THE INSTRUCTOR PARAMETERS OF TRANSITION TO FULLY ONLINE LEARNING

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ABSTRACT

Online learning has an old background and is an efficient method if applied correctly. However, during the pandemic period, it has been faced with a negative perception due to the wrong practices brought about by the mandatory and rapid transition. During this pandemic term, most educational institutions have offered support in this process to explain the process to both their students and instructors. This study examined XXX University instructors' perspectives regarding the emergency remote teaching period in terms of their professional experience, discipline area, online instruction experience, and whether they received training in online instruction. Quantitative research methods were used in the study. An online instructor's emergency remote teaching perspective scale has been developed and used as a data collection tool. A significant difference has been found in the discipline areas, online instruction experience, and participation in training program. From the results of the research, the need to support the instructors according to the needs specific to the disciplines has been revealed, and it is recommended to investigate the relationships between self-competency for online teaching and the perception of institutional support in depth.

Keywords: Online learning, higher education, clustering, instructor perspective.

INTRODUCTION

Online learning has been widely preferred all around the world, especially during and after the Covid-19 pandemic. Even if online learning is an efficient method in certain situations, during and after the pandemic it has been used at almost all education levels. This imperative and rapid shift has resulted in many negative experiences (Adedoyin & Soykan, 2020; Sharadgah & Sa'di, 2020). However, studies in the field of online learning show that the harmonious interaction of each component in the online learning process brings with it an effective learning experience. Instructors, students, the system, content, institution, and their interaction are the main components of online learning. Anderson's (2008) model also shows these components and their associated subcomponents (Figure 1).

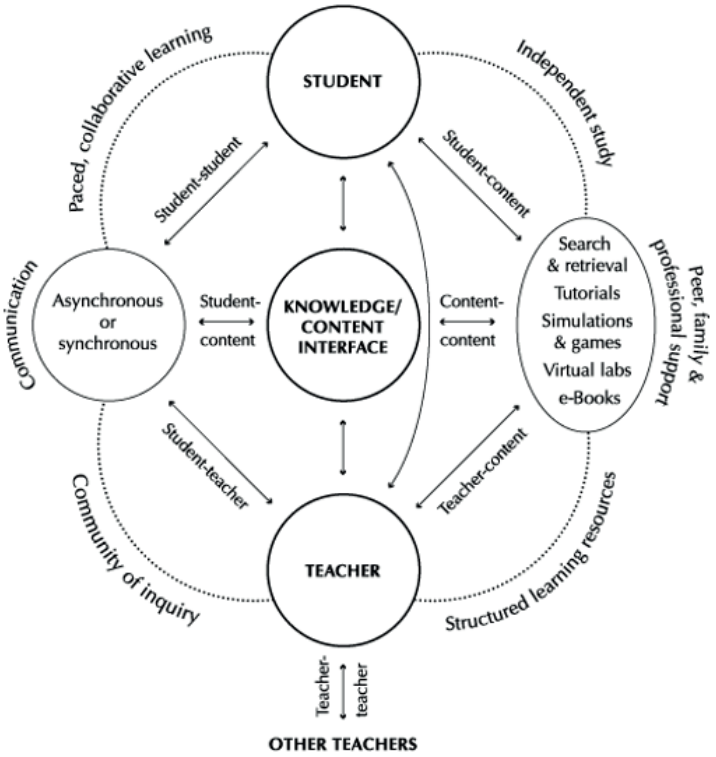

Figure 1. A model of online learning showing types of interaction (Anderson, 2008)

Previous studies about distance education have focused more on students and institutional structures than on instructors (Martin, 2022; Martin, Sun, & Westine, 2020). Research findings examining instructors' perceptions of the online learning process have focused on creating community (Berry, 2019), lack of support (administrative, personnel, pedagogical and technological) (Kulal & Nayak, 2020; Martin et al, 2019), roles or functions (designer, facilitator, developer, etc.) (Martin, Kumar & She, 2021).

Online learning is a planned and systematic process, so it is an efficient method when the stakeholders are ready for this in terms of infrastructure, experience, motivation, preparation, and readiness. However, during the pandemic, a large group of instructors experienced online learning for the first time. As such, it is vital to investigate their experiences during this process. Gulinna, Xie, and Korkmaz (2022) found that teachers did not like teaching online during the pandemic. Thus, understanding the basics and the underlying cause of this situation is critical for supporting an effective online learning experience.

Online learning is a complete process with instructional design process -analysis, development, implementation, and evaluation- support systems and services. During the pandemic, most of the instructors and institutions were unprepared for or inexperienced with online learning. For this reason, a new concept arose – emergency

remote teaching (ERT) – to classify the process experienced with online learning (Hodges, Moore, Lockee, Trust & Bond, 2020). In addition to online learning and distance education studies, researchers have found several problems that instructors experienced during the ERT term. These problems are lack of information communication technologies literacy abilities (Almazova, Krylova, Rubtsova & Odinokaya, 2020; van der Spoel, Noroozi, Schuurink & van Ginkel, 2020), experience with online instruction (Gulinna et al., 2022; Joshi, Vinay & Bhaskar, 2021; Shambour, & Abu-Hashem, 2022; van der Spoel et al, 2020); technical support (Kamisli & Akinlar, 2022; Samifanni & Gumanit, 2021, Verma, Campbell, Melville & Park, 2020); communication efficiency (Sari, & Nayir, 2020; Sepulveda-Escobar & Morrison, 2020); and content-related issues (Karakaya, 2021; Sedaghatjou et al., 2021; Xie, Rice & Griswold, 2021).

The importance and necessity of the instructional design in which instructors use online learning methods also emerged during the ERT process. It was especially necessary to create efficient instructional design implementations for application-oriented content (Ilgaz & Yildirim, in press). However, this sudden and rapid shift to online learning has been more challenging for some disciplines. Application-oriented discipline areas such as health sciences and engineering experienced more difficulty during ERT (Sedaghatjou et al., 2021; Verma, Campbell, Melville & Park, 2020; Xie & Rice, 2021). Gulinna et al. (2022) emphasized that academics in different disciplines have different instructional and assessment design needs, so creating specified training programs based on their needs is essential for supporting them.

The area of discipline is another important dimension during the online learning process (Bolliger & Martin, 2021; Khan, Kambris & Alfalahi, 2022; Martin et al., 2021). Becher (1994) defined four discipline areas for higher education. The first is hard-pure, which consists of physics, mathematics, chemistry, and similar majors. The second is soft-pure, which consists of history, philosophy, anthropology, etc. The third is hard applied, which consists of majors like engineering, medical sciences, and dentistry. The fourth is soft applied, which consists of education, law, and social sciences. The soft-applied disciplines focus more on the practical implementation of protocols or procedures (Redmond, Devine & Bassoon, 2014). Previous discipline-based studies investigated student behaviors (Finnegan, Morris & Lee, 2008), instructional design of math courses (Smith, Torres-Ayala & Heindel, 2008), engagement of K-12 science classes (Jaber, Dini, Hammer & Danahy, 2018) and student performance and participation (Vo, Zhu & Diep, 2020).

Each discipline area has its own teaching methods and strategies. The needs of learners can be met efficiently with a well-designed course in an online learning environment. The common point of previous discipline-based studies is they were conducted before the pandemic. So, this means that the instructors – regardless of which discipline area – are motivated and ready for the online learning process. The critical point is taking into consideration these dimensions for the duration of the pandemic, as during this period instructors were not ready or motivated for online learning. Shambour and Abu-Hashem (2022) compared to 187 university lecturers of various disciplines and teaching experiences in traditional learning and online learning environments during the pandemic by academic majors, and they could not find a significant difference. Machajewski, Steffen, Romero Fuerte and Rivera, (2019) investigated the patterns of course tools used by faculty members. While some faculties under the medical discipline used all the tools (grade center, announcement, assignment, assessments, discussions, etc.) included in the online learning system, the engineering faculty mostly used complementary tools. Therefore, it is important to conduct discipline-based research from the perspectives of instructors regarding the period of the pandemic.

PURPOSE OF THE STUDY

In line with the possibilities of ERT, it does not make much sense at the first stage to expect instructors' experiences to be multi-dimensional. Because, considering that in ERT, the teachers try to transfer their face-to-face habitus to the online environment (Hodges et al., 2020), it may be expected that the skills of using online learning systems in terms of the teaching and measurement methods they are accustomed to and the institutional support for these skills will be important. This study examined XXX University

instructors' self-competency and institutional support regarding the emergency remote teaching period in terms of their professional experience, discipline area, online instruction experience, and whether they received training in online instruction. Accordingly, answers to the following research questions were sought:

1. Is there any difference in self-competency for ERT and institutional support in terms of the time spent in the profession?
2. Is there any difference in self-competency for ERT and institutional support in terms of having previous experience in online learning?
3. Is there any difference in self-competency for ERT and institutional support in terms of participation in the training program?
4. Is there any difference in self-competency for ERT and institutional support in terms of the discipline areas (hard-pure, soft-pure, hard-applied, soft-applied, and others)?
5. How do instructors' experiences differ in terms of their self-competency and institutional support?

METHOD

A quantitative research design was used in this study to determine instructors' perspectives based on several variables. Regarding this design descriptive statistics and unsupervised machine learning (clustering) were used during the research. For data collection a "Online Instructor's Emergency Remote Teaching Perspective Scale" developed. For this development process validity and reliability studies have been conducted.

The Context and Sample

After the World Health Organization (WHO) declared that COVID-19 was a pandemic and the Higher Education Council decided to transition to online learning, XXX University became one of the first universities to move all of its courses online at every level. Initially, several quick and compact system training sessions were planned and streamed to all instructors. At the end of the Spring 2020 semester, a detailed online instructor certificate program was applied to the instructors. This program consisted of theoretical and practical information about the foundations of learning and distance education, instructional design, assessment and evaluation techniques, communication tools and usage, visual design, etc.

In this regard, the study was conducted among the instructors at XXX University. The questionnaire was open to all instructors on a volunteer basis. The sample included 1571 instructors working at XXX University in the 2020-2021 Fall Semester. Before the data collection process, Ethical Approval was taken from the University Commission. The demographic variables have been presented in Table 1.

Table 1. Demographic data of the participants

Variables		Frequency (f)	Percent (%)
Gender	Female	646	50.8
	Male	625	49.2
Age	22-32	45	3.5
	33-43	439	34.5
	44-54	419	33.0
	55-64	328	25.8
	65+	40	3.1
Title	Professor	550	43.3
	Associate Professor	257	20.2
	Assistant Professor	136	10.7
	Research Assistant	76	6.0
	Teaching Assistant	252	19.8
Time spent in the profession	2 and less	129	10.1
	3-10	283	22.3
	11-18	238	18.7
	19-26	206	16.2
	27-34	284	22.3
	35-42	114	9.0
	43+	17	1.3
Experience in online instruction	Yes	352	27.7
	No	919	72.3
Participation to training program	Yes	885	69.6
	No	386	30.4
Discipline area	Hard pure	118	9.3
	Soft pure	224	17.6
	Hard applied	449	35.3
	Soft applied	236	18.6
	Other	238	18.7

Data Collection and Analysis

The Scale Development Process

The current scales (Bangert, 2016; Bigatel et al., 2012; Gay, 2016) related with online instructors have been identified in a detailed way. Also after reviewing these scales the items were prepared in consultation with student affairs, instructional designers, content development specialists, and system administrators who interacted with online instructors during the pandemic. An item pool was created to reflect the interaction of the instructor and the institution during emergency remote teaching education. So the first version of the scale was designed as 19 items and a 5-point Likert-type, and the ranges from 1 – strongly disagree, to 5 – strongly agree. In order to examine the construct validity of the scale explatory factor analysis has been conducted and also expert opinions have been gathered for content and face validity process. Validity and reliability studies were conducted on the data obtained from 300 participants (randomly selected) of whole data by using IBM SPSS Statistics 20. Due to the Kaiser-Meyer-Olkin Measure (KMO) of Sampling Adequacy was .770 and Bartlett's Test of Sphericity was significant ($p < 0.05$), data set results can be used for exploratory factor analysis (Table 2).

Table 2. KMO and Bartlett's test of sphericity

Kaiser-Meyer-Olkin Measure of Sampling Adequacy		.770
Bartlett's test of sphericity	Approx. Chi-Square	1031.192
	df	36
	Sig.	.000

As a result of the exploratory factor analysis, the scale was finalized as 9 items and 2 dimensions (Appendix 1). The scale items and factor loadings, total explained variance has been presented in Table 3. Based on these results, the six of nine items in a single factorial structure, which explained 33.721% of the total variance. And the other dimension has explained 27.424% of the total variance. The finalized version of the scale showed high reliability overall, and in both dimensions (Table 4).

Table 3. Factor loadings and explained variance

Factors	Items	Factor Loading	Total Variance Explained		
			Total	% of Variance	Cumulative %
Institutional support	Item 1	.777	3.035	33.721	33.721
	Item 2	.768			
	Item 3	.699			
	Item 4	.675			
	Item 5	.670			
	Item 6	.656			
Self-competency for ERT	Item 7	.917	2.468	27.424	61.145
	Item 8	.893			
	Item 9	.878			

Table 4. Reliability statistics

Dimensions	Items (N)	Cronbach Alpha
Self-competency for ERT	3	.88
Institutional support	6	.80
Overall	9	.76

Data Analysis

After scale development, descriptive statistics, non-parametric analyses (due to the normality assumption has not been validated), and clustering analyses were conducted on the data obtained from 1271 participants (remaining from whole data). Cluster analysis is an unsupervised machine-learning technique that allows for the division of a dataset into subsets (called clusters) so that data points in the same cluster are as similar as possible, and data points in different clusters are as unique as possible (Fan, Matcha, Uzir, Wang, & Gasević, 2021). In this study a cluster analysis has been applied to instructors' self-reported data to gain insight into both their different experiences during the pandemic and their views of the current situation. Thus, by describing the characteristics of clusters with unique experiences during the pandemic, steps can be taken to determine instructors' needs.

FINDINGS

RQ1: Is there any Difference in Self-Competency for ERT and Institutional Support in Terms of the Time Spent in the Profession?

A Kruskal Wallis H Test analysis was applied to determine whether there was a significant difference in the perceptions of the participants regarding the online learning process in terms of the time spent in the profession. According to the analysis results, no significant difference (p> .05) was found for this research question (Table 5).

Table 5. The Kruskal Wallis H test results of time spent in the profession

	Time	N	Mean Rank	df	X2	p
Self-competency for ERT	2 and less	129	634.50	6	7.126	.309
	3-10	283	622.99			
	11-18	238	599.27			
	19-26	206	626.47			
	27-34	284	665.81			
	35-42	114	680.75			
	43+	17	695.62			
Institutional Support	2 and less	129	661.37	6	4.173	.653
	3-10	283	659.02			
	11-18	238	615.78			
	19-26	206	609.17			
	27-34	284	638.45			
	35-42	114	625.65			
	43+	17	696.97			

RQ2: Is there any Difference in Self-Competency for ERT and Institutional Support in Terms of Having Previous Experience in Online Instruction?

The Mann-Whitney U test was applied to determine whether there was a significant difference in terms of having prior experience in the online instruction process. According to the results of this analysis, there was a significant difference (U= 143785.500, p< .05) in the institutional support dimension, and it was determined that instructors who had previous experience in online instruction had a more positive perception of institutional support and more specifically about system usage (Table 6).

Table 6. The Mann-Whitney U test results of previous online instruction experience

	Experience	N	Mean Rank	Sum of Ranks	U	p
Self-competency for ERT	Yes	352	651.84	229446.50	156169.500	.333
	No	919	629.93	578909.50		
Institutional Support	Yes	352	687.02	241830.50	143785.500	.002*
	No	919	616.46	566525.50		

*Note. *p<.05*

RQ3: Is there any Difference in Self-Competency for ERT and Institutional Support in Terms of Participation in the Training Program?

The Mann-Whitney U test was applied to determine whether there was a significant difference in the perceptions of participants of the online learning process according to their participation in the training program. According to the results of the analysis, there was a significant difference (U= 144145.00, p< .05) in the institutional support dimension, and it was determined that the instructors participating in the training program had a more positive perception of the institutional support (Table 7).

Table 7. The Mann-Whitney U test results of participation to the training program

	Participation	N	Mean Rank	Sum of Ranks	U	p
Self-competency for ERT	Yes	885	636.67	563457.00	170208.000	.920
	No	386	634.45	244899.00		
Institutional Support	Yes	885	666.12	589520.00	144145.000	.000*
	No	386	566.93	218836.00		

*Note. *p<.05*

RQ4: Is there any Difference in Self-Competency for ERT and Institutional Support in Terms of the Discipline Areas?

A Kruskal Wallis H Test analysis was applied to determine whether there was a significant difference in the perceptions of the participants regarding the online learning process in the context of their disciplines (hard-pure, soft-pure, hard-applied, soft-applied, and others). According to the results of the analysis, there was a significant difference in self-competency for online teaching (X^2=15.970, p< .05). According to the results of the pairwise comparisons made with the Mann-Whitney U test, the study found that this difference was between hard-pure and other disciplines (Table 8). Hard-pure disciplines include theoretical sciences such as physical chemistry and mathematics. Considering that the courses in these disciplines are mostly based on lectures and theoretical evidence is formulated, it can be considered normal that the self-competency of the instructors working in these disciplines regarding online teaching is lower than in other disciplines. Because they may be less accustomed to online teaching than other disciplines.

Table 8. The Kruskal Wallis H test results of discipline areas

	Discipline areas	N	Mean Rank	df	X2	p
Self-competency for ERT	Hard pure	118	507.49	4	15.970	.003*
	Soft pure	224	648.82			
	Hard applied	449	648.27			
	Soft applied	236	643.95			
	Other	238	640.66			
Institutional Support	Hard pure	118	612.54	4	7.607	.107
	Soft pure	224	608.39			
	Hard applied	449	651.86			
	Soft applied	236	594.43			
	Other	238	668.96			

*Note. *p<.05*

RQ5: How do Instructors' Experiences Differ in Terms of Their Self-Competency and Institutional Support?

A hierarchical cluster analysis was applied to determine the differences in the experiences of the instructors. Ward method and Euclidean distance were used for cluster analysis. While determining the number of clusters in a sample, the cluster with the highest average Silhouette (S) value was selected. This value's range is between -1 and 1, and if the result is closer to 1 this indicates a better clustering (Aranganayagi & Thangavel, 2007). However, it does not allow for an in-depth examination of these experiences. For this reason, the method applied in the research determined the number of clusters by researchers' subjective decisions to reveal dissimilar experiences (Figure 2), and then examined participants' experiences with an average Silhouette value or higher (Figure 3).

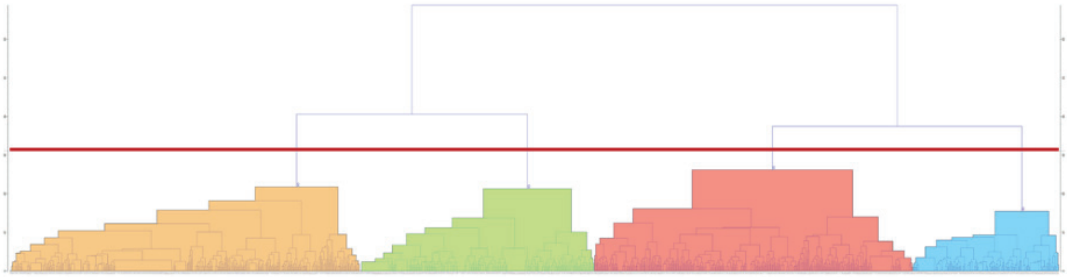

Figure 2. Hierarchical clustering – Dendrogram

According to Figure 2, the researchers divided the sample into 4 clusters. After this clustering, Silhouette values calculated separately for each participant are shown in Figure 3. In the next step, 232 participants with a Silhouette value of 0 and below were excluded from the analysis (S <= 0, *n* = 232).

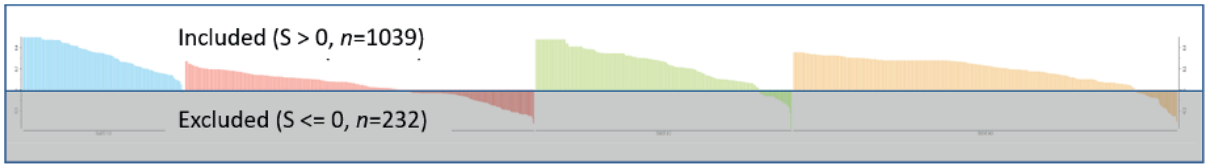

Figure 3. The participants' silhouette distances

An examination of the average self-competency for online teaching perception and the perception of institutional support according to the clusters revealed that different clusters had varying experiences. Accordingly, C3 and C4 have significantly lower self-competency for online teaching perceptions than C1 and C2 (Figure 4; F = 1244.174; p=.000). C3 and C1 have significantly lower perceptions of institutional support compared to C2 and C4 (Figure 5; F=649.666; p=.000).

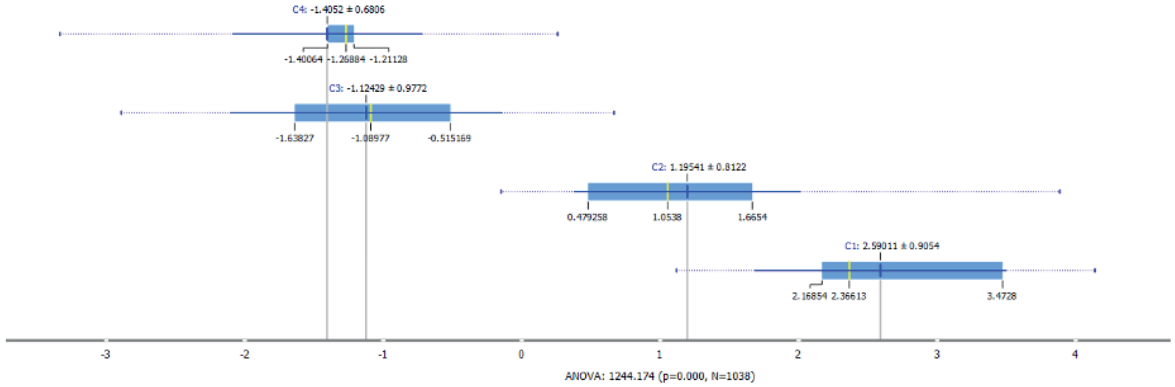

Figure 4. Perception of self-competency according to clusters

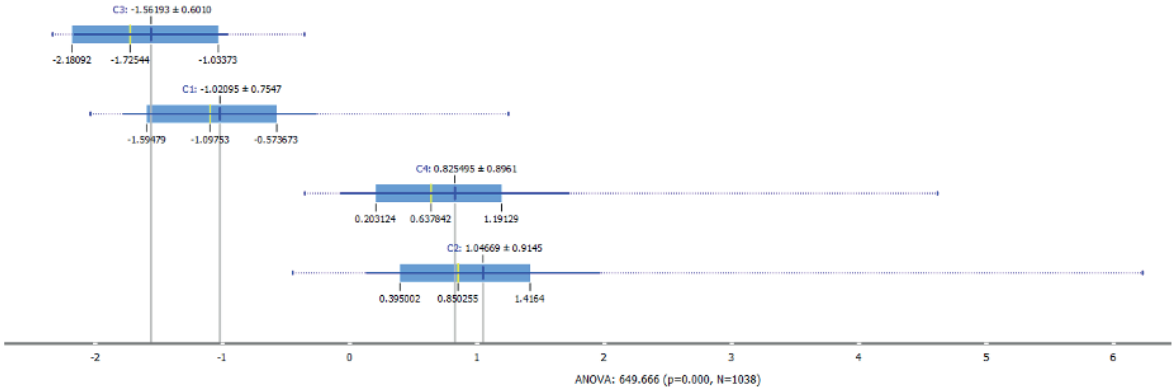

Figure 5. Perception of institutional support according to clusters

DISCUSSIONS AND CONCLUSION

The current study, which prioritizes instructors' interactions with the online learning system and the institution, has focused on instructors' perspectives regarding their experience, discipline area, online instruction experience, and whether they received training about online learning.

In this study, there was no significant difference in the perspectives of instructors on the online learning process in the context of their years of experience in the profession. Contrary to the findings of Shambour and Abu-Hashem (2022) and Zalat, Hamed, and Bolbol (2021), this result shows that newer instructors considered themselves competent and institutional support was sufficient in the online learning process. Furthermore, there have been studies showing that elderly instructors with more time in the profession use systems more effectively and have a more positive perspective on online learning than their younger colleagues (Akdemir, 2008; Kerr-Sims & Baker, 2021; Moralista & Oducado, 2020).

In addition to experience in the context of the time spent in the profession, the study showed that teachers who had witnessed institutional support regarded their previous online teaching experiences more positively. Based on their previous experiences it shows that they know that their needs will be met in terms of both system and institution. Also, parallel with the findings of this study, previous studies have found that people with prior online teaching experience had a more positive experience compared to those without (Bolliger & Halupa, 2022; Cutri, Mena & Whiting, 2020; Mishra, Gupta & Shree, 2020).

Previous studies about online learning have also shown that providing support by training instructors is of crucial importance. Allen and Seaman (2011) showed that many institutions in the USA provide training to instructors who teach online. Institutional support to instructors became increasingly crucial during the sudden shift required with the onset of the pandemic (Bonk, 2020; Hodges et al., 2020). This study found that instructors who participated in the detailed training program in online instruction were aware of the support provided by the institution and had a more positive perception of it. Although similar results were obtained in studies conducted during the pandemic, this study emphasizes the importance of comprehensive training programs for both system use, content development, and assessment processes (Caliskan et al., 2020; Kamisli & Akinlar, 2022; McGee, Windes & Torres, 2017). Such support or training programs provided by institutions are also a necessity in terms of creating quality online learning experiences. While previous studies in the literature emphasize the importance of this training (Joshi, Vinay & Bhaskar, 2021), this study showed the instructors participating in the training program have a higher perception of institutional support than others. The training program has been prepared on subjects such as evaluation and quality assurance, course technologies, course facilitation, course assessment, and course design. In general, we may expect that the self-competence perceptions of the instructors participating in the training program would also be significantly higher. However, no significant difference was found in this study. Considering that there is not enough time for instructors to reinforce the acquisition of these skills on subjects such as course assessment and course design during the pandemic process, we may still consider it normal for instructors to have a lack of skills. So, instructors who lack prior knowledge of different assessment strategies or teaching techniques experienced difficulties during this process. As Bolliger and Martin (2021) stated, the components that instructors and instructional designers consider important differ. Such support or training programs provided by institutions are also a necessity in terms of creating quality online learning experiences.

Disciplines are the other component of this study. According to the research results, instructors in the hard-pure fields of physics, mathematics, chemistry, biology etc., consider themselves less competent in terms of online learning than those in other disciplines. When compared to instructors in other disciplines, they need more improvement in their skills in system usage, content development and assessment-evaluation areas. For example, instructors in hard-pure fields may have had more difficulties in adapting to the online learning system, as this discipline is generally evaluated with experiments and open-ended questions. Another finding was presented by Gulinna et al. (2022), that those who taught arts, humanities, and social sciences courses were more likely to use various forms of assessments compared to instructors who taught online courses in science, technology, engineering, and mathematics (STEM). Sedaghatjou et al. (2021) found that STEM teachers were not concerned about adapting to new technology for their classes. This may be due to their confidence in their knowledge and skills to adapt to new technologies. Of course, a deeper analysis is needed to explain this result, but when compared to applied disciplines, pure disciplines can be considered as having less implementation. As a result, instructors in the pure disciplines regard themselves more competent compared to those who work in applied disciplines. Previous studies have shown that for online learning, it is important to organize one-on-one mentoring and needs-driven trainings, taking into account instructors' discipline areas (Kerr-Sims & Baker, 2021; Martin, et al., 2021; Schmidt, Tschida & Hodge, 2016).

An examination of the clusters according to the average scores in terms of self-competency and perception of institutional support reveals that each cluster has distinctly different characteristics (Figure 6). For example, C1's perception of institutional support is high but self-competency is low. In this context, this finding may be helpful in explaining the low perceptions of the instructors who did not attend the training regarding system usage. In an emergency, when instructors are left alone with a system that they have not experienced before, institutional support alone, therefore, is insufficient for the sustainability of online teaching. Conversely, C4 has a low perception of institutional support but a high perception of self-competency. This finding can be interpreted in two ways. On the one hand, instructors with high self-competency perceptions may not need institutional support. On the other hand, institutional support may not have been provided with the instructors' needs at different levels of self-competency in mind. C2 has a high perception of both self-competency and institutional support. It can be stated that they have ideal profile features for the trainers in this group. However, the reasons behind the low perception of both self-competency and institutional support in C3 are open to debate regarding variables such as student and instructor motivation.

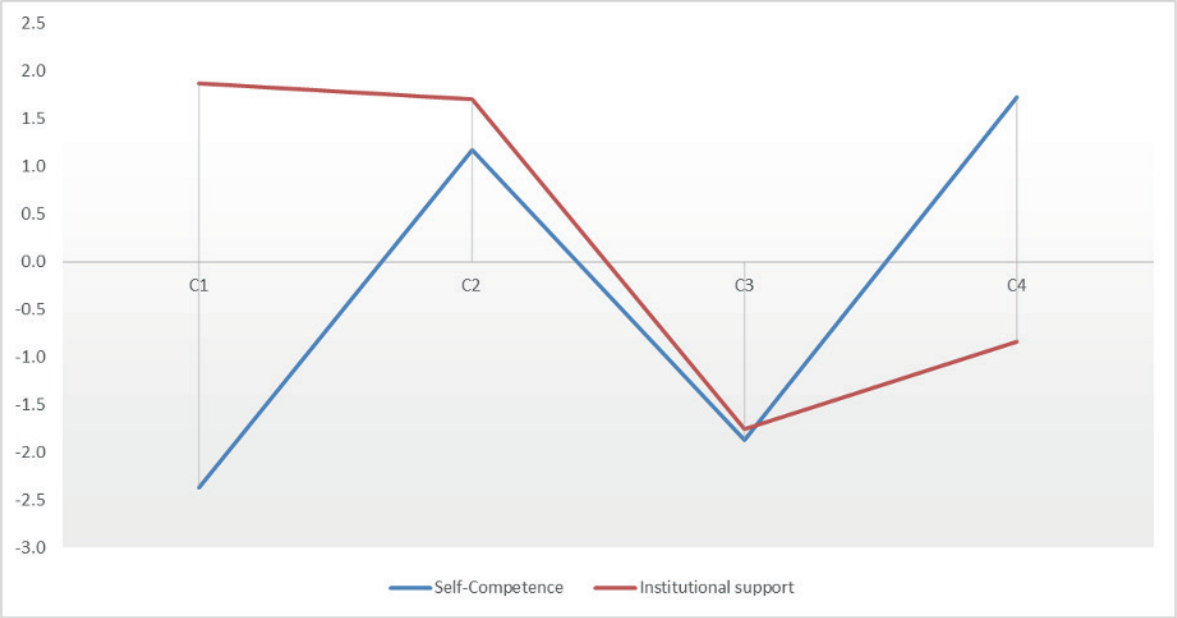

Figure 6. Comparison of clusters in terms of mean self-competency and perception of institutional support

While both the availability and quality of education were high regarding studies in the field of online learning, comparisons with face-to-face education are ill-founded due to the large volume of first-time applicants during the pandemic. In fact, the process experienced during the pandemic was called "emergency remote teaching" to prevent this comparison, but it was still subject to criticism due to wrong practices (Hodges et al., 2020; Naidu, 2022). There is no doubt that these criticisms will disappear only with the spread of better practice examples. Although it is not possible to consider online learning processes independently of technological developments, they will become more efficient and widespread in the future, both in the context of applied and pure disciplines, with the spread of technologies such as augmented reality, virtual reality, extended reality, and haptic technologies and their effective integration into courses. Submitting discipline-based instructional design, and secure and reliable assessment strategy examples for instructors in applied fields will make a significant contribution to increasing their knowledge and skills (Bozkurt et al., 2020). Despite the disruptive effects of the epidemic, many institutions have had the possibility to develop or revise their systems with this rapid shift (Ilgaz & Yildirim, in press).

As a result, this study took a general picture by examining the self-competency of instructors for online teaching and the perception of institutional support in the pandemic period, according to various variables such as discipline and training programs. From the results of the research, the need to support the instructors according to the needs specific to the disciplines has been revealed, and it is recommended to investigate the relationships between self-competency for online teaching and the perception of institutional support in depth.

Limitations and Suggestions

Instructors' self-competency for online teaching and perceptions of institutional support are among the main components of online teaching and learning. However, studies in the last 10-15 years seem to focus more on student engagement (Martin et al., 2020). The self-competency dimension discussed in this study is related to the dimension of course technologies as laid out by Martin et al. (2020). Institutional support is only a sub-category of the organizational dimension. Accordingly, the perspectives of the instructors in this study were limited to only these two dimensions.

An online teaching process can be associated with instructors' self-competency, evaluation and quality assurance, course technologies, course facilitation, course assessment, course design, and development from a macro perspective (Martin et al., 2020). The training program offered to the instructors also includes these subjects. Therefore, instructors' experiences with these issues can guide online teaching. Accordingly, it is false to say that institutional support cannot be provided in a way that considers instructors' needs at different levels in terms of self-competency. Therefore, there is a need for an in-depth investigation of the relationships between the perception of institutional support and self-competency. In this case, each cluster can be handled separately with an in-depth investigation of the method of intervention to be made regarding the quality of online learning. At the first stage, instructors in each cluster (C1, C2, C3, C4) can be asked about the reasons for their perceptions of institutional support and self-competency.

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APPENDIX

Online Instructor's Emergency Remote Teaching Perspective Scale's Items

Items	Turkish	English
Item 1	Sanal/canli sinif sistemini kolay bir sekilde kullanabiliyorum.	I can easily use the virtual/live classroom system.
Item 2	Ogrenme yonetim sistemini kolay bir sekilde kullanabiliyorum.	I can easily use the learning management system.
Item 3	Ogrenme yonetim sistemi, ogrencilerimin basarilarini degerlendirmede cesitli olcme-degerlendirme yontemlerini (coktan secmeli test, odev, akran degerlendirme) kullanmama olanak saglamaktadir.	The learning management system allows me to use various assessment and evaluation methods (multiple choice test, homework, peer assessment) to evaluate the success of my students.
Item 4	Ogrenme yonetim sisteminin kullanilmasina yonelik olarak hazirlanan bilgilendirme ve egitim kilavuzlarini/videolarinin yararli oldugunu dusunuyorum.	I think that the training guides/videos prepared for the use of the learning management system are useful.
Item 5	Uzaktan egitim faaliyetlerinin teknik ve idari acidan yurutulmesinden sorumlu olan Uzaktan Egitim Merkezi'nden / Acik ve Uzaktan Egitim Fakultesi'nden ihtiyac duydugum anda kolaylikla yardim alabiliyorum.	I can easily get help when I need it from the Distance Education Center / Faculty of Open and Distance Education, which is responsible for the technical and administrative execution of distance education activities.
Item 6	Ogrenme yonetim sistemi, ogretim faaliyetlerimi surdurebilmem acisindan gereksinimlerimi karsilamaktadir.	The learning management system meets my needs in order to continue my teaching activities.
Item 7	Uzaktan ogretimde dijital icerik gelistirme konusunda bilgi ve becerilerimin gelistirilmesi gerektigini dusunuyorum.	I think that my knowledge and skills on digital content development in distance education should be improved.
Item 8	Sistemlerin etkin kullanimi konusunda bilgi ve becerilerimin gelistirilmesi gerektigini dusunuyorum.	I think that my knowledge and skills on the effective use of systems should be improved.
Item 9	Uzaktan ogretimde olcme-degerlendirme konusunda bilgi ve becerilerimin gelistirilmesi gerektigini dusunuyorum.	I think that my knowledge and skills about assessment and evaluation in distance education should be improved.