OFFICIAL WEBSITE OF A HIGHER EDUCATION INSTITUTION AS A MECHANISM FOR THE IMPLEMENTATION OF INFORMATION OPENNESS

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Abstract

The article presents an approach based on the use of software for publication, collection and use of information from official websites of HEIs, including during state accreditation of educational activities. An information technology based on the program - a web spider that automatically scans sites for search of information and further storage of the identified structured data from marked fields in the data warehouse was developed. This technology ensures not only the information openness of the higher education system, but also allows for an automated implementation of a part of the external review procedure. At the same time, more attention during external review is paid directly to the education quality assessment.

Keywords: Official website of the educational organization, information openness of educational activity, search Internet robot.

1 INTRODUCTION

The requirement for information transparency at the European level is provided for by "Standards and Guidelines for Quality Assurance in the European Higher Education Area", ESG (Standards and Guidelines, 2016). Standard 1.8 prescribes: "Institutions should publish information about their activities, including programmes, which is clear, accurate, objective, up-to date and readily accessible."

The information transparency of an educational organization's activities in the Russian Federation is stipulated by the legislation. The Law "On Education in the Russian Federation" establishes that "educational organizations form open and accessible information resources containing information about their activities and provide access to these resources by posting them on information and telecommunication networks, including on the official website of the educational organization on the Internet" (Federal law "On Education in the Russian Federation"), a list of data and documents required for publication is also defined.

2 MATERIALS AND STUDY METHODS

The list of data for publication and technical requirements for its placement is specified in by-laws: the order of the Federal Service for Supervision in Education and Science dated 05.29.2014 № 785 establishes the structure of a special section "Information about the educational organization", which educational organizations are obliged to create and keep relevant on their websites, as well as some technical requirements for the information layout (requirements to the navigation mechanism, valid file formats, etc.) (Order of the Federal Service for Supervision in Education and Science). In addition, all pages of the official website included in the section "Information about the educational organization" must contain special html markup allowing for unambiguous identification of the information to be posted, and the data marked with the specified html should be available for viewing by website visitors on the relevant pages of the special section

(Order of the Federal Service for Supervision in Education and Science). Such markup enables to automate the procedure for collecting information from HEIs' official websites for its further use, including during the education system monitoring.

An information technology for collecting and posting information on official websites of HEIs based on the program - a web spider that automatically scans sites for search of information and further storage of the identified structured data from marked fields in the data warehouse was developed (Petropavlovskiy M., 2017; Petropavlovskiy M., 2016).

The program – web spider addresses the pages of educational institutions' websites as a regular Internet browser. If the page is successfully received, the program saves it in a new data set and tries to parse the information. As a result, there appears a data set on the educational organization containing copies of the Internet pages and the structured data itself.

The saved pages are analyzed as follows. The program recursively analyzes the information in all page tags. If an attribute is found in a tag, it is compared with a dictionary containing the required attributes. If positive, the data is recorded in pairs (attribute name - value).

The next element of the information technology is the software product *"Data collection module for a special section of the educational organization's website"*. The collection module is designed to enter data, adjust information in a special section for updating, as well as to automatically generate html pages in a special section "Information about the educational organization" in accordance with the requirements of the regulatory framework.

3 RESULTS AND DISCUSSION

Thus, the main stages of the automated data collection and publication on official websites of educational organizations include:

-   Information input by educational organizations using the software "Data collection module for a special section of the educational organization's website";

-   Automatic generation of html-pages of a special section "Information about the educational organization" and their layout on official websites on the Internet based on the prepared data, and the special markup allowing for automated data collection is entered into the generated html-code by the program;

-   Automated collection of data from the marked html-pages of a special section on official websites is carried out by the software module once a month to update the information. The collected data is integrated into the data warehouse;

-   The collected data are used to provide systematic monitoring of the implementation by educational organizations of the legislation requirements for publication of the required information on their official websites.

It should be noted that European and Russian requirements to the content of information posted by educational organizations coincide to a large extent. At the same time, websites of Russian educational organizations contain a significantly more complete information structure allowing both applicants, students, graduates, employers and other stakeholders to obtain comprehensive information. Additionally, a detailed study of technical aspects for posting public information (requirements for the information structure, presentation format, its layout) makes it possible to organize automated collection, publication on the website and analysis of this information.

4 CONCLUSIONS

The information openness of HEIs is one of the important elements of the quality assurance system and is especially crucial for large educational systems covering a significant number of organizations and student enrolment; Russia also belongs to them. Successful practices of the automated collection of information from HEIs' official websites into databases and its use in monitoring studies, for informing the public, employers, and other stakeholders, demonstrates the advantages over the existing methods of information placement and manual collection, as it provides not only information openness of the higher education system, but also allows to automate the process of data collection in quality assurance procedures.

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