y
5	Strongly important	If criterion x is strongly more important than criterion y
7	Very strongly important	If criterion x is very strongly more important than criterion y
9	Absolutely important	If criterion x is absolutely more important than criterion y
2, 4, 6, 8	Intermediate values	If the decision maker is straddled among the values above
If criterion x is less important than criterion y at some degree; then 1/3, 1/5, 1/7 and 1/9 values are used		

Saaty and Sodenkamp (2008: 29)

Besides, there are some steps to follow in this technique (Saaty, 2008: 85). In the first step, for the purpose of the study, hierarchical structure is formed including the basic components which were mentioned above. In the second step, within the scope of the first axiom of AHP which is reciprocal, criteria, sub-criteria and alternatives are pairwise compared. In this step, the scale seen in Table 1 was used. In the next step based on the formula developed by Crawford and Williams (1995: 6) which can be seen in equation 1, weights and priority vectors of main and sub-criteria were calculated.

$$w_i = \frac{\prod_{j=1}^{n} a_{ij}^{1/n}}{\sum(\prod_{j=1}^{n} a_{ij}^{1/n})} \quad (1)$$

In the fourth step, consistency ratios of each matrix whose priority vectors have been calculated is acquired with the aid of equations below and random index table which is seen in Table 2.Analytic Hierarchy Process (AHP)

$$\lambda_{max} = \frac{\sum_{i=1}^{n} \frac{d_i}{w_i}}{n} \quad (2)$$

Consistency Index (CI_A)$= \frac{\lambda_{max}-n}{n-1}$ (3)

Consistency Ratio (CR_A)= $\frac{CI_A}{RI_{n*}}$ (4)

In the last step, global weights are determined. Here, global weights of sub-criteria are calculated and each placed in hierarchical order as the weights of main criteria are multiplied with each of their sub-criteria's weights (if exists).

Table 2. Random Index Table

n	3	4	5	6	7	8	9
RI*	0.5247	0.8816	1.1086	1.2479	1.3417	1.4057	1.4499

Saaty and Tran (2007: 966)

Determining Criteria

In this research, two models were proposed. While the first model was composing of criteria for students, the second model was of academicians. The criteria of both models are divided into three categories such as positively affecting factors, negatively affecting factors and dual affecting factors. Positively affecting factors may be also the supporters of distance learning, while negatively affecting factors are as supporters of formal learning and dual affecting factors are of hybrid learning.

Positively Affecting Factors for Students (Distance Education Supporters)

Regarding positively affecting factors of students' motivation towards distance learning, they should be time advantage and space independence (Anderson, 2011: 52). In Serçemeli and Kurnaz's research (2020: 51), most of the students who like to follow the courses without being presented at school reported that they had a positive approach to distance education with flexible time and space opportunities. Thanks to distance learning, students are practicing not time and indoor restraint problems such that they are flexible of following the course recorded in archives at anytime and anywhere but in a specific classroom they would like to. Another positive affecting factor is comfort. Instead of dressing formal clothes and make oneself presentable as being in a common public place, students feel free in their appearances, attitudes and behaviors in web-based distance learning system. In Üçer's study (2020: 230), students reported that they mostly are happy with distance learning because of its ease of use, comfort and hedonic use. Fourth positive motivation factor for students is weakness of assessment and evaluation supervision. Actually this factor became an issue to consider because of test security as the distance learning technology develops (Özbek, 2014:160). Because the evaluation system made on-line is much harder in written examination, lecturers prefer

multiple choices exam. Despite understanding the psychology of a student why s/he cheats on exam is not concerned in this research, it's a serious problem often encountered. Online exams lead up this situation because of being non-supervised. Even worse, considering our sample, business department students are classified in the most cheating group (Simon et al. 2012: 160). Along with multiple choices exams, some lecturers prefer to give homework requiring exegetical knowledge. According to Simon et al. (2012: 248) some students prefer to plagiarize this time. Nowadays, one of the private universities in Turkey found a solution with sending a mirror to each student to put it on their back to create infinite sight in order to see their screens. Moreover, they also ask for an honor promise not to cheat on exam. However, there should be a more reliable, technological, valid and persistent solution. The last positive motivation factor for students is opportunity of avoidance of responsibility by abusing of technology. For Keskin and Özer Kaya's research (2020: 61) 63.8% of students claimed that web based distance learning does not aid in developing the sense of responsibility. According to the results of Can's study (2020:36), it was found that the attending the livestream courses and watching videos related to courses ratios are lower. Moreover, the situation that the ratio of reading the announcements by students are higher than the participation in activities ratios shows that there are other factors those affect the students attendance in the courses. The student may turn on one's computer and pretend to be in class even s/he is somewhere else. They can also avoid answering questions by providing an excuse of technical problems.

Negatively Affecting Factors for Students (Formal Education Supporters)

In Balıkçıoğlu et al.'s (2019: 470-471) research in which the variables of distance learning are determined, one of the factors was found as accessing to courses issue as a result of factor analysis. Moreover, 71.6% of students claimed that it was harder to access course materials. Beside, 46.3% of students reported that they had difficulties in accessing the exams. These accessing problems could occur due to technical structures, lack of interaction and communication with the lecturer and lack of technological knowledge. Supporting this situation, in Durak et al.'s study (2020: 805) livestream lecturing could be a problem for students who may not have computers or internet and results in student's failure due to absenteeism. Thus the first criterion is determined as accessing problems of courses and exams. The second criterion is expression difficulty in quantitative courses. It is known that business department comprise of both verbal courses such as human resources management, organizational theory etc. and quantitative courses such as mathematics, statistics, accounting and so on. In verbal courses, it would not be such a problem whether the course is taught via on-line or face to face lessons because of its nature. On the other hand quantitative courses require the lecturer's narration step by step as how notations are used. Students are more comfortable in

understanding these courses face to face as watching the lecturer's locution stepwise. But in distance learning only by Powerpoint presentations it would be harder. Corroborating this issue, according to Akgün's study (2020: 225), with 84.78% of importance, female participants reported that accounting which is one of the quantitative courses is harder in online education due to not being able to ask the lecturer the incomprehensible points. In the same research male participants agree with this issue by giving more details such as that they would not understand how to edit financial tables, where to note the date, debt and credit information. Once again, another negative academic criterion is academic satisfaction. Inspiring from Maslow's esteem needs (Maslow, 1970:45), when the students' self-esteem is satisfied, that leads to higher self-confidence, worth, strength, capability and feeling of being useful. In our opinion, in formal education type in a classroom of postgraduate students especially, where discussion of a topic along with an interaction with both other students and lecturer would be both more welcome and proper rather than a unilateral teaching style which is more proper in bachelor students. But in distance learning, these conditions would be harder to provide due to technical problems and lack of interactions. Thus, considering our sample-doctoral students, distance learning type would be not helpful in their academic satisfaction. The last negative criterion is the need for socialization. In Akgün's study (2020: 226), male participants reported that in formal education they would be able to spend time together with friends, work as a team and in distance learning they would socialize at minimum level. Keskin and Özer Kaya (2020: 65) also reported that 36% of participants claimed that web-based distance education reduced teamwork by directing them to individual work. Considering Turkish culture as collectivism existing rather than an individualism and Maslow's pyramid, socialization is a basic need for human beings in cognitive and intellectual growth context. Also in Cheng and Chau's study (2016: 274), it has been reported that the lack of social bonding and low solidarity among students in web based education may reduce students' social interactions and have low performance and high attrition.

Dual Affecting Factors for Students (Hybrid Education Supporters)

Under this title, the factors which have a chance of affecting the motivation either positively or negatively depending on the situation or the person oneself are introduced. The first of them is technological knowledge level. This factor could motivate the student towards distance learning if only the student is good at technology. At the same time the opposite condition is also valid for the ones who are incapable of using technology. This situation may arise from the person oneself, the location s/he grows up, income level, area of interest etc. At first sight, considering present university students are of generation Z or even generation Alpha, they are expected of being specialized with technology. Yet in Balıkçıoğlu et al.'s study (2019: 471), it was found that most of the students had trouble as a result

of lack of technological support about how to use the system and incapability of accessing online course materials. Moreover according to Can (2020: 38), most of the students suffer from using information technologies, preparing presentations, and using internet for the purpose of education. The second factor is the economic factors. For Akgün (2020: 230), distance learning provides students cost advantage such as stationary and transportation costs. Moreover students smooth away from the sheltering and dining costs. On the other hand, according to Toker Gökçe (2008: 10) distance learning deepens the inequalities in education system mostly in undeveloped and developing countries in regards of economic factors. This is because most low income level-people who compose the biggest pie of the cake in society have trouble with accessing internet, even owning a personal computer. Similarly, in Balıkçıoğlu et al.'s study (2019: 467) students reported that they do not have adequate sources for distance learning. Beside, considering that the cost of benefiting from the programs the universities provide via distance education over the internet is very expensive. Because internet creates inequality of opportunity for those living at a lower economic level. The third factor is the health status. With distance learning, health status may be affected in both directions. According to Akgün's research (2020: 229), usage of technological devices will cause new psychological illnesses due to increased dependence on these devices and genetic disorders due to their harmful radioactive waves. Keeping eyes steadily on screen would be also harmful. On the other hand, considering physical conditions of winter especially, it is easier to catch or spread flu or other viral diseases in a crowded place such as a classroom. Regarding Covid-19 disaster, this could be one of the best advantage that distance learning provides. The whole criteria determined for students are shown in Figure 1.

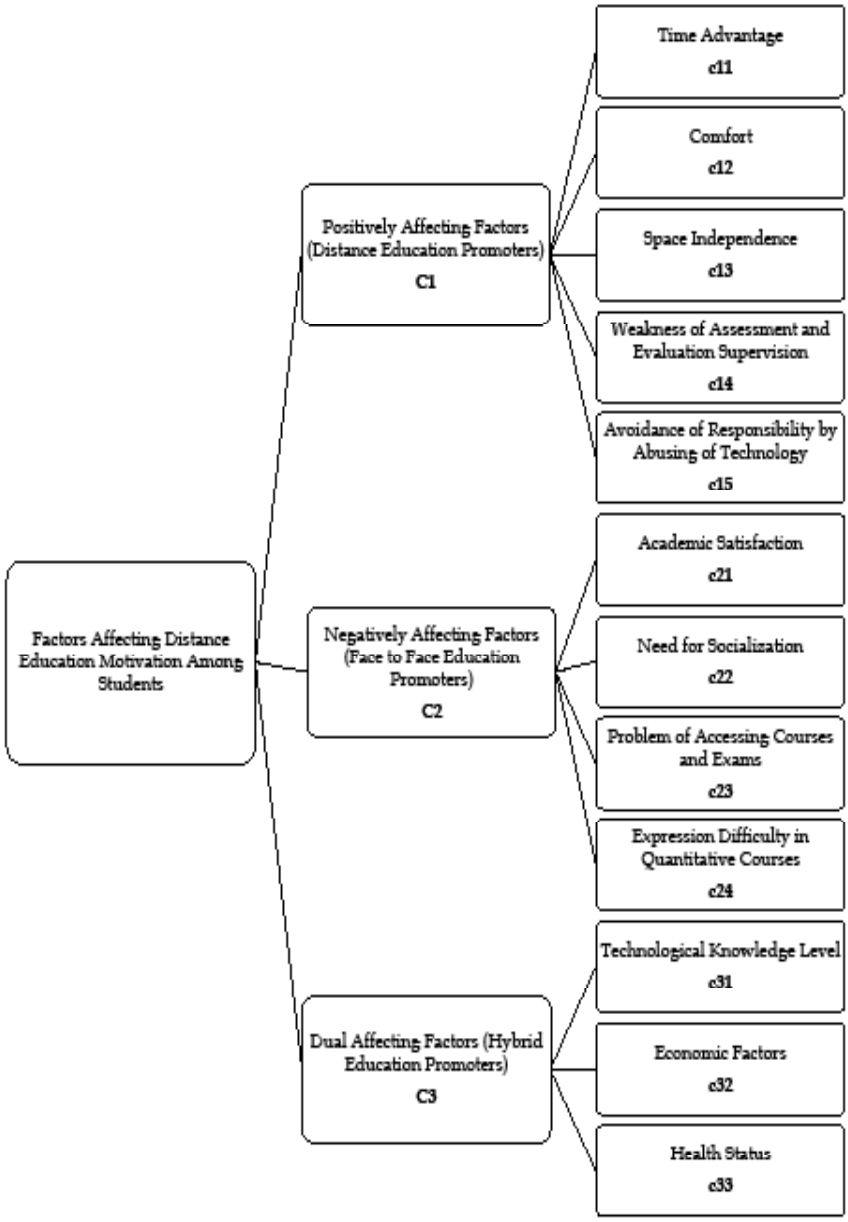

Figure 1.
Factors Affecting Distance Learning Motivation of Students

Positively Affecting Factors for Faculty Members (Distance Education Supporters)

The first two of these factors would be time advantage and space independence (Can, 2020: 17) as in students'. Şakar (1997) claimed that (cited by Aras and Karakaya, 2020: 10) the two biggest differences between distance education and formal education are that the space and time barriers between students and teachers are eliminated. According to Tekin's research (2020: 27) teachers claimed that they felt free because of the freedom, control and flexibility that distance learning provided them in terms of time and space. In Aras and Karakaya's reseach (2020), most of the academic staff participated in the study claimed that distance learning provides saving of time which leads to using time for other beneficial issues (s. 5) and also space independence (s. 11). Another positively affecting factor is comfort. According to Tekin's research results (2020: 27), teachers reported that they felt comfortable and flexible with distance learning because they did not worry about presenting in the classroom physically. The last factor would be the economic advantage that distance learning provides. By distance learning, lecturers are free from travel and food expenses. In Tekin's study (2020: 29), most of the teachers reported that distance learning provides economic advantage in statements as "…in formal education type, there is a place to stay, food, course center and materials are required; but in distance learning there is not…".

Negatively Affecting Factors for Faculty Members (Formal Education Supporters)

The first of these factors could be academic satisfaction issue (Koç, 2020: 36; Özgül et al., 2016: 302). In Bakioğlu and Çevik's study (2020: 123), science teachers reported that they felt unsatisfied, useless and insufficient in terms of teaching as they said "…the students' lack of internal discipline and not doing their homework, no matter how much content you prepare, makes me worried about the incomplete learning…" and "… I am concerned that I cannot support my students adequately…". This situation would be probably mostly occurring for the lecturers who are used to traditional teaching methods. When they do not interact with students physically in the same setting, they may feel like they are only talking to a screen. Also for Maslow's hierarchy pyramid, unless a person feels self-actualized, that person would not be motivated completely. Another factor would be failure of providing class dominance and loss of authority (Bolliger and Wasilik, 2009: 103). In Gürer et al.'s study (2016: 65) academicians reported that since it is not possible to make eye contact and face-to-face communication with the student to watch them instantly, it is difficult to ensure the active participation of the student and they need to make more effort to increase students' motivation. Supporting this idea in Tekin's study (2020: 30), teachers reported that lack of communication and

interaction, which leads to failure of providing dominance and loss of authority. In Bakioğlu and Çevik's study (2020: 118) teachers reported that some students had lower motivation due to lack of interaction and communication, the general attendance is low and some sabotaged the course. Another negative affecting factor is problems of knowledge assessment issues. Just like the student's model explained above, here the reliability and security of the exams are pioneer problems. According to Sırakaya et al. (2015: 100), it is necessary to consider problems that may occur in situations where online measurement method is applied in different places and without supervision. Corroborating this idea Can (2020: 34) claims that in such online and unsupervised exams, it is of great importance to ensure the safety and reliability of the exam and to provide the necessary conditions for an objective practice. Apart from cheating possibilities, technical insufficiencies are also another barriers for evaluating the knowledge level of students. Especially in quantitative courses, how would it be possible to solve the problem step by step online? Thus, most lecturers of this kind of courses prefer multiple choices exam which does not reveal which way the student had chosen but the result itself. Speaking of quantitative courses, another factor is expression difficulty in quantitative courses. According to Sayan (2020: 118), academicians have reported that 79% of them thought that distance learning is not beneficial and efficient in applied sciences and distance learning creates deficiency. In business department quantitative courses such as mathematics, statistics and operations research are also kind of applied courses. Teaching how to formulize without drawing but only via presentations is as hard for lecturers as learning of students. The last negative affecting factor is privacy issues. Online courses are recorded in order to watch again through archive. Thus, lecturers may not feel free and comfortable at all in their speeches which is violating the academic freedom.

Dual Affecting Factors for Faculty Members (Hybrid Education Supporters)

The first factor is technological knowledge level. According to Can (2020: 38), lecturers and teachers are insufficient in using the internet and information technologies for the purpose of education, preparing and making presentations. On the other hand in Bakioğlu and Çevik's study (2020: 118), table shows that most of the participants who are science teachers claimed that they did not experience any technological problems with computer and other software-hardware materials. Thus technological knowledge differs from person to person. The more knowledge a lecturer has, the less problem s/he experiences and vice versa which affects the direction of motivation towards distance learning. Another factor is age of the lecturer or speed of technological adaptation in other terms. It is a well-known fact that ability of using internet skills are generally directly proportional to generations to present day. According to Becerikli (2013: 16) older people state that problems such as the lack of skills in using computers or mobile phones is a problematic point in their

communication with the younger generation. Especially a large group of people who retired in the 1980s and 1990s were deprived of experiencing the internet in their working life. For the same study, because of this reason in a period when the elder people's cognitive competencies are on the decline, they fall behind in terms of internet use practices compared to young people. However, some elder academicians improve themselves to catch the day's requirements to be useful for students and science. Thus this criterion is counted as dual affecting one. The third factor is the need for socialization. Aristotle said "…man is by nature a social animal…" and according to Maslow, after physiological and safety needs are satisfied people need others in terms of socialization (Maslow, 1970: 43). In academia, some prefer to work alone, some do not. Though this situation also depends on the culture, it also differs by personality. For example in Serçemeli and Kurnaz' research (2020: 50); the side of distance learning that made them keep away from their friends so they felt asocial was reported as a disadvantage. Supporting this idea in Tekin's research (2020: 33) teachers stated the reasons for preferring face-to-face teaching methods as including communication and interaction, the need to meet other people, and support social learning. The last factor is health status. According to Bostancı (2016: 97) the time spent in front of the screen plays an important role in the severity of the symptoms such as xerophthalmia. Many studies have shown that ocular symptoms are more severe and frequent in people who spend more than 4-6 hours in front of the screen. Moreover, spending time with computers and being exposed to blue light results in headache and neck pain which are related with musculoskeletal system. On the other hand, considering the formal education type, standing for long time, eating unhealthy food in cafeteria, smoking more in social environment are also bad for health.

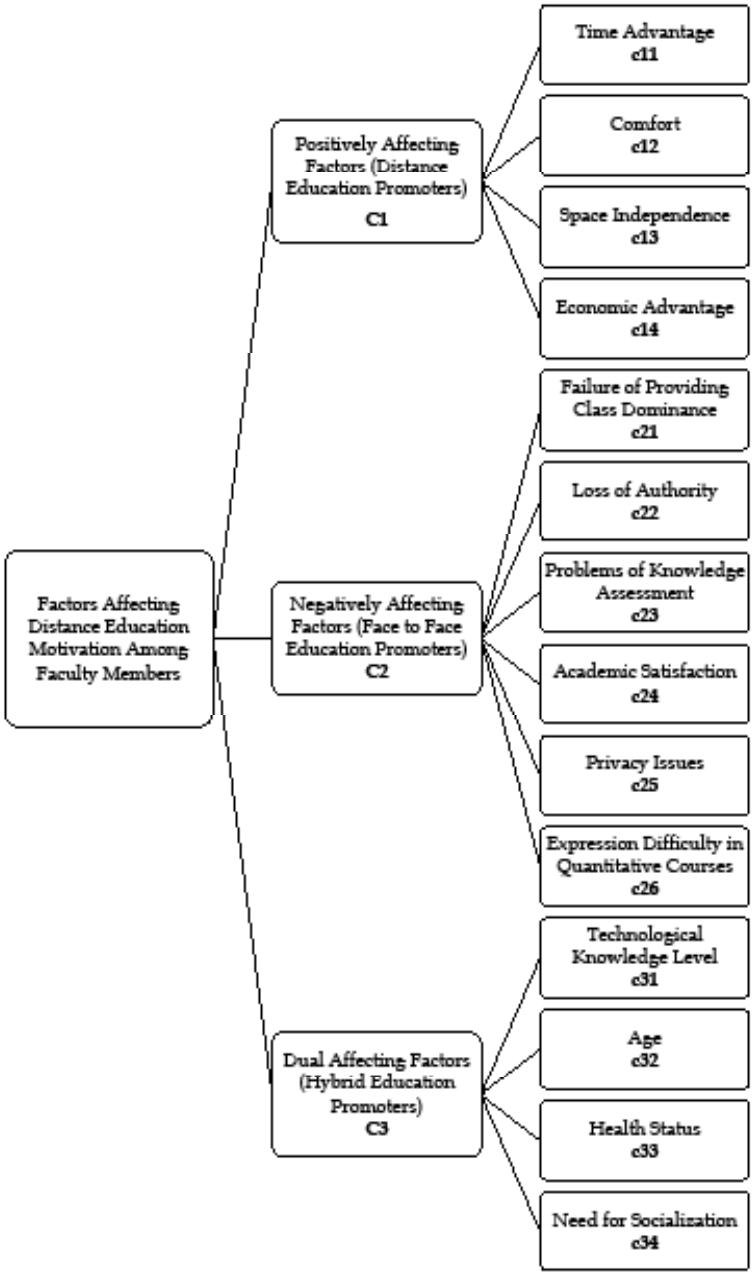

Figure 2.
Factors Affecting Distance Learning Motivation of Academicians

Data Collection and Analysis

After determining criteria with the help of literature and the authors' opinions, the main and sub-criteria were formed for pairwise comparison. The pairwise comparison forms were sent to the participants on-line. Because each criterion was not explained in detail in forms, authors spent their time to give answer to participants by explaining what it means in case of avoiding any obscurity and/or misunderstanding. After collecting the forms, analyses were made by following steps of AHP via Microsoft Excel.

The Validity and Reliability of the Scale and the Ethical Issues

In this research the validity and reliability of the AHP technique is proved by the consistency ratios of pairwise comparison tables. This value is calculated by equations (2, 3 and 4). If the value is below 0.1 then each matrix is counted as reliable. The research is also completed after taking the ethical committee approval document from Kırıkkale University on 18.12.2020.

FINDINGS

All criteria were coded in tables below. What each code means was already shown in Figure 1. In all tables range from Table 3 to Table 6, the criteria were pairwise compared by 13 doctoral students. The weights of criteria were found by equation (1) after geometric mean was calculated. Also the consistency ratios of these tables were also acquired by equations (2, 3 and 4) which should be below the value 0.1. First, the weights of the factors affecting distance education motivation among students were determined as follows.

Table 3. Pairwise Comparison of Main Criteria - Doctoral Students

Main Criteria Pairwise Comparison	C1	C2	C3	Geo. Mean	PV
C1	1.00	0.24	0,28	0.41	0.1121
C2	4.14	1.00	1,92	2.00	0.5491
C3	3.58	0.52	1,00	1.23	0.3388

TOTAL	8.72	1.76	3,20	3.63	1.0000
CM = 0.014382257	**RI = 0.58**			**CR = 0.02**	

In Table 3 there are main criteria affecting students' motivation towards distance learning as positively (C1), negatively (C2) and dual (C3) affecting factors. The most important criterion was found as negatively affecting factors by 54.91%. It can be claimed that doctoral students would prefer formal education system rather than distance learning.

Table 4. Pairwise Comparison of Sub-Criteria of Positive Factors (Distance Learning Supporters - Doctoral Students

Positively Affecting Factors Pairwise Comparison	c11	c12	c13	c14	c15	Geo. Mean	PV
c11	1.00	3.67	0.85	1.24	2.19	1.53	0.2847
c12	0.27	1.00	0.41	0.99	1.75	0.72	0.1339
c13	1.17	2.43	1.00	1.55	2.33	1.59	0.2955
c14	0.81	1.01	0.65	1.00	1.34	0.93	0.1729
c15	0.46	0.57	0.43	0.75	1.00	0.61	0.1129
TOTAL	3.71	8.67	3.34	5.52	8.62	5.39	1.0000
CM = 0.034545	**RI = 1.12**			**CR = 0.030843**			

In Table 4 there are sub-criteria of positively affecting factors as time advantage (c11), comfort (c12), space independence (c13), weakness of assessment and evaluation supervision (c14) and opportunity of avoidance of responsibility by abuse of technology (c15). The most important criterion was found as space independence by 29.55% which is followed so closely by time advantage with 28.47%.

Table 5. Pairwise Comparison of Sub-Criteria of Negative Factors (Formal Education Supporters) - Doctoral Students

Negatively Affecting Factors Pairwise Comparison	c21	c22	c23	c24	Geo. Mean	PV
c21	1.00	0.75	0.61	1.73	0.94	0.2143
c22	1.34	1.00	0.62	2.18	1.16	0.2640

c23	1.65	1.61	1.00	3.73	1.78	0.4042
c24	0.58	0.46	0.27	1.00	0.52	0.1175
TOTAL	4.56	3.82	2.49	8.65	4.39	1.0000
CM = 0.0031	**RI = 0.9**			**CR = 0.0034**		

In Table 5 there are sub-criteria of negatively affecting factors as academic satisfaction (c21), need for socialization (c22), problem of accessing courses and exams (c23) and expression difficulty in quantitative courses (c24). The most important criterion was found as problem of accessing courses and exams by 40.42%.

Table 6. Pairwise Comparison of Sub-Criteria of Dual Affecting Factors (Hybrid Education Supporters) - Doctoral Students

Dual Affecting Factors Pairwise Comparison	c31	c32	c33	Geo. Mean	PV
c31	1.00	0.91	1.73	1.17	0.3792
c32	1.10	1.00	1.50	1.18	0.3840
c33	0.58	0.67	1.00	0.73	0.2368
TOTAL	2.67	2.58	4.23	3.07	1.0000
CM = 0.003081	RI = 0.58			CR = 0.005311	

In Table 6 there are sub-criteria of dual affecting factors as technological level (c31), economic factors (c32) and health status (c33). The most important criterion was found as economic factors by 38.40% which is followed closely by technological level with 37.92%.

Table 7. Global Weights - Doctoral Students

Main Criteria	Weights	Sub-Criteria	Weights	Global Weights
C1	0.1121	C11	28.4702%	3.19%
		C12	13.3919%	1.50%
		C13	29.5521%	3.31%
		C14	17.2945%	1.94%

C2	**0.5491**	C15	11.2913%	1.27%
		C21	21.4309%	11.77%
		C22	26.3988%	14.50%
		C23	40.4240%	22.20%
C3	0.3388	C24	11.7463%	6.45%
		C31	37.9217%	12.85%
		C32	38.3969%	13.01%
		C33	23.6814%	8.02%

To understand Table 7 clearly, it is visualized in Figure 3. According to both Table 7 and Figure 3 in terms of global weights (final results) problem of accessing courses and exams was found to be the most important factor as it affects the motivation of students negatively towards distance learning with the weight of 22.2%. Another negative affecting factor - expression difficulty in quantitative courses follows it by 14.5%. Economic factors and technological knowledge level follow these two factors by 13.01% and 12.85% respectively as dual affecting criteria. Because the rest of the factors have similar weights and the line in the graphic formed as horizontal, they were not mentioned in detail.

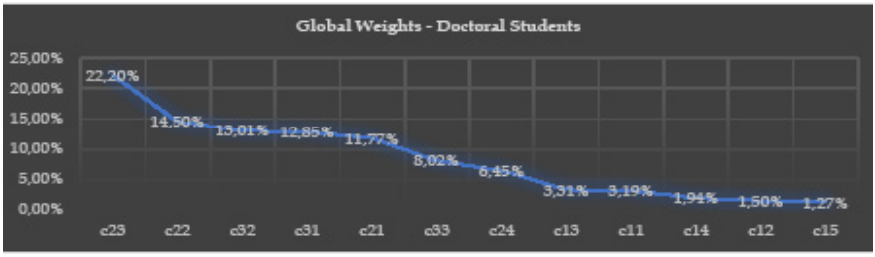

Figure 3.
Global Weights Graphic-Doctoral Students

In the next step, the weights of the factors affecting distance education motivation among faculty members were determined as follows. All criteria were coded in tables below. What each code means has already been shown in Figure 2. In all tables range from Table 8 to Table 11, criteria were pairwise compared by 7 faculty members. The weights of criteria were found by equation (1) after geometric mean was calculated. Also the consistency ratios of these tables were also acquired by equalities (2, 3 and 4) which should be below the value 0.1.

Table 8. Pairwise Comparison of Main Criteria-Faculty Members					
Main Criteria Pairwise Comparison	C1	C2	C3	Geo. Mean	PV
C1	1.00	0.21	0.28	0.39	0.1081
C2	4.69	1.00	1.47	1.90	0.5241
C3	3.51	0.68	1.00	1.34	0.3678
TOTAL	9.21	1.89	2.76	3.63	1.0000
CM = 0,000532326	**RI = 0.58**			**CR = 0.00**	

In Table 8 there are main criteria affecting faculty members' motivation towards distance learning as positively (C1), negatively (C2) and dual (C3) affecting factors. The most important criterion was found as negatively affecting factors by 52.41% likewise students' result. It can be claimed that faculty members would prefer formal education system rather than distance learning.

Table 9. Pairwise Comparison of Sub Criteria of Positive Factors (Distance Learning Supporters) - Faculty Members						
Positively Affecting Factors Pairwise Comparison	c11	c12	c13	c14	Geo. Mean	PV
c11	1.00	2.54	1.00	1.56	1.41	0.3428
c12	0.39	1.00	1.04	0.88	0.77	0.1878
c13	1.00	0.96	1.00	0.50	0.83	0.2020
c14	0.64	1.14	2.02	1.00	1.10	0.2674
TOTAL	3.03	5.65	5.05	3.94	4.12	1.0000
CM = 0.05634397	**RI = 0.9**			**CR = 0.063**		

In Table 9 there are sub-criteria of positively affecting factors as time advantage (c11), comfort (c12), space independence (c13) and economic advantage (c14). The most important criterion was found as time advantage by 34.28%.

Table 10. Pairwise Comparison of Sub-Criteria of Negative Factors (Formal Education Supporters) - Faculty Members								
Negatively Affecting Factors Pairwise Comparison	c21	c22	c23	c24	c25	c26	Geo. Mean	PV
c21	1.00	0.79	0.14	0.18	0.32	0.22	0.33	0.0413
c22	1.26	1.00	0.15	0.18	0.41	0.15	0.36	0.0440
c23	7.34	6.83	1.00	2.76	2.30	0.74	2.48	0.3075
c24	5.63	5.43	0.36	1.00	2.30	0.48	1.52	0.1878
c25	3.11	2.45	0.43	0.43	1.00	0.36	0.90	0.1111
c26	4.47	6.83	1.35	2.09	2.76	1.00	2.49	0.3082
TOTAL	1.26	1.00	0.15	0.18	0.41	0.15	8.08	0.0440
CM = 0.032728825	RI = 1.24				CR = 0.03			

In Table 10 there are sub-criteria of negatively affecting factors as failure of providing class dominance (c21), loss of authority (c22), problems of knowledge assessment (c23) academic satisfaction (c24), privacy issues (c25) and expression difficulty in quantitative courses (c26). The most important criterion was found as expression difficulty in quantitative courses by 30.82% which is followed so closely by problems of knowledge assessment with 30.75%.

Table 11. Pairwise Comparison of Sub-Criteria of Dual Affecting Factors (Hybrid Education Supporters) - Faculty Members						
Dual Affecting Factors Pairwise Comparison	c31	c32	c33	c34	Geo. Mean	PV
c31	1.00	2.04	0.43	0.22	0.66	0.1449
c32	0.49	1.00	0.46	0.37	0.54	0.1176
c33	2.30	2.19	1.00	1.17	1.56	0.3415
c34	4.64	2.69	0.85	1.00	1.81	0.3961
TOTAL	8.43	7.93	2.75	2.76	4.56	1.0000
CM = 0.06415	RI = 0.9				CR = 0.0713	

In Table 11 there are sub-criteria of dual affecting factors as technological level (c31), age (c32), health status (c33) and need for socialization (c34). The most important criterion was found as need for socialization with 39.61% which is followed closely by health status with 34.15%.

Table 12. Global Weights - Faculty Members

Main Criteria	Weights	Sub-Criteria	Weights	Global Weights
C1	0.1081	C11	34.2791%	3.71%
		C12	18.7802%	2.03%
		C13	20.1990%	2.18%
		C14	26.7417%	2.89%
		C21	4.1315%	2.17%
C2	**0.5241**	C22	4.4050%	2.31%
		C23	30.7511%	16.12%
		C24	18.7837%	9.84%
		C25	11.1064%	5.82%
		C26	30.8224%	16.15%
C3	0.3678	C31	14.4863%	5.33%
		C32	11.7566%	4.32%
		C33	34.1497%	12.56%
		C34	39.6074%	14.57%

To understand Table 12 clearly, it is visualized in Figure 4. According to both Table 12 and Figure 4 in terms of global weights (final results) expression difficulty in quantitative courses was found to be the most important factor as it affects the motivation of faculty members towards distance education negatively by 16.15%. This factor is followed closely by problems of knowledge assessment with 16.12% as another negative factor. These two factors are followed by need for socialization and health status as dual affecting ones by 14.57% and 12.56% respectively and also academic satisfaction as a negative affecting one by 9.84%. Because the rest of the factors have similar weights and the line in the graphic formed as horizontal, they were not discussed in detail.

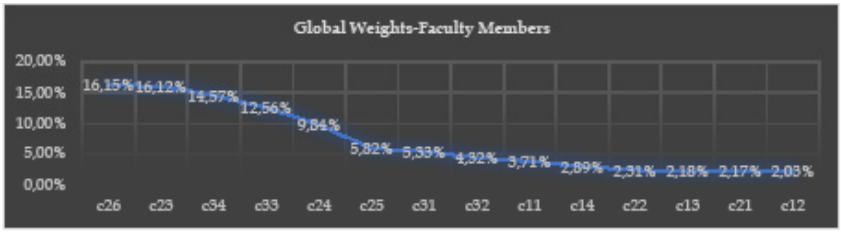

Figure 4.
Global Weights Graphic - Faculty Members

DISCUSSION AND CONCLUSIONS

In this research, by AHP technique it was aimed to determine and hierarchically order the factors that determine the motivation of both students and faculty members positively, negatively and bilaterally towards distance learning which we believe as it will be an important alternative education system in the future. Analyses revealed that both students and faculty members are kind of fans of formal education yet, instead of distance education. This result shows similarities with the literature (Genç and Gümrükçüoğlu, 2020: 419; Karatepe et al., 2020: 2172; Tekin, 2020: 33; Yolcu, 2020: 246) According to results, it is obvious that despite the advantages, negatives sides still outweigh. This situation leads to make people prefer a traditional education system rather than web based distance one. In addition, it is hard to change traditional and cultural things. Especially because faculty members are of Generation X and Y; they are familiar with formal education. Furthermore, each generation suppose that they were better educated than the next one (Ruggeri, 2017). Thus, they may probably think that web based distance education will not be sufficient and enough for an already less educated-capacity owner of the next generation. Although the distance education system saves education from being interrupted by Covid-19, it is a matter of discussion that why it is not preferred by academicians and students. While distance education is a prediction that is likely to replace face-to-face education, quarantine and emergency distance education due to covid-19 will affect this prediction. Although there are no empirical studies, it can be said that factors such as the feeling of being trapped in an isolated life can develop a negative perspective towards distance education as the indirect effect of the pandemic (Tomasik et al., 2020: 3).

Moreover, while the most important factors for students were found to be problem of accessing courses and exams and expression difficulty in quantitative courses; for faculty members it was expression difficulty in quantitative courses and problems of knowledge assessment. When the literature is examined, it is seen that the results show similarities in faculty members and in students. According to Korucu's study (2020: 190); it was found that program evaluation and learning

are the most important satisfaction factors of distance learning for classroom teachers while evaluation and materials are following them. According to Akbal and Akbal (2020: 544), it was found that the most important negative factors for students towards distance learning are the physical conditions which involve limited studying field that is the lack of technological tools and materials and also insufficient communication. On the other hand, according to Zaied (2012: 465), the most important factors for both students and instructors of a university are security, contents quality, on-line resources, student/instructor satisfaction and level of interaction.

It can be claimed that in this study both students and the faculty members have a common ground on similar factors. Business department covers many quantitative courses. Thus, without proper materials it would be difficult to teach a lesson as well as to learn it. It is just like an English conversation among two people who do not know English. As in this example, participants should either learn English or try to make conversation in another language; these quantitative courses need special tools or specialized software which shall replace the traditional blackboard if it is to be given via distance education. The expression / transference limitation of distance education can be compensated with advanced technology systems such as simulations, virtual reality, and augmented reality that can be used in distance education (Clark, 2020: 414). With these advanced technology applications, it can also create a motivating environment by compensating for the lack of interaction, which is another disadvantage of distance education (Krassmann et al., 2020: 155). Except for common problem, for students the second most important issue is accessing problems of courses and exams. The main reason underlying here is the insufficiency of technical infrastructure and the complexity of the program presented. Despite depending on the location, bandwidth or server generally is not enough for everyone in rush hour. The distance education program that the university designed for students may be too complex to understand and the management may not prepare the how-to-use explanation for students. These are problems of the supplier of the education, who is the university which can be counted in micro scale. In macro scale it is the regional or even countrywide internet issue. On the other side of the medallion, the demander of this content who are the students may have some deficiencies. These are having lack of technical knowledge and technological tools such as computer and internet. The main responsibility is held by the government in this issue as they should take precautions such as strengthening the infrastructure of web through the country even for the furthest regions, providing technical and financial supports to universities and providing computers and internet for students who are deprived. For students, criterion of economic factors as dual classification was found to be the third important factor. Two different consequences of the economy emerge in distance education. The first result is that the socio-economic scissors among the students (such as living in a crowded

family with a large population, not having technological devices such as phones, tablets or computers to access the lessons) deepened with distance education and negatively affects the educational motivation of students (Akyıldız, 2020: 692 ; Altuntaş et al., 2020: 12). The other result is the economical factor that underlies the existence philosophy of distance education. Thanks to distance education, saving all the expenses (road, food, accommodation, etc.) made to access education provides an economic advantage for individuals (Karakuş et al., 2020: 222). Following closely, the fourth important factor was found to be technological knowledge level. For a successful learning process in distance education, it is necessary to provide technology literacy education to lecturers and especially students in order to prevent problems that may arise from the perception of operational distance and technological knowledge level in communication between student and teacher (Cabı, 2018: 62). In this way, they will gain skills such as easily perceiving the information acquired through distance education, designing and integrating information (Dağ, 2016: 93).

For another party of participants, the faculty members, the second most important factor is problems of knowledge assessment. The possibility of cheating in exams increases with mostly preferred type as multiple choices tests. There is no supervision system that audits the student while s/he is answering the questions on computer. The student is online and may use web for the answers. Even if the system does not allow the student leaving or closing the exam screen to the tab, s/he may use another device such as a smart phone. Lecturer may prefer to evaluate the knowledge of the student by giving a homework. In this time students can choose the way of plagiarizing. Each of these undeserved success is easily understood in grading time whether making a cross check with other grades of the student, comparing the exam paper with other students' or checking the homework with plagiarism program. Actually, "cheating rates of students" is the reflection of a society. Deeping into the social psychology is not the main field of this study but it can be said that the media, friends, family and neighbors which all compose the environment in which the student grows up, the role model s/he takes, geographical location of the country, the history of it, the culture of the society are all playing roles in this bad manner. Thus, instead of finding temporarily solutions by building panoptic supervision (Foucault, 1875: 20) such as sending a mirror or expecting a promise from a student; instead of approaching the problem individually, we should first realize that this is a social problem. Thus, instead of educating people individually we need to teach the children, even the whole society members what is right and what is wrong; simply what ethics mean. For faculty members, the third important factor was found to be the need for socialization in dual classification. Socialization is explained in Alderfer's ERG theory (1969) as a need for people's motivation as the need to be connected. Relationship includes all needs including relationships with other people (superiors, colleagues, subordinates, friends, fa-

mily members, etc.). Relationship needs, which can be expressed as socialization in a way, is based on the assumption that people are satisfied by sharing their feelings and thoughts (Alderfer, 1989: 145).

LIMITATIONS AND SUGGESTIONS

This research has some limitations. First of all, the study was carried out within only one public university. Further researches should be carried out with increased number of public universities accompanying also private ones. The study was also carried out within business department, so next studies may be handled within different majoring programs requiring more visual and other senses or face to face learning style such as medicine, engineering or fine arts. The student sample of the study is constituted by doctoral students. Further studies may constitute bachelor students who may probably be economically disadvantaged and having problems in accessing in distance learning. The study was carried out in Turkey which is a developing country. Thus researchers may investigate the two models in undeveloped and developed countries in order to make comparisons. The research was studied in the environment of Covid-19 disaster. Further research may be handled in a proper time when distance education is not a compulsory alternative because of any natural disaster. Last, in this study, by considering non-dependencies among the factors, AHP was preferred. Next studies may make comparisons by considering these dependencies as using different MCDM techniques such as DEMATEL and Analytic Network Process (ANP).

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UZAKTAN EĞİTİM: ÖĞRETİM ÜYELERİ VE ÖĞRENCİLER İÇİN MOTİVE EDİCİLER, ÖNLEYİCİLER VE ETKİSİZLEŞTİRİCİLER

GENİŞLETİLMİŞ ÖZET:

Bu çalışmanın amacı; uzaktan eğitimi geleceğin önemli bir eğitim aracı olarak öngörerek güçlü yönlerini daha da güçlendirebilmek, zayıf yönlerini ise tespit ederek önlem almak için eğitim sisteminin üst halkalarından birini oluşturan üniversitelerde uzaktan eğitime yönelik olarak gelişen algıları motivasyon bağlamında etkileyen faktörleri önceliklendirmektir. Covid-19 pandemisi, 2019 yılının sonlarına doğru Çin'de ortaya çıkmış ve tüm dünyayı başta sağlık olmak üzere sosyal ve ekonomik yönde olumsuz yönde etkilemiştir. Her ne koşulda olursa olsun bir toplumun yapıtaşlarından olan, uzun dönemde geleceğini etkileyen ve pandeminin yukarıda bahsedilen olumsuz yönlerini terse çevirecek olan eğitimin sekteye uğramaması önem arz etmektedir. Pandeminin kalabalık ortamlarda fiziksel temas ile bulaştığı gerçeği ile dünyanın pek çok ülkesinde olduğu gibi ülkemizde de örgün öğretim yerini uzaktan eğitime bırakmıştır. Hali hazırda YÖK tarafından belirlenen bazı temel dersler uzaktan eğitim ile verilse de, arz ve talep bağlamında kaynakların zorlanmadığı durumda uzaktan eğitim sisteminin oldukça verimli ve işleri kolaylaştıran bir alternatif olduğu görülmektedir. Bununla birlikte pandemi ile beraber tüm yükseköğretim sisteminin bu altyapıya geçmesi, gelişmekte olan ülkemizin çeşitli ekonomik düzeylerine sahip bireylerinde erişim sorunlarına ve sağlanan teknolojik altyapı problemlerine yol açmıştır. Uzaktan eğitimin artı yanlarının daha da geliştirilmesi, eksi yönlerinin ise belirlenerek bertaraf edilmesi, teknolojinin sürekli geliştiği günümüzde ve gelecek dünyasında uzaktan eğitimi sadece zaruri durumlarda kullanılacak bir alternatif olmaktan çıkararak temel eğitim tarzı olma yolunda adım atılması için etkileyen faktörlerin belirlenmesi önem arz etmektedir. Bu bağlamda bir kamu üniversitesinin, ülkemizdeki yükseköğretimde uzaktan eğitimin en çok tercih edilen bölümlerden biri olması sebebi ile (Yavuzalp et al. 2016: 766) işletme bölümündeki lisansüstü öğrencilerinin ve öğretim üyelerinin uzaktan eğitime karşı olan motivasyonlarını pozitif, negatif ve çift yönlü etkileyen faktörlerini belirlemek amacıyla Çok Kriterli Karar Verme (ÇKKV) tekniklerinden biri olan Analitik Hiyerarşi Süreci kullanılmıştır. Çalışmanın katılımcılarını ise 13 doktora öğrencisi ile 7 öğretim üyesi oluşturmaktadır. Çalışmada nicel yöntemlerden birinin kullanılmasına karşın, örneklem sayısının az olduğu dikkat çekmektedir. Bunun sebebi ise AHS gibi karar vericilerin rol aldığı ÇKKV tekniklerinde karar vericilerin niceliğinden çok niteliğinin önem arz etmesidir. Yani karar vericilerin ilgili olgu hakkındaki bilgi seviyesi ya da deneyimi önemlidir (Triantaphyllou and Mann, 1995: 37; Surapati and Mukhopadhyaya, 2011: 26). Deneyiminin önemli olması düşüncesi bu çalışmanın, uzaktan eğitime geçilmesinin üzerinden yaklaşık olarak dokuz ay geçmesine karşın bu çalışmanın bu kadar geç yapılmasını da açıklamaktadır. Amaç, katılımcıların uzaktan eğitim ile ilgili dene-

yimlerinin olgunlaşmasının beklenmesidir.

Uzaktan eğitimin mevcut durumdaki problemlerini gidermek ve iyileştirilmesini sağlamak amacıyla literatürde araştırmalar bulunmaktadır. Uzaktan eğitimde üniversite öğrencilerin geribildirimi konusunu inceleyen (Keskin ve Kaya, 2020; Üçer, 2020), memnuniyet algısını (Karadağ ve Yücel, 2020), uzaktan eğitime yönelik bakış açılarını (Balıkçıoğlu vd., 2019; Serçemeli ve Kurnaz, 2020; Akgün, 2020; Akçay ve Gökçearslan, 2016; Bolliger ve Halupa, 2018; Wei ve Chou, 2020), endişelerini (Peloso vd., 2020), uzaktan eğitimde yaşanan problemleri öğrenci açısından AHP yöntemiyle derecelendiren (Akbal ve Akbal, 2020), sınav tutumlarını inceleyen (Sırakaya vd., 2015) çalışmalar ve elde ettikleri benzer bulgular literatürde yer almaktadır. Ayrıca Öğretim elemanlarının uzaktan eğitime yönelik algı ve değerlendirmelerini inceleyen (Gürer, Tekinarslan ve Yavuzalp, 2016; Koç, 2020; Sayan, 2020; Gök ve Çakmak, 2020; Aras ve Karakaya, 2020), ders vermeye teşvik eden faktörleri (Abazaoğlu ve Umurhan, 2015; Johnson, Veletsianos ve Seaman, 2020), uyguladıkları stratejileri (Lewis ve Abdul-Hamid, 2006), memnuniyet faktörlerini AHP yöntemiyle derecelendiren (Korucuk, 2020) çalışmalar da yer almaktadır. Fakat bu çalışmalarda ya tüm faktörlerin üzerinde aynı önem derecesi ile durulmuş ya da eğitimin tek bir unsuru (öğrenci ya da öğretmen) ele alınmıştır. Bu çalışma ile eğitimin önemli iki unsuru olan eğiticiler ve eğitilenler bir arada analiz edilmiş ve uzaktan eğitime yönelik motivasyonlarını etkileyen faktörler; insan, zaman ve maliyet gibi kaynakların kıt olmasından dolayı tüm faktörlere aynı önem derecesinde yaklaşılmasının rasyonel olmayacağı düşüncesinden yola çıkarak ağırlıklandırma yolu seçilmiştir. Çalışmadaki tüm faktörler literatür yardımı, katılımcıların fikirleri ve yazarların görüşleri esas alınarak elde edilmiş olup; motivasyonu pozitif yönlü etkileyen faktörler aynı zamanda uzaktan eğitimi destekleyiciler, negatif yönlü etkileyen faktörler örgün eğitimi destekleyiciler, çift yönlü etkileyen faktörler ise karma eğitimi destekleyiciler olarak adlandırılmıştır.

Çalışma kapsamında iki model geliştirilmiştir. İlk model doktora öğrencilerinin uzaktan eğitime karşı motivasyonlarını etkileyen faktörleri; ikinci model ise öğretim üyelerinin uzaktan eğitime karşı motivasyonlarını etkileyen faktörleri ifade etmektedir. İlk model 3 ana kriter ve 12 alt kriterden; ikinci model ise 3 ana kriter ve 14 alt kriterden oluşmaktadır. Analiz neticesinde her iki grup için de tercih edilen öğretim türü örgün öğretim olarak tespit edilmiştir. Doktora öğrencilerinin uzaktan eğitime karşı motivasyonlarını etkileyen birincil faktör, %22,2 ağırlıkla derslere ve sınavlara erişim sorunsalı olarak bulunurken; bu faktörü sırasıyla %14,5; %13,01 ve %12,85 lik ağırlıklarla sayısal derslerdeki ifade zorluğu, ekonomik faktörler ve teknolojik bilgi düzeyi takip etmektedir. Öğretim üyelerinin uzaktan eğitime karşı motivasyonlarını etkileyen en önemli faktör ise %16,15 ile sayısal derslerdeki ifade güçlüğü olmuştur. Bu faktörü sırasıyla %16,12; %14,57; %12,56 ve %9,84 lük ağırlıklar ile bilgi ölçümündeki problemler, sosyalleşme ihtiyacı, sağlık

durumu ve akademik tatmin takip etmiştir.

Çalışma sonuçlarına göre geleneksel eğitim sistemi olan örgün öğretimin hem öğrenciler hem de öğretim üyeleri için hala tercih edilir olduğu; bunun nedenleri arasında kültürel değerlerin, yıllardır süregelen bir alışılmışlık neticesinde adaptasyon zorluğunun ve değişime direncin yanı sıra insanların pandemi sebebiyle kapalı ortamda sosyal yaşamdan izole edilmiş olması da önemli bir sebep olarak görülmektedir (Tomasik vd., 2020: 3). Sayısal derslerdeki ifade güçlüğünün iki grupta da önemli bir sorunsal olarak çıkması ise üzerinde durulması gereken bir konu olup; çözüm olarak teknoloji ile birlikte geliştirilen simülasyonlar ve artırılmış sanal gerçekliğin yanı sıra özel yazılımlar ve geliştirilmiş materyaller sunulabilir. Öğrenciler için önemli olarak görülen ikinci faktör olan derslere ve sınavlara erişim sorunsalı için ise devletin desteği ile ülkenin her yerinde internet altyapısının güçlendirilmesi, kullanıcılara yansıyan maliyetin azaltılması, materyal eksikliği çeken öğrenciler için bilgisayar temini yapılması ve üniversitelerin sunmuş olduğu uzaktan eğitim programı ile ilgili sıkça sorulan sorulara yönelik cevap listesi oluşturması çözüm olabilir. Öğretim üyeleri için önemli olarak görülen ikinci önemli faktör ise bilgi ölçümündeki problemdir. Uzaktan eğitimde sıkça tercih edilen çoktan seçmeli sınav türü, sınav güvenliğini azaltmaktadır. Öğrencilerin, gözetimsiz bir sınav ortamında, farklı bir bilgisayar ya da akıllı telefonla sorulara cevap aramak için kopya çekmeye yönlenmesi kaçınılmaz olabilmektedir. Fakat soruna panoptik denetim gibi bireysel olarak yaklaşarak geçici çözümler bulmak yerine (Foucault, 1875: 20) bunun bir sosyal problem olduğunun farkına varılması ve gençlere en başta yetiştirime aşamasında neyin doğru neyin yanlış olduğunun öğretilmesi; kısaca ahlakın ne olduğunun verilmesi gerekmektedir. Öğretim üyeleri açısından ise bilginin ezberlenmesi neticesinde kopyayı mümkün kılmak yerine, bilgiyi yorumlamaya yönelik sorular sorması da diğer bir çözüm olarak sunulabilir.

Anahtar Kelimeler: *Uzaktan Eğitim, Analitik Hiyerarşi Süresi (AHS), Örgün Eğitim, Karma Eğitim, Motivasyon.*

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