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Interdisciplinary Approaches to Development Resources for Blended Learning

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Abstract: The article is devoted one of the important issues of digital pedagogic, namely how to implement museum open sources to learning practice of classical university. The authors consider this process at the sample of collaboration between Saint Petersburg State University and Russian State Museum. The Museum provides unique multimedia content and university experts make pedagogical adaptation of the content. Blended course 'Information Systems for Museums' examine as a sample of electronic resource which combined open and corporative sources.

Keywords: blended learning, e-learning, edutainment, multimedia learning, digital heritage

Introduction

Information technologies development has changed not only social institutes, but also anthropological characteristics of people. Education is area where crossing of these vectors is very noticeable; therefore, researches in the field of use of pedagogical potential of virtual space are in the center of attention of the modern scientific countries, which are in a segment of information society [1].

In the Russian Federation one of the main directions of the pedagogical theory and practice is research of eLearning possibilities for increasing of high education efficiency and implementation of the received results in educational process of educational institutions [2, 3]. St. Petersburg State University, being one of the oldest universities of Russia, is at the same time one of leaders of the higher education of the country and the initiator of the advanced developments in a wide range of scientific knowledge fields. Pedagogics is among them and the university provides experts and students with opportunity to use the University Blackboard Learn portal as a tool for modernization of Face-to-Face learning process to Blended learning practice.

It is obvious, that technological platform is insufficiently condition for implementation of a learning process. Learning Management System should maintain wide range of diverse resources and electronic segments of the blended courses are among them. Pedagogical design of such resources is based on interaction of three components: area of scientific knowledge of the course, pedagogical approaches and technological decisions.

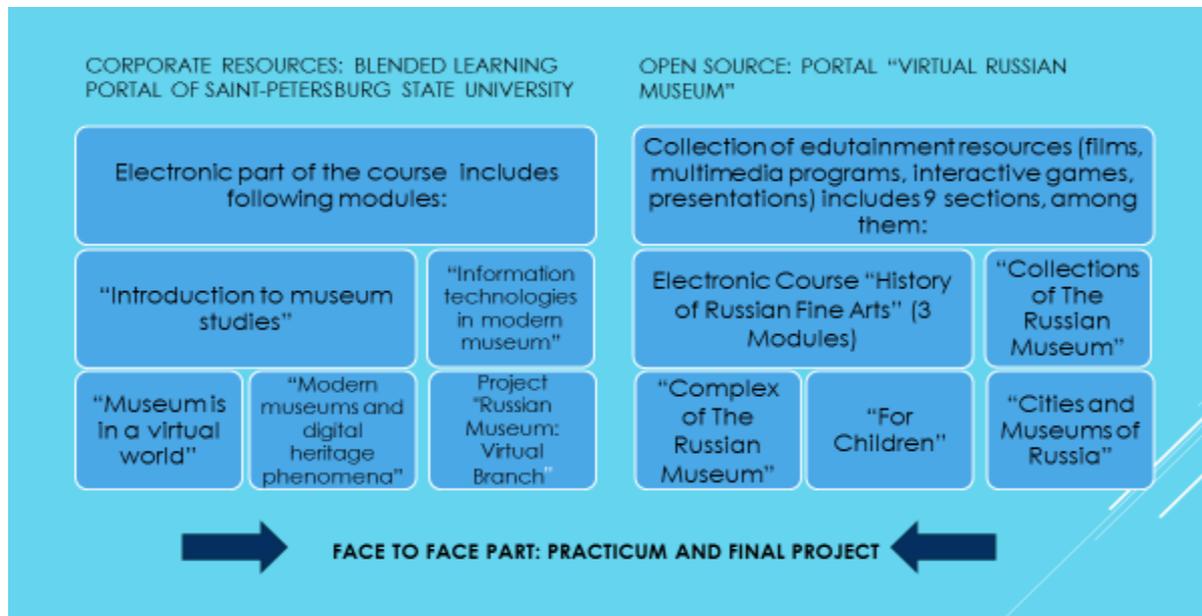
Pedagogical Theory

Theoretical basis of the research is following concepts Blended Learning [4], Social Constructivism [5, 6], Web Environmental Learning [7]. The theory of web environmental learning is developed by expert team led by Tatyana Noskova, Institute of Information Technologies in Education of Russian State Pedagogical University named after A. Herzen. It is a system of knowledge about specifics of educational process in information society. The theory benchmark is a priority of personal development of future specialist as a condition of his (her) successful professional implementation. Internet is considered as space of professional interactions among experts, therefore students should be taught special competences, for example, presentation of their research, evaluation of reliability electronic materials, participations in professional discussions etc. Application of these theory is presented in collaboration of Saint Petersburg State University and Russian State Museum [8, 9].

It is a challenge for students and teachers. Students, as digital natives, do not understand that Facebook and Web of Science expect different styles of communication from their audiences. Pedagogues, as digital immigrants, sometimes are shocked by style of forums where their students are in one's element. Presumably, the most convenient place for their communication is universities portals of blended learning. At the same time open web sources are extremely important for future professionals and in reality learning process takes place in two segments of Internet: "corporate gulf" and "open sea". In this case, teachers face two problems: (1) the design of resources are based on synergy of capacities of the "gulf" and "sea"; and (2) organization of educational process, aims to successful free floating of students in their professional future.

A sample of aforementioned resource is electronic part of blended learning course "Information Systems for Museums" is a required course on basic educational program Applied Informatics for Arts and Humanities (the direction 09.03.03 the Bachelor's level) at St. Petersburg State University, Faculty of Arts.

Corporate Resource is Blended Course of Classical University



Scheme 1. Structure of Blended Learning Course "Information System for Museums". Saint-Petersburg State Museum, Faculty of Arts. Fall terms of 2015/16, 2016/17, 2017/18 years.

The Course Aims

- to train of highly skilled, widely educated and professionally competent experts in a field of modern information technologies in museums of different profiles to give to students the necessary volume of knowledge on history of development of a museum as a specific sociocultural institute from antiquity to the present time;
- to acquaint students with variety of types of the museum; to show multilateral interrelation of the museum with various scientific disciplines and culture phenomena, esthetic and social characteristic of different eras;
- to show the specifics of development of the museum in information society and such trends as presentation of museums' collections in the virtual world, application of information technologies in museum space and participation of museums in creation of Digital Heritage phenomena.

The Course Content and Structure

The course content includes internal and external resources (Scheme 1) and is divided into following sections:

Unit 1. Introduction to museum studies

Unit 2. Information technologies in modern museum

Unit 3. Museum is in a virtual world

Unit 4. Impact of modern museums on development of digital heritage phenomena

Unit 5. Project "Russian Museum: Virtual Branch" is a unique museum institution of information society.

Internal resources are modules of the Course are published in the Blended Learning Portal of Saint Petersburg State University (Picture 1), and [10], and External Resources are Open Sources of Museums, Electronic Copies of Fine Arts Treasure Repositories and Massive Open Online Courses.

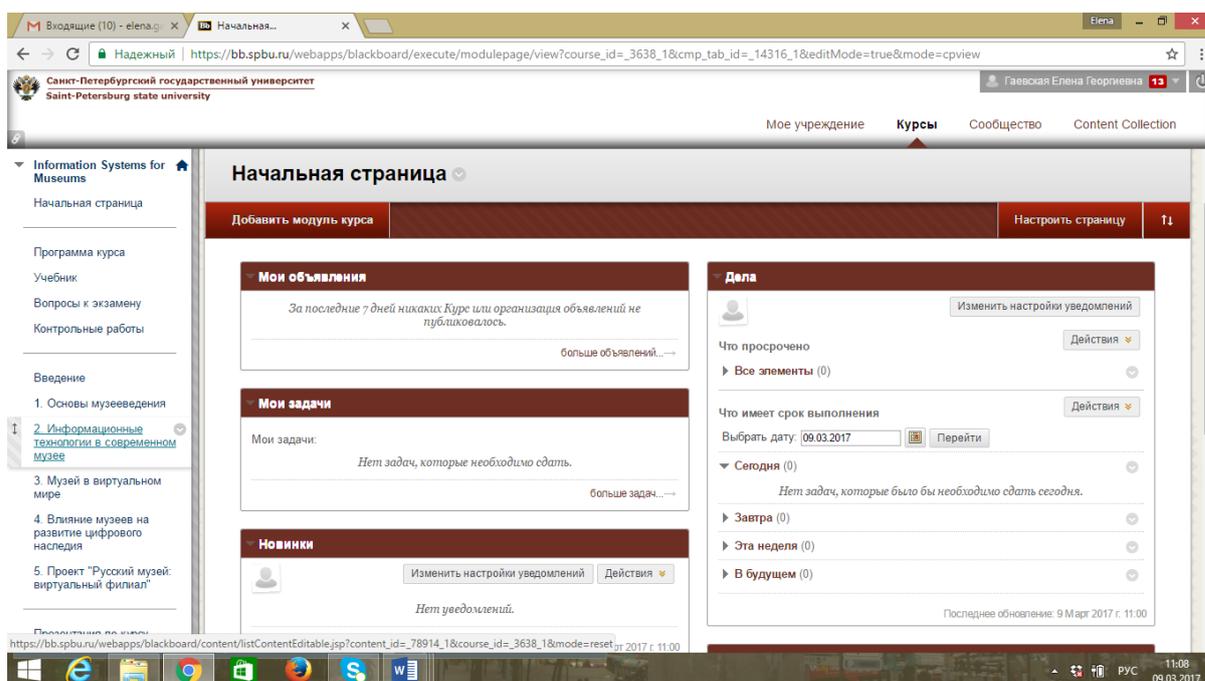


Fig. 1. Start Page of Blended Learning Course "Information System for Museums", Blended Learning portal of Saint-Petersburg State University

The Course Methodology

Experts more and more actively use such tools of communication as social networks, blogs, discuss of professional issues via videoconference, publish articles in electronic journals, etc. In this connection, development such competences as delivering results of researches in articles, oral presentations, participation in discussions, papers reviewing, etc. in virtual and face to face formats is very relevant in context of modern requirements to professional trainings. Consequently, the course methodology is based on combinations of these approaches.

Virtual Format: creation of the course thesaurus (service "wiki"), publication students' projects on the course forum, test on the main issues of the course modules, and blind review of the essays (service "Assignment").

Classroom format: Lectures, meetings with experts, visits to museums, consultation, discussion of projects.

A stable trend of nowadays is creation of technical possibilities for professional interaction at the institutional and individual level in the virtual space through Web2.0 technologies by different organizations. Many institutions of science and culture place on their portals services that provide possibilities to develop the network community of the organization, and pay great attention to their successful functioning. There are portals of museums and virtual collections of fine arts electronic copies among them. Studying these resources is important part of the course methodology; in particular, the students' final projects are focuses on creation presentations of one of them.

The outcome of the students' work is implementation of final projects, within they must demonstrate level of the competences mastered in the course of studying the materials of the preceding modules of the course. The project includes following stages (1) creation of presentation of a museum, an exhibition or exhibit, (2) publication the product on the course forum, (3) discussion the presentation with classmates in virtual and audience formats, (4) publication presentations in social networks, (5) external review and (6) defense of the project at the closing session.

The Course Learning Management System

The course is presented on Blended Learning portal of the St. Petersburg State University, which functions based on services Black Board LMS. This software provides with a set of services for students and teachers. The LMS allows the teacher to create conditions for the development of future professionals through the alignment of an educational path through gradual complication of learning tasks, based on the individual characteristics of students and to motivate them for personal development. It gives to students possibilities for comfortable interaction with internal and external learning environment.

Open Sources is Portal of Russian State Museum "Virtual Russian Museum"

One of the most successful examples of activities in this direction is the portal "Virtual Russian Museum". An unquestionable advantage of this resource is orientation to community of Russian Museum: Virtual Branch Project. The portal designers take into account the diverse needs of the network which includes international organizations of arts, culture, charity, science, and education. At the same time educational organizations cover a wide range of participants from secondary schools to universities.

News feed, archives of online lectures and video broadcasts records, social networks pages allow the portal to realize its functions of technological and resource base of a like-minded team, which join more than one hundred organizations from almost 20 countries. Each institution - participant of the project is provided with a personal cabinet, for presentation in the expert network, information about events taking place in the organization, or participation in joint projects.

At the same time, the portal has a significant pedagogical potential, consists in providing open access to multimedia publications, grouped in the following cycles:

- Complex of The Russian Museum: twenty films and multimedia programs about the Mikhailovsky Palace and the Mikhailovsky Castle, the Marble Palace, the Stroganov Palace,

Peter the Great's Cottage, Guardhouse, the Summer Garden and the Summer Palace of Peter the Great;

- Collections of the Russian Museum: more than one hundred computer, multimedia, and video films and interactive programs devoted to various aspects of the history of Russian fine arts; systematized by headings: Artists, Art and Religion, Funds, Technology, Theme in Arts, Folk Art, Associations, Styles, Collectors;
- The history of one masterpiece: more than twenty computer and video films;
- Cities and museums of Russia: more than twenty interactive programs, multimedia and video films;
- For Children: more than twenty interactive programs, multimedia and video films;
- Electronic course of the history of Russian Fine Arts: three modules "Art of the end of the XIX - early XX century", "Russian avant-garde", "Gardens of the Russian Museum";
- The Cycle of films "Century of Russian Fine Arts": Sixty three films about the history of Russian Fine Arts and museum work;
- Programs in foreign languages: twenty game computer programs, interactive programs, video films;
- For Branches: Eight video presentations and interactive programs.

Serious potential for the development of 'skills of networking' in the expert network is interaction with specialists. In this direction we use the enormous potential of the project "Russian Museum: Virtual Branch". Using the library project, meetings with experts, work on the portal allow the students to create a responsible attitude to work in the Network as an important part of the development of ethical and professional approaches to work on the Internet.

"The Russian Museum: Virtual Branch" is a large-scale international project that embodies the idea of access to the world's largest collection of Russian art. Among the participants of the project there are universities, cultural institutions and institutions of further education, Russian culture centers in cities of North-West and Central Russia, Siberia, the Urals and the Far East, as well as in Finland, Greece, Slovenia, China, India, Ukraine, Lithuania, Kazakhstan and other countries. The project is an international network of 91 organizations in 10 countries.

The project implements educational goals: involving a wider audience in sharing the values of Russian culture, the historical past of Russia, through free access to digital materials (computer programs on the history of Russian art, video, and electronic catalogs of major exhibitions), as well as formation of a single cultural and information space for the project participants.

St. Petersburg State University is one of the partners in the project. "Russia's oldest university" founded in 1724, St. Petersburg State University has deserved the right to be called one of the best universities in Russia: a rich historical past, current broad research activity, active development and innovation put SPSU at the forefront of Russian science. It is obvious that the cooperation of such organizations as St. Petersburg State University and the State Russian Museum opens perspectives for the development of a web community project as a whole.

"The Russian Museum: Virtual Branch" is not only the public access to artistic and scientific potential of the world's largest museum of Russian art, but also the possibility of fruitful cooperation on the basis of joint educational and research projects. Two major areas are developed on the basis of the project in St. Petersburg State University: student learning and collaboration of experts in the arts and humanities.

Computer programs on the history of Russian art, videos and electronic catalogs of the largest exhibitions offered by the Russian Museum to virtual branches, can most fully and vividly present to students the artistic culture of Russia. In addition to the preservation of the Russian cultural and historical traditions, the project allows creating a multicultural environment involving partners from other countries and cultures.

One of the main requirements of the modern university education is that the students are involved in research work at the earliest stages of learning. Students have possibilities to meet experts of the Russian Museum, collaborate on degree projects.

It is impossible to imagine a modern university without active research work and international cooperation. Among the projects of this kind we would like to mention the conferences held in partnership with our organizations: International Workshop on Sustainable Development of Museums (2007), Development of Information Technology at the Museum (2008) and events are held by Russian State Museum in frame of the Saint Petersburg International Cultural Forum (2012–17).

Conclusion

Long-term cooperation of the university and the museum meets modern trends of education development. It allows students to receive high quality multimedia resources for learning sessions, which conduct in classroom and virtual space, and to be included in communication with team of experts at an early stage of professional training. Sometimes it is possible to establish a network communication between students and professionals, for example, in the case of reviewing the students' projects.

At the same time, practice shows that in the process of university -museum cooperation occur challenges are related to the specifics of the partnership participants. In this case, the issues lie in the fact that the university and the museum have specific goals in the field of pedagogical activity: museum field of activity is edutainment, but university area is professional education. In this connection university have to make Pedagogical adaptation for the resources are created by the museum and then include them to educational process of university. The adaptation usually is development of some exercises, questions, tests accompanying film or multimedia program. The museum addresses to academic capacity of the university in such projects as seminars, conferences, competitions, and we will have opportunities to master new directions of common activity.

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Междисциплинарные подходы к развитию ресурсов для смешанного обучения

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Аннотация: Статья посвящена одному из важных вопросов цифровой педагогики, а именно внедрению музейных открытых источников в практику обучения классического университета. Авторы рассматривают этот процесс на примере взаимодействия Санкт-Петербургского государственного университета и Государственного Русского музея. Музей предоставляет уникальный мультимедийный контент, а университетские специалисты осуществляют педагогическую адаптацию контента. Смешанный курс "Информационные системы для музеев" рассматривается как образец электронного ресурса, объединяющего открытые и корпоративные источники.

Ключевые слова: смешанное обучение, электронное обучение, игровое обучение, мультимедийное обучение, цифровое наследие

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