ТЕОРИЯ И МЕТОДИКА ОБУЧЕНИЯ И ВОСПИТАНИЯ (ПО ОБЛАСТЯМ И УРОВНЯМ ОБРАЗОВАНИЯ)/THEORY AND METHODS OF TEACHING AND UPBRINGING (BY AREAS AND LEVELS OF EDUCATION)

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REDESIGN PROBLEMS IN MAGISTER E-COURSES IN TECHNICAL HIGHER SCHOOLS

Research article

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Abstract

In this paper, the authors evaluate the Masters educational needs according to the current political and economic educational conditions in Russia, analyze the educational approaches in connection with educational programs in Technical Higher Schools. They determine the most important purposes and tasks for E-courses structure and the reason it should be redesigned. All these aspects are connected with the process of Masters, professional skills and competiveness development.

This research can be the reason to recommendations for educational institutions to moderate the Masters learning processes in a Higher School creating a modular E-learning environment. Also, it is possible to create certain educational programs which will be able to monitor the results of E-course combination with the best aspect of electronic and traditional learning.

The authors proved that creating a personal learning environment taking account the individual approach increases the Masters involvement in the learning process. It stimulates their interest in the discipline and gives them the opportunity to become a competitive specialist in the modern professional labor market. The authors tried to represent the masters' professional skills competiveness on the Blended Learning model on the Russian online platforms.

Keywords: Masters, professional skills and competiveness development educational needs, E-courses, Technical Higher Schools, educational purposes and tasks, LMS MOODLE, Blended Learning, web-portfolio.

ПРОБЛЕМЫ РЕДИЗАЙНА ЭЛЕКТРОННЫХ КУРСОВ МАГИСТРАТУРЫ В ТЕХНИЧЕСКИХ ВУЗАХ

Научная статья

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Аннотация

В этой статье авторы оценивают образовательные потребности магистров в соответствии с текущими политическими и экономическими условиями в сфере образования в России, анализируют образовательные подходы в связи с образовательными программами в технических высших учебных заведениях. Они определяют наиболее важные цели и задачи для структуры электронных курсов и причины, по которым она должна быть пересмотрена. Все эти аспекты связаны с процессом обучения в магистратуре, развитием профессиональных навыков и конкурентоспособности.

Это исследование может стать основой для рекомендаций образовательным учреждениям по организации процесса обучения в магистратуре в высшей школе с помощью модульной среды электронного обучения. Также можно создавать определённые образовательные программы, которые позволят отслеживать результаты сочетания электронного курса с лучшими аспектами электронного и традиционного обучения.

Авторы доказали, что создание индивидуальной учебной среды с учётом индивидуального подхода повышает вовлечённость магистрантов в процесс обучения. Это стимулирует их интерес к дисциплине и даёт им возможность стать конкурентоспособными специалистами на современном рынке труда. Авторы попытались представить конкурентоспособность профессиональных навыков магистрантов на модели смешанного обучения на российских онлайн-платформах.

Ключевые слова: магистры, профессиональные навыки и развитие компетенций, образовательные потребности, электронные курсы, технические высшие учебные заведения, образовательные цели и задачи, LMS MOODLE, смешанное обучение, веб-портфолио.

Introduction

The Masters educational needs, purposes and tasks for E-courses, electronic and traditional learning issues and advantages and problems of Blended Learning are the points which can give the opportunity to provide Masters with professional skills and competiveness that they can use in their future professional field.

At present, digital information technologies in the whole and in English teaching is paid great attention. It is connected with the fact that the High School is always considered as a place of knowledge development and generation, a source of

technologies vitally necessary for society. Despite the difficulties in studying English because of political and economic transformations, this subject requires full mastering as only language provides multicultural connections and relationship that create the society advance and progress. Multicultural environment in Russian Higher Schools is believed as a prior development of a School in many road maps. But such environment creation process is still being formed and all the attempts are on the initial stage. University language environment integration is one of the indications characterizing its internationalization and digitalization. The main results of this process are global mobile activity, publications, research work and scientific collaboration.

Research methods and principles

In this connection, the *topicality* is in searching methods which let accelerate the process of internationalization and digitalization in Russian Technical High School. Future specialists, the Masters, can be prepared with the help of Internet technologies forming new thinking and labor optimization. Also, educational needs were analyzed and determined; the Masters E-courses peculiarities were selected; the reasons for redesigning E-Learning conditions were worked out; the results of their application were evaluated.

We used the following *methods* to solve the determined tasks: theoretical — analyzing the interdisciplinary literature, diagnostical — survey, testing, self-evaluating, empirical — pedagogical experience summarizing and qualitative and quantitative experiment data analyzes.

Discussion

The purpose of the Siberian Federal University is to prepare the competitive specialists in the modern labor market, taking into consideration the current environmental changes in all spheres of our life. The university is an institutional organization which has the right to provide the Diplomas, Certificates and Licenses to the young specialists in many fields. This means that the High School lecturers are obliged to fulfill all the formal requirements of Ministry of Education, be monitored by Ministry departments, conducts lessons, create E-Learning environment, make working programs and etc. At the same time they must be flexible, modern and interesting. Especially, in Technical Schools, teaching such discipline as Business English is very important and complicated.

There are the following main skills to be mastered by the lecturers to work in the Masters Department:

1. To evaluate Masters educational needs. It lets form target audience, find out Masters Knowledge drawbacks, and define the required results.

2. To select the appropriate educational approach. Depending on the analyzed results, a lecturer understands which approach is to be chosen.

3. To work out an educational program. To think about the format — classroom, distant, blended.

4. To choose and produce learning materials. A lecturer must design tasks based on real life situations that help Masters to fulfill them consciously.

5. To interact with future Masters employers. Employers make and order the current labor market [1].

The authors work at different technical faculties such as Radio, Physics, Economy, Building, Ecological and so on. We have a great number of Masters and make up working programs and E-courses for them. We use a lot of instruments, but the main core of our learning system is LMS MOODLE platform provided by our university, and we try to make all educational activity be fulfilled here. These E-courses must be regularly redesigned with the aim to form Masters professional competences together with their ability to analyze scientific investigations' results, apply them while solving scientific tasks in the professional and research work and conduct this work autonomously [2], [3], [4].

LMS MOODLE platform suggests different opportunities to create the E-courses' tasks amazing, feasible and at the same time effective and teaching. They are based on federal state educational new generation standards realization. Creating these E-courses we used such pedagogical technologies as systems, project and modular rating ones, multilevel training and case studies. But in Masters professional training, web-portfolio technology wasn't worked out enough. It is used in Russia in some cities including Krasnoyarsk, but not everywhere. Today, the collected data of its using and adaptation to Technical Higher Schools' demands are responsible for its practical realization.

Despite the previous experience of web-portfolio technology using, there is not a united scientists' opinion about its characteristic features. It is connected with lack of Russian and foreign experience generalization in modern condition of Russian Higher School. Web-portfolio evaluation criteria and stages of its creation are not enough described, as well as pedagogical circumstances of it applying in the Masters' professional training system. Its working out condition problem analyzes of web-portfolio using in the Masters' future professional activity gave the opportunity to find out the contradictions between the following points: informatization in all levels of educational system development and lack of participants of all modern educational technologies realization during educational process using web-portfolio technology potential opportunities in Masters professional skills training and indeterminacy of didactical mechanisms and tools that will promote this process effectiveness [5].

One more disputable and cute technology is using artificial intelligence for solving educational tasks. We can introduce in the course such technologies as Oxford Text checker, Learning Wall, Word wall which help the masters analyze professional lexis, filter and create professional terms and make exercises. Learning Apps creates the collection of readymade language materials. Such tools as Quillot and AiGPTbot give the masters the opportunity to process natural language and visualize data respectively. Elicit and Scispace finds, analyzes, generates the Literature and helps the masters to write papers. BibMe and Zotero correct the bibliography automatically [2]. All these technologies and tools make the masters work in the E-course easier and motivate them to learn autonomously. But due to topicality of such instruments, application lecturers must constantly control and analyze its results.

On the bases of these contradictions, we determined the investigation problem — what are the pedagogical conditions of Masters professional skills formation with the help of E-courses in general and the web-portfolio technology using in

particular. This technology implementation in the E-courses, being a web-based recourse, could reflect Masters' learning or professional progress. So, we introduced in the course the website which shows all results — grammar tests results, projects fulfillment, Masters Interaction, taking part in Forums discussions, making Technical English Glossaries, writing scientific papers, taking part in conferences and so on. Also, the grar attention was paid to control the masters work in the course. It shoud be redesigned according to its automatization – through mini websites, web-portfolio, LMS systems, distant technologies with the help of video communications [6], [7]. At the end of the course, the masters should give the feedback answering the questions in the questionnaire developed by the authors to find out certain difficulties faced by the masters during the work in the course. This technology changed the Masters' learning activities and let them work autonomously. Also, it increases their motivation to use the scientific potentiality in the future professional activity.

Stage by stage studying the E-courses modules gives them the opportunity to form professional competence developing their personal features. That is why the E-courses target is to provide the Masters training of high level which will form and develop the professional competences [8], [9], [10], [11].

During the work with masters in the course were defined the following points to be considered while redesigning it:

1. Educational standards realization.
2. Future masters competence formation according to changeable employers' demands.
3. Creation of masters' positive motivation to learning and self-studying.
4. Course tasks working out paying attention to the principles of professional orientation, interdisciplinary integration, scientific approach and availability.

Also, the lecturers must prepare E-course learning methodical accompanying, professional competence list and software tools selection.

Conclusion

In conclusion, it should be noted that the E-course redesign should be done according to pedagogical science, while achieving the practical direction. The educational methods and forms that provide the main competences' intensive mastering are to be applied. This enables personal development to be more effective. To achieve professional drive, it is important to organize the long-lasting and stable knowledge mastering process and correct the E-courses' content systematically [12], [13], [14], [15].

The tasks in the course must motivate the magisters positively to gain the professional competences. They may include interactive forms, means and methods of education. The course should provide informational and communicational environment for masters' research activity as it is one of the main masters work.

Конфликт интересов

Не указан.

Рецензия

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Conflict of Interest

None declared.

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