



The Evaluation of Web Design Education Materials Used in Vocational Education in the Aspect of Graphic Design Education

Mustafa KINIK¹, Asım TOPAKLI², Halil ÖZKAN³

Abstract: Throughout the history, there are plenty of education materials and methods applied both in our country and in the world. Many of them are evolved and they are still being used. Besides; thanks to the recent electronic and visual technologies, brand new education methods such as: Online and mobile education methods are developed and applied. It is important to realize the necessity and importance of the visual elements of the materials and it create an awareness on education process via reinforcing the efficiency of the learning. Today; in the Turkish Vocational Education sector the applied method is called “Modular Education” which can be defined as half-online carried system. Modular education is an education method in which the lessons can be divided into units and can be supported with online elements. Ministry of National Education official web servers give students and teacher materials, except physical equipments, in online format whereby the students pass through the education process which gain the efficiencies to meet the needs and demands of the institutions and organizations. The modular education systems is applied in Information Technologies as in the other education systems. One of the lessons in these area is; “Web Design and Programming”. In this study, visual elements in the “Web Design and Programming” lesson modules are examined.

Keywords: Vocational education, web design training, web design training materials, graphic design.

Introduction

One of the fundamental human rights of the human is to have education. Regardless of language, religion, race and gender, the right of education is sacred for all. It is also stated in United Nations ‘treaty of Economic, Social and Cultural Rights in 13th item that humans have equal rights for education. It is via education people become efficacious to community and whole world. In general meaning ‘education’ is the learning activities which the knowledge, skills and habits are transferred via teaching and research canals. Generally it occurs under the guidance of a teacher but also it can occur in an autodidactic.

To cite this article: Kınık, M., Topaklı, A. & Özkan, H. (2016). The evaluation of web design education materials used in vocational education in the aspect of graphic design education, *International Journal of Humanities and Education*, 2(3), 144-153.

¹ Necmettin Erbakan University, Faculty of Fine Arts, Graphic Design Department

²University of Sinop , Gerze Vocational School , Department of Design , Graphic Design Program

³Selcuk University, Institute of Science , Computer Engineering Department , PhD Student

*A part of this study was presented at the Intellectual Capital & Education Conference Dec. 4, Warsaw, Poland.

There are varied and different education methods throughout the history. The common aim of all of them is to upgrade the learning acquirement. Different education materials and information transmitting techniques are developed in order to achieve this goal. It is from this point that visual elements are started to use in lesson materials. Development in the visual techniques led to increase of the visual graphic elements and become more common. It is understood that learning is more permanent and noteworthy. In our study; graphic elements of web design vocational education lesson materials. The graphic elements are evaluated by an expert.

The design of the graphics in the lesson materials are one of the important ones as content to make the learning more effective. The designed graphics should enable awareness and permanence in the minds of the students. In its general meaning ‘graphic’ can be defined as “the art of defining using technics such as drawing, coloring, print picture and varied printing technics etc.” In the flow of the history, the concept pointed out by this term have changed. Traditionally graphic is defined as the describing of the objects or varied shapes occurred via drawings, pictures etc. (Genç, 1985, p.55). Today the word has a universal definition which express same and clear for all. This definition is: graphic means writing, drawing, visualizing and reproducing (Tepecik, 2002, p. 17).

Graphic design is a branch of art. Graphic arts are the ones which can evolve via producing itself and throughout constructive thinking. The success in these arts passes through, a successful invention ability, a special color and shape sense, systematic research and observation habit. Neat and careful studying, expertise on the technique, working out with the devices are preconditions of the graphic communication and printing picture arts (Sözen, 1986, p.44). While transmitting a message, psychological, material and physical restrictions should be taken into consideration (Becer, 2005, p.19). The same apply to web design as a branch of graphic design. E-media introduction to the application and is used in many fields of education that will need to be designed according to the design principles of the web page. (Keş, 2009, p.27)

Graphics built with aesthetic and artistic concerns, technical infrastructure, thanks to the products with the help of effective strategies aims to give the necessary message to the audience. Except for the vibrant designs graphic design products, still we see the design in the form of intensive modules. In this context the basic building blocks of graphic design from the aesthetic and artistic concerns located between edges technical information is impossible. (Ceylan & Akengin, 2014, p. 171)

It is seen that the graphics in teaching materials are used in almost in all education technics. It is getting more and more common to use visual elements in teaching methods. Among them distance and online education has gained power and developed these days. E learning had grown at 14 times the rate of traditional learning in 2012. Online education is fast growing to become the dominant form of education, for many reasons such as its efficiency and results compared to traditional methods (Lohr, 2009, p.10). Online education is the type of education that can be carried with teacher or without teacher and also exists in electronic base.

Today online education is applied all over the world among with the vocational education area. In turkey, the system is applied as half-flexible way which the materials are presented in online with the guidance of the teacher. By this way students can gain vocational acquirements. Vocational education is a process which acquires students demanded skills and needs besides general training. Plenty of education methods and technics are applied in order to achieve this aim in time.

Today; in the Turkish Vocational Education sector the applied method is called “Modular Education” which can be defined as half-online carried system. Modular education is an education method in which the lessons can be divided into units and can be supported with online elements. Ministry of National Education official web servers give students and teacher materials, except physical equipments, in online format whereby the students pass through the education process which gain the efficiencies to meet the needs and demands of the institutions and organizations.

Modular Education is applied to all education areas including vocational and informatics technologies. Informatics Technologies is the education genre in which whole informatics technology education is given. In general informatics is a concept that take communication and computer in its subject. Lately, with the developing technology, informatics systems come across both in daily and vocational life. That is the reason why informatics education is necessary. Informatics education is given in Turkey at every level in education basement elementary, secondary, etc. At first-second graded schools, students learn the techniques that they need all over their life. At high-school and university level students learn the specialized informatics subjects.

In Turkey vocational high school education is defined as 4 years. The education process follow as; at their first year general high school education, at second year vocational education and the last two years for specialization at the genre.

In vocational education system, informatics education is carried through the under the lesson name of the informatics technologies. In this area technical service, database, network and web design areas are taught. At their third and fourth year of the vocational education life students choose one of them. Throughout this process they get the lessons which they choose to be specialized. In this study web design genre is chosen. At informatics Technologies, web design, web page design, web page forming and web programming education are given. The lessons on this area is given at Table1.

Table 1. Web Design Program Lessons

No	Lesson Name
1	Fundamentals of the Informatics Technology
2	Fundamentals of Programming
3	Packet Programs
4	Basic Electronics and Measurement
5	Informatics Technical Drawing
6	Vocational Development
7	Selective Database
8	Web Design and Programming
9	Graphic and Animation
10	Selective System Maintenance
11	Skill Management in Companies
12	Internet Programming
13	Selective Object-Oriented Programming

When the Table 1 is examined it can be seen that Web design and programming lessons are vocational lessons. Students acquire the necessary qualities of internet page design and internet programming. With this aim, lesson is carried via 12 modules selected by the teacher and these modules can be seen at Table 2.

Table 2. Modules of Web Design and Programming

No	Name of the Module
1	Fundamentals of the Design
2	Html and Basic Web Processes
3	Html and Advanced Web Processes
4	Style Pattern (Css)
5	Introduction to Web Design Editor
6	Advanced Applications at Web Design Editor
7	Web Design Editor and Database Processes
8	JavaScript
9	Introduction to Interacted Web Applications
10	Basic Processes at Interacted Web Applications
11	Web Forms at Interacted Web Applications
12	Database Processes at Interacted Web Applications

Method

In this quantitative study, the survey model (Karasar, 1994, p.77) is used in order to define the current situation in the context of Web Design Materials. Those materials used in Vocational Education System are examined in aspects of graphics, design criteria and appropriateness to the students' perceptions. Besides interface qualifications are tried to be defined. For this, the 40 different images are selected and presented to a group of 20 experts (10 with bachelor degree, 10 with associate degree) and they evaluate those images with the help of the criteria/qualifications rendered to them. Some of the selected images are given below.



Image 1. Net Platform Components



Image 2. Most Commonly Used Web Browser Programs

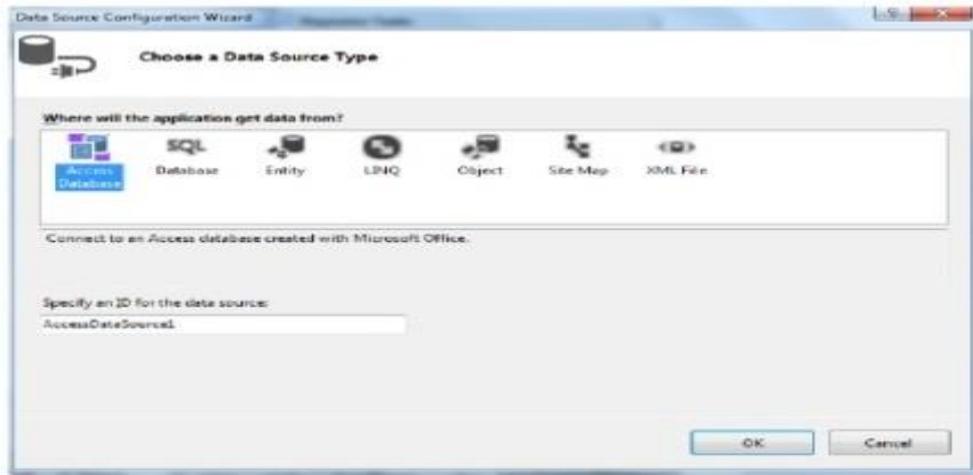


Image 3. Data Source Configuration Wizard dialog window - selecting the database type

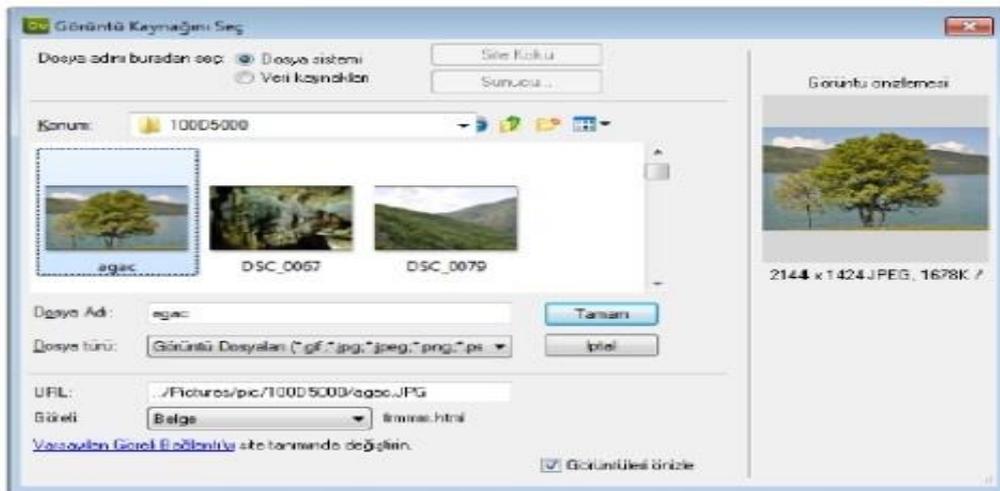


Image 4. Select the Image Source Window



Image 5. Web design editor screen**Image6. The use of the web to the World Wide Web in July 2011**

To evaluate the qualifications of the Web Design Education materials, the evaluation form being prepared and printed by National Ministry of Education for the Vocational Education System is used. The criteria/qualifications presented in that from which are used by the experts in the evaluation of the presented images are given in the Table 3 below.

Table 3. The Criteria/Qualifications Used by the Experts

No	Criteria/Qualifications
1	The designs are qualified enough to help students acquire the required acquirements at the end of the module.
2	Visual Materials enable students to have a permanent learning.
3	At designs, there are plenty exercises to test the acquirements of the students.
4	The content is detailed enough to reach the acquirements.
5	Material is united in itself.
6	When the material is not enough it can be possible to reach other sources.
7	Visual Images and symbols are attractive.
8	The relation between image and text is correct and understandable.
9	Designs make learning more interesting.
10	It makes students curious to learn the subject.
11	The target message is clear and understandable.
12	There are plenty of samples in number and variety.
13	The relation between message and symbol is successful.
14	The colors used in the general of the designs support the target messages.
15	The socio-cultural differences of the target community take into account.
16	The socio-economic differences of the target community take into account in the design.
17	It is pay attention to the intellectual property rights.

Findings

In this section, the findings of the study are presented in the light of the analysis and comments of the 20 experts separately for each qualification/criterion.

1-“The designs are qualified enough to help students acquire the required acquirements at the end of the module.” The findings of the related item are as follows; definitely not appropriate %0, not appropriate %0, partially appropriate %11,66, appropriate %41,66, totally appropriate %46,66 and it is considered as %46,66 percentage totally appropriate.

2-“Visual Materials enable students to have a permanent learning.” The findings related to this item is as follows; totally not appropriate %12, not appropriate %13,33, partially appropriate %38,33, appropriate %28,33, totally appropriate %8 and it is considered as %38,33 percentage partially appropriate.

3-“At designs, there are plenty exercises to test the acquirements of the students.” The findings related to this item is as follows; totally not appropriate %15, not appropriate %31,66, partially appropriate %20, appropriate %20, totally appropriate %13,33 and it is considered as %31,66 percentage not appropriate.

4-“The content is detailed enough to reach the acquirements.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate %5,34, appropriate %47,66, totally appropriate %47 and it is considered as %47,66 percentage appropriate.

5-“Material is united in itself.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate %6,66, appropriate %56,66, totally appropriate %36,68 and it is considered as %56,66 percentage appropriate.

6-“When the material is not enough it can be possible to reach other sources.” The findings related to this item is as follows; totally not appropriate %56,66, not appropriate %0, partially appropriate %6,66, appropriate %1,66, totally appropriate %35,02 and it is considered as %56,66 percentage totally not appropriate.

7-“Visual Images and symbols are attractive.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %6,66, partially appropriate %16,66, appropriate %31,66, totally appropriate %45,02 and it is considered as %45,02 percentage totally appropriate.

8-“The relation between image and text is correct and understandable”. The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate %1,66, appropriate %20, totally appropriate %78,34 and it is considered % 78,34 totally appropriate.

9-“Designs make learning more interesting.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate %1,66, appropriate %30, totally appropriate %68,34 and it is considered % 68,34 totally appropriate.

10-“It makes students curious to learn the subject.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate %6,66, appropriate %56,66, totally appropriate %36,66 and it is considered %56,66 appropriate.

11-“The target message is clear and understandable.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate %11,66, appropriate %41,66, totally appropriate %46,68 and it is considered %46,68 percentage totally appropriate.

12-“There are plenty of samples in number and variety.” The findings related to this item is as follows; totally not appropriate %3,33, not appropriate %3,33 partially appropriate % 3,33, appropriate %13,33, totally appropriate %76,66 and it is considered %76,66 totally appropriate.

13-“The relation between message and symbol is successful.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %3,33, partially appropriate %8,33, appropriate %35, totally appropriate %53,33 and it is considered %53,33 totally appropriate.

14-“The colors used in the general of the designs support the target messages.” The findings related to this item is as follows; totally not appropriate %0 not appropriate % 1,66, partially appropriate % 8,33, appropriate %33,33, totally appropriate %56,66 and it is considered %56,66 totally appropriate.

15-“The socio-cultural differences of the target community take into account.” The findings related to this item is as follows; totally not appropriate %5, not appropriate %21,66, partially appropriate %23,33, appropriate %45, totally appropriate %5 and it is considered %45 appropriate.

16-“The socio-economic differences of the target community take into account in the design.” The findings related to this item is as follows; totally not appropriate %6,66, not appropriate

%23,33, partially appropriate %31,66, appropriate %35, totally appropriate %3,33 and it is considered %35 appropriate.

17-“It is pay attention to the intellectual property rights.” The findings related to this item is as follows; totally not appropriate %0, not appropriate %0, partially appropriate % 1,66, appropriate %6,66, totally appropriate %91,66 and it is considered %91,66 totally appropriate.

Result and Suggestions

There are some rules in preparing the lesson modules. These rules is concerned not only related to text but also related to the interfaces. The books which are neat in designing their interfaces are very important to understand the content of the books. That is why the interface designs should be done under the control of experts by the hand of the government.

It is considered to be necessary the involvement of the experts in the designing of the interfaces from the phase of preparing of the modules to the printing phase. It is because we believe that the designs have great contribution to the visual education of the student and aesthetic sense. The designs should also be united with the subject and easy to be understood.

Sources

- Becer, E. (1997), (2005). *Graphic communication and design*. Ankara: Dost bookstore.
- Ceylan, I.G., & Akengin, G. (2014). *Used in the printing industry, offset printing, graphic design, printing errors caused by the investigation*. *Gazi University Industrial Arts Education Faculty Journal*, 33, 170-177
- Dewey, J. (1944). *Democracy and education*. New york: The Free Press.
- Genç, A., & Sipahioglu, A. (1990) *Visual perception*. Istanbul: Hyberlink Publications
- Hill, A. (2002). *Graphic arts*. Ankara: Details & System Offset.
- Lohr, S. (2009). *Study finds that online education beats the classroom*. *New York: The New York Times*.
- Karasar, N. (1994). *Research, report preparation*. Ankara: Training Consultancy
- Keş, Y. (2009). *Electronic publishing and web design*. Istanbul: Hyperlink Publications
- Sozen, M., & Tanyeli, U. (1986). *Glossary of art terms and concepts*. Istanbul: Remzi Bookstore