

E-Learning in The Development of Managerial Competencies: A Case Study¹

Yönetmel Yetkinliklerin Geliştirilmesinde E-Öğrenme: Bir Vaka Çalışması

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Abstract

The main purpose of this study is to determine the critical success factors that affect the success of e-learning in executive development. The study was conducted on the executives of a participating bank operating in Turkey. The research was conducted with a study group of eight people. The research was conducted according to the holistic single case study, one of the qualitative research designs. The study sample was determined according to the critical situation sample, one of the purposeful sampling techniques. Research data were collected through managers' interviews, case analysis, observations, records of the e-learning platform, e-learning contents, competency packages and basic behavior indicators. The obtained data were analyzed using the MAXQDA package program and according to the content analysis technique. Analysis results show that the critical success factors affecting the success of the e-learning process at the corporate level in the participation banking sector are important in e-learning. It was concluded that among the critical success factors, staying in the environment and continuity factors are more important than other factors in developing managerial competencies. These results also show that e-learning techniques can be used effectively as traditional learning techniques to develop managerial competencies.

Anahtar Kelimeler: Managerial competency, corporative e-learning, e-learning success, critical success factors

Öz

Bu çalışmanın temel amacı, yönetici geliştirmede e-öğrenmenin başarısını etkileyen kritik başarı faktörlerini belirlemektir. Araştırma, Türkiye'de faaliyet gösteren bir katılım bankasının yöneticileri üzerinde yapılmıştır. Araştırma sekiz kişilik bir çalışma grubuyla nitel araştırma desenlerinden bütüncül tek durum çalışmasına göre yürütülmüştür. Çalışmanın örnekleme amaçlı örnekleme tekniklerinden kritik durum örneklemine göre belirlenmiştir. Araştırma verileri; yöneticilerle yapılan görüşmeler, vaka analizlerinden elde edilen veriler, gözlemler, e-öğrenme platformunun kayıtları, e-öğrenme içerikleri, yetkinlik paketleri ve temel davranış göstergeleri yoluyla toplanmıştır. Elde edilen veriler, MAXQDA paket programı kullanılarak ve içerik analizi tekniğine göre analiz edilmiştir. Analiz sonuçları, katılım bankacılığı sektöründe kurumsal düzeyde e-öğrenme sürecinin başarısını etkileyen kritik başarı faktörlerinin e-öğrenmede önemli olduğunu göstermektedir. Kritik başarı faktörlerinden ortam sürekliliği ve devamlılık faktörünün yönetmel yetkinliklerin geliştirilmesinde diğer faktörlere göre daha önemli olduğu sonucuna varılmıştır. Bu sonuçlar yönetmel yetkinliklerin geliştirilmesinde e-öğrenme ve geleneksel öğrenme tekniklerinin aynı zamanda etkin bir şekilde kullanılabileceğini göstermektedir.

Anahtar Kelimeler: Yönetmel yetkinlik, kurumsal e-öğrenme, e-öğrenmenin başarısı, kritik başarı faktörleri

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Introduction

With the rapid changes in technology, economy and socio-cultural structure, extreme competition conditions affect organizational structures and fields of activity. This influence leads to the need for competent managers who will ensure the adaptation of the enterprises to competitive conditions. The competency-oriented management approach puts forward that individual competencies lie on the ground of competitive advantage. Without competencies, it is not easy to successfully adapt and implement well-conceptualized and positioned strategies (Ünal, 2012). Managerial competencies are the basic and critical components that the manager refers to when dealing with environmental complexity. Managerial competencies consist of knowledge, skills and attitude dimensions that come to the fore in the performance of roles and responsibilities concerning performance. Managers use their core competencies in responding to the changing environment. Managers respond differently in areas such as keeping control, cognitive information processing and choosing among alternative applications while adapting to organizational life. In this respect, managerial competencies are mainly the features that enable the person to perform well in the management job (Gold et al., 2010; Kanungo & Menon, 2005). Managerial competencies are attributes that can be measured and enhanced through training and development. Knowing which managerial competencies are important for different functions is essential for improving training and development programs.

The main purpose of developing managerial competencies is to provide managers with information about the current and future qualifications expected from them and to gain the competencies they will need to fulfill their roles. The main purpose here is to develop the competencies necessary to fulfill future managerial duties (Mailick & Stumpf, 1998: 12). Developing managerial competencies enables managers to be more sensitive to the role he plays in organizational functioning. Manager development programs aim to contribute to the ability of managers to evaluate the situations that determine success and to show the necessary behavior (Oktal, 1999).

The development of managerial competencies can only be realized with the harmony between administration practice and the inflow from administration and learning theories (Mumford, 1998). Administration theories are the fundamental structures on which the practice of administration is grounded. Nevertheless, the development of competencies does not impact the contribution of learning. Efficiency while detecting, developing, and reflecting administrators' competencies in their roles and performances is one of the critical success factors of competence administration (Mailick & Stumpf, 1998). In the learning process of administrators, taking into account the principles and characteristics of adult learning, such as knowing, self-perception, being ready to learn, and motivation, play a significant role in developing their competencies (Knowles et al., 2005). Traditional and adaptive learning environments used in developing competencies may sometimes be insufficient for developing dynamic competencies. Traditional learning environments have different response levels, content, distribution, and managerial competencies. Fails to respond to dynamics. It is insufficient in demands such as up-to-date information, lifelong learning opportunities, and the cost of education. Internet accessibility and rapid development in technological infrastructure in e-learning carry learning environments and materials to network systems. Integrating learning environments into network structures expands the usage area of e-learning.

However, reviewing the e-learning concept with only the dimension of "e" (electronic) emphasizes the technical side of e-learning. Technology-dominated perspective on e-learning causes the evaluation of e-learning to be regarded as systematic and at the micro-level. Because e-learning focuses on individual development with its technical aspect, it is a learning way with sophisticated social features. Here, the social aspect of learning needs to be considered because individuals focus on development in the e-learning process. Some dynamics, such as the individuals' different learning styles, perceptions of time-business-duty, motivation, learning preferences, and experiences, play a vital role. At the same time, the e-learning process gains a social qualification. This study's main research question, which was conducted to develop managerial competencies through e-learning, was determined as "What are the critical success factors affecting the success of e-learning in the development of managerial competencies?" The sub-questions of this basic question are as follows:

1. What is the role of technological factors in the success of the executive development e-learning program?
2. Which factors are more critical to the success of the executive development e-learning program?

1. Literature Review

Developing competence involves organized efforts to improve, increase and enhance managerial knowledge, intuition, skills, and attitudes. The development of managerial competencies can be expressed as actions that can help administrators' performance exhibition (Brownell & Chung, 2001; Gold et al., 2010; McEvoy, 2005; Mumford, 1998). The primary purpose of competence development is to ensure that administrators know the expected qualifications and the competencies they will need to fulfill their duties and roles. The main goal is to help administrators develop the

competencies required to perform managerial tasks in a higher position or a different department (Mailick & Stumpf, 1998). The development of managerial competencies makes administrators more sensitive to their role in a given organization's structure and operation. Professional administrator development programs enable administrators to assess the conditions that determine success and acquire competence to demonstrate the necessary behavior. Spencer and Spencer (1993) point out that specific motivational competencies such as success orientation and self-confidence, which are located under the competence iceberg and partially challenging to develop, can be improved. According to Spencer and Spencer (1993), the development of competencies is based on different approaches to how people learn. Failure to pay attention to these approaches negatively affects the e-learning process at both institutional and individual levels. The lack of control in the learning environment, the learner profile, the instructional design that does not support interaction and active participation, and the e-learning environments designed without theory reduce the effectiveness of e-learning.

1.1. Institutional E-learning Barriers

Although e-learning provides several advantages for organizations, e-learning faces some essential barriers, such as the costs of technological infrastructure and interaction constraints experienced by learners (Saraç & Çiftçiöğlü, 2010). Learners in e-learning experience different things and are affected by the learning process differently. Some obstacles can be experienced in an e-learning application; however, it is not confident that similar obstacles will be experienced in all e-learning applications (Semerci & Keser, 2013). The e-learning process's success necessitates a systematic process in planning, designing, evaluating, and applying online learning environments and actively supporting the learning process. An e-learning system's effectiveness depends on the system's meaningfulness for all stakeholder groups, including trainers, support staff, and the institution, not only for learners. Therefore, an e-learning system must be easily accessible, simple-designed, learner-centered, and flexible. Also, it must have a comfortable learning environment and software (Khan 2005). When learners demonstrate high participation and success in meeting the course's goals and objectives, e-learning also becomes sensible for trainers (Tai, 2008).

Apart from necessary functionality, e-learning also has some problematic areas. In the literature, the barriers to adopting and implementing e-learning are generally focused on organizational and technical issues. The common technical barriers are; system crashes, bandwidth and infrastructure improvement (Mulienburg & Berge, 2005), accessibility, usability, technical support, and the difficulties perceived in e-learning system usage (Mungania, 2004). Besides, e-learning requires new user skills, such as communication technologies and online tools, effective communication, and tackling specific procedures (passwords, permissions, etc.). Organizational barriers (Crouse et al., 2011), lack of appropriate content related to time and specific needs for education, language barriers in content, difficulties in measuring e-learning effectiveness, lack of planning and orientation in the absence of accord with business objectives, e-learning awareness barriers such as lack of support, lack of encouragement and guidance and, finally, lack of management support (Ali & Magalhaes, 2008).

Success in the application of e-learning depends on some factors, which are contextual factors such as background and experience, institutional factors such as speed and delivery methods, and personal factors such as previous knowledge and the competencies related to the use of communication technologies by individuals (Mungania, 2004). The most critical barrier to e-learning is time pressure and the focus on low contribution to improving efficiency. The efficiency of e-learning is about the talent of learning to increase performance. No matter how relevant the content is, employees do not use the e-learning environment if they do not have the appropriate time. Another barrier to using e-learning by employees is the perception that the related technologies do not improve work performance. This perception originated from badly-designed e-learning solutions or poor support.

Consequently, a resistance that is hard to overcome may appear towards e-learning. The efficiency of e-learning is also directly related to meeting the personal development desires of employees and their needs to be appreciated. In the studies about e-learning, the following factors appear as the primary learning obstacles: low motivation, organizational conflict, focusing on the technical aspect of design rather than institutional expectation, ineffectiveness in the improvement of performance, shortage of the skills related to the use of communication and information technologies, accessibility, lack of exciting material, and lack of interaction (Reynolds, 2012).

1.2. Critical Success Factors

Research shows that the main factors leading a company to adopt e-learning solutions are reducing corporate costs, improving education quality, saving time, providing added value, and economies of scale brought by flexibility (Comacchio & Scapolan, 2004; Atıcı et al., 2022). Organizations also implement e-learning by imitating other organizations with technological leadership to deal with isomorphic pressures and innovation uncertainty. Considering that half of the current knowledge and skills will be obsolete in business within three to five years, corporate e-learning is an effective way to update and develop knowledge, skills, and competencies and adapt these to their diverse workforces' different learning styles (Wong & Sixl-Daniell, 2015; Alqahtani & Rajkhan, 2020). The success of corporate e-learning mainly stems from its

flexibility in accommodating location, duration, and specific learning needs and interests (Macpherson et al., 2004). The idea that adult learning processes may differ from children has become an established theory after andragogy (adult learning theory) was developed by Malcolm Knowles (Delahaye, 2005). Andragogy is generally defined as "the arts and science that help adults learn" (Knowles, 1990), aiming to change the adult person. It asserts that the differences between young and adult students are essential in learning. This difference reflects the psychological perspective of becoming an adult when the developed self is achieved through taking responsibility for self-management.

E-learning is performed through various teaching activities involving Information and Communication Technology (ICT). To create an effective, transparent, and flexible learning environment, e-learning success factors must be identified. These factors serve some essential functions for the success of e-learning. The Critical Success Factor Analysis (Rockart, 1979) is essential for planning, implementing, and assessing e-learning applications. While extensive research is available on various e-learning success factors, scant research focuses on andragogy's basic principles in e-learning environments. Table 1 below lists some critical studies on the critical success factors in e-learning.

Table 1. Critical Success Factors in E-learning

Critical Success Factors	Factor Components	Author
Human Factors	Characteristics of student and instructor, technical competencies, experience in using information and communication technologies, motivation	Benigno and Trentin (2000); Selim (2007); Soong et al. (2001); Sun et al. (2008)
Educational Factors	The harmony of the course and content, the structure of the course, compatibility of the content with the learning goals and objectives, the use of multimedia, assessment and constructive feedback, interaction, the quality of learning materials, the level of collaboration, the learning environment and design, the quality of the material.	Govindasamy (2001); Selim (2007); Soong et al., 2001; Volery & Lord (2000)
Technological Factors	e-learning platform, information technologies, ease of access and navigation, interface and screen design, technological infrastructure and system quality, distribution, ease of use and usefulness	Benigno and Trentin (2000); Reynolds (2012); Volery & Lord (2000)
Institutional Factors	Adequate corporate support, support of senior management, corporate governance structure, service quality, promotion and awareness activities, education policies, culture, financing, determination of target audience	Khan (2005); McPherson and Nunes (2006); Selim (2007)

The current study, which aims to find the primary and sub-research questions, is significant from four perspectives. Firstly, the present study provides the general framework of essential success factors for e-learning environments based on real employees' inputs. While the studies about the success factors of e-learning in the literature concentrated on children and young learners pedagogically (Cheawjindakarn et al., 2012; Masoumi, 2006; Volery & Lord, 2000), there is a research gap on the topic of adult learning and learning process of the employees working at the administration level. For this reason, the present study fills the research gap in evaluating e-learning practices based on the development of dynamic competencies at the institutional level rather than the e-learning programs based on content transfer. Secondly, the present study proposes a process approach to evaluate the e-learning environment at institutional and individual levels. An E-learning environment comprises dynamics such as individuals, environment, institution, education, and technology (Sridharan et al., 2010). The success of the ecosystem above depends on the interaction between the dynamics constituting itself. This interaction is evaluated from a macro perspective by considering the relative weight of the abovementioned dynamics. Thirdly, the obtained data enable institutions to understand employees' active participation in e-learning and essential elements preventing the appearance of the expected benefit from e-learning. Summarizing the obtained success factors in categories facilitates the definition of fundamental success sources. Furthermore, summarizing the data in categories enables the research instrument in further studies to be used more efficiently. Finally, it can be stated that administrators focusing on critical success factors can lead the development of e-learning enterprises at the institutional level more effectively.

2. Methodology

The qualitative research method was preferred to examine a subject more deeply, according to the holistic one-case pattern of qualitative research desires (Yin, 2003). The pattern was chosen because it is suitable for evaluating education quality, learning process, problems encountered, and reasons (Tutar & Erdem, 2020). Another reason for a holistic single-

case design is that it is suitable for determining the underlying causes by investigating educational problems in their environment in case studies operational.

2.1. Participants and data collecting

The research data were obtained from the senior managers of a participating bank operating in Turkey with 399 branches and 5749 employees. The study sample consists of 8 managers selected among the managers participating in the e-learning program to develop managerial competencies. In the research, primary data were collected through in-depth face-to-face interviews. The interviews tried to determine the administrators' opinions on participating in the development program on the success factors of e-learning.

Table 2. Characteristics of The Managers Participating in The Study

Demographics	MANAGER							
	A	B	C	D	E	F	G	H
Education	Ph.D. in progress	Ph.D. in progress	Ph.D. in progress	Bachelor's	Bachelor's	Master	Master	Bachelor's
Experience (year)	12	18	16	7	12	8	10	9
Position	Functional manager	Line manager	Functional manager	Functional manager	Line manager	Functional manager	Line manager	Functional manager
Previous e-learning experience	-	-	-	✓	✓	✓	✓	-
Frequency of ICT usage	Intense	Medium	Intense	Intense	Intense	Medium	Intense	Intense
Competence perception of ICT usage	High	Medium	High	High	High	Low	High	High

Secondary data sources and types are presented in Table 3.

Table 3. Secondary Data

Secondary Data Source	Secondary Data Type
Documents	Corporate competence packages, e-learning text content, basic behavior indicators, e-learning platform usage statistics, education plans and syllabi, education evaluation reports
Audio/Visual Materials	Corporate e-learning platform interface visuals, simulation, learning events and case analysis visual and audio materials, video conference audio and visual materials

2.2. Data Analysis

The research was conducted based on content analysis. For this purpose, the interview record was transformed into a text and subjected to content analysis to examine the subject in depth. At the same time, visual data of corporate competence packages, related course messages, basic behavior indicators, e-learning platform, training plans and programs, training evaluation reports, platform interface, simulation of course contents, learning games, case analysis, and audio video conferences are transformed into text units. It has been analyzed. Then, the findings were interpreted together, and various suggestions were made.

3. Results and Discussion

The most frequently assigned codes, obtained after the content analysis according to the obtained data and expressions, are displayed in the code cloud in Figure 1. The most prominent and frequently repeated codes affecting the overall success of e-learning are displayed below according to the frequency of coding: staying in the environment and continuity, content quality, accessibility, the attraction of contents, compliance with objectives and expectations, and corporate communication and support codes. The most repeated, prominent code is "staying in environment and continuity code." The code of staying in environment and continuity, which plays the most critical role in e-learning, represents the most

significant barrier that causes interruption between an individual and the learning process and prevents the learner from entering the same learning environment re-motivated.



Figure 1. Code Clouds Related to The Success Factors of E-learning

The managers' sample statements about completing training without any problems in the e-learning process and ensuring their continuity in the process are provided below.

"In some cases, there may be conflicting information. Some issues are taught quickly. I would state that the information given is not much, but overall, it is up-to-date and adequate. Also, information not reflected in working life can sometimes be given."

"As there is an inconsistency between the information I want to learn and the information I am looking for, I shut down the screen after a few minutes. This prevents me from continuing to the learning platform. I do not stay in the environment for a long time."

The code system and its distribution for the participants are provided in Figure 2, Figure 3, Figure 4, and Figure 5, respectively, in Educational, Humanistic, Institutional and Technological factors. The codes whose numbers were relatively assigned more appear in bigger squares in Figures 2, 3, 4, and 5.



Figure 2. Code distribution about the themes of Educational Factors

Within the context of educational factors, the managers' statements about critically important themes and codes are provided below:

"I give importance to the content of the training. If I think it is useful, I continue and finish the exercises. I like some pieces of training, but I sometimes dislike them. I disregard the ones I do not like. If possible, I let the training continue until it is over without my intervention."

"When case analyses and scenarios are used in the training contents, the training becomes richer and attracts you. Therefore, the flow of the lesson does not tire the listeners. A monotonous expression is exhausting, however. More documentary or film-like pieces of training make people watch. This affects my active usage."

As shown in Figure 3, expressions in the theme of human factors are concentrated on motivation codes and compliance with goals and expectations. This shows that expected attitudes and preparation for learning are essential for managers.

Managers have goals to overcome the problems they face in real life and adapt what they learn to their lives is performance-oriented e-learning.

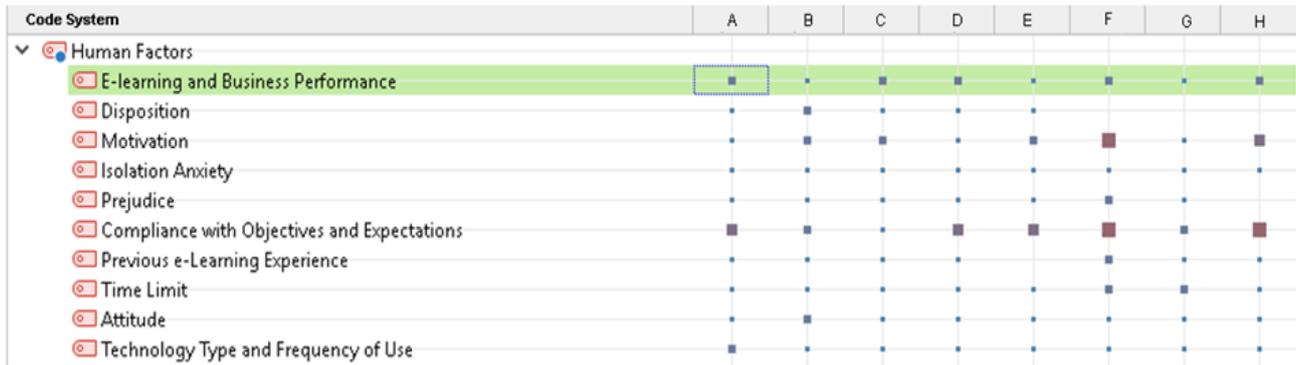


Figure 3. Code distribution about the themes of Human Factors

Under human factors, the sample statements that managers evaluate the e-learning process in terms of their compliance with their goals, expectations, and motivation are provided below.

"No matter how perfect the system is, a given person seems to be training but not actually in the background. If a person does not want knowledge, you cannot force him/her to learn anything, even in the traditional class. The individual's intrinsic motivation is very important during the e-learning process."

"I think that the user's enthusiasm and the desire to learn is the dynamo of the process. If the content is bad for those who want to learn, she/he doesn't want to get training on a bad platform."

The codes focus on expressions in the theme of institutional factors that effectively affect the success of e-learning; "corporate communication and support, adaptation, the attitude of senior management and education policies." The most frequently repeated code in the theme of institutional factors is the "corporate communication and support" code, as seen in Figure 4. After compliance with the objectives and expectations, the Enterprise communication and support code is sixth place in the code system.

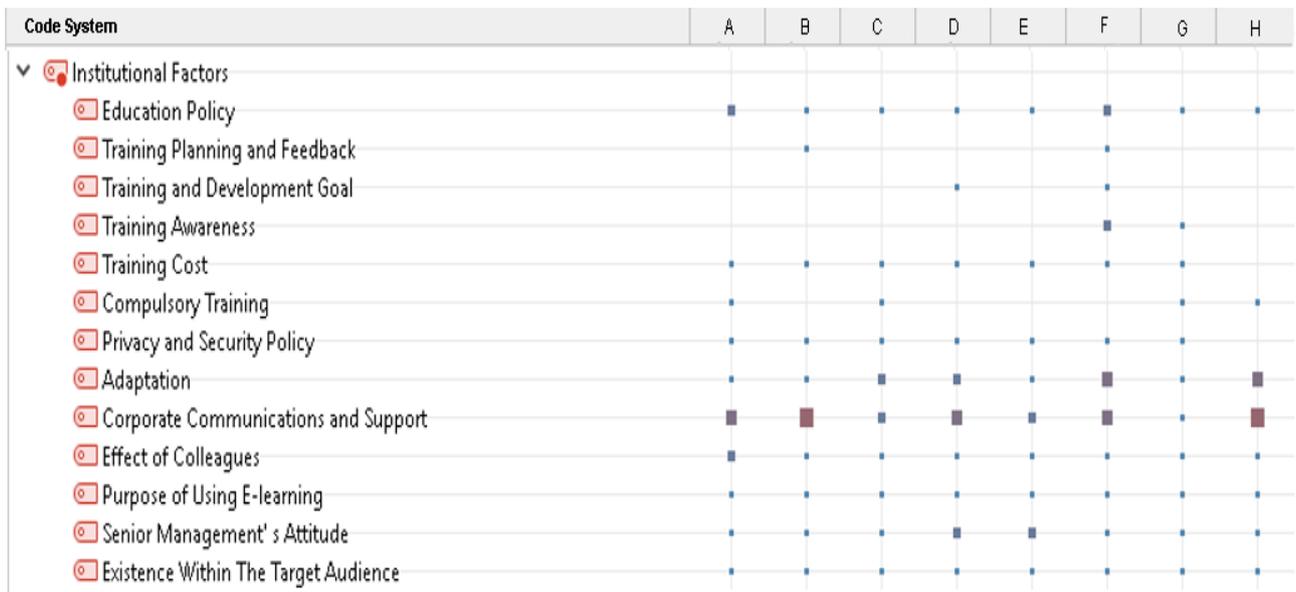


Figure 4. Code Distribution About The Themes of Institutional Factors

The managers' statements about prominent themes and codes in the context of institutional factors are provided below.

"When I have a problem in the e-learning process, I can state that there is no institutional support. There is not much institutional support, and there is ambiguity about where to apply when I say I cannot learn or the system does not work. This situation affects my attendance; my enthusiasm disappears."

"If the support of the top management were more intense, there would be some awareness at the institutional level. That is why I think there may be a weakness in this sense. I think I would be more motivated if I felt the leadership of the senior management board in terms of the ability to learn to work within the corporate body and the weight of encouragement policies."

The theme of technological factors refers to the factors that stress the electronic environment in e-learning. The codes under the theme of technological factors are densely populated in the following concepts in Figure 5: accessibility and access quality, interaction, technical problems, and interface and screen design.

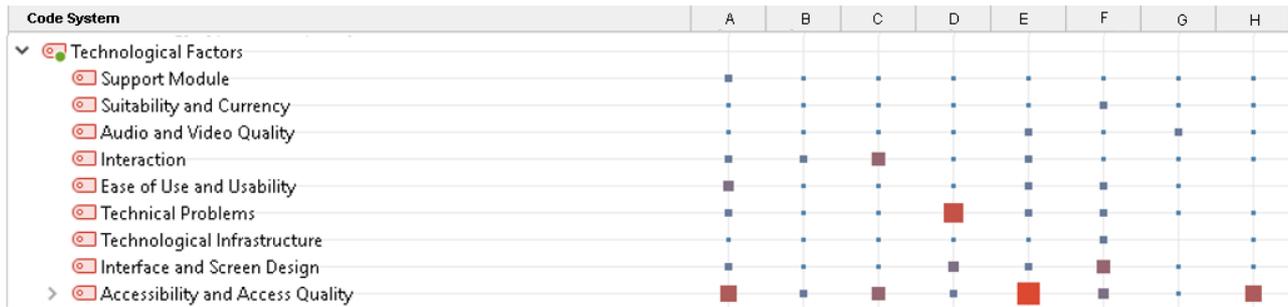


Figure 5. Code distribution about the themes of Technological Factors

The code that is prominent in technological factors is the code of accessibility and access quality. This code is in the third position inside the code system after the codes of staying in the environment, continuity code, and content quality code. The intensity of the activities of the managers, such as logging in to the e-learning platform, navigating quickly between menus, and having access to the services and opportunities that the e-learning environment provides (content, evaluation, feedback, etc.), display important implications about accessibility, access quality and the successful relationship of the e-learning process. From the perspective of regular attendance to the learning environment and environment continuity, the concept of access flexibility was keynoted by all managers. Besides, access flexibility plays a significant role in meeting managers' objectives and expectations and building motivation.

In the context of technological factors, sample statements of the participants about the quality of access and accessibility, technical problems, and interface and screen design codes are given below.

"Even if I had a small trouble accessing the portal or if I could not open the e-learning environment, I would not try it again."

"If I have access problems with the training I want, I get bored. If I cannot get to the training, I will miss it. After that, I do not know if I want to go to the same training again. Maybe I will have a prejudice about it."

"The problems with hardware and technical support bother me. I feel uncomfortable if I cannot attend because of a technical problem."

The shortage or lack of interaction causing isolation in the learning environment and access flexibility negatively affects motivation. The research managers expressed that collaborative educational activities based on interaction, cooperation, and group work with colleagues in the e-learning environment make learning easier. They also stated that the applications to interact with each other such as efficient discussion & chat platforms and live (virtual) courses, might increase e-learning motivation. The sample statements emphasizing the importance of interaction in the e-learning process are given below:

"The forum space in our system is not very active. It is not used very intensely. It would be better for me to use it. Because user reviews are important to me."

"If we had a more efficient platform that allowed interaction, I would say I could use the environment more actively. Because interaction is important to me, I would like an infrastructure to interact with other students."

"To be honest, in-class training is more important to me since there is interactivity. This makes training more attractive. You live with your colleagues, there is a social environment, and the instructor teaches the lesson."

The codes and their relations, which critically impact the e-learning process's success within educational, technological, institutional, and human factor themes, are provided in the Single-Case Model in Figure 6. In this regard, the most

prominent codes at the relational level are: the staying in the environment and continuity code, compliance with objectives and expectations code, content quality code, corporate communication and support code, and the attraction of contents code, displayed in bolder lines. The most intense relations in the field were staying in the environment, and continuity and content quality codes were available.

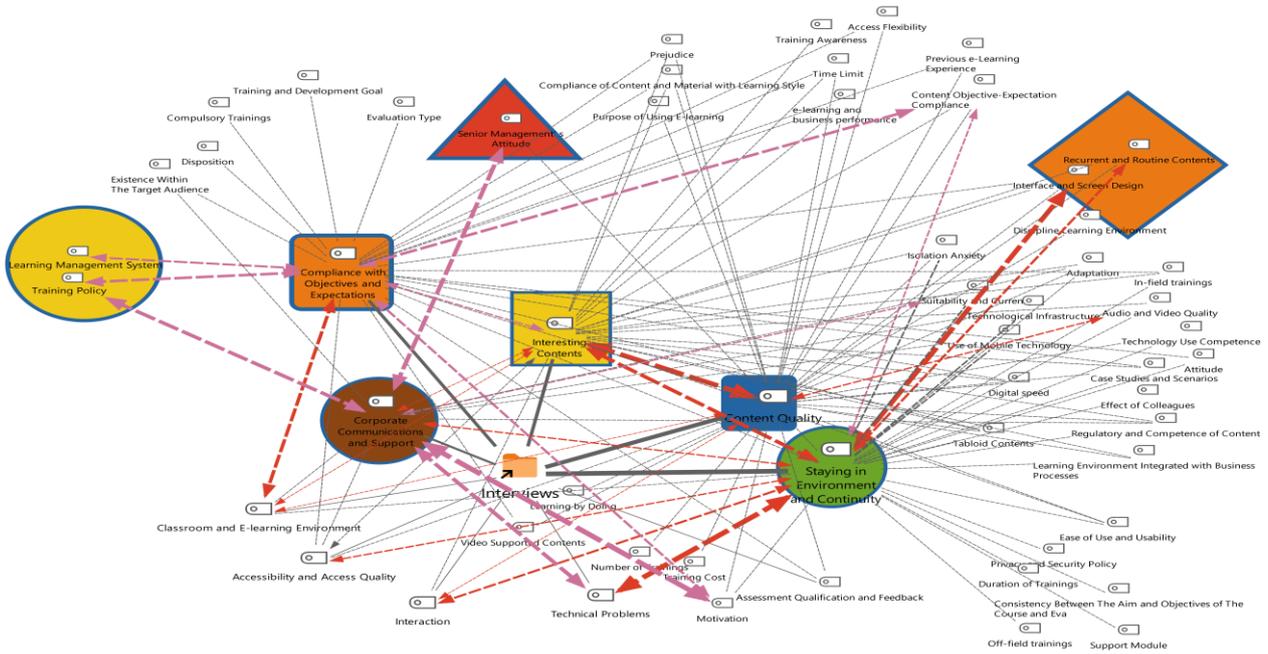


Figure 6. Single-Case Model with Code Hierarchy

The codes displaying a dense relation with the most critical success factor (environment continuity and attendance frequency) are interface and screen design, repeated routine contents, compliance with objectives and expectations, technical problems, corporate communication and support, accessibility and access quality, interaction and the attraction of contents.

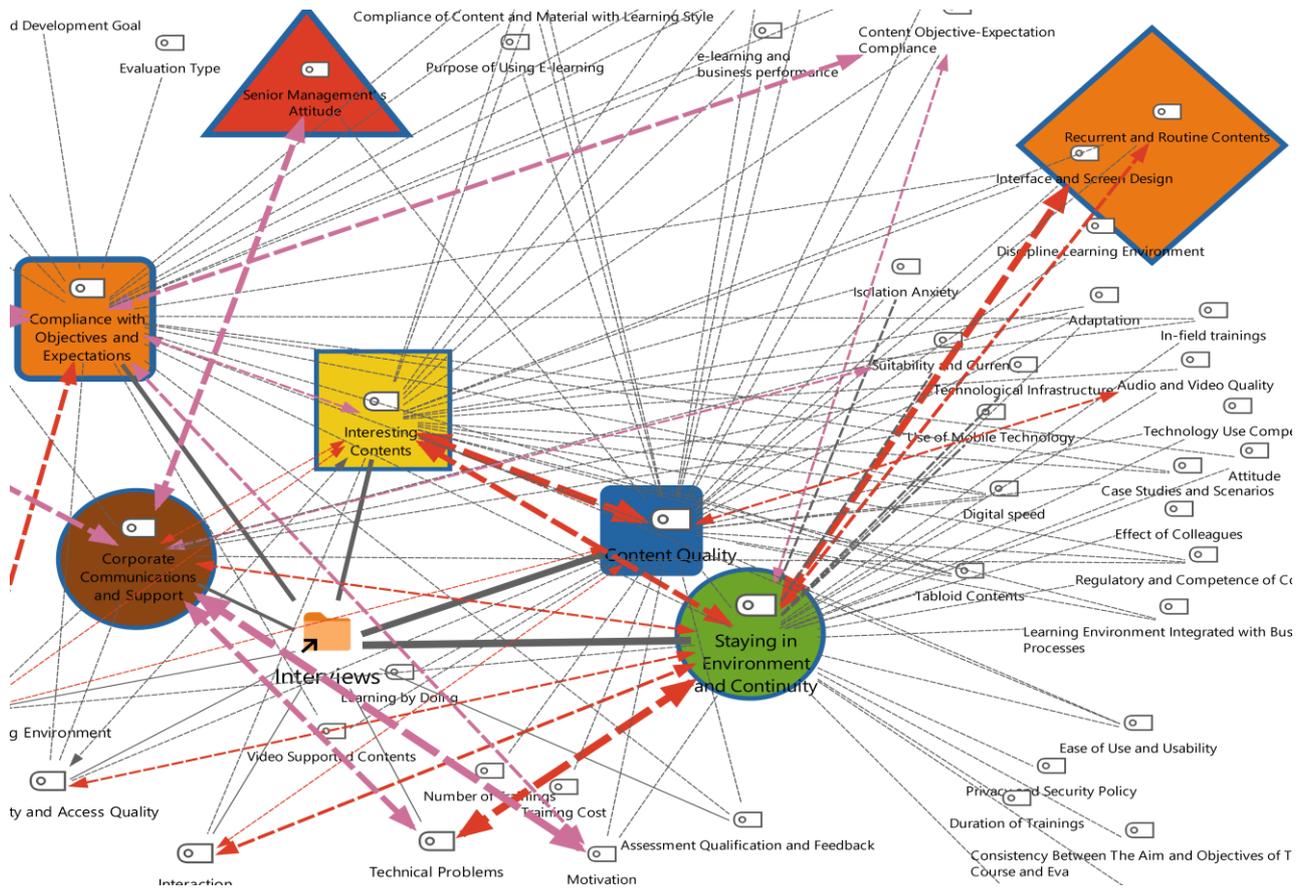


Figure 7. Staying in Environment and Continuity Code Cross Section within Code Relationships

When the relationship between staying in the environment and continuity code and other codes were evaluated, the strongest relations are seen between technical problems code and interface and screen design code in Figure 7. The statements of the managers indicating the impact of the codes which are available in the theme of technological factors affecting the success of the e-learning process on the entrance to the e-learning environment, completing the e-learning process without having any problems and assuring continuity in the process are provided below:

"It's important that they tell us what to write instead of the user name when we log in. Otherwise, we will be confused about whether to type our email addresses, our usernames for PC, or our real names and surnames. Even if I encountered a simple problem related to the access to the portal (for example, if I cannot log in and enter the program), I would not try again."

"Continuity is essential for me. I guess it is the touchpoint. When you have problems related to access, you automatically disconnect from the environment. Moreover, there is an isolation problem due to the lack of a classroom atmosphere."

The metaphor of "cotton yarn" used by one of the managers refers to the importance of technical problems related to environment continuity and permanency. In e-learning, the connection between the learning environment and the student is only established through the platform. The managers' statements also reveal that the delay in providing feedback or solving problems negatively affects logging into the e-learning environment and readiness for the learning process. The following factors are seen as barriers for managers to continue e-learning. The complexity of the design of the e-learning interface, the need for additional technical knowledge and skills in the use of the interface, and the fact that the interface is not user-friendly and includes complex activities which are difficult to understand.

"The failure in interface transitions and other problems usually create uncertainty about e-learning. I still have ambiguity in my mind. I wonder why they changed the interface several times in and out of season. They have already made changes to the interface a few times. I often have a question mark on my mind, which affects the use of e-learning for me in the long-term."

"During the design process, the people who would use the program may not have been contacted adequately; that is to say, the customers may not have been asked to give feedback, and detailed field research may not have been conducted."

The code of staying in the environment and continuity also has an intense relation with interaction code, which is inside the theme of technological factors. The statements of the managers about this relation are given below:

"Since e-learning is not interactive, you try to learn in the e-learning environment without a real person before you. Indeed, this situation tires the person and decreases the chance of keeping the obtained knowledge in mind. As the years passed by, the benefit of e-learning declined for me. For example, my interest in and usage of e-learning decreased in the past few years. "

"To give an example, you are studying in the environment, and a question comes to your mind. Unfortunately, you do not have the chance to find an immediate answer to that question in e-learning. Maybe, this is one of the most significant handicaps of learning."

Effective learning occurs when learners are actively involved in the learning process and delighted with the process. Because learners are frequently alone in front of the computer in e-learning, one of the most strategic methods of saving e-learning from being boring and monotonous is to bring the dimension of interaction to the forefront.

"If I cannot find what I am looking for on the screen after a while, I shut down the screen after a few minutes, which prevents my integrity to the learning platform. I cannot stay in the environment for a long time. Media contents in e-learning technologies are consumed very quickly."

" I do not think they are practical; however, interaction is too low. I do not consider that the learning environment will give me an advantage. What is more, I am just a follower in WhatsApp groups."

The corporation's e-learning environment does not provide the users with the opportunities such as asking questions anytime they like, receiving a response to the questions, getting immediate feedback related to the wrong answers in multi-choice tests and evaluation exams, and conducting joint and collaborative studies with other managers. Interaction between content and students is a barrier to managers' path to strengthen e-learning self-confidence and reach learning objectives. The last code, to which the code of staying in the environment and continuity is related to the theme of technological factors, is the code of accessibility and access quality. The statements of the managers about the codes of environment continuity and accessibility, and access quality are provided below:

"I get bored when I have access problems related to the training I want to attend. If I get bored or do not have access to the environment, I miss the training. I am unsure whether I would like to get similar training again. Maybe, I will have a prejudice about the issue. For example, I feel disappointed if I have a password or login problem."

"If I encountered even a slight problem related to the access to the platform (If I could not log in the system after trying), I would not try again."

"I find the e-learning environment very useful. Compared to my other friends, I can state that I use the environment more intensively. If you ask me why I can answer that I can get the information I want in a minimal time."

As in the interface and display design code, accessibility and access quality statements directly affect the e-learning process in managers' absence. The following problems managers encounter or will encounter in the future may affect their activation in the environment directly: the entrance to the e-learning platform, navigating among the menus easily, and the restriction of access to the services and opportunities that the e-learning environment provides (platform, course content, evaluation, etc.).

Conclusion

Learning at the institutional level involves employees from whom self-learning action is expected by carrying out tasks and responsibilities and young students whose sole purpose is learning. Learners form a heterogeneous group with different goals, expectations, and motivation characteristics. Managing this heterogeneous structure in the learning environment raises the need for different educational policies. Rather than a systemic and micro-scale assessment of e-learning, this situation requires a process-based assessment and a more macro perspective where critical importance is given to each dimension. The focal point of this study, which evaluates the success of e-learning in management and learning disciplines in the development phase of managerial competencies in a corporate structure, is to detect critical factors affecting the success of e-learning in the institutional process at the dimensional level and to evaluate how technological factors affect the success of the e-learning process. According to the research results, seven critical success factor dimensions were

identified while developing the competencies of the employees who work at administrative positions in the banking sector and affect the e-learning process's success. These dimensions are staying in environment and continuity, content quality, compliance with objectives and expectations, accessibility and access quality, content attraction, interaction, and corporate communication and support.

When the dimensions of CSFs were evaluated separately, it was concluded that the factor of staying in the environment and continuity was more intense than other CSFs. The factor of staying in the environment and continuity, which plays the most significant role in the success of e-learning, reveals the sensitivity of the relationship between managers and the e-learning environment (Alhabeeb & Rowley, 2018). The perceptions of staying in the environment and continuity play an important role for managers to visit the e-learning environment more frequently, spend more time in the environment, and get stability for their visit. Technical problems, accessibility and access quality, interface and screen design, and interaction are technological factor dimensions that displayed intense relation with staying in the environment and continuity factor in the success of e-learning. Having flexible access options to the learning environment anytime and anywhere desired, which was also emphasized by the managers, may sometimes cause drawbacks due to the technical problems encountered during the process. Unfriendly and time-consuming interface and screen design is another success factor that distracts the managers from the learning environment.

Technical problems and interface and screen design directly impact managers' access to an e-learning environment, complete the learning process without encountering problems, and enable continuity in the process. The experienced technical problems or the design's incompatibility affect managers' persistence by causing a bias toward e-learning. Furthermore, delaying feedback on technical problems and avoiding these problems' repetition causes dissatisfaction with the e-learning environment. The interaction was another dimension among technological factors that affect staying in the environment and continuity. The managers, whose only connection with the e-learning environment is screen and network, feel a high need for interaction to increase learning motivation and lead an active and compatible learning process. In order e-learning process to be regarded as useful and convenient by the managers, the demand for an interactive content design that is interesting, encouraging, joyful, and quick to feedback was strongly keynoted.

The relationship between staying in the environment, continuity, and technological factors is also ensured with accessibility and access quality. One of the reasons behind e-learning is that this learning type allows users to get online access to the course or content anytime (Alqahtani & Rajkhan, 2020). Managers should complete e-learning sessions at the workplace without any interruption. The problems with accessibility directly result in the absence of managers in the e-learning process. Besides, a great drawback of flexibility appeared. E-learning is naturally a self-oriented type of studying and requires a high level of motivation. Indeed, self-study is not new for managers who are used to teacher-centered classroom instruction. However, classroom instruction creates an environment where the managers stop working and focus on training, and students are not led to an isolated environment. Thus, it can be argued that managers will not complete the e-learning process without the required motivation (Naveed & Ahmad, 2019).

Since the academic success of the administrators in the education programs and the performance evaluation results could not be reached in the research, the factual development status in managerial competencies was limited to the administrators' perceptions. The inability to collect data from administrators with below-average participation in the e-learning process led to limited conclusions about attendance. This little inference causes a lack of evaluation of the causality of the continuity factor, which plays the most important role in the success of e-learning, according to the research results. In addition, the fact that administrators compare the e-learning process with traditional learning and that e-learning is supported by technology causes some difficulties at the theoretical level in explaining e-learning.

Recommendations

The current research proposes a process-oriented approach to evaluate the e-learning environment at institutional and individual levels. Transferring traditional and adaptive learning principles to the learning environment causes e-learning to be evaluated via a technology-oriented systematic perspective by bringing technological aspects to the forefront. However, the e-learning environment is a holistic system composed of different social and technical dynamics such as individual, environment, institution, education, and technology. The success of this system changes depending on the interaction of the system's dynamics. Considering the dynamics' relative weights, this interaction must be evaluated from a macro perspective.

The current research allows institutions to understand their employees' active participation in e-learning and the basic elements that prevent the appearance of the benefit expected from e-learning. Thus, institutions will focus on a more specific area to eliminate or reduce the related barriers. Summarizing the data and success factors in categories will define the main sources of success. Besides, summarizing the data in categories will enable more effective use of the research

tool in further studies by working in e-learning environments to select various categories. Also, focusing on the CSFs that managers perceive in the e-learning process will lead to more efficient future e-learning enterprises at the institutional level. Overall, both organizations and employees will experience the advantages of e-learning in the time, money, and labor-saving dimensions.

References

- Alhabeeb, A., & Rowley, J. (2018). E-learning critical success factors: Comparing perspectives from academic staff and students. *Computers & Education*, 127, 1-12.
- Ali, G. E., & Magalhaes, R. (2008). Barriers to implementing e-learning: A Kuwaiti case study. *International Journal of Training and Development*, 12(1), 36-53.
- Alqahtani, A. Y., & Rajkhan, A. A. (2020). E-learning critical success factors during the covid-19 pandemic: A comprehensive analysis of e-learning managerial perspectives. *Education Sciences*, 10(9), 216-231.
- Atıcı, U., Adem, A., Şenol, M. B., & Dağdeviren, M. (2022). A comprehensive decision framework with interval-valued type-2 fuzzy AHP for evaluating all critical success factors of e-learning platforms. *Education and Information Technologies*, <https://doi.org/10.1007/s10639-021-10834-3>.
- Benigno, V., & Trentin, G. (2000). The evaluation of online courses. *Journal of Computer Assisted Learning*, 16(3), 259-270.
- Brownell, J., & Chung, B. G. (2001). The Management Development Program: A Competency-Based Model for Preparing Hospitality Leaders. *Journal of Management Education*, 25(2), 124-145.
- Cheawjindakarn, B., Suwannathachote, P., & Theeraroungchaisri, A. (2012). Critical success factors for online distance learning in higher education: A literature review. *Creative Education*, 3, 61-66.
- Comacchio, A., & Scapolan, A. C. (2004). The adoption process of corporate e-learning in Italy. *Education & Training*, 46(6/7), 315-325.
- Crouse, P., Doyle, W., & Young, J. D. (2011). Workplace learning strategies, barriers, facilitators and outcomes: A qualitative study among human resource management practitioners. *Human Resource Development International*, 14(1), 39-55.
- Delahaye, B. L. (2005). *Human resource development: Adult learning and knowledge management*. New York: John Wiley & Sons.
- Gold, J., Thorpe, R., & Mumford, A. (2010). *Handbook of leadership and management development*. London: Gower Publishing.
- Govindasamy, T. (2001). Successful implementation of e-Learning Pedagogical considerations. *The Internet and Higher Education*, 4(3-4), 287-299.
- Kanungo, Rabindra N., & Sanjay T. Menon (2005), Managerial Resourcefulness: Measuring a critical component of leadership effectiveness, *The Journal of Entrepreneurship*, 14(1), 39-55.
- Khan, B. (2005). *Managing e-learning: Design, delivery, implementation, and evaluation* (1 ed.). New York: Information Science Publishing.
- Knowles, M. S. (1990). *The adult learner: A neglected species* (3 ed.). New York: Gulf Publishing Company.
- Knowles, M. S., Holton, E. F., & Swanson, R. A. (2005). *The adult learner: The definitive classic in adult education and human resource development* (6 ed.). London: Elsevier.
- Macpherson, A., Elliot, M., Harris, I., & Homan, G. (2004). E-learning: reflections and evaluation of corporate programs. *Human Resource Development International*, 7(3), 295-313.
- Mailick, S., & Stumpf, S. A. (1998). *Learning theory in the practice of management development, evolution and applications*. California: Greenwood Publishing Group.
- Masoumi, D. (2006). Critical factors for effective e-learning. Retrieved May 2, 2021, from [http://asianvu.com/digital-library/elearning/Critical_factors_for_effective_e-learning_by_DMasoumi\[1\].pdf](http://asianvu.com/digital-library/elearning/Critical_factors_for_effective_e-learning_by_DMasoumi[1].pdf)
- McEvoy, G. M. (2005). A Competency-based model for developing human resource professionals. *Journal of Management Education*, 29(3), 383-402.

- McPherson, M., & Nunes, M. B. (2006). Organizational issues for e-learning: Critical success factors as identified by HE practitioners. *International Journal of Educational Management*, 20(7), 542-558.
- Muilenburg, L. Y., & Berge, Z. L. (2005). Student Barriers to Online Learning : A factor analytic study. *Distance Education*, 26(1), 29-48.
- Mumford, A. (1998). Managing learning and developing management. *Human Resource Development International*, 1(1), 113-118.
- Mungania, P. (2004). *Employees' perceptions of barriers in e-Learning: The relationship among barriers, demographics, and e-learning self-efficacy* (Doctoral dissertation), University of Louisville, Kentucky.
- Naveed, Q. N., & Ahmad, N. (2019). Critical success factors (CSFs) for cloud-based e-learning. *International Journal of Emerging Technologies in Learning*, 14(1), 140-149.
- Oktal, Ö. (1999). *İnternet tabanlı eğitim programına yönelik bir model önerisi* (Doctoral dissertation), Anadolu Üniversitesi, Sosyal Bilimler Enstitüsü, Eskişehir.
- Reynolds, K. T. (2012). *Critical success elements for the design and implementation of organisational e-learning* (Doctoral dissertation), Queensland University of Technology, Queensland.
- Rockart, J. F. (1979). Chief executives define their own data needs. *Harvard Business Review*, 57(2):81-93.
- Saraç, M., & Çiftçioğlu, B. A. (2010). Örgütlerde e-öğrenme açılımı. *Uludağ Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 29(1), 29-52.
- Selim, H. M. (2007). Critical success factors for e-learning acceptance: Confirmatory factor models. *Computers & Education*, 49(2), 396-413.
- Semerci, A., & Keser, H. (2013). E-Learning barriers. In V. Yüzer, G. T. Yamamoto, & U. Demiray (Eds.), *E-learning in Turkey: Developments and applications IV* (pp. 97-134). Ankara: Efil Press.
- Soong, M. H. B., Chan, H. C., Boon, C. C., & Loh, K. F. (2001). Critical success factors for online course resources. *Computers & Education*, 36(2), 101-120.
- Spencer, L., & Spencer, S. M. (1993). *Competence at work: Models for superior performance*. CA: Wiley.
- Sridharan, B., Deng, H., & Corbitt, B. (2010). Critical success factors in e-learning ecosystems: A qualitative study. *Journal of Systems and Information Technology*, 12(4), 263-288.
- Sun, P.C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of the critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183-1202.
- Tai, L. (2008). *Corporate e-learning: An inside view of IBM's solutions*. Oxford: Oxford University Press.
- Tutar, H. & Erdem, A.T. (2020). *Scientific Research Methods with Examples*. Ankara: Seçkin Yayıncılık
- Ünal, Ö. F. (2012). Process and model proposal for determining the core competencies. *Journal of Social Sciences Research*, 11(2), 185-205.
- Volery, T., & Lord, F. D. (2000). Critical success factors in online education. *The International Journal of Educational Management*, 14(5), 216-223.
- Wong, A., & Sixl-Daniell, K. (2015). A case study in corporate e-learning. *International Journal of Advanced Corporate Learning*, 8(1), 52-53.
- Yin, R. K. (2003). *Case study research design and methods*. California: Sage Publications.