Online (Virtual) Exhibitions Applicatıon in Education

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ABSTRACT

Online or virtual exhibitions are no more new tools to libraries, museums, art galleries and particularly to education institutions. The National Library of Medicine, United States, Holocaust Memorial Museum, Smithsonian Information, many counties national archives, etc. started exhibiting their information resources through these tools. These education resources provide instructional templates that present and use exhibition materials to engage students' interest in historical and scientific perspectives. Educators are welcome to review and use the module or lesson plans in whole or in part, as appropriate for their students' interests, levels, and academic goals. This paper studied how virtual or online exhibitions could be used for instructional purpose to the graduate students of painting programme at university level. This study found useful for using of virtual museums for teacher education. The teachers had positive approaches in terms of acquiring culture and constructing knowledge regarding painting, art, recognising painters and paintings, producing original art works, interacting between individual, society and artist, providing information sources to their students in teacher proficiency and career.

Keywords: Online exhibitions, virtual exhibitions, virtual museums, educational applications

1. INTRODUCTION

Concept of museum brings to mind exhibition of objects which is frozen in time. It is acknowledged that exploring these collections of objects provide students information and cognitive gain[1] and positive attitudes toward learning[2]. However, there could be some difficulties in visiting museums for students like time and cost constraints for travelling. The development of information and communication technologies (ICTs) offers alternatives for eliminating these difficulties and exploring museums. In this context, virtual museums provide great opportunities for students and educators.

1.1 Museums and Virtual Museums

Museums are public institutions researching, collecting, and saving the objects witnessed to human and human life. They are the nonprofit bodies that share information, provide exploration, education and enjoyment opportunities concerning to the services of social development in contemporary meaning[3]. Also museums have educational dimensions including pedagogical, sociological, and psychological components[4].

Museums are the most dominant culture corporations in which cultural memory stored and exhibited to people especially gained a political power feature with the release of nation-state concept. This process opened the way of becoming museums close to society and beginning from 1960s converging to society process has picked up. This state related with the varying socio-economic structure at the same time.

As the computer and communication technologies are being used in all fields of life, education, research and culture institutions have begun to use those technologies. Initially museums used computers for keeping art objects records. After the developments in the ICTs, museums started exhibiting art works in virtual environments. In 1990's, after the introduction of internet, virtual museum concept came into existence.

Schweibenz[5] has defined virtual museums as '…a logically related collection of digital objects composed in a variety of media which, because of its capacity to provide connectedness and various points of access, lends itself to transcending traditional methods of communicating and interacting with

visitors…; it has no real place or space, its objects and the related information can be disseminated all over the world'.

In the literal sense, a museum's web application, whether being a virtual museum or not, is a divisive issue and is not related with having a real museum structure. Presenting a museums collection online doesn't mean that museum's application can be defined as 'virtual museum' whether it has a real location or not. Likewise the applications that give virtual navigation to visitors are not a virtual museum. These two applications should be evaluated as museum's website and can be seen as museum's printed catalog application. So, what is the actual virtual museum? It will come true by online presentation of the similar objects which have not physical integrity in real world in an artificial environment. This takes us from Malroux's concept of 'museum without walls' to Schweibenz's virtual museum definition. The phenomenon which Schweibenz describes as virtual museum and Malroux as 'museum without walls', will be operative with the applications which is related with digital collections beside its own collection.

1.2 Virtual Museum Arguments

On the basis of virtual museum arguments there is a question: Can every museum structure which performs applications could be defined as virtual museum or not? For identifying a museum's web application as virtual museum, first it should digitalise its collection to serve them online and it should give an opportunity of virtual tour to visitors. A different point of view can be improved and this approach is connected with what is understood by 'virtual' concept. One of the definitions of virtual word means 'offered as a potential'. This sub concept can be defined as something that does not really exist but it has opportunity to exist, a utility that an organisation displayed. It is an operating unit which appears with the need of organisation structure and that can be restructured. This explanation is overlapped with an association which has non-real building but it develops its collection digitalised.

One of the other meanings which virtual word hosts is, 'surreal, watching the fact'. 'Virtual Reality' is a good example of this sub-virtual concept. This expression suggests that a virtual organisation looks like real (traditional) but does not really exist, virtual organisation only formed by a cluster of independent partner networks. And this definition overlaps with the form of a network of virtual museums which is formed by similar objects which are not integrated in real world physically but associated in an artificial environment and serving integrated online.

Another dimension in virtual museum arguments is the comparison between virtual museum experience and real museum experience and therefore virtual museums is no 'competitor' for real museums. This argument is relevant with its own sense of divisions. Especially, in developed countries museum is no more an organisation of high culture and visited seductively. Classical museum experience has been changed like museum's structure. Virtual museums take an important place in this change. More successful museum experiences lived by the information which virtual museum provides. In this regard one can easily see that virtual museums add new meanings to real museum experience. Virtual museums not only bring museums to people who don't visit museums in traditional meanings but also give an extensive museum experience to traditional museum visitors by using virtual collections in the real museum with wireless network technologies.

One of the other arguments which are indicated above is around the aura of museum object. Museum object has integrity with its own aura. Dissolutions of the object in its aura are the cause of conceptual corruptions on the object. This discussion, about the museum object, is related with the objects has importance for whom. When the problematic of aura corruption arised because of art works photographs copied extensively, museum-society relationship was being discussed also. For this reason a new aura attached to the art work expression developed in spite of the expression of aura, should be protected. Skeptical approach is not as strong as in the past in current conditions in which socialist museum concept which aims to provide objects and information to the widest possible audience is active although this intellectual argument didn't completely lose the importance. In breaking this suspicion and prejudice, technological development in the spread of social life and conversion of outlook to an art work is relational.

Another argument for virtual museums is about the necessity of designing virtual museums considering certain criteria. The criteria which performed by Wallace[6] later was used in evaluation of library web pages by Love and Feather[7]. Garzotto, Matera & Paolini developed a system known as 'Systematic Usability Evaluation (SUE)' in 1998[8]. With these system forms of serving the information and interpreting the site is provided together with evaluating virtual museum's information structure. Moreover, SUE recommends evaluating the factors like learnability and efficiency. The modal developed by Dyson & Moran regards pre-modals as inception and suggests evaluating virtual museum applications in two major headings: Formal and informal[9]. Where formal evaluation is one as the investigation of what titles should be in a virtual museum, informal evaluation is done as investigation of user-centered criteria like usability of webpages in virtual museum applications.

Formal evaluation in terms of content is made to test the needful headings in applications for a functional implementation of a virtual museum. The main sections which should be in virtual museum applications consist of collections and presentation features of virtual navigation. Three main sections are divided into sub-captions.

(i)   Main Sections

•   Vision & mission

•   Collection policy

•   Applications built according to the target audience

•   General contact information

•   Plan or map

•   Searching

(ii) Collection Titles

•   Presentation of collection (list, information bank)

•   Nature of collection, home page to link page

•   Testing for connections to other

•   Presentation options according to different user

(iii) Presentation Features of Virtual Navigation

•   Mapping: Museum floor plans submitted with the virtual navigation

•   Informing: Both navigation and information made by multimedia

Informal evaluation models formed for virtual museums, show similarities with usability tests which arise as a result of the joining internet into all areas of life. So, museums can be evaluated in terms of learnability, effective accessibility, and consistency of presentation.

1.2.1   Learnability

The most important caption in evaluating a site for usability is 'learnability'. It is defined as aspects which should be considered for users to easily understand the site when they first enter the site. A site's learnability is related to user's establishing proximity with site, consistency of design and presentation, generality of items used for design and simplicity of design.

1.2.2   Effective Accessibility

Effective accessibility is defined as captions which provide a rapid access to information that user look for. Effective accessibility should orient users correctly.

1.2.3   Consistency of Presentation

Similar elements' presentations should be consistent. Typography should help to reach the information which user is looking for. The relationship between pictures and text should be clear.

1.3 Advantages of Virtual Museums

(a) Virtual museums provide worldwide access. Today it is acknowledged that a museum's knowledge is not only the local community's but also world's heritage. Nowadays, many museums are digitising their collections and putting on internet to provide access to entire world.

(b) Virtual museums provide a nonstop communication to users. At times in which communication is in the forefront, museums have used classical media instruments. However, these media structures provided opportunities but they were slow and limited. Through internet, remote users get chance to connect museums in a quick way.

(c) Virtual museums, if designed correctly, can be used for distance learning and lifelong learning.

(d) Virtual museums contributes to close digital discrimination. Advancements in information technology have brought new problems. The most important and the first comes to mind of these problems is digital discrimination. An e-culture activity which is formed by virtual museum applications could provide possibility to close digital discrimination.

(e) Virtual museums are correct and trustworthy information sources. Internet facilities provide opportunity to reach the information and also to publish information. Consequently the reliability of the information on internet is decreasing day by day. Museums become reliable information sources on Internet by developing virtual museum applications.

1.4 Types of Virtual Museums

Schweibenz[5] has categorised virtual museums on the internet as follows:

(i)   Brochure museum;

(ii) Content museum;

(iii) Learning museum; and

(iv) Virtual museum.

Brochure museums are the websites containing basic information like types of collection, contact details for informing potential visitors[5].

They are also internet applications which contain the basic information about the museum. As they give limited information about museum collection, they are likely a promotional webpage rather than a virtual museum. Content museums are the websites presenting collections online. Art objects are presented with identical database information. That kind of museums designed for experts to provide a detailed portrayal of the collections and has no didactical mission[5]. Content museum application presents the museum's collections and invites the virtual visitor

to explore them online. In this application, content is presented in an object-oriented way. It is more useful for experts than for laymen because the content is not didactically enhanced.

Learning museums are the websites designed for virtual visitors to interact in a context-based way. Information is presented according to visitors' age, background and knowledge. The site is didactically enhanced and the goal of the learning museum is to make the virtual visitor revisit and come to the museum to see the real objects[5]. In the learning museum's visitors can play games, see the virtual object and places in 2D or 3D. Virtual reality applications can create objects and situations those are not real and make the visitors feel in real environment. In this kind of applications there is no danger of art works to break, loose or damage. Visitors have no opportunity to touch the objects but they can look in different angles or situations[4].

The virtual museum is the next step to the learning museum, provides not only information about the institution's collection but link to digital collections of others. In this way, digital collections are created which have no counterparts in the real world[5].

Although there are some discussions about the virtual museums in point of definition, visitor experience and exhibiting objects, but it can be said that, initially a web museum application must present virtual objects and give virtual tour opportunities to visitors then it can be called a virtual museum.

1.5 Virtual Museums and Education

Experince is important in learning precess. Extraordinary experiences can provide greater effects in learning[10]. Museums can provide appropriate environments for education process by experiences. Virtual museum activities make visitors live more different experiences but the same goals. Meaningful learning is dependent to some principals. Some of them are:
- Learning requires a cognitive process,
- individual engage in a social environment,
- Individual communicates in a social environment,
- Individual is active,
- Individual manages knowledge and time according to own character,
- Motivation is important[3].

According to the above principles, virtual museums can provide not only learning environments but also discovering, interaction, and participation opportunities.

Museums have an important potential on enhancing learning. Virtual museums can contribute in classroom learning activities utilising that potential. Virtual museums can break the source and time constraints. They can provide accessing to rich and more different learning materials beyond the classroom walls to learners and teachers. Virtual museums are useful in child and adult education, social development, recognising historical heritage and other societies.

Lepouras & Vassilakis[4] have emphasised that participants reported their pleasure regarding 3D game based virtual museum. They also expressed virtual museums are prominence conceptions in edutainment. Okolo[11], *et al.* suggested that virtual museums are beneficial in history learning. Teacher and students can directly access to art works, historical objects, photos, texts, videos. Handicapped students can have the same opportunities. They also reported that there is an increase on achieving learning goals in education curriculums when virtual museums used.

2. A CASE STUDY: PERCEPTIONS OF PAINTING TEACHING PROGRAMME STUDENTS ABOUT VIRTUAL EXHIBITIONS

In the IT age, information is about change in terms of amount and quantity. So, individuals need to find direction, master, analyse, share and present information, collaborate by appropriate technologies and be life-long learners. Also societies need people qualifying those attributes. In the process of shifting from teacher oriented education to learner oriented education, people must acquire 21st century knowledge capabilities[12].

Teachers have great responsibilities in point of individuals to obtain those qualifications and to be a model to other people. So it is important for teacher candidates to obtain the skills for using information technologies and recognise different cultures. Teacher candidates should be able to realise teaching applications using information technologies with appropriate pedagogical approaches in their own fields. Teacher education programmes are being designed and implemented according to changing teacher and learner roles[12]. There are lessons including usage of basic information technologies and how to use those technologies in educational activities, computer supported distance education applications such as virtual museums. Virtual museums are found to be important in personal and occupational development of art teacher candidates.

2.1 Purpose

The main purpose of this research is to determine and evaluate how painting teaching programme students, attending the Basic Computer 2 course, perceive virtual museums and their perceptions about contributions of the virtual exhibitions to

personal and occupational development in education process.

2.2 Definitions

Blog:

A blog (a contraction of the term 'web log') is a web site, usually maintained by an individual with regular entries of commentary, descriptions of events, or other material such as graphics or video[13].

Occupational Development:

Development of teacher candidates regarding teaching profession.

Personal Development:

Development of teacher candidates regarding art knowledge and applications.

2.3 Importance of Study

This research is important because of following points:
- Gives hints to instructors lecturing basic computer education,
- Contributes personal developments of teacher candidates,
- Contributes occupational developments of teacher candidates,
- Contributes cultural developments of teacher candidates,
- Give hints to individuals and institutions in developing and designing virtual museums.

2.4 Research Questions

(i) What are the perceptions of teacher candidates towards virtual museums?

(ii) How does teacher candidates estimates virtual museums and virtual paintings?

(iii) What are the views of teacher candidates about the contributions of virtual museums to their occupational and personal development?

3. METHOD

3.1.1 Research Design

Research was designed as 'action research' and 'qualitative method' was used to analyse the data. Action research can be used when there is a need to improve a process or try to a new approach[14]. In this context, researchers considered virtual museums as a new approach and with Painting Teaching Programme candidates in Computer 2 lesson visited a virtual painting museum. Teacher candidates reflected their views towards virtual museums in their blogs.

3.1.2 Participants

Data was gathered from second undergraduate students of Pamukkale University Painting Teaching Programme in 2007-2008 academic years.

3.1.3 Data Collection Process

Computer 1 and 2 lessons took place in the programme of education faculties for 4 hours a week. The goals of these lessons were to make the teacher candidates to recognise basic computer technologies, to gain knowledge and experience about computer literature and computer supported education. There are also distance education applications in the curriculum of these lessons. So, a virtual museum visiting activity was realised according to Painting Teaching Programme as a distance education application. Visiting activity realised in 2 weeks means 8 lesson hours. Teacher candidates visited exhibitions; used tools designed to look into paintings and created their own collections.

3.1.4 Data Collection

Data was gathered from the blogs of participants. Willing candidates participated in the research. 20 of the 32 teacher candidates created their own blog page and 17 of them expressed their own views. Teacher candidates expressed their views about research questions.

4. DATA ANALYSIS

Content analysis was used to analyse the data gathered from the blogs.

4.1 Findings

4.1.1 Natural Perceptions of Teachers Towards Virtual Museums

Teachers considered virtual museums like an access tool to art objects and paintings. Virtual museums and the virtual exhibitions provide easy access opportunities in terms of time and source to individuals. Virtual museums also can provide visitors to see various and multiple paintings and look into them. These opportunities can open a door to new visitors, individuals interested in paintings, and artists.

Teachers also give a point to the interaction capability of virtual museums. This interaction may occur between individual, society and the artists and virtual museums can be ideal environments for interaction. This interaction can make the societies and cultures to be conscious, develop, give chance to catch developed countries. Also artist and art can get more valuable and change the views of people regarding art and artist in society.

According to teachers virtual museums can provide cultural values to present wide mass of people. In this context, virtual museums have an

important role in recognising and meeting other cultures and societies. Real or virtual museums have a potential on creating individual and social awareness about cultural richness. Cultural knowledge can be transferred between cultures and generations with virtual museums too.

Virtual museums can contribute on introducing and presenting cultural richness and extend the activities and the effectiveness of real museums. Convenience on individual or institutional presenting art works is important for society at large.

4.1.2 Views of Teachers Towards Virtual Art Works in Virtual Museums

According to teachers, virtual paintings cannot create the same impression like real ones. This is because of indirect interaction between human and virtual object. Seeing and looking in an art work on a brochure or display causes a dimension constraint. Brush strokes, patterns, volume, and dimension details are the important parameters when exploring a painting. Virtual paintings cannot provide those parameters and reflect the same effect.

4.1.3 Views about Use of Virtual Museums to Occupational and Personal Development

In the process of occupational development, teachers looked into the paintings and recognise painters as many as they and. It was possible to criticise, comment and compare the paintings in virtual museums so teachers were able to cherish. Thus, teachers improved their imagination, creativity, extend viewpoint and reflect to their paintings and drawings. Recognising different painters, styles, drawing and painting techniques are the requisites in the process of developing self style.

Creating original paintings need visual experience and visual richness. Virtual museums can provide visual experience and visual richness on account of quality and quantity.

Another point that teachers were impressed was getting general and detailed culture and knowledge regarding their field. Having efficient knowledge about painters, art works, art philosophies, and art trends, it is important both to their and their students' development. It is a necessity in the way of being a teacher and an artist.

Virtual museums can provide up-to-date information to teachers and students. Virtual museums present more comprehensive information in comparison with printed materials such books and magazines. Virtual museums can be considered as a useful lecture material for the lessons.

5. CONCLUSIONS

This research performed for seeing contribution of virtual museums and determining views of teachers towards virtual museums for teacher education. As a result, lecturers and the teachers had confident attitudes towards virtual museums and had a positive effect on the education process. In this context, teachers had positive approaches in terms of acquiring culture and constructing knowledge regarding painting, art, recognising painters and paintings, producing original art works, interacting between individual, society and artist, providing information sources to their students in teacher proficiency and career. They also stated that virtual museums have a positive impact on social development. Teachers had no confident attitudes towards virtual art works and paintings. According to them, virtual paintings cannot create the same effect and impression in terms of sensation, emotion and perception like real ones on the visitors.

Since curriculums are including field specific applications, this research can give some light to educators those are providing teaching computer lessons in teacher education programmes like virtual museums for Painting Teaching Programme. Positive or negative attitudes are one of the factors affecting the success of the applications based on which they can be rejected or included.

Also this research can contribute design process of virtual museums which are not only presenting places of the artworks but also providing interaction, information about artworks, including tools for looking in them.

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