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*Araştırma Makalesi • Research Article*

## The Role of Educational Factors in the Success of Corporate E-Learning: A Case Study

### *Kurumsal E-Öğrenmenin Başarısında Eğitsel Faktörlerin Rolü: Bir Vaka Çalışması*

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**Abstract:** The primary purpose of this study is to determine the role of critical success factors in corporate e-learning. The research was designed according to a holistic single case study, one of the qualitative research designs. According to the critical situation sampling, the research sample was determined, and the data were collected through semi-structured interviews with eight senior bank managers. The research data were collected with the permission of Sakarya University Social and Human Sciences Ethics Committee numbered 61923333/050.99. The data were analyzed according to content analysis using the MAXQDA qualitative analysis package program. Analysis results show seven critical success factors for corporate e-learning: staying in the environment and continuity, content quality, compliance with learning goals, accessibility, content attractiveness, interaction, and corporate communication support. According to the analysis findings, staying in the environment and continuity are the most critical success factors in e-learning. This study offers an andrological framework at the institutional level instead of research focusing on students generally and providing a pedagogical framework for evaluating e-learning success. The research results are essential in revealing the necessity of a macro perspective in assessing the success of the e-learning ecosystem consisting of individuals, the environment, institutions, education, and technology. This research is also original and essential in contributing to the employees seeing the factors that prevent the benefit they expect from e-learning.

**Keywords:** Corporate e-Learning, Adult Learning, E-Learning Success, Educational Factors

**Öz:** Bu çalışmanın temel amacı, kurumsal e-öğrenmede kritik başarı faktörlerinin rolünü belirlemektir. Araştırma nitel araştırma desenlerinden bütüncül tek durum çalışmasına göre tasarlanmıştır. Kritik durum örneklemesine göre araştırma örnekleme belirlenmiş ve veriler sekiz üst düzey banka yöneticisi ile yapılandırılmış görüşmeler yoluyla toplanmıştır. Araştırma verileri, Sakarya Üniversitesi Sosyal ve Beşeri Bilimler Etik Kurulunun

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61923333/050.99 sayılı izni ile toplanmıştır. Veriler, MAXQDA nitel analiz paket programı kullanılarak içerik analizine göre analiz edilmiştir. Analiz sonuçları, kurumsal e-öğrenme için yedi kritik başarı faktörünü göstermektedir. Bu faktörler ortamda kalma ve süreklilik, içerik kalitesi, öğrenme hedeflerine uygunluk, erişilebilirlik, içeriklerin çekiciliği, etkileşim ve kurumsal iletişim desteği faktörleridir. Analiz bulgularına göre, e-öğrenmede ortamda kalma ve süreklilik en kritik başarı faktörüdür. Bu araştırma, kurumsal eğitimlerin değerlendirilmesinde genel olarak öğrencilere odaklanan ve pedagojik bir çerçeve sunan bağlam yerine kurumsal düzeyde androlojik bir çerçeve sunmaktadır. Araştırma, bireyler, çevre, kurumlar, eğitim ve teknolojiye oluşan e-öğrenme ekosisteminin başarısının değerlendirilmesinde makro bakış açısı gerekliliğini ortaya koyması açısından önemlidir. Bu araştırma, çalışanların e-öğrenmeden bekledikleri faydayı engelleyen faktörleri görmelerine katkı sağlaması açısından da özgün ve önemlidir.

**Anahtar Kelimeler:** Kurumsal e-öğrenme, Yetişkin Öğrenmesi, E-Öğrenme Başarısı, Eğitsel Faktörler

## Introduction

The COVID-19 pandemic in late 2020 has become a nightmare affecting the world. Strict precautions were taken in many countries to gain treatment studies and reduce the infection's pace. Social distancing was created as much as possible with arrangements such as giving a break to face-to-face education in educational or institutional facilities for some time (Yamamoto & Altun, 2020). The education sector has come first as the most affected, right after the health sector. Even institutions that did not develop online education strategies due to prejudices such as lack of interaction (Basir et al.; 2021), low participation rates (Agrawal et al., 2020), and low learning motivation (Harandi, 2015) in e-learning had to move their learning environments to the digital environment. Online learning has now become not the last solution but the only solution for the whole world.

E-learning is learning activities in an electronic environment with the support of information and communication technologies or transferring knowledge and skills through these technologies (Valverde-Berrocoso et al., 2020). Rapid developments in information and communication technologies create new opportunities in coordination processes between organizational units and corporate training strategies (Tikhonov, 2020). The increase in the use of web applications in corporate functions ensures that web-based education applications are increasingly integrated with the corporate context (Beinicke and Bipp, 2018). Corporate e-learning, which emerges from this integration, refers to corporate online education and training programs that include various learning activities for employees to acquire knowledge and skills (Wong and Karin, 2015). With the continuous and accessible online learning environment provided by corporate e-learning applications, employees can improve their learning at their own pace (Beinicke and Kyndt, 2020).

The technical and economic advantages of web-based education compared to traditional face-to-face instruction accelerate the transition of institutions to the e-learning environment. Statistics describing this shift show that organizations that continue to innovate in corporate e-learning environments are recognized as market leaders (Baporikar, 2019). 42% of the world's most profitable companies in the Fortune 500 list use e-learning tools extensively in their training and development processes (Tyurina et al., 2021). The global e-learning market is predicted to reach 350 billion dollars by 2025. Corporate e-learning is estimated to reach 37.8 billion within this market, with an annual growth rate of 13% (Choudhury and Pattnaik, 2020). This orientation shows that in addition to traditional classroom education, e-learning applications have become a standard in corporate education. However, one of the issues that should not be ignored in this process is the effectiveness of e-learning (Beinicke and Kyndt, 2020). According to LinkedIn 2020 Workplace Learning Report, the most important strategic focus point that experts in learning and development point out in 2020 is evaluating the effectiveness of learning programs (LinkedIn, 2020). The effectiveness of institutional e-learning applications is based upon understanding the main difficulties of the current e-learning systems. During the COVID-19 pandemic, there is no consensus on critical difficulties and factors that shape the successful use of e-learning systems (Almaiah et al., 2020).

Research on corporate e-learning shows that the main learning challenges are motivation problems, ignoring educational and organizational issues, focusing on technical issues in design rather than meeting organizational expectations, lack of exciting materials, and inadequate interaction (Reynolds, 2012).

As the primary development focus of the corporate e-learning process is the individual, dynamics such as the individual's learning goals and objectives, motivation, and learning preference are the elements to be considered in e-learning. Unlike e-learning, corporate learning involves employees who aim to climb the career ladder rather than students whose only purpose is learning. When e-learning is not designed considering adult learning principles, it may cause intense feelings of isolation, low acceptance, and high absenteeism rates (Edwards & Thorn, 2016; Wong & Daniell, 2017). Corporate e-learning problems mainly involve limited interaction, inadequate feedback, and faulty course/material design. Our study is based on the adult learning theory (andragogy) developed by Knowles (1990), which assumes that the pedagogical model is inappropriate for adult learning. Andragogy considers factors such as adult learner readiness, willingness to learn, level of motivation, the need to know, self-perception, and the effects of individual learner experiences on learning.

### **Literature Review**

Corporate e-learning refers to online technologies offering different solutions to enhance individual and organizational knowledge and performance (Rosenberg, 2001; Tai, 2008). Due to web-based education's technical and economic advantages compared to traditional face-to-face education, many business organizations turn to e-learning and virtual training. Companies that continue innovating and incorporating e-learning environments are considered market leaders. Expected to become a 75 billion-dollar global market in 2020, e-learning may soon set corporate education standards (Beinicke & Bipp, 2018).

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; Rosenberg, 2001; Iqahtani and Rajkhan, 2020). Organizations also implement e-learning by imitating other organizations with technological leadership to deal with isomorphic pressures and innovation uncertainty (Comacchio and Scapolan, 2004; Naveed et al., 2019). 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 and Karin, 2015).

E-learning environments with interactive content attract students and facilitate the comprehension of the learning material (Wong and Daniell, 2017). 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, Iqahtani and Rajkhan, 2020). The idea that adult learning processes may differ from children's has become an established theory after andragogy (adult learning theory) was developed by Malcolm Knowles (Delahaye, 2005; Kara et al., 2019). Andragogy is generally defined as "the arts and science that help adults learn" (Knowles, 1990, p. 54), which aims at a change in the adult person (Knowles, Holton, and Swanson, 2005). 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.

Corporate e-learning uses student feedback in its curriculum design. The formal training environment alone cannot motivate learners to change their behaviors significantly. Such behavioral change depends on tailoring the content according to individual learning styles and developmental goals, besides incentives for change.

Adult learning principles render the quantities and qualifications of the knowledge, skills, and competencies in the corporate e-learning environment critical in analyzing e-learning success. Since

theoretical foundations of learning guide the e-learning environment design, andragogy, with its assumptions about how adults learn, plays a vital role in content and material design (Waight and Stewart, 2005). Although most andragogy principles were developed before the emergence of technology-assisted learning, integrating them into e-learning enhances learner motivation.

E-learning is performed through various teaching activities involving ICT. To create an effective, transparent, and flexible environment for learners, 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; Moeuf et al., 2020) 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, the experience of using information and communication technologies, motivation	Benigno and Trentin (2000); Volery and Lord (2000); Soong <i>et al.</i> (2001), Selim (2007), Sun et al. (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 information, the quality of material and diversity.	Papp (2000); Soong <i>et al.</i> (2001); Govindasamy (2001); Selim (2007); Sridharan <i>et al.</i> (2010), Priatna <i>et al.</i> (2020); Harandi (2015); Basir, Ali and Gulliver (2021)
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	Papp (2000); Benigno and Trentin (2000); Volery and Lord (2000); Soong <i>et al.</i> (2001); Selim (2007), Agrawal et al. (2020)
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	Benigno ve Trentin (2000), Govindasamy (2001); Selim (2007), Iqahani and Rajkhan (2020)

The primary purpose of corporate training and development is to achieve organizational and individual goals by creating positive changes in the behavior and performance of employees. In reaching this goal, strategies for what, when, how and with what medium and tools the target audience can learn are essential for the success of the process (Tikhonov, 2020).

In corporate e-learning, web technologies are used extensively to access the learning environment, interact, improve the learning experience, and receive support. However, evaluating corporate e-learning only in terms of technology causes an emphasis on the technological aspect of e-learning. The technology-dominated view causes the evaluation of e-learning at the systemic, technical, and micro levels (Schultz and Correia, 2015). However, corporate e-learning includes employees who expect self-development in addition to their corporate duties and responsibilities, rather than students whose main purpose is learning (Shurygin et al, 2021). Learners as employees are a heterogeneous group with different goals, objectives, expectations, and motivations. Managing this heterogeneous structure in the learning environment requires different education policies and instructional designs. This situation;

requires a more macro view that necessitates the process-based evaluation of e-learning rather than systemic and micro-level evaluation.

When institutional e-learning is not approached in a process dimension, high feelings of isolation by e-learners, low acceptance rates, high absenteeism rates, and therefore failure are associated with it. It can be said that the main problematic of institutional e-learning stems from the design of e-learning programs that are far from adult education theory, do not support interaction, do not allow active participation, and cannot combine successful educational methods that increase learning. In this respect, this study aims to examine the factors that facilitate the design, development, and implementation of corporate e-learning. The main research question is “What are the factors affecting the success of corporate e-learning?” The sub-questions are:

1. What is the nature of the relationship between educational factors and other factors affecting the success of corporate e-learning?
2. How do educational factors affect the success of corporate e-learning?

**Method**

This study was designed according to the qualitative research method in which qualitative data collection methods such as observation, interview, and document analysis are used to holistically analyze phenomena in the natural environment (Yin, 2003). The reason for choosing the holistic single case design (Yin, 2003) is to analyze the factors affecting the success of e-learning in its specific context. Further, it offers an appropriate framework for discovering the underlying causes by examining educational problems in their real contexts (Bogdan and Biklen, 2007).

**Participants**

The scope of the study is limited to a participation bank operating in Turkey. According to the data published by the Participation Banks Association Turkey for the third quarter of 2020, six participating banks are in operation in Turkey with 1049 branches and 15,029 employees. Participation Bank, where the present study was conducted, has 399 branches and 5749 employees (38% total employment in Turkey's participation banking) (Participation Banks Association of Turkey, 2020). Given the time constraints in conducting the study, the diversity of the participation banks and their high number necessitated such a limitation. The study sample consists of the managers who participated in an executive development e-learning program and 8 unit managers selected through critical case sampling (Denzin and Lincoln, 1994). The reason for the relatively small number of participants in the study is that the case study is a detailed and in-depth research method. In addition, the data saturation obtained from the interviews with the existing participants was reached (Yıldırım and Şimşek, 2018). In addition, the data saturation obtained from the interviews with the existing participants was reached (Boddy, 2016). The reason for choosing critical situation sampling in the research is to investigate the underlying situations of the success problem of corporate e-learning in depth. Another justification is the judgment of critical situation sampling that if this group is faced with a particular problem, all other groups will definitely face this problem (Creswell, 2014). The participants' educational status, their experience and positions in the organization, their previous e-learning experiences, their frequency of Information and Communications Technology (ICT) use, and their perceptions of personal ICT competencies are given in Table 2.

**Table 2.** Characteristics of The Managers Participating in Study

Demo-graphics	MANAGER							
	A	B	C	D	E	F	G	H
Education	PhD in progress	PhD in progress	PhD 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 use	Intense	Medium	Intense	Intense	Intense	Medium	Intense	Intense
Perception of ICT competence	High	Medium	High	High	High	Low	High	High

### Data Collection

Interviews with the managers were conducted using semi-structured forms. The data regarding the effects of success factors on the e-learning process and the e-learning success factor perceptions of the managers participating in the management development program were analyzed. We first examined the related disciplines' research questions to investigate the success factors shaping our research questions. The secondary data included in our analysis 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

### Validity and Reliability

Multiple data collection tools such as interview, observation and document analysis were used in the data collection process to increase the research's internal validity and confirm the data obtained. The findings were evaluated according to the conceptual framework previously created, and the data were presented without comments. The research report was read and confirmed by the managers participating in the study. Any potential data loss was prevented by recording the data with a voice recorder. The interviewer's subjective judgments during the interviews were minimized by using carefully written and ordered questions. In addition to the method triangulation (Denzin and Lincoln, 1994; Creswell, 2014; Yin, 2003), the researcher triangulation method was used by including the supervision of two observers to increase validity reliability.

### Data Analysis

Interviews were analyzed using the MAXQDA software. The data obtained from the interviews were first read one by one and copied into the Microsoft Word document. Instructional materials, instructional design, and learning content are the main elements that come to the fore in determining the effect of educational factors on corporate e-learning success. The execution of e-learning in the virtual environment highlights the auditory and visual qualities of the materials and contents used. In this direction, together with the interview data, the data were deciphered in order not to lose data on audio and visual data and to write the interviews exactly. Data were deciphered using MAXQDA software. The data were coded as a frame according to the open, selective and selective coding steps. In the analysis, a categorical analysis strategy depending on the content of the material was used. In the coding process, a coding approach made within a general framework was followed (Yıldırım and Şimşek, 2018). At this stage, a coding table containing the main and sub-codes was created so that all codes are clear and understandable by both the researcher and others (Creswell, 2014). In order to ensure the validity of the codes and not be limited to the personal interpretation of the researcher, coding categories

were developed by a different researcher and the results were compared. Each new code added to the coding key during the coding process was subjected to second coding by re-reading the previously coded documents. With recoding, the risk of data loss is reduced and researcher bias is eliminated.

Themes were determined to reveal the relationship and common aspects between the codes (Yıldırım and Şimşek, 2018). Emerging themes enabled the research to be shaped in a more factual framework and to establish relationships between codes. For example, data on opinions about evaluation exams under educational factors; While they were coded with the concepts of "type of evaluation, adequacy of evaluation, feedback of evaluation results, evaluation process and meeting the aims and expectations of evaluation", these codes were included in the "educational factors (evaluation)" theme, which corresponds to a higher level and general concept in the thematic coding process. The whole data set was carefully examined in order for the themes to form a meaningful whole (internal consistency) and to explain the data obtained in the research in a meaningful way (external consistency). Thus, the representation ability of the data set according to the themes was evaluated. Then, interpretations were made based on the research findings (Creswell, 2014). At the same time, direct participant statements that fully reflect the views of the participants were included.

### Findings

The code cloud, which shows the most repetitive codes and where educational factors dominate the factors affecting the success of corporate e-learning, is given in Figure 1. According to their frequency from the highest to the lowest, the codes determining the success of the corporate e-learning process are staying in environment and continuity, content quality, harmony with the learning objectives and expectations, corporate communication and support, and accessibility. The Staying in Environment and Continuity code, which stands out in the cloud, emerges as the main success factor, which, depending on the learner's motivation, may disrupt the learning process and discourage re-entering the learning environment.



**Figure 1.** Code Cloud on Success Factors of E-learning

The coded themes and their distribution are presented as Educational, Human, Institutional, and Technological factors in Figure 2. The codes with relatively high recurrence in the related figures appear as larger squares. The codes that emerged during the coding mostly fall under the theme of Educational Factors. The codes related to the educational factors' theme were subjected to further coding, revealing the following: LMS (Learning et al.), content appeal, continuity, learning environment, training quantity, scope, evaluation process, and content quality. Overall, the most prominent themes in the Educational Factors theme are staying in the environment and continuity, content appeal, and content quality. As shown in Figure 2.



**Figure 2.** Code Distributions for The Educational Factors Theme

Two codes stand out regarding the evaluation process sub-theme under the theme of educational factors. The most frequently recurring codes in the relevant theme are the consistency between the course's aim/objectives and evaluation, besides assessment quality and feedback. The managers stated that theoretical knowledge examinations at the end of the training were adequate, but the skills assessment should be extended over a more extended period.

The codes that stand out in the quantity of training are the duration of the training and the number of training codes. Time is an essential factor affecting staying in the environment and continuity. All the managers suggested that the training should be shorter with more superficial content. They stated that more extended training does not necessarily mean higher quality training, and visuals, animations, and videos support that; the course content can be reduced to ten minutes. They also recommended fewer lessons focusing on specific areas.

The code that stands out in the theme of the training's scope is the in-field (field-specific) training. The managers engage in training closely related to their professional specialization, positively affecting their learning continuation. They suggest that training on general subjects needs to be more concise. The heavy emphasis on general training causes an aversion to e-learning.



The codes that stand out in the LMS theme are customizable platforms, education and content proposals, indexing, and search engine codes. The managers expect the LMS they use to be customizable. They also stated that an LMS with content that matches their personal and professional development and guidance to monitor their self-development would increase their participation in e-learning.

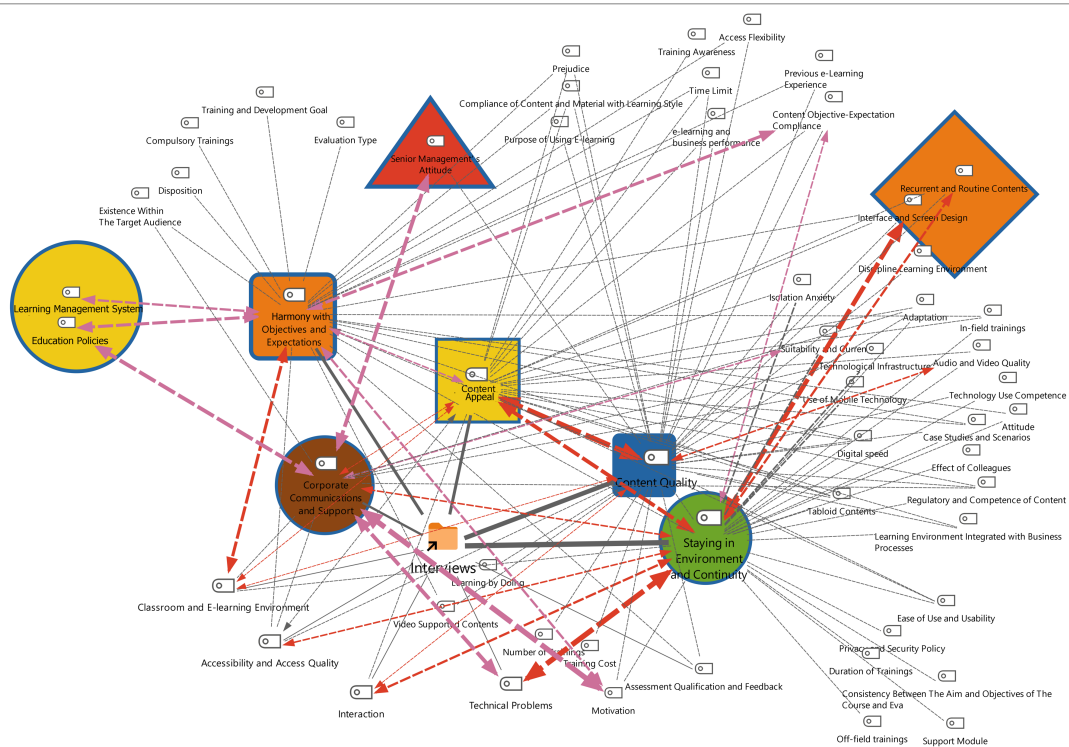
The prominent code in the learning environment theme compares classroom and e-learning environments. The managers evaluate e-learning by comparing it with the dimensions of interaction, sharing, socialization, and adaptation provided by the traditional learning environment. Considering these dimensions, the e-learning environment enables managers' location flexibility but disadvantages interaction and socialization. An e-learning environment integrated with managerial business tasks may attract more attention and increase continuity.

Content quality is the most frequently recurring theme regarding the educational factors after the content appeal and staying in environment and continuity. Thus, qualities such as meeting learning expectations, timeliness, adequacy, and adaptation to the learning style play an essential role in the success of e-learning. Managers who evaluate the course content's quality by considering design, consistency, clarity, intelligibility, and sound/animation support of the multimedia tools expect multimedia support rather than plain text, especially in the training content, to develop managerial skills.

The distribution of the codes concerning the theme of content appeal indicates that the code distribution is concentrated on case analysis and scenarios. Instructional games, simulations, case analyses, and scenarios make the content attractive. With a critical role in reducing isolation anxiety and enabling learner-content interaction, these instructional tools are the tools that heavily demand training on improving managerial competencies.

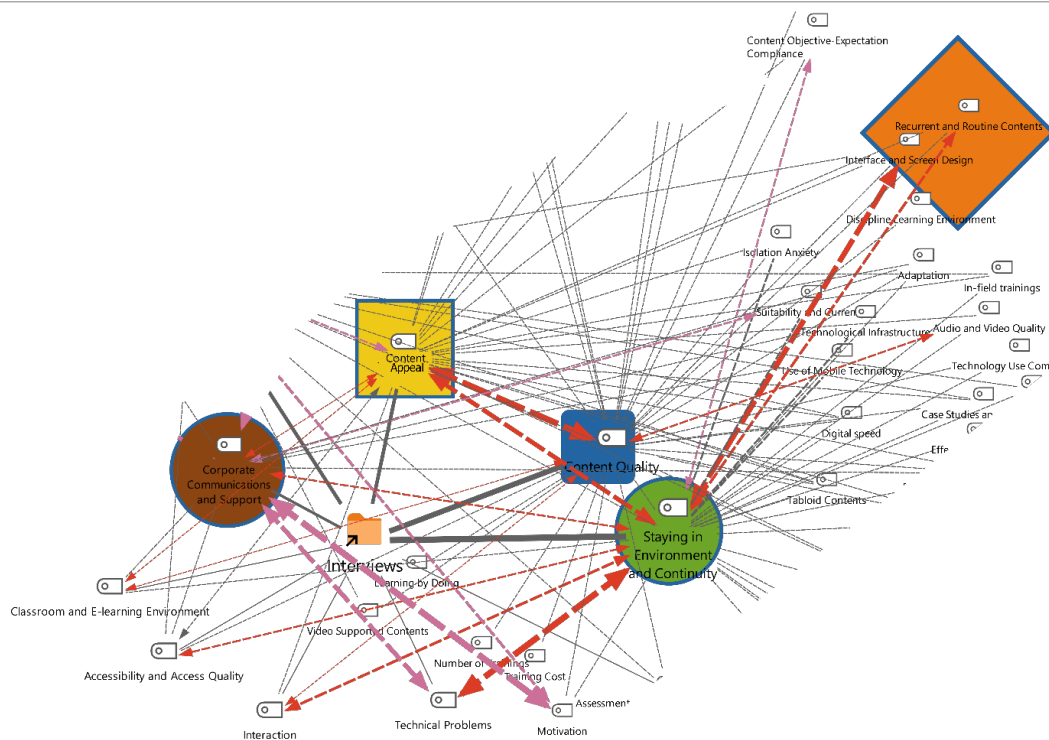
#### **Analysis of the Code-Theme Relationships**

This part of the analysis focuses on the critical success factors and their relationships, incorporating e-learning. The study's central question and the related sub-questions were answered by analyzing the relationships between the codes and themes that play a role in e-learning, the statements made with the highest frequency, and how they affect each other. In analyzing these relationships, we supported our interpretations by taking descriptive statements from the interviews to explain the code's and themes' interplay and reveal the cause-effect connections. The codes that critically affect the success of the e-learning process and their relations are given in Figure 3 under educational, human, technological, and institutional factors.



**Figure 3.** Single-Case Model with Code Hierarchy

In the Single Case Model given in Figure 3, the codes of staying in the environment and continuity, harmony with the objectives and expectations, quality of content, corporate communication and support, and content appeal are shown with a thicker line indicating the strength of the relationship. Accordingly, it can be seen that the most vital relationship is between staying in the environment and continuity and content quality. The analysis revealed some links among the content appeal, corporate communication and support, interface and screen design, harmony with the objectives and expectations, content objective-expectation harmony, senior management's attitude, repetitive content, education policy, and LMS, which vary in strength. These codes labeled as Critical Success Factors were examined based on their relational strength, and frequency is presented with quotations from the interviews and cross-sectional visualizations. The codes indicate a strong relationship between staying in the environment and the critical success factor in Figure 4.



**Figure 4.** Code Relationships Related to Staying in Environment and Continuity

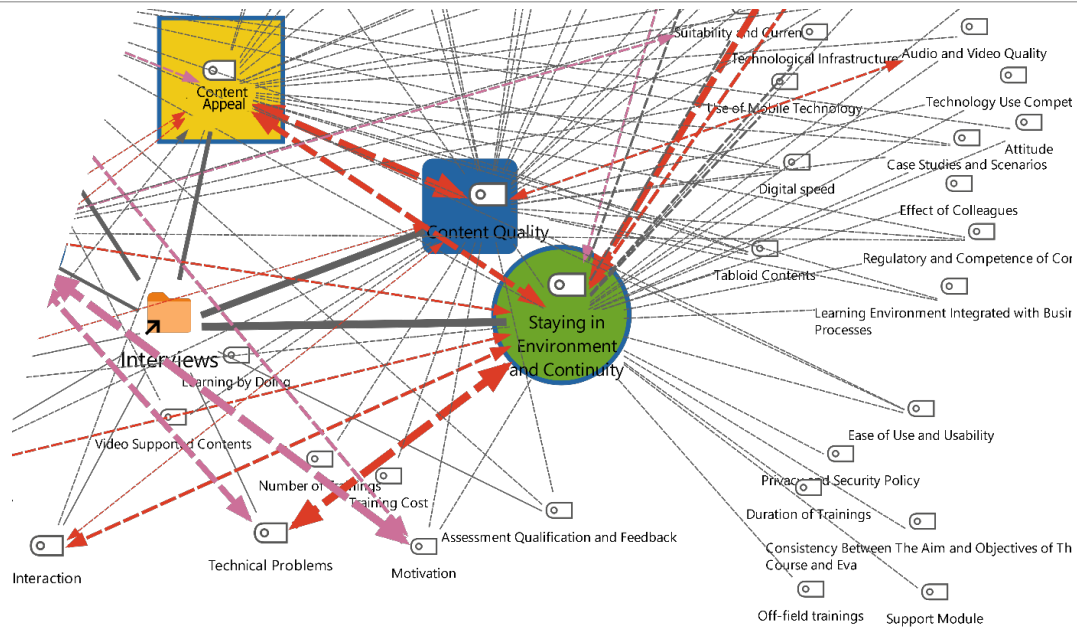
The codes closely associated with the Staying in Environment and Continuity code are repetitive content, content objective-expectation harmony, and content appeal. Some statements of the administrators regarding the code relations are as follows:

"The training on management skills is nice, but it gets boring when it is too repetitive. The content that repeats what we know repeatedly gets boring after a while, and you no longer pay attention to the environment."

"When lessons are not interesting, there is a fast forward function (using which) I can skip the pages directly and come to the end of the lesson."

Transferring the course contents and printed materials to the e-learning environment and presenting them through the LMS alone does not ensure the success of e-learning programs' success. Simply displaying boring, repetitive, and monotonous educational content on screens instead of books could indicate faulty instructional design. Such errors only further consolidate the negative biases adults may hold against e-learning. The level of learner knowledge and their expectations about education require differentiated content designs to practice, interact, measure their knowledge, and learn according to multiple learning styles. It is crucial for learning that the e-learning environment encourages interaction and provides instant feedback and concise content in a fun and attractive way.

According to the analysis results, the code with the most vital relationship with the other codes, following the staying in the environment and continuity code, is the content quality code. The codes with the most robust relationship with the content quality code considered the second critical success factor in corporate e-learning success are content appeal, sound and image quality, in-class and e-learning environment comparison interaction, as seen in Figure 5.



**Figure 5.** Code Relationships Related to Content Quality

Some evaluative statements of the managers regarding content quality based on the content, design, consistency, clarity- and comprehensibility criteria are as follows;

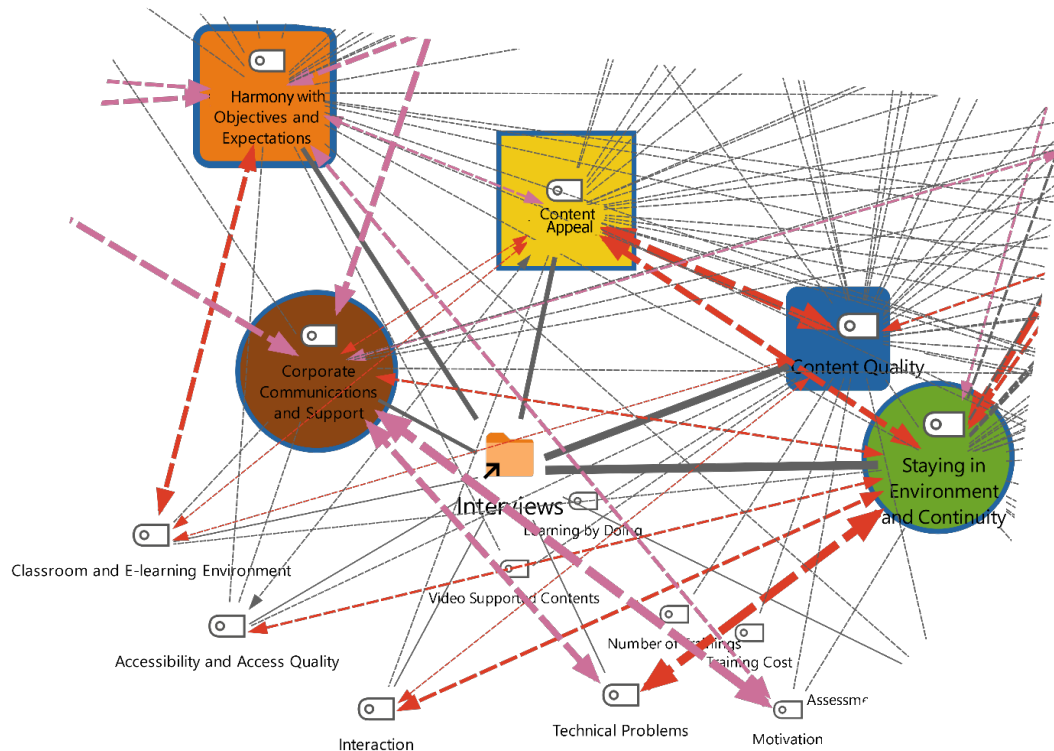
"I like the course contents. They do it with cartoon characters, and I am intrigued. So you feel that the design is good; it does not feel unpleasant."

"If the content is not good, it gets boring. You wish it to be over as soon as possible."

"It is essential that something is watchable and has flow rather than high quality."

In the e-learning process, administrators have an active role by taking responsibility for their learning and leaving their passive audience role. Being interactive allows the learner to choose a particular subject depending on its learning content difficulty, adjust the learning pace, and engage in discussions by contacting others when needed. When course materials have attractive multimedia elements such as sounds, graphics, and animation, they draw the learner's attention to the content.

The content appeal is critical with its length, attention-grabbing, and appealing instructional tools (case analysis, scenario, simulation, etc.). Its close relationship with continuity and content quality shows that it is a critical success factor in e-learning. As shown in Figure 6, the content appeal code has a strong relationship with the content quality, staying in environment and continuity, comparison of classroom and e-learning environment, harmony with the objectives and expectations, and corporate communication and support codes.



**Figure 6.** Code Relationships Related to Content Appeal

Some evaluative statements of the managers regarding appeal are as follows:

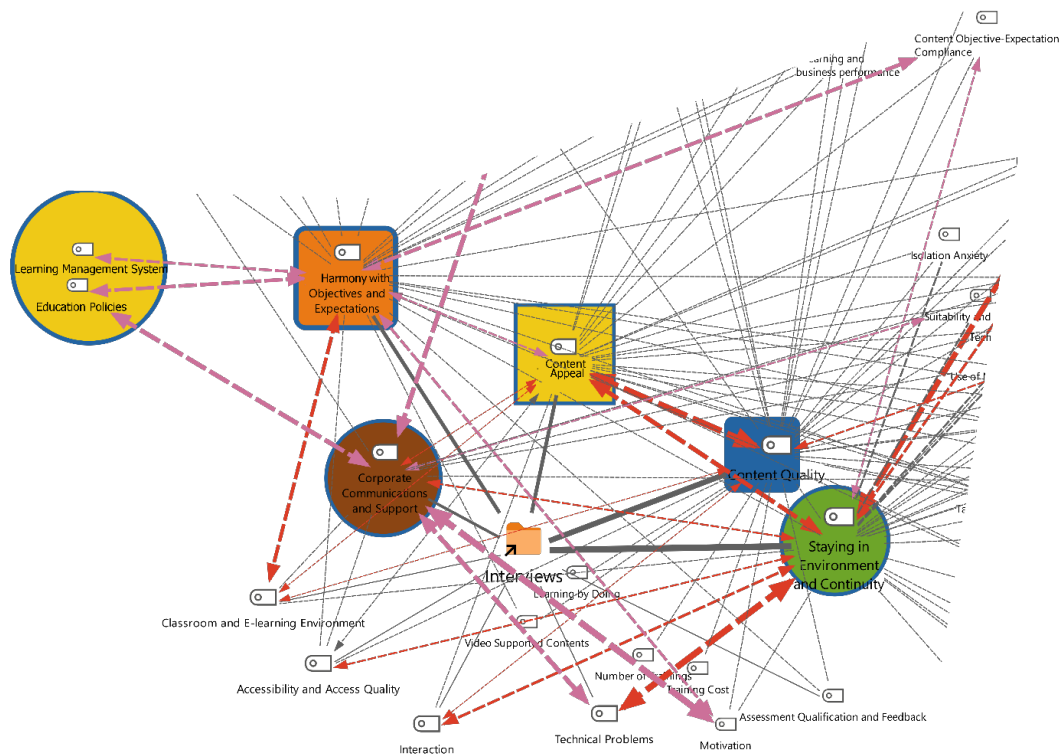
"I like the content of the lessons; they do it with cartoon characters, which makes me curious. Honestly, they do not feel repulsive at all."

"The training content can be interesting. I mean, more interactive and like a documentary."

"Multimedia-supported educational content makes it look richer and more attractive."

All the participants agree that the content is attractive. Content expectations are about what the environment offers. Content and materials that are too lengthy and general and do not require interaction featuring visuals that drive managers to be passive in the learning environment cause failure in e-learning. The statements above indicate that the e-learning design must address the learner's cognitive, affective, and psychomotor characteristics.

The code of harmony with the objectives and expectations under the theme of human factors and directly related to the educational factor dimensions is the code in which the advantages offered by the e-learning environment for learning and development are taken. The managers strongly associated developmental expectations with motivation, purpose and expectation harmony, content appeal, classroom and e-learning environment comparison, education policy, and LMS codes. As shown in Figure 7, the most vital relationships with the learning objectives and expectations code compare the classroom and e-learning environment and LMS codes.



**Figure 7.** Code Relationships Related to Harmony with The Objectives and Expectations

Some evaluative statements of the managers regarding the harmony with the individual learning objectives and expectations with the e-learning process are as follows:

"I have little time at work. I have to close my educational gap in a very short time."

"There are those that do not match my learning goals and those that do. I follow those that do, and for those not matching my purposes, I pretend that I have completed them just because they have been assigned to me as tasks."

"I would like the Learning Management System to present content following the user's expectations and to integrate it with different learning resources."

Curiosity is the primary driver behind managerial learning objectives and expectations. Managers have varying learning expectations as adult learners with different backgrounds, professional specializations, and knowledge-skill levels. Managers expect to overcome the problems they encounter in real life, meet their needs, and apply what they have learned to their lives. Therefore, satisfying such problem-oriented learning plays a critical role in the success of e-learning. One primary expectation regarding the e-learning process is integrating the e-learning environment with the business processes.

One reason for the intersection of harmony with the objectives and expectations and comparing classroom and e-learning environment codes is the participants' interaction. Inadequate support for interaction is considered the biggest weakness of the e-learning environment. One clear advantage of the e-learning environment over traditional classroom education is its flexibility to tailor to the learner's objectives and expectations.

## Discussion

Our results revealed seven critical success factors that affect corporate e-learning success: continuity, content quality, harmony with the objectives and expectations, accessibility, content appeal, interaction, and corporate communication and support. The analysis results show that the critical success factors in corporate e-learning are gathered under the Educational Factors theme. The themes that follow the educational factors theme are Technological Factors, Human Factors, and Institutional Factors.

**Table 4.** Weight Distribution of the Critical Success Factors in All Codes

Success Factors	Percentage Weight
Educational Factors (Continuity)\ Staying in Environment and Continuity	5,3
Educational Factors \ Content Quality	5,1
Educational Factors \ Content Appeal	4,3
Human Factors \ Harmony with Objectives and Expectations	4,0
Technological Factors \ Interaction	2,7
Technological Factors \ Accessibility	4,9
Institutional Factors \ Corporate Communication and Support	3,7
Total	30,0

Regarding the Critical Success Factors dimensions, it is concluded that environmental Stability and continuity are more important than the other critical success factors. Staying in Environment and Continuity, which plays a critical role in e-learning, highlights the importance of the relationship between the manager and the e-learning environment. Managers' perception of Staying in the Environment and Continuity plays an essential role in visiting the e-learning environment more frequently, staying longer, and maintaining their interest and participation in the e-learning process. However, it has been confirmed by various studies that coherence, timeliness, and openness factors in the course contents are essential to the success of e-learning (Papp, 2000; Selim, 2007). The real success of e-learning applications is driven by their content and quality rather than their presentation, demonstration, and communication (Anderson, 2008). The biggest obstacle to developing practical e-learning applications is anxiety about providing more information than content and quality. However, instructional materials' content makes e-learning different and successful (Hamid, 2001). Therefore, the quality of content is the main factor determining the success of e-learning.

The strongest of the dimensions determined as the critical success factors are staying in the environment and continuity, harmony with the learning objectives and expectations, corporate communication and support, quality of content, and content appeal. The dimensions of the educational factors affecting staying in the environment and continuity were identified as the repetitive content; content objectives-expectations match, and content appeal dimensions. In e-learning, the learning discipline is practiced and enforced by the person (herself) instead of the educator. The Training conducted with a computer without personality can decrease the employees' motivation and interest (Derouin et al., 2005). As such, they are using simulation as an essential tool to increase their interest in e-learning. When games and simulations are used as training environments, the employees' interest can be drawn to the training content and increase the training performance (Rossett, 2002, p. 140). Thus, collaborative interaction with content attracts attention and stimulates learning (Rodriguez & Armellini, 2013) is needed. Case studies, scenarios, and educational games used for this purpose are essential teaching techniques that increase participants' attention to the e-learning environment.

Our finding indicates that the success of e-learning calls for the content presented in the learning environment to be rich, clear, understandable, and consistent. Besides, course materials with appealing multimedia elements such as sound and animation help draw participants' attention to the content. In the e-learning process, participants actively participate in their own education's execution and responsibility (Hamburg et al., 2003), leaving aside their passive consumer role. Using simple voiceovers on explicit texts and the content that renders the learner only to a passive audience or follower status disengages the learners from the e-learning process. In this respect, the administrators find the content prepared by considering instructional design principles and the learners' goals and expectations (Paechter et al., 2010).

The "evaluation process" was identified as another critical success factor in e-learning. Traditional evaluation methods like multiple-choice tests at the end of education cannot determine student

achievement and learning development. Creating training in short sections and giving feedback to the participants about their development through periodic evaluations before moving on to the following section are motivating factors for sustained e-learning participation. Adult learners wish to be viewed as self-directed learners and decision-making individuals. Our research results demonstrate that the traditional evaluation system is inadequate to evaluate e-learning based on experience and problem-solving.

### **Conclusion and Recommendations**

The success of the e-learning application depends on various factors such as instructional design, technology, student engagement, and support resources. The quality of instructional design is a critical success factor in ensuring effective e-learning. Another significant issue is the use of up-to-date technology so learners can access course materials without problems. E-learning providers must invest in high-quality instructional design and ensure that courses are structured, engaging, and tailored to meet students' needs. E-learning providers should provide students with access to a range of support resources such as study materials, tutorials, and technical support to enable them to be successful in their learning. In conclusion, e-learning is a rapidly growing field that can benefit learners significantly, but its success depends on several critical success factors. E-learning providers must focus on high-quality instructional design, technology, student engagement, and support resources to ensure their courses are practical and successful. By combining these factors and providing ongoing support and education, e-learning providers can create engaging, effective, and successful courses that meet the needs of students.

Although the studies on the success factors of e-learning in the literature have generally focused on children and young learners with their pedagogical aspect, the institutional and adult e-learning field has not been adequately examined. This research fills the gap in evaluating institutional-level e-learning applications rather than formal education-based e-learning applications. The study proposes a procedural approach to evaluate the e-learning environment at the institutional level. The transfer of traditional and adaptive learning principles to learning environments and practices, and finally, the prominence of technological aspects in e-learning causes e-learning to be evaluated with a technological-oriented and systemic perspective. However, e-learning is an ecosystem of different social and technical dynamics, such as individuals, environments, institutions, education, and technology. The success of this ecosystem varies depending on the interaction of the dynamics that form it. This interaction should be evaluated from a more macro perspective, considering the relative weights of the dynamics. This study gives a more macro view to the evaluation of success by approaching e-learning on a process basis.

The research has two limitations. The first of the constraints is that data on the evaluation of corporate e-learning are collected from managers who have internalized e-learning by the institution and who perform above average in participation in e-learning. No data was collected from managers who performed below average in participation. Another limitation is that administrators are unaware of all the factors that can affect the success of e-learning. Therefore, not all possible success factors were discovered by this study. In addition, the study's findings can only be generalized to the research sample.

This research will identify the main factors that prevent active participation in corporate e-learning and the expected benefit from e-learning. Thus, institutions can focus on eliminating or reducing the relevant barriers. Summarizing the obtained data and category success factors will define the primary sources of success. Summarizing the data in categories allows researchers working on e-learning environments to select various categories. This will enable the research tool to be used more effectively in future studies. In addition, focusing on critical success factors in the e-learning process will make the development of institutional-level e-learning initiatives more effective.



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