

# INCORPORATING DIGITAL HERITAGE CONTENT INTO INFORMATION SCIENCE PROGRAMS

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## ABSTRACT

Information science is an area that does not actually have a generally accepted definition that everyone would agree with. The reason for this may be because the field itself is still considered relatively young, but also because it is strongly linked to other disciplines, such as information technology (IT). Information sciences follow and adapt to advances in technology that have become a very important support in their work. "In the 1990s, the Internet opened the door to information and communication, creativity and digital libraries in today's sense of the word" (Zubac & Tominac, 2012, p. 68). With the help of the Internet, or one of its parts - libraries through digitalization, storage and protection provide access to their own material. During their studies, information science students at the University of Zadar develop competencies necessary for building and managing collections of materials and information, information organization, design and provision of information services, research and analysis of information needs, problems and phenomena, organization and management of information institutions and networks, educational processes, cultural projects and scientific research, and training for lifelong learning. But is there a focus on digital libraries, the digital transformation, and the library profession of the future? Do students have the opportunity to participate in digitization and the creation of digital information services? The aim of the poster is to show the ways in which content related to all aspects of creating, collecting, processing and managing digital heritage is included in information science programs conducted at the Department of Information Science, University of Zadar, Croatia, and how information science students actively participate in the creation of digital heritage content and their creative use. The active participation of students in the project Digitization, bibliographic processing and research of texts of the Zadar-Šibenik area until the end of the 19th century written in Glagolitic, Bosnian and Latin (further in text: Written Heritage) and their assignments on the project itself as an example of good practice. The phases of the project in which students participate will be described and explained with the aim of defining the competencies that students develop through the project and through courses related to digital libraries, digitization and digital transformation in general.

**Keywords:** digital heritage; information science; digitalization; University of Zadar

## INTRODUCTION

Information science is defined as a scientific discipline in the field of social sciences that deals with the creation, collection, organization, interpretation, storage, retrieval, dissemination, transformation and use of information, especially with the help of information and communication technology (Hrvatska enciklopedija, 2020). There are many University information science programs in the world that use digital technologies and digitization in their programs, but in this paper the focus will be on the Department of Information Sciences of the University of Zadar. The advent of the Internet has opened the door to information and communication, creativity and digital libraries in today's sense of the word (Zubac & Tominac, 2012, p. 68). With the help of the Internet, or one of its parts - libraries through digitalization, storage and protection provide access to their own material.

The digitization of library materials and the design of digital collections have changed the role of librarians. The librarian is thus less and less a custodian of material, and more and more a

provider of access to digital material and the preservation of cultural heritage.

Information science students at the University of Zadar develop a large number of competencies during their studies, but the question arises: do they develop the competencies necessary to work in a digital environment? What is the focus on digital libraries, the digital transformation, and the library profession of the future?

## RESEARCH

The aim of the poster is to show the ways in which content related to all aspects of creating, collecting, processing and managing digital heritage is included in information science programs conducted at the Department of Information Science, University of Zadar, Croatia, and how information science students actively participate in creating digital heritage content and their creative use.

For the purposes of this research, the method of content analysis was used. The website of the Department of Information Sciences and syllabuses that are in open access on the website were analyzed, with the aim of finding those courses and projects that are partly or fully focused on digital libraries, digital transformation and the library profession of the future.

## RESULTS

Before we present the results, it is important to emphasize that only those segments from the courses dealing with digitization and digital heritage will be presented here, and not the whole syllabus of the course.

At the undergraduate level, there are three courses that introduce students to cultural heritage, digital repositories, digitization, and cultural heritage research in the digital age. The first course that is important to mention is *Fundamentals of information technology*. Although this course is not directly related to digital heritage and digitization procedures, it is important because it introduces students to modern information technologies, their capabilities and achievements and this is quite important for students to get a perception of the impact of digital technology on heritage institutions and heritage. The second course selected for syllabus analysis is *Fundamentals of Oral and Written Culture*. The course discusses the concept of heritage including all types of heritage, as well as the problem of communication of heritage, especially in the context of heritage institutions. In addition, students in this course intensively discuss digitalization and cultural heritage research in the digital age. The third course that introduces undergraduate students to technologies and digital repositories is *Digital Multimedia*. Through the course, students develop the skills they need to create works in a variety of digital media.

At the graduate level, there are two courses that educate students in the context of digital heritage, digitization and digital collections. The first is *Digital Humanities*. In this course all aspects of digitized text processing and presentation are explored, as well as all aspects of data use, large data sets problems in the humanities including dissemination of information on research results and presentation of written heritage in the digital environment. Students are introduced to the comparative advantages of text research in the digital environment with the use of marking tools and other possibilities of digital text research.

The second course is *Modeling and Construction of Digital Collections and Services*. This course explores the theoretical and practical aspects of activities related to the construction and management of digital libraries, including repositories and digital archives. The aim is to achieve a broad understanding of digital libraries, including the creation and organization of digital libraries, the technologies used in doing so, access management, as well as social and economic factors.

For the purposes of this paper, the project Digitization, bibliographic processing and research of texts of the Zadar-Šibenik area until the end of the 19th century written in Glagolitic, Bosnian and Latin (further in text: Written Heritage) was analyzed as an example of good practice of student involvement in digitization and digital cultural heritage projects. The project has many goals, and as one of the most important that can be singled out are: digitization of Glagolitic manuscripts of Zadar provenance and watermarks on paper with the help of special conservation-safe methods and research of manuscripts with the help of digital tools.

The participation of students in all project activities is especially important, which is why the project also acted as a teaching laboratory for information science students. Students of information sciences through professional practice on the project acquired knowledge and skills in the field of protection and digitization of old and rare material and sensitivity to this particularly endangered material of cultural heritage. Students were in charge of: digitization using Traveller TCCS 4232 stand, photo processing, naming photos and archiving. All participants received training concerning the expert handling of manuscripts, operating the 'Traveller' and the camera. The project also developed a Working Group for the research of watermarks, within which students were in charge of digitizing and describing watermarks on Glagolitic manuscripts paper of the Zadar area.

## CONCLUSION

This paper sought to investigate how much focus the Department of Information Sciences of the University of Zadar puts on digital libraries, digital transformation and the library profession of the future, and whether students have the opportunity to participate in digitization and digital cultural heritage creation. The syllabus analysis showed that there are several undergraduate and graduate courses that can prepare students to work in a digital environment. Of particular importance, this paper places on the project Written Heritage, which educated students on the procedures of digitization of old and sensitive manuscripts that are of great importance for the culture of the city of Zadar. Students had the opportunity to participate in the processing, description and preservation of digital cultural heritage. It is important to emphasize that the project continues its work within the *Center for Glagolitic Research* at the University of Zadar. For future research, it would be interesting to analyze how students will be involved in the future work of the project and what other segments can help them become professionals of the future.

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# Incorporating digital heritage content into information science programs



## Introduction

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The advent of the Internet has opened the door to information and communication, creativity and digital libraries in today's sense of the word (Zubac & Tominac, 2012, p. 68). With the help of the Internet, or one of its parts - libraries through digitalization, storage and protection provide access to their own material.

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Information science students at the University of Zadar develop a large number of competencies during their studies, but the question arises: do they develop the competencies necessary to work in a digital environment? What is the focus on digital libraries, the digital transformation, and the library profession of the future?

## Research

The aim of the poster is to show the ways in which content related to all aspects of creating, collecting, processing and managing digital heritage is included in information science programs conducted at the Department of Information Science, University of Zadar, Croatia, and how information science students actively participate in creating digital heritage content and their creative use.

For the purposes of this research, the method of content analysis was used. The website of the Department of Information Sciences and syllabuses that are in open access on the website were analyzed, with the aim of finding those courses and projects that are partly or fully focused on digital libraries, digital transformation and the library profession of the future.

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### UNDERGRADUATE LEVEL

#### Fundamentals of information technology

- introduces students to modern information technologies, their capabilities and achievements
- Through lectures and exercises, students become more intensively acquainted with basic web technologies, ways of searching for information on the Internet

#### Basics of oral and written culture

- the course discusses the concept of heritage including all types of heritage, as well as the problem of communication of heritage, especially in the context of heritage institutions
- the course intensively discusses the digitization and research of cultural heritage in the digital age

#### Digital multimedia

- Students get acquainted with technologies and digital repositories of media content. They acquire the skills and knowledge needed to create works in a variety of digital media
- students create and design multimedia content using a variety of digital applications

### GRADUATE LEVEL

#### Digital Humanities

- students are introduced to the comparative advantages of text research in the digital environment with the use of marking tools and other possibilities of digital text research.
- all aspects of digitized text processing and presentation are explored, as well as all aspects of data use large data sets problems in the humanities including dissemination of information on research results and presentation of written heritage in the digital environment

#### Modeling and construction of digital collections and services

- The aim is to achieve a broad understanding of digital libraries, including the basic concepts, types and formats of digital objects and the creation and organization of digital libraries

## Written Heritage project

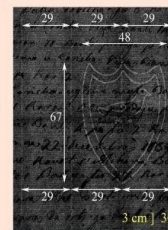
Project aims:

- digitization of Glagolitic manuscripts of Zadar provenance and watermarks on paper with the help of special conservation-safe methods,
- research of manuscripts with the help of digital tools

The project also acted as a teaching laboratory for information science students.



Students are in charge of: digitization using Traveller TCCS 4232 stand, photo processing, naming photos and archiving



Watermark Research Working Group: identification and digitization of watermarks with the aim of creating an atlas or catalog of watermarks