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Research Article / Araştırma Makalesi

How Scholars Define the Field of Computer Education and Instructional Technology?[1]

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Abstract

The term Instructional Technology has been used since 1960s and defined differently throughout the time. Along with the increase in the use of information and communication technology in schools; the need for technologically qualified teachers has been increased. While many of instructional technology programs are at graduate level around the world; Turkey has an undergraduate level instructional technology program, called Computer Education and Instructional Technology (CEIT) in addition to graduate level. The department of Computer Education and Instructional Technology was founded in 1998 during the re-construction of Faculties of Education in Turkey. The purpose of this study is to investigate the similarities and differences among how graduate students and faculty members define CEIT department, as well as their opinions on the current situation of the program, and their

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expectations. A case study has been conducted with 5 faculty members and 5 graduate students from three major universities in Turkey including Anadolu University, Gazi University , and Middle East Technical University. Semi-structured interviews were used as the data collection tool. The content analysis was used to analyze the data and results of the study showed that faculty members and graduate students have similar opinions about the scope of the department, expected qualifications and work areas, and challenges affecting academic life.

Keywords: *Computer education and instructional technology, definition of the field, academic staff, graduate students*

Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü Akademisyenler Tarafından Nasıl Tanımlanıyor?

Öz

Öğretim teknolojileri 1960'lı yıllardan beri kullanılmakta olan ve zamanla farklı şekillerde tanımlanmış bir kavramdır. Bilgi ve iletişim teknolojileri okullarda daha yaygın hale geldiğinden dolayı teknoloji konusunda donanımlı öğretmen ihtiyacı da artmıştır. Dünyada öğretim teknolojileri programları genel olarak lisansüstü düzeyde yer alırken, Türkiye'de ise lisansüstü programlara ek olarak lisans düzeyinde Bilgisayar ve Öğretim Teknolojileri Eğitimi(BÖTE) programları mevcuttur. Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü, 1998 yılında eğitim fakültelerinin yeniden yapılandırılması sürecinde kurulmuştur. Bu çalışmanın amacı, BÖTE Bölümlerinde görev yapmakta olan öğretim üyeleriyle, bu bölümde lisansüstü eğitimlerine devam eden öğrencilerin bölümü nasıl tanımladıklarını, bölümün mevcut durumu ile ilgili görüşleri ve bölümden beklentileri arasındaki benzerlik ve farklılıkları araştırmaktır. Araştırma durum çalışması olarak gerçekleştirilmiş olup çalışmanın katılımcıları Orta Doğu Teknik Üniversitesi, Gazi Üniversitesi ve Anadolu Üniversitesi gibi Türkiye'nin büyük üniversitelerinde çalışmakta ya da lisansüstü eğitimlerine devam etmekte olan beş öğretim üyesi ve beş lisansüstü öğrencisidir. Veri toplama aracı olarak yarı yapılandırılmış görüşme formu kullanılmıştır. Verilerin analizinde içerik analizi kullanılmış olup sonuçlar öğretim üyelerinin ve lisansüstü öğrencilerin bölümün kapsamı, beklenen yeterlilikler ve çalışma alanları ve akademik yaşantıyı etkileyen zorluklar bağlamında benzer görüşlere sahip olduklarını göstermiştir.

Anahtar kelimeler: *Bilgisayar ve öğretim teknolojileri eğitimi, alanın tanımı, öğretim üyeleri, lisanüstü öğrenciler*

Introduction

Two of the most important features of the current information era are globalization, rapid changes and advancements in technology. At this stage, Information Technology (IT) meets the need of immediately reaching information and supports the quality of life by taking advantage of the opportunities brought by the recent developments in information technology. There is no doubt that education is also affected by these developments. Since, the use of information and communication technology has become more prevalent in schools; the need for technologically qualified teachers has been increasing.

Instructional technology term was firstly used in 1960s by Professor James D. Finn from the University of Southern California. At that time, the term technology referred to media such as radio, television, film, slides, and audio recordings until the computer age came into effect (Finn, 1960). Today, the instructional technology can be defined as "the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (AECT, 2004).

Although Instructional Technology programs have generally been offered at graduate level around the world, it is offered at both graduate and undergraduate levels in Turkey under the Department of Computer Education and Instructional Technology (CEIT). The graduates of CEIT departments are able to work in schools as an information technology teacher or as a coordinator similar to an ICT coordinator in other countries. Information technology teachers are responsible of being knowledgeable about computer literacy and helping students to access data, process them, and communicate their understandings by using technology. On the other hand, ICT coordinators are responsible for computer literacy education and ensuring effective technology integration. ICT coordinators also organize short-term courses or seminars for teachers to execute effective technology integration (Orhan & Akkoyunlu, 2003). However, studies show that ICT coordinators spend so much time on technical support in schools that they do not achieve their educational goals (Memmedova & Seferoglu, 2002).

Therefore, CEIT departments were founded in 1998 during the re-construction of Faculty of Education at several universities in Turkey (YÖK, 2007). The main mission of the department

is to train ICT teachers so as to enable them to develop, spread and teach the new technology and adapt them into education. Graduates can accomplish this mission at public or private schools controlled by the Ministry of National Education. Furthermore, the department aims to train Instructional Designers to analyze, design, develop, implement, and evaluate the whole instructional process. According to Measurement, Selection and Placement Center ('ÖSYM', http:// www.osym.gov.tr.) data of 2015, there are 58 active CEIT departments accepting students in Turkey. While 48 of them are public universities, ten of them are private universities. Moreover, five out of ten private universities are located in Northern Cyprus. Even though 83 universities have CEIT program and 58 of them are actively training students, only 19 universities have Master program and eight of them have PhD program. Four universities, which have PhD program, are located in Ankara and other Ph.D. programs are located in Istanbul, Eskisehir, Sakarya, Erzurum and Trabzon.

The Purpose of the Study

The current study is designed to define the perspectives of faculty members and graduate students of CEIT departments about what CEIT offers at graduate level education. The purpose of this study is to investigate the similarities and differences among the graduate students' and faculty members' definitions of CEIT departments' graduate program in terms of the current situation and expectations. Faculty members' expectations from students who are willing to enroll in CEIT departments were also in the scope of this research with the inclusion of graduate students' expectations from the department. Within that context, the following questions were answered:

1. How CEIT program is defined at the graduate level?
    a. How do faculty members define CEIT at the graduate level?
    b. How do graduate students define CEIT at the graduate level?
2. Do expectations of faculty members and graduate students correspond to each other?

Methodology

Research Design

Case study design has been used to investigate how graduate students and faculty members define the CEIT program in terms of current situation and expectations at graduate level. For this purpose, data were collected from faculty members and graduate students of CEIT departments from three different universities via semi-structured interviews. By interviewing the main stakeholders of the graduate programs of these departments, researchers have worked towards capturing the existence of the gap between the perspectives of these two groups.

Participants

A two stage sampling method was used so as to determine the participants. At first, faculty members and graduate students were selected purposefully. Graduate students and faculty members of CEIT Departments in Turkey constitute the population of the study. In order to narrow down the participants to be included in the research, the universities offering graduate education at PhD level were defined. The universities offering graduate education at PhD level were defined and participants were selected among these universities. According to the study conducted by Erdogmus and Cagiltay (2009), the majority of the dissertations and M.S. thesis belong to Anadolu University, Ankara University, Gazi University, and Middle East Technical University (METU). Thus, faculty members and graduate students from Anadolu University, Gazi University, and Middle East Technical University (METU) were included in the study.

Since confidentiality is crucial for participants, their names were kept unrevealed. Information of participants shown in Table 1. While three students graduated from CEIT departments, one graduated from statistics and one graduated from computer science. Two of them were PhD students, one of them was MS student, and two of them were PhD on BS (integrated program of master and PhD) students.

Table 1
Demographic Information of Graduate Students

Student	University	Ph.D/MS/Ph.D. on BS/	BS Degree
S1	Anadolu Uni.	Ph.D on BS	Statistics
S2	Gazi Uni.	MS	CEIT
S3	Gazi Uni.	Ph.D on BS	Computer science
S4	METU	Ph.D on BS	CEIT
S5	METU	Ph.D on BS	CEIT

S: Student

Five faculty members from three different universities participated to the study. The demographic information and research areas are shown in Table 2.

Table 2
Demographic Information of Faculty Members

Faculty member	University	Research Area
FM1	Anadolu Uni.	Internet- children and family/ Technology integration
FM2	Gazi Uni.	Distance Education
FM3	Gazi Uni.	Constructivist Learning Environments
FM4	METU	Virtual Learning Environments
FM5	METU	Technology Enhanced Learning

FM: Faculty Member

Instruments

Since the main aim of the study is to define perspectives of faculty members and graduate students, a set of questions were prepared and asked to the participants in an open ended manner to gain more detailed answers. First of all, a number of questions was created at first hand and divided into two subsets; one set for the graduate students and one set for the faculty members. All of the questions were reviewed in order to check their appropriateness by subject experts. Two pilot interviews were conducted with a faculty member and a graduate student to create the final interview guideline with the help of the information collected through these two pilot studies, the required modifications were applied on the question sets; furthermore, the final interview guideline was refined.

Data Collection

In this study, to gain insight into faculty members and graduate students' definitions on Department of CEIT graduate studies; semi-structured interviews were conducted. Firstly, the universities, which offered graduate degree in CEIT, were listed. It was found out that there were eight universities offering both master of science (M.S.) and Ph.D. degree; and, eventually three of them were selected by the convenience sampling method, due to the fact that they also have had the aforementioned graduate programs for a long time. After this process, interviews were held with volunteer faculty members and graduate students from each of the chosen departments. As one of the chosen universities is located outside of the city, where the research team lives an online interview were held with this participant. The interviews focused on how participants define graduate studies of CEIT program; the competencies obtained in these programs, and the area of expertise offered after graduation in general. Each interview was recorded and transcribed verbatim.

Data Analysis

The qualitative data gathered through the interviews with participants were subjected to detailed content analysis. Each group, faculty members, and students were defined as cases. Two cases were analyzed to draw out the key themes and findings related to the definitions of CEIT graduate education, in terms of the current situation and expectations. There were two steps followed in the data analysis: within case analysis and cross-case analysis. The main approach of the case analysis is to get familiar with each case as a stand-alone entity (Eisenhardt, 2002); and in cross-case analysis, it is to recognize the similarities and differences identified across the cases (Miles & Huberman, 1994). The following steps were taken in the open coding process (Miles & Huberman, 1994);

- Unrelated text was filtered from the raw data,
- Transcripts were read in order to get the meaning from each case interview,
- Each meaningful part of the data was derived, and first level codes were generated,
- First level codes were sorted into form themes and coded again based on the research questions

- Finally, matrix was formed according to the codes and themes (Miles and Huberman, 1994).

The codes that emerged from the open coding of the within cases were examined and compared to provide cross-case analysis.

Trustworthiness

In qualitative studies "Trustworthiness" refers to "How an inquirer can persuade his or her audience (including self) that the findings of an inquiry are worth paying attention to?" (Lincoln & Guba, 1985, p. 290). To establish trustworthiness, four criteria were listed: Credibility, Transferability, Dependability, and Confirmability (Lincoln & Guba, 1985). For credibility criteria peer debriefing was used as the researcher team consists of four researchers in the area of instructional technology; analysis was separately conducted and findings were put in comparison and member checking, moreover; the findings were sent to the all the faculty members participated in the study for confirmation. For transferability, which helps applying the findings in other contexts, a thick description of the context was provided such as who the participants were, how the participants were selected. And for confirmability and dependability, findings from the qualitative analysis were reviewed by a researcher outside of the team of researchers.

Findings

This study aims to gain insight into the faculty members and students' views on graduate studies of CEIT departments in Turkey. In this part, definitions of the faculty members and graduate students were displayed in tables according to the data gathered from interviews.

Definitions of Faculty Members

Table 3 presents how faculty members define graduate studies in CEIT departments.

Table 3

Faculty Member's Definitions on CEIT Graduate Programs

Scope		Expectations		Challenges
Research Domain	Aims	Qualification	Work Area	
● Instructional design (FM1, FM4, FM2) ● Instructional Technology (FM4, FM5, FM2, FM3) ● Multimedia applications (FM1) ● Human Performance Technology (FM5)	● Technology integration (FM1, FM4) ● Innovation in education(FM1) ● Technology for all education levels and types(FM1) ● Technological solutions (FM1) ● Training computer teachers (FM4, FM5, FM2) ● Human Performance Technology (FM3)	● Research skills (FM1, FM4, FM3) ● Techno-pedagogical Approach(FM1) ● System design(FM1) ● Instructional Design (FM4, FM5, FM2) ● Distance Education (FM4) ● Comprehensive Knowledge of the Field (FM5, FM2) ● Interdisciplinary Communication (FM2)	● Academics (FM1, FM5, FM3) ● Policy makers(FM1) ● Educational Technology Projects (FM1) ● Distance Education/ Research Centers (FM4) ● Educational Software developer(FM4) ● Instructional Technologist / designer (FM1, FM5, FM2) ● Informatics Sector (FM2) ● K-12 Teachers (FM5, FM3) ● Specialist(FM3)	● Defining the field (FM1, FM5, FM3) ● Employment (FM1, FM4, FM2) ● Techno-centric approach (FM1) ● Unawareness of the work area(FM2)

FM: Faculty member

Faculty member's thoughts were accumulated around the themes of "*scope, expectations and challenges*". In the theme of scope, research domains and aims of the department were defined as sub-themes.

Scope

Instructional design, instructional technology and human performance technology were articulated in terms of the research domain. One faculty member, who was coded as FM1, stated that *"instructional design is an effective field in the area of educational technology. Similarly, so are the multi-media applications…"*

Faculty members focused more on the instructional technology as a research domain. FM5 emphasized not only computers but also the usage of other technologies in learning. Thereby, he mentioned instructional technology and its impact on human performance, as the following:

> *"Technology not only consists of computers. It contains television, video… audio, and the other 3D materials, too… so let's look at this as an instructional technology, even as a human technology, human performance technology. Our aim is…to improve someone's performance in every situation and context. We perform this with the help of education or by changing the environment or motivation factors."*

Furthermore, in order to provide effective instruction, FM1 mentioned about the use of technology for any learning situation and stated the aim of the department is to *"Provide solutions for using technology effectively from K-12 to adult education with the help of scientific research methods."*

CEIT department has two main aims: training computer teachers and to carry out studies in order to effectively use technology, which is coded as "technology integration, innovation in education, Technology for all education levels and types, Technological solutions and Human Performance Technology". Being related to these two tasks FM5 compared the situation in Turkey to the rest of the world and stated that;

> *"As we look from the context of Turkey, the driving force of the establishment of these departments is to prepare computer teachers… As we look at the name of the department we can see the sequence computer and educational technology. So the educational technology has remained as the second in the sequence I think… Indeed the study area of this department is instructional technology throughout the world. Especially in the US, there were no undergraduate programs but graduate programs in instructional technology. Also the names are changing into human-performance technology, performance technology or learning science, and they work as an instructional technologist."*

Expectations

The theme "*expectations*" contains the views of the faculty members' on what qualifications a student can gain from CEIT graduate programs and in what areas these qualifications can be used. Research skills, Techno-pedagogical Approach, System Design, Instructional Design, Distance Education, Comprehensive Knowledge of the Field, Interdisciplinary Communication

were articulated as the qualifications to be gained. FM1 discussed combining technological and pedagogical knowledge in system design and stated that

> *"In accordance with the processes of scientific research they will implement the environments, which were designed with the help of pedagogical and technological knowledge, creativity, and even ethical and aesthetic values."*

CEIT graduate programs are generally considered to be an interdisciplinary area. Interdisciplinary communication skills are defined as a qualification to be gained for students of these departments. After graduation, students are expected to gain comprehensive knowledge of the field. In this context, FM5 stated

> *"…Instead of speaking with opinions in academic topics, they should know about the theoretical foundations of what they speak on and review research studies related to this field in order to convince people through providing evidence…"*

Challenges

According to the qualifications stated, there were many work areas defined for the graduates of CEIT departments from K-12 teacher to policy makers. But there were some other challenges for CEIT programs in Turkey. Two of them were the defining or denominating of the field and employment problems. One of the faculty members stated that

> *"…I perceive our department as an educational technology… Because I feel that we are limiting ourselves by naming our department as CEIT. …I think educational technology is more effective to express ourselves."*

While FM3 stated *"…In the world there were technology coordinators instead of computer teachers… In world perspectives the work area of these departments was instructional technology."*

One of challenges was the viewpoint of using technology which is defined as techno-centric by FM1. Moreover, the other challenge was the fact that although there were many working areas for the CEIT graduates, they were not aware of this. According to an experience of FM4, a governmental institution had expected to employ a CEIT graduate but they couldn't have

received application from CEIT graduates but many graduates from several departments. She continued as *"they (CEIT graduates) were not aware of it, so they had to employ people who studied different areas. It shows that people in the field were not aware of themselves and their field."*

Definitions of Students

Table 4 displays the definition of the program from students' perspectives.

Table 4

Students' Definitions on CEIT Graduate Programs

Scope		Expectations		Challenges
Research Domain	Aims	Qualification	Work Area	
▪ Instructional Technology (S5) ▪ Material Development(S2)	▪ Technology integration(S1,S3) ▪ Innovation in education(S1) ▪ Teaching computer skills(S5) ▪ Technological in-service training(S2) ▪ Effective learning opportunities(S1,S2) ▪ Interdisciplinary studies(S1,S3,S4) ▪ Support for other departments(S4) ▪ Guide IT Leaders(S3)	▪ Effective teaching skills(S1) ▪ Technology integration process(S1,S3) ▪ Research skills(S1,S3) ▪ Instructional design(S1,S3) ▪ Material development(S1,S2, S3) ▪ Material evaluation(S5) ▪ Computer based measurement and evaluation (S1) ▪ Software development (S1) ▪ System Analysis (S3) ▪ Human performance technology (S3) ▪ Multi-disciplinary thinking (S4) ▪ Interdisciplinary communication (S5) ▪ Analytic thinking(S4) ▪ Academic experience(S4) ▪ Academic culture(S3,S4)	▪ Informatics Sector(S1) ▪ Education(S1) ▪ Technology integration(S2) ▪ Instructional designer(S3, S4) ▪ Systems analyst(S3) ▪ Academics(S3) ▪ Policy makers(S3) ▪ Game developer(S4) ▪ Educational software developer(S4, S5) ▪ Consulting(S5) ▪ Software development(S5) ▪ Project management(S5)	▪ Defining the field(S5) ▪ Unawareness of the field by other disciplines (S1) ▪ Lack of interdisciplinary communication(S1) ▪ Lack of practical studies (S2) ▪ Educated academic staff in the field (S3) ▪ Graduate courses related to the field (S3) ▪ Introducing the field (S3) ▪ Undefined areas of expertise(S3) ▪ Undergraduate curriculum (S4) ▪ Give education limited to department opportunities (S4) ▪ Aims of the undergraduate program / vision problem (S5)

S: Student

Scope

The scope of the programs was defined according to the research area and aims. Instructional Technology and Material Development were considered to be a research area by students. The aims of the programs emphasize the effective use of technology. There were some aims related to giving direction to the field while guiding IT leaders; giving technological in-service training; and providing support for other departments.

Expectations

The theme *"expectations"* contains thoughts of students' perspective on what qualifications they can gain from CEIT graduate programs and in which area these qualifications can be used. There were also some qualifications related to the scope of the programs. S3 stated that (s)he learned the roles in the technology integration process. Also S1 stated that (s)he learned how to effectively teach rather than developing software and repurposing new technologies due to the technology integration. Her views were

> *"…Facebook, Twitter … I do not know how to integrate them. I do not even think if they will. I learned lots of things related to this topic; also I learned how to integrate developing Technologies in education…"*

S4 mentioned that CEIT graduate programs imply much more disciplines inside and mentioned *"You need to have a little bit knowledge on psychology, technology, education, and also you need to combine them."* In the same direction, S5 stated that the field provided her with interdisciplinary skills and said *"You should be good at computing; rather than as an expert you can also feel comfortable and confident in other fields."*

According to the defined qualification there were many work areas mentioned. S3 mentioned that the graduates of these programs must have a say in policy making and gave an example of the head office of educational technology in ministry of education. But there were some challenges defined by the students related to CEIT programs. S3 discussed about the lack of educated academic staff in the field and graduate courses offered to students related to the field. His thoughts on academic staff and courses were

> *"When I review my CEIT impressions… Most of the people working in this are not educated based on their field… CEIT… It is a fact that people give education in the area of they were sufficient enough…"*

Challenges

S3 also brought up the problems about the non-definition of expertise in the field and stated that;

> *"There are no departments under the CEIT program such as human-computer interaction, software, system analysis, message design… It is a large spectrum. If there were a human-computer interaction department, I think, I would be studying there. It is not bad that some universities' studies were collected under the same title whereas; the others collected under another title. But as programs are named as CEIT, it will deal with every area of its field"*

In addition, the problems related to defining or denominating the field was also discussed. S5 claimed that the name of the program did not coincide with its vision or vice versa. Thereby, a vision problem comes forward in that context.

Pre-qualifications for future CEIT students

The faculty members' views were taken for questioning the pre-qualifications for students who wish to enroll CEIT programs. This information is also considered to be useful in defining graduate studies of CEIT programs. Table 5 displays faculty members' views related with pre-qualifications. Faculty members' views were collected under the themes of *"research, individual and field-specific knowledge"*.

Table 5

Faculty Members' Perceptions on Pre-Qualifications for Students to Join CEIT Programs

Research	Individual	Field-specific Knowledge
▪ Research skills(FM2) ▪ Research Ethics(FM3) ▪ Foreign language(FM3)	▪ Interdisciplinary communication (FM1) ▪ Creativity (FM1) ▪ Ethic and aesthetics(FM1) ▪ Critical thinking (FM5, FM3) ▪ Self-regulated learner (FM3) ▪ Argumentative writing (FM3)	▪ Technology as media and content (FM1) ▪ Pedagogical Knowledge (FM1, FM4, FM5) ▪ General knowledge of the field (FM2) ▪ Technology awareness (FM5) ▪ Technology knowledge (FM1, FM5, FM2)

In the theme of research, the faculty members have emphasized the required pre-qualifications in order to conduct a research. In addition, individual factors were also articulated. FM5 mentioned that if the study area is a social science, students need to have a critical thinking ability. Also some pre-qualifications related to the field were mentioned. In this context, FM1 indicated that

> *"I view the process from the point of techno-pedagogy view… Originally in CEIT programs both content area and tools that we use include technology, information and communication technology, which become both aim and tool for us…"*

(S)He also added that students do not need to have top-level knowledge and taking some undergraduate courses related to field could be enough. Additionally, FM2 emphasized that students need to have general knowledge on the field including general concepts. Some of the faculty members specified the pedagogical knowledge as FM4 indicated *"...Although there is a part of technology we call it as instructional technology, instruction is important. So having taken a pedagogical course is important."*

Appropriateness of CEIT for students

Graduate students' explanations about the appropriateness of CEIT programs for themselves were collected under themes of *internal factors*, *external factors* and *field property* (see Table 6). According to *internal factors* theme, some of the students expressed that they were

interested in educational technology area. While some of them expressed that they joined the programs in order to have an academic career. S3, who had a bachelor degree from computer and statistics, expressed that CEIT graduate program coincided with his bachelor's.

Table 6

Students Thought about why CEIT is Appropriate for Them

Internal factors	External factors	Field property
▪ Personal interest (S1,S3, S5) ▪ Academic career (S2, S4) ▪ Relates with my undergraduate(S3) ▪ Acceptation of study areas(S3)	▪ Institutional expectations(S1,S3)	▪ Provide Effective teaching skills (S1, S2) ▪ Its interdisciplinary perspective (S2, S4) ▪ Deal with different technologies(S4) ▪ New field(S5) ▪ Deal with real problems(S5) ▪ Practical Studies(S5)

S1 and S3 graduate student, who were also working in the area of education, expressed that their institutions, which constituted the external factor, forced them to have a degree in a program which was related to education. In this context S1 expressed that:

> *"Obviously, to prefer CEIT program for me occurred by chance. At that time, when I was working in a computer education department as an instructor, our head directed me to study CEIT because of its relation to my work area."*

In the theme of field property, students expressed which properties of the field made them choose CEIT degree program. S1 and S2 concluded that while they had their education in CEIT graduate program they learned how to effectively teach. S4 discussed the interdisciplinary role of the department and work areas and explained her thoughts as *"…The properties of the department such as being an interdisciplinary program, utilizing from psychology and dealing with different technologies grabbed my attention."*

Furthermore, S5 indicated that he chose to have an education in CEIT because he preferred working with real-life items in real educational environments and conducting practical studies beside its theoretical perspective over working in a laboratory.

Discussion and Conclusion

In this study, we focused on basically how graduate studies of the department of Computer and Instructional Technologies (CEIT) were perceived by the faculty members and graduate students. In addition, we aimed at defining the similarities and differences among the views of faculty members and graduate students of CEIT. In general, the findings suggest that perceptions of the two groups of participants are aligned with each other, in terms of the scope of the department, expected qualifications and work areas, and challenges affecting academic life - except for a few exceptions.

Faculty members mostly emphasized the significance of instructional technology. According to overall structure of departments of CEIT, with the inclusion of both graduate and undergraduate education, instructional technologies have not been given the importance they require when compared to computer teacher training. On the other hand, as they repeated many times, faculty members do not believe in the necessity of computer teacher training since there are not many similar examples in the rest of the world. The common expectation among them is that the departmental academic works have to be directed towards instructional technologies so as to become the source of solutions to educational problems, by using not only computer but also other technologies specific for the problem.

Instructional technology has generated solutions to educational needs of different settings from schools to military and industry (Morrison, Ross, & Kemp, 2004). Parallel with this, the general approach of the faculty members to the graduate studies has been to create an educational and academic environment leading people to focus on the educational problems and technology related solutions. As a result of this fact, the department is interdisciplinary by its nature. Instructional technology exists in each single piece of life where learning never stops; therefore, there are numerous fields of study for graduates of Instructional technology such as academic environments, policy, informatics sectors, educational software development, and etc. Today, in the field of instructional technology, the focus is not only on educating more knowledgeable people to work in this area, but also on increasing employees' productivity and bringing solutions to organizational problems (Richey, Morrison, & Foxon, 2007). At this

point, faculty members have complained about the unconsciousness and unawareness of their graduate students regarding these various work opportunities.

Some of the fundamental characteristics, a graduate student is expected to have, were listed by a faculty member. Among these characteristics critical thinking and the ability to defend thoughts by providing evidences have come forward. In fact, these characteristics were expected to be acquired by the graduate students, regardless of the field she/he planned to work. On the other hand, research skills in interdisciplinary environment, and pedagogical & technological knowledge to a certain degree were also some of the specific skills expected from graduate students by the faculty members.

Graduate students mostly have had similar same views on the department. They have thought that CEIT focuses on the Instructional Technology and the Instructional Material design. Moreover, they have indicated that they could be IT leaders in government or private companies; also they could give in-service training to co-workers and could support other people for their technological needs and its integration to education or to other areas. In addition, graduate students' have emphasized on not only producing new technologies but also using the existing technologies with educational purposes, because most of the technologies used in the education has not been designed to be an educational tool. Graduate students have stated that the technological side of the department was attracted and captivated them. Furthermore, personal interest and academic career plans are the main reasons of being a graduate student of CEIT. Another significant point is viewing CEIT as an interdisciplinary department. Graduates believe that they could adapt to other fields easily. Moreover, the ability to work on a topic with a subject matter expert, without specific knowledge on that field is one of the biggest positive aspects of the department.

Graduate students suffer from lack of the number of adequate Faculty Members. Most of the faculty members have graduated from different departments. If the founding date of the department is taken into consideration, the academic year of 2007-2008 could have been the earliest date, on which a person could graduate from BS, MA and PhD programs of CEIT. Another point is that students suffered from the name and the content of the department. There is no exact definition of the department. Each university, moreover each faculty member

defined the department different from others. Moreover, content of the courses differs from one department to another.

The main aim of our study has been to investigate the similarities and differences among the graduate students and faculty members' definitions of CEIT departments' graduate education. Both faculty members and graduate students have agreed that the department mostly focuses on instructional technology. Being an interdisciplinary department is one of the most significant points on which both faculty members and students emphasized. Additionally, both graduate students and faculty members complained that the department did not have an exact definition and a working area. Most of the graduates of the department have preferred to study at that department to pursue an academic career. However, faculty members have believed that graduates of the department are not aware of the possible working areas related to their interest. The results of the study have important practical implications for the future of the CEIT departments. A non-formal discussion among the stakeholders, who are undergraduate and graduate students, faculty members, and policy makers, to define the field in Turkey has been continuing for a considerable amount time. The study contributes that discussion with some formal findings. To put forth some data-driven opinion have the potential to bring extension for healthier discussion. We realized that a huge necessity to explore the problems emerged by the definition issue. It is crucial from now on to locate the damage caused by working in the field with a proper definition and boundaries. More in-depth qualitative studies with instructional technologists, teachers, faculties, and policy makers are needed for the future of instructional technology in Turkey.

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Genişletilmiş Öz

Öğretim teknolojileri kavramı 1960'lı yıllardan beri kullanılmakta olan bir kavramdır. Gelişen ve yaygınlaşan teknoloji ile birlikte farklı bilgi ve iletişim teknolojileri araçlarının okullarda daha yaygın hale gelmesi nedeniyle teknoloji konusunda donanımlı öğretmen ihtiyacının artması kaçınılmaz bir durum olmuştur. Dünya geneline bakıldığında öğretim teknolojileri eğitimi pek çok ülkede lisansüstü düzeyde sunulan bir program iken, Türkiye'de bu eğitim hem lisans, hem de lisansüstü seviyede Bilgisayar ve Öğretim Teknolojileri Eğitimi (BÖTE) Bölümü adı altında sunulan bir program şeklindedir. Bilgisayar ve Öğretim Teknolojileri Eğitimi Bölümü, 1998 yılında eğitim fakültelerinin yeniden yapılandırılması sürecinde kurulmuş bir bölüm olmakla birlikte, bölümün temel amacı yeni teknolojileri kullanan ve eğitime adapte eden Bilgi ve İletişim Teknolojileri Öğretmenleri yetiştirmektir. Bölüm mezunları bu görevlerini Milli Eğitim Bakanlığı'na bağlı gerek devlet gerekse de özel eğitim kurumlarında sürdürmektedirler. BÖTE bölümlerinin bir diğer amacı ise birbirinden farklı öğretim süreçlerini kapsayacak şekilde, eğitim ortamlarındaki tüm öğretim süreçleri için gerekli analizleri gerçekleştirebilecek, tasarımlar üretebilecek, bu tasarımları hayata geçirebilecek, uygulayabilecek ve değerlendirmesini yapabilecek öğretim tasarımcıları yetiştirmektir. Gerek isminden, gerekse de amaçlarından anlaşılacağı üzere BÖTE bölümü disiplinler arası bir bölüm olup, lisansüstü seviyede farklı disiplinlerden öğrenci kabul etmektedir. Bu kapsamda çalışmanın amacı, BÖTE bölümlerinde görev yapmakta olan öğretim üyeleri ile bu bölümde lisansüstü eğitimlerine devam eden öğrencilerin bölümü nasıl tanımladıkları, bölümün mevcut durumu hakkındaki görüşleri ile bölümden beklentileri arasındaki benzerlik ve farklılıkları ortaya çıkarmaktır.

Araştırma durum çalışması şeklinde yürütülmüştür. Araştırmanın katılımcılarını, Orta Doğu Teknik Üniversitesi, Gazi Üniversitesi ve Anadolu Üniversitesi gibi Türkiye'nin büyük üniversitelerinde çalışmakta olan beş öğretim üyesi ve bu üniversitelerde lisansüstü eğitimlerine devam etmekte olan beş lisansüstü öğrencisi oluşturmaktadır. Her bir katılımcıyla yarı-yapılandırılmış görüşmeler gerçekleştirilmiş olup bu görüşmelere ait ses kayıtları yazılı hale getirilmiş ve detaylı içerik analizi gerçekleştirilmiştir. İçerik analizleri için, analize yol göstermesi amacı ile analiz birimlerini içeren temalar ve kavramlar belirlenerek tablo haline getirilmiş ve bu tablo yardımı ile tüm veriler detaylı olarak derinlemesine analiz edilmiştir.

Araştırma sonuçlarına göre her iki grubun da bölümden beklentileri, bölümün amaçları ve kazandırması gereken yeterlilikleri konusundaki görüşleri birbirleriyle benzerdir. Öğretim üyeleri özellikle öğretim teknolojilerinin önemini vurgulamakta, ancak öğretim teknolojilerine gerekli önemin verilmediğini belirtmektedirler. Bir başka deyişle, bölümün öğretmen yetiştirme misyonunun öne çıktığı, bu noktada iki farklı alan olan bilişim öğretmenliği ve öğretim teknolokluğu kavramlarının gereken önemi alamadıkları sonucu belirginleşmiştir. Öğretim üyelerinin üzerinde durduğu bir diğer konu da bölümün yapısı itibariyle disiplinler arası bir bölüm olduğudur. Bu doğrultuda hayatın her alanında öğretim teknolojilerinin yer aldığını, bölümün amaçları arasında sadece güncel eğitsel problemlere değil çalışanların performanslarını arttırma ve örgütsel problemlere çözüm üretmek gibi görevlerin olduğunu da belirmektedirler. Bununla birlikte lisansüstü öğrencilerin kritik düşünme ve düşüncelerini savunma becerileri olması gerektiğini öğretim üyeleri tarafından ayrıca vurgulanmıştır.

Öğretim üyeleri tarafından üzerinde durulan bir diğer husus da Bilgisayar ve Öğretim Teknolojileri Eğitimi programlarının Türkiye'de karşılaştığı engeller ve sorunlar olmuştur. Alanın yeterince iyi tanımlanmaması nedeniyle lisans ve lisansüstü mezunların işverenler tarafından doğru algılanamaması ve dolayısı ile uygun işlerde istihdam edilememesi önemli bir problem olarak vurgulanmıştır. Bahsedilen durumun devamında ise mezun öğrencilerin kendilerini tanımlamasında, doğru mesleki seçimleri yapmalarında ve var olan çeşitli çalışma alanlarının farkına varılmasında önemli engeller öğretim üyeleri tarafından gözlemlenmektedir.

Lisansüstü öğrencileri BÖTE bölümü mezunlarını gerek devlet kurumlarında, gerekse özel kurumlarda çalışabilecek, iş arkadaşlarını teknoloji konusunda eğitebilecek ve rehberlik edebilecek kişiler olarak görmektedirler. Bununla birlikte lisansüstü öğrencileri sadece yeni teknolojilerin üretilmesi değil aynı zamanda mevcut teknolojilerin eğitsel amaçlı kullanımı üzerinde durmaktadırlar. Lisansüstü öğrencilerin BÖTE bölümünde lisansüstü eğitimlerine devam etmelerinin temel sebebi olarak kişisel ilgi ve akademik kariyer yapma isteği yer alırken, bölümün disiplinler arası bir bölüm olması da etkili olmuştur. Ayrıca belirli bir konu alanı üzerinde, konu alanı uzmanı ile birlikte, alan bilgisi olmadan çalışabilme imkânı da BÖTE'de lisansüstü eğitimi tercih etme sebepleri arasında yer almaktadır. Lisansüstü öğrencilerin en büyük sıkıntılarından birisi alanda yeterli sayıda öğretim üyesi

bulunmamasıdır. Alandaki mevcut öğretim üyelerinin birçoğu başka bölüm mezunlarıdır. Bölümün 1998 yılında kurulmuş olmasından dolayı, hem lisans, hem de lisansüstü eğitimin BÖTE'de tamamlayan öğretim üyesi sayısı çok fazla değildir. Lisans ve lisansüstü eğitimini ülkemizde bu alanda tamamlayan öğretim üyelerinden henüz bu alanda profesör olabilen kimse yoktur. Ancak öğrenci profili incelendiğinde büyük bir bölümünün lisans eğitimlerini de bu alanda aldığı görülmektedir. Öğrenci ve öğretim üyesi arasındaki profil farkı öğrenciler için önemli bir husus olduğu çalışmanın sonuçlarında rahatlıkla görülmektedir. Lisansüstü öğrencilerinin diğer bir belirttiği unsur da alanın tam ve kesin bir tanımının olmamasıdır. Öğretim üyeleri tarafından da belirtilen bu tanım sorunu ve beraberinde ortaya çıkardıkları, öğrenciler tarafından da paylaşılmaktadır. Ayrıca, her üniversitenin ve her öğretim üyesi alanı farklı bir şekilde tanımlamaları da problemin kaynaklarından birini oluşturmaktadır.

Sonuç olarak öğretim üyeleri ve lisansüstü öğrencilerin Bilgisayar ve Öğretim Teknolojileri Eğitimi bölümleri üzerindeki algılar birbirine paralellik göstermektedir. Lisansüstü eğitim bağlamında bölümün daha çok öğretim teknolojileri alanında yoğunlaştığı çalışmaya katılan iki grup katılımcı tarafından kabul edilmiştir. Ancak lisansüstü öğrenciler kendi alanlarının içerisinde bilişim teknolojileri liderliği, özel kurumlarda eğitim yöneticiliği ve danışmanlığı, teknoloji entegrasyonunda proje yöneticiliği ve danışmalığı gibi konuların aldıkları eğitimler ve yaptıkları çalışalar sonucunda yerine getirebilecekler görevler olarak belirtilmiştir. Alana dair tanımlar, algılar ve sorunlar benzerlik gösterirken elde edilen en önemli bulgu ise Bilgisayar ve Öğretim Teknolojileri alanın doğru tanımlanmaması ve tanımsızlığın yol açtığı sorunların mezunları doğrudan etkilediği sonucudur.