

## Possibility of E-instructional Design and Development of a Distance Education Context in Vocational Consultancy

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**KEYWORDS** ADDIE. Career Counseling. Constructivist Thinking. Online Certificate Programs. Web-based Learning

**ABSTRACT** The developments that have arisen in education settings today has led to a change in the design of the curricula. Today, societies have also changed over the time, resulting in a need for additional support. The aim of this paper is to evaluate the certificate program of career counselling based on distance education at Eastern Mediterranean University (EMU). It is considered that developing the spatial ability of students, who are currently in 12<sup>th</sup> grade and are, preparing for university, will result in supporting them both in their daily lives and professional environments. The importance and necessity of understanding, grasping and using the relations between concepts of space, plane, point, line and dimension are emphasized. The study conducted in this paper has attempted to define which concept model learners have for words like space, plane and dimension. A case study was employed in this research paper, focusing on a case in order to clarify the situation.

### INTRODUCTION

Developments have increased in the education field that has led to a change in the design of curricula. The change in the needs of today's societies requires some additional support. Counsellors need to attend Certificate programs in respect to vocational issues. Maree and Beck (2004) mention the importance of career counselling as:

Career counselling as a discipline, favoured the traditional objective (positivist) perspective. Sophisticated media such as psychometric tests, work sheets and computer programs were utilized to form an objective image of the individual. This image was then matched with the character traits suited to a specific career. If the values, interests and abilities of the individual were considered congruent with the requirements of a specific career, the assumption was made that the individual would find that career stable, productive and satisfying. The 'matching', 'objective' image was accepted as real and true (p. 81).

According to Maree and Beck (2004), focusing on career counselling, is related to education and contributes positively to the quality of life. A career consultancy certificate program would allow individuals to generate different opportunities in the changing conditions of the world, and would create different learning options that could support their career and personal developments. In the recent years, concepts such as coaching and mentoring have become increasingly popular. Taking into consideration the high

proportion of young people in Turkey, in Northern Cyprus (T.R.N.C) and the variability of business dynamics in today's world, the importance of obtaining professional and academic support from people trained in career counselling becomes increasingly apparent. Those who intend to work in this field should, without doubt, have the necessary qualifications. In Northern Cyprus, there are a limited number of institutions and programmes available that provide this education. These programmes ensure that the person who participates in their courses gains knowledge and skills in career consultancy at international standards while reinforcing his/her ability to manage his/her own career. These programmes also equip individuals with professional support after graduation, allowing for an expanding international and national communication network. Finally, the programmes provide an engaging and transferable learning environment and, through distance learning, they remove the obstacles of cost and time.

As a result of the development of knowledge and technology in developed and expanded societies in the 21<sup>st</sup> century, education needs have increased in all societies, and traditional educational institutions have proven to be insufficient in meeting this increased demand for education. As a result of this education deficit, efforts for seeking alternative methods to traditional education methods have led to the concept of "distance education". In 2004, an organization in teaching programmes was launched adopting a constructivist approach. Within this system, an

“ability to use information technologies” was determined as one of the eight basic skills to be taught in courses (MEB 2006).

The advantages of web-based teaching include, different styles of learning, low development and operation costs and the existence of different sources of information, while its basic disadvantages include limited bandwidth, access to hardware and the Internet, and social isolation (Tüzün 2001). In order for the desired transfer of knowledge to be realized, attention must be given to selecting appropriate technological devices and the transfer of teaching skills when switching from face-to-face teaching to online teaching (Gopal et al. 2010; Tüzün 2001; Ozen 2016).

Graduating from any school is not sufficient anymore; today, people feel the need for life-long learning. The Internet allows people to store their information on the Web and share this information in a visual and interactive environment. This allows people to enjoy the opportunity for continuous life-long learning, with added personal and environmental value. In addition, people can use certificate programmes to establish areas of specialization. However, these certificate programmes can be found in only a few cities and central areas in Turkey. Along with this factor, the globalization of information, the scarcity of educated teachers in many regions, a demand for learning independently due to time, space, cost needs, a desire for life-long learning and proven effectiveness are all factors that point towards the adoption of distance education and other alternative means of education (web-based learning, online learning, e-learning) in different fields and at different levels of education (Usluel and Mazman 2009). The concept of distance teaching also brings the Internet and Web technologies to the forefront and ensures that education practices become sharable and improvable through Internet and Web technologies (Atabek 2006; Erturgut and Soyseker 2010). Over 2.2 million students in world, most of who are in the USA, are currently benefiting from this type of online education, and this number is expected to rise above 300 million students in 2012.

Blended learning is important in the sense that it enables face to face teaching together with the technology. Also defined as a learning approach that brings together different sharing methods and learning styles, blended learning

helps students learn in an effective and efficient way (Wu et al. 2010).

### **Types of Distance Learning**

“There are two primary types of distance learning activities: asynchronous learning and synchronous learning. Knowing the characteristics of each will help you to determine how you will integrate them in your online or blended course” (Johns Hopkins University School of Education 2010).

A relevant learning medium was developed based on the ADDIE teaching-design model (McGriff 2000; Kaminski 2007; Driscoll 2002). The steps of this model are listed as the following: analysis, design, development, implementation and evaluation (McGriff 2000; Kaminski 2007; Reiser, and Dempsey 2002; Arkün 2007):

### **Purpose**

The purpose of the study is to transform the traditionally-run certificate programmes at Eastern Mediterranean University Continuous Education Centre into a “vocational consultancy” certificate programme that is performed through distance education.

## **METHODOLOGY**

A case study approach was adopted for this study. A working group was formed consisting of 45 EMU seniors (26 females and 19 males; average age 22) from the Faculty of Education, Education Sciences, Psychological Counselling and Guidance Departments (PCG). A computer expert was also included in the group. All of the students in the study had computers at their residences; 4.4 percent were excellent, 60 percent were good and 35.6 percent were mediocre at computer and Internet usage. These percentages were collected from a personal information form. The Web-based learning medium and ADDIE design model were offered to students after the application to aid them in evaluating the application and medium. The ADDIE design development consisted of 14 open-ended articles based on a Web-based learning medium and the application of this medium, with the purpose of determining how PCG students should design career consultancy in a Web environment. In addition, some survey questions were used to

gather information about gender, age, and computer skills of students.

In this study, the ADDIE design model was taken as basis and the course was transformed in such a way that it could be delivered via distance education according to this model (Dogan et al. 2011). Tüzün (2001) states that designers who did not follow a certain model in the process of transforming existing courses into distance education formats suffered a loss of time and resources (cited by Dogan et al. 2011). Taking this into account, the ADDIE teaching design model presents designers with an easily traceable structure, and proves to be an especially useful model in the process of designing e-learning programmes (Driscoll 2002).

### Course Transformation Process

This section examines the effort made to run the certificate programme through a distance education model using the stages of the ADDIE design model.

### Analysis of Courses

An analysis of the career consultancy course was performed first, so that the certificate programme, which was practiced as a traditional model before, could be run through a distance education model.

The Programme Application Principles stated that the participating students must be graduated from the PCG departments and have at least one year of work experience. In addition, adults who received undergraduate or graduate education in fields like social services, human resources, sociology, anthropology, management, economics, industrial engineering, management engineering, philosophy, teaching and communication, and who have had at least two years of field experience could participate in this certificate programme. Those individuals who have good command of the technology that will be used in the distance education were preferred.

### Content of the Programme

Courses in the career consultancy certificate programme:

- Introduction to professional guidance and career consultancy
- Theories and information of career development

- Career consultancy assistance and evaluation skills
- Effective communication skills
- Personality door and importance of cultural features in career
- Career path
- Decision-making and job-seeking strategies
- Design of career development programmes and development of education skills
- Ethical and legal regulations
- Evaluation in education and career consulting
- The 350.000 TLs worth system of the BTO department and teaching staff was made available as a budget.
- It is witnessed that graduates of the GCDF (Global Career Development Facilitator) programme work under such titles as:
  - Career coach
  - Career centre coordinator
  - Career groups manager
  - Career source centre coordinator
  - Recruiting expert
  - Human resources career development coordinator
  - Interview specialist
  - Professional and labour markets resource responsible
  - Labour development personnel
  - Period: determined as 200 hours

The scope of this analysis includes the expectations of the lecturer, justification of the programme, titles obtained by those who complete this programme, application principles of the programme, time period, fee, course definitions and objectives of the course. In addition, course-related documents which were obtained from the lecturer had been examined.

The number of students, selection of lecturers depending on the course contents, determination of class hours, book chapters to be covered, weekly reading assignments and student tasks in synchronous and non-synchronous environments were planned based on these documents.

Relevant sections of the textbook were examined, and discussion topics for before and after the class were drawn from these sections. Online presentations of the course book were also used. Attention was paid to the content of these and to the points that were emphasized by course lecturers in previous years. In addition, programs conducted in other countries were examined and used as a basis in choosing course content. During the process, weekly interviews were con-

ducted with the lecturer and approval was received from the lecturer at each step of re-structuring the course syllabus.

### **Design**

Cognitive structure plays an important role in learning and remembering. This structure determines the general framework in which new knowledge is acquired and the pattern of the connections made between pieces of knowledge. The individual can comprehend new knowledge only if he/she has previously acquired knowledge about the topic, as the former knowledge acts as the starting point (Driscoll 1993:113-114). According to Jonassen (1994), technology in constructivist teaching design consists of reproducible and applicable techniques that direct learners to cognitive learning strategies and critical thinking abilities. Like Dede (1995) and Jonassen (1996), many other researchers argue that the most effective way of combining technology with learning and teaching methods is following a constructivist model.

### **Formation of Course Syllabus**

#### *Major Components of the Course Syllabus Include*

- Pre-class discussion points on assigned readings for discussion forums within the learning management system (LMS), as well as the evaluation scales and inventories that will be used in the course.
- synchronical participation from a distance in a visual and interactive environment,
- Post-class discussion points in discussion forums connecting to impressions related to the topics covered synchronically that week, as well as completed scales and inventories.

The certificate programme was planned as a 12-week period. The first week was allocated to ensure active synchronical and distance participation, introduce visual and audio interaction media, introduce the course and discuss the acquisition of course books. In addition, the "course-participation" feature in the LMS allows lecturers, who are responsible for managing the course, to see when participants take active part in the course. It was planned that, starting from the first week, all courses would be conducted long-distance and synchronically for ten weeks

total (excluding the 7<sup>th</sup> and 12<sup>th</sup> weeks). During these 10 weeks, in addition to managing the course synchronically and distantly, it was also planned that the trainees participate in discussions before and after class in an asynchronous way, establishing both synchronical and asynchronous facets. The 7<sup>th</sup> week of the semester (traditional midterm exams) and the 12<sup>th</sup> week of the semester (traditional final exams) involved exams at a central location.

### **Development**

#### *Selection of Learning Management System (LMS)*

In distant education environments, an integrated medium is required to connect physically distant teachers and learners. Learning Management System (LMS) technologies are used for the purpose of generating and sustaining distance courses. LMS is the general term used for systems that consist of personal communication means (e-mail, chat, forum etc.), course content, documents, presentations, course abstracts, evaluation tools and many more auxiliary tools (Clark 2002). Blackboard WebCT is the most widely known LMS. Drawing especially on the popularisation of distant education in recent years, several private companies produced their own LMSs, and many open-coded LMSs were also designed to address professional needs. The most widely known and used open-coded LMS is "Moodle". Moodle was chosen as the LMS tool for this study as it does not require installation fees, it is easy to install, can be readily installed on department servers and it integrates such tools as forums, text messaging, blogs. Efforts for transforming this course into its distance-education form continued along with the testing and installation of the LMS.

#### **Selection of Synchronical Tool**

When selecting the synchronical tool, the fact that a presentation would be made every week, required choosing visual and audio communication equipment. For this purpose, appropriate synchronical visual interaction tools were examined, chosen and their features were listed. The features of these tools and the course syllabus were reviewed and the following features were deemed necessary in the synchronical vi-

sual interactive tool that will be used: (Dogan et al. 2011).

- allowing for the use of smart board,
- allowing for multiple usage,
- inclusion of add-ins that are integrated to the teaching management system
- servers and databases that are active in all features
- images and voices to reach other individuals in a high-quality and uninterrupted manner,
- ability to participate in chat during presentation

When the synchronical visual interactive tools that provide these features were examined, it was decided that the Scopia XT Desktop and similar devices that facilitate distant and synchronical visual interaction in accordance with current guidelines should be used. The Scopia XT Desktop, which offers academics to open free accounts, has an add-in that will ensure integration with the LMS; thus, it was chosen as the optimal synchronical visual interaction tool in the design of this course. The fact that the Scopia XT Desktop synchronical visual interaction tool is on a different server prevents deceleration in voice, image and bandwidth. In addition, it has many advantages such as determination of the maximum term when students can enter the class after the class begins and determination of the number of students that can participate in the class. The ease of use of the Scopia XT Desktop and the quality of its user interface are also among its advantages.

## Implementation

### *Transfer of Components to the Medium*

In order to make the “vocational consultancy” certificate programme manageable via distance education, the necessary reading texts, inventory and evaluation scales were determined by the researchers and the lecturer of the course. In this context, the inventory, scales and presentation files were selected accordingly for the online courses which were to continue for six weeks. Special attention was given to ensure a balanced distribution of weekly reading workloads. All determined readings, section presentations of the course and discussion headings were loaded to the “career consultancy” certificate program which operates on Moodle LMS.

In addition, as the usage of technology plays a critical role in distance education, the research has focused on technology as well. Taking potential technical problems into consideration, this study considered that the lecturer would deliver the course content and make sure that asynchronous education could be delivered independently from time and space.

## Evaluation

### *Availability Work*

After all the teaching materials of the course were transferred to the medium and the design had been completed, an availability test was conducted on two students, one of whom had taken the course before and another who had not, as well as the lecturer of the course. Rubin (1994) defines availability tests as a whole process/operation that can represent the target group and put participants to work so that the extent to which a product meets a special usage measure can be evaluated. Another definition describes availability tests as invaluable tools for measuring the ease of usage and effectiveness (Battleson et al. 2001).

Initially, the availability test of the learning environment for the distance education “vocational consulting” certificate program was planned. Two types of availability tests were considered in this planning process. The first was a 4<sup>th</sup> grade PCG which included guidance students who will use the medium and will learn in an online medium, whereas the other was the lecturer who would deliver the course, thus establishing the need for conducting two different availability tests. Authentic tasks were formed for both the students and the lecturer,

and attention was paid to ensure that these tasks proved to exist and be available in the medium.

Availability tasks related to students were as the following:

- Download the course plan on the 1<sup>st</sup> week.
- Download the presentation titled “introduction to professional guidance and career consultancy”
- Enter the synchronical interaction medium at the 3<sup>rd</sup> week
- Turn on the camera in synchronical interaction medium
- Send your own voice in synchronical interaction medium

- Raise your finger to get the floor in synchronical interaction medium
- Upload the test questions in synchronical interaction medium and start answering. Send the answers after solving them.
- Download the “scale and inventory” in the 8<sup>th</sup> week to your computer.
- Find the pre-class discussion topic in the 9<sup>th</sup> week and write down your contributions.

During the availability work, tasks were read out aloud to participants and participants’ browsing in the medium was traced. Participants were asked to think aloud about the problems they encountered in the medium, and notes were taken for each user. In addition, the students were asked to determine the analysis, design, development, application and evaluation sections based on the ADDIE design model.

Important data related to the medium were also obtained during the availability test. At task number 3, where both the student and the lecturer were asked to enter the synchronical interactive medium, they were able to easily find a connection. When presentations were being downloaded to the computer, participants stated that a downloadable file link configuration would be more efficient. The lecturer noted that the expression “online class” could be diversified. Necessary corrections were made along with this feedback and the expression “online class” was replaced with “Virtual carrier class”. Connections were made more noticeable. The Scopia tool was also made more striking by adding a dynamic visual to the beginning.

### DISCUSSION

Online vocational consultancy course design needs to contemplate unpredictability and instability which prevents it from having a pre-established fixed design. It should be based on an open syllabus, structured according to learning situations that is suggested/selected by students, able to respond to their interests, and through vocational items will be introduced and discussed. By taking advantage of technological resources like animation, hypertexts, sound effects, songs, and videos, the course design should also be able to address real learning situations and provide students with concrete reasons to communicate and express their opinions. The course should be enriched with opportunities to use the vocational skills in spontaneous

ways, giving the students the chance to perform social roles and develop themselves as citizens (Freire 2013). Contemporary Education, based on the distant IT- technologies, goes beyond the national boundaries, transforming into an open space, providing the opportunity to obtain high-quality education for every person around the world, regardless of its location and accommodation (Nurmukhametov et al. 2015).

Vocational consultancy in distance education context will be possible and useful for the students who haven’t got availability for face to face education. With this design, it will provide an opportunity to form an effective communication between students and counsellors/lecturers/teachers living in different countries. It is also important to form new models of education that give opportunities for students who are outside the existing education systems. This type of vocational consultancy via distance education also helps to reduce education costs. It is important that based on distance education will be able to reach multiple people at the same time. It will be a lot easier and also useful to give supervision to students within this context. Also student’s responsibilities and personal awareness are priorities in this context. In order to make this designed system work properly, both students and instructors should be informed and trained properly.

The disadvantages of the system can be; any problems that might occur in the equipment used in the system will have a wide effect, negative impacts of the changes in the communication methods, lack of interactive education atmosphere and opportunities, not being able to solve learning disabilities spontaneously, limitations in discussing practicum and high student numbers. In addition to all these disadvantages instructors will not be able to form an emphatic understanding with the students.

### CONCLUSION

PCG students requested a training activity related to the use of this online teaching prior to implementation. The students also stated that teaching should be provided for all professions that are mostly human-oriented and that an opportunity for online teaching career consultancy should be provided for visually and orthopedically impaired individuals. Students also claimed that creating a teaching environment that addresses larger populaces would be better.

The high cost of the online system and the existence of a backup plan so that learning can continue during power and communication failures seem like the disadvantages of such a system; however, the students considered the system as very advantageous and readily available in terms of economy and time. They asserted that 100 percent of prospective students could participate in e-teaching career consultancy offered as a university certificate programme. In addition, students requested that implementation supervision to be provided. The computer expert contributed to the study by establishing a system which the lecturer was able to follow the participants.

It is believed that the ADDIE program is highly usable and easy to understand within a “career consultancy” certificate programme. In addition, it can be said that the ADDIE design model acts as a happy medium. In short, every design or program, aims to provide opportunities to satisfy student needs. Education can improve the quality of life since a career or a good job is very important in today’s world. The online certificate programme described in this paper intends to meet student needs by providing this kind of life-improving education.

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