Embracing the digital era: the case of Zagreb City Libraries

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Abstract:

Zagreb City Libraries are a modern and well-organized network of 42 public libraries and 2 mobile libraries with 77 stations. They provide equal access to traditional services as well as modern information and communication technology to all the citizens of Zagreb and Zagreb County.
Digital transformation is defined as "the use of technology to radically improve the performance or reach of enterprises" (Westerman, Bonnet, and McAfee, 2014). This paper will present how Zagreb City Libraries participate in digital transformation through their services and programs and help their patrons to stay in touch with digital changes.

The 2014-2020 strategic plan of Zagreb City Libraries defines the organizational goals of the institution and aims to use new technologies to strengthen the existing services and provide new services to patrons of all age groups so that new generations of patrons can successfully "grow with the library". The main goals are: encouraging and supporting the development of knowledge and excellence, developing an inspiring cultural environment and human resources, and developing the managing system. Zagreb City Libraries also support knowledge and skills development, encouraging the creativity and entrepreneurship of their patrons.

Zagreb City Libraries provide information and sources in the virtual world through responsive web pages, OPAC, the Anniversary Calendar, Digitized Zagreb Heritage, virtual exhibitions, social networks, services like Ask a Librarian and E-Citizen... New services include the online reservation of books and audiovisual items and E-book lending.

Browser-based file sharing applications (Google documents, Dropbox, ISSU, YouTube) let patrons access materials from the events they missed.

Zagreb City Libraries support technological learning and conduct various free workshops, such as information and computer literacy for senior citizens, and coding workshops, gaming workshops, and 3D printers for young patrons.

Zagreb City Libraries do all of the above to help patrons access, interact, and engage with the new digital environment.

Introduction

Zagreb City Libraries (ZCL) are Croatian's largest modern network of public libraries, that consists of 42 libraries, with 2 central libraries and 12 district libraries with 27 branches, while the Bookmobile service has 2 buses that stop at 78 locations in the City of Zagreb and Zagreb County. The network was created during 40 years, starting in 1967 as the beginning of the integration of Zagreb's libraries which ended in 2007 when the last four district libraries with their branches were integrated. Members need to obtain one library card to borrow materials from any of the libraries in the network.

The size of the network and activities can be easily shown through statistical data for 2018: in 42 libraries with the total size of just 18.098 m^2, 440 professional employees were managing 2.444.929 books, AV and other library materials, serving 241.383 library card users. They also organized more than 4.000 cultural activities for adults, 18.000 different activities for children and 1.833 exhibitions. During the realization of the program, the ZCL cooperated with more than 1.000 Croatian and international institutions and associations. Educated and professional staff ensures the highest level of services for library users.

Providing access to different resources, various information and cultural events is a basis for lifelong learning, independent decision making and cultural development of individuals and larger social groups. Zagreb City Libraries, as a modern network of public libraries are working on a measurable increase in using public library services and at the same time participating in constant digital transformation and a world where technology is always changing. Special care is given to citizens who are in danger of being excluded on either social or digital access basis, marginalized groups but also programs for children and young people, people with disabilities and older people. Library is no longer only a building where users come to borrow books but also a space for inspiration and innovation.

This paper will present different kind of workshops (IT, STEAM, micro: bit, VR) with which Zagreb City Library participate in digital transformation through their services and programs and help their users to stay in touch with digital changes. As Westerman, Bonnet,

and McAfee, 2014 assert digital transformation cannot happen without digital investment that serve to creatively enhance customer experience. According to Westerman, Bonnet, and McAfee digital transformation includes among other things 3D Printing, Robotics, Augmented Reality and that digital masters understand that innovation comes from creatively bringing together multiple digital and physical channels to create new and improved customer experiences and encourage continual innovation.

Strategic plan of the ZCL

Strategic plan of the Zagreb City Libraries for 2014-2020 defines organizational goals of the institution, and how with the use new technologies, to strengthen existing and provide new services for users of all age groups so that new generations of users can successfully "grow with the library."

Three main goals are:
1. Encouraging and supporting development of knowledge and excellence
2. Developing inspiring cultural environment and human resources
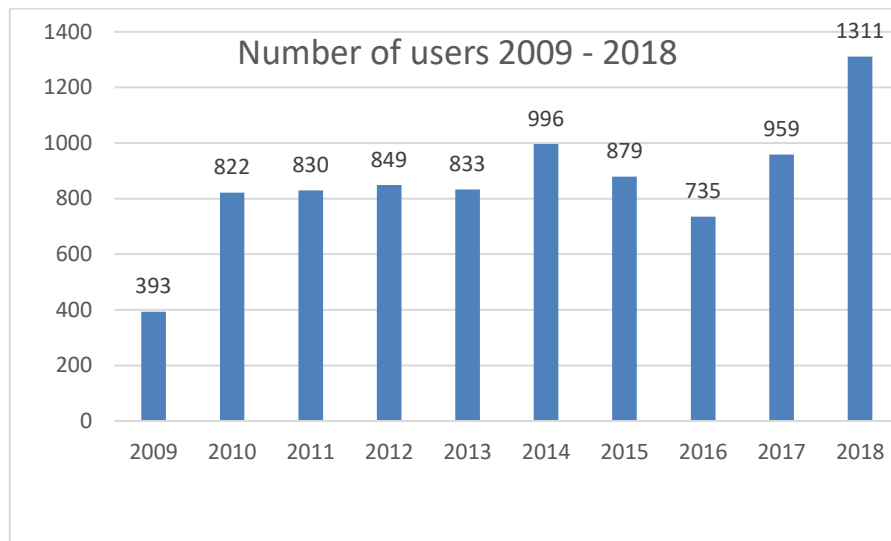3. Developing the managing system

For this presentation the third goal is the most important one aimed at creating conditions for keeping track of fast changes in ICT and challenges that libraries face in the age of continuous development of the media for transferring knowledge, the need to help citizens to become e-citizens and ensuring services and programs for digital environment. To have more efficient employees that will be ready to face continuous changes not only in technology but also in legislature, the ZCL supports continuous education for librarians in great measure which is very important in implementation of workshops that will be presented in this paper.

IT workshops

IT Workshops for Senior Citizens within the "65plus" project are being implemented since 2008 in ZCL. The program, among other things, consists of IT workshops and informational literacy of Senior Citizens of age 65+. The first workshop was launched in 2004 by a volunteer (library advisor Vesna Turčin) whose engagement has had positive effects on users that have acquired new knowledge. Based on the implementation of these initial volunteer workshops, the "Information Literacy Hour" was created, which is being implemented today in 17 network libraries. The workshops were initially run by the librarians of ZCL, but with the increase of users volunteers were included.

The program was made to fit the needs of individual users and, depending on the library, encompassed a whole spectrum of knowledge and skills: from desktop and portable computer work (Internet search, email use, use of writing and computing programs: Word, Excel ...), through tablet work (browsing photos, reading e-books, browsing the web, etc.) and a smartphone (serving a variety of communication and social media applications and application applications for organization and service applications). Depending on the need, workshop is carried out on library desktops or on user's personal devices. The development of new technologies and a fast way of life have brought people of the third age to adapt to them, and inclusion in the lifelong learning process enables them to communicate closely and across the community, which has a direct positive impact on their activity, learning and memory and quality of life as a whole. The social component of such a form of organized informal education, with a special emphasis on intergenerational connectivity and socializing, is the main goal of the workshops.

Today, the 65plus project is being implemented in 26 libraries from the ZCL network and co-financed with the funds of the City of Zagreb. All activities within individual programs are free for members of the ZCL. The hour of IT and information literacy is one of the most successful programs within the project, as confirmed by figures - by the end of 2018, more than 5,900 workshops with more than 8,600 attendees were held. In addition to the IT workshops within the 65+ projects, there are also held for homeless people since 2010. In eight years there were 650 workshops attended by 276 individual users.

Archives of the ZCL. Project Reports 65plus ZCL for the period 2009 - 2018 [internal document]

STEAM workshops

As IFLA Guidelines for Library Services to Children aged 0 – 18 say children's libraries are potentially well placed to take advantage of new technologies, which can support reading and learning needs. Technology implies excitement, entertainment and fun to most children. ZCL STEAM, micro:bit and VR workshops are proof of that quote.

STEAM programs in ZCL include using 3D printers, 3D pens and robotics (covering basics, programming and assembling sets). Children and young adults acquire new knowledge and new skills in those workshops. These workshops are organized by The American Corner in Zagreb that is a partnership between the U.S. Embassy in Croatia and the ZCL. Today American Corner Zagreb is branching out into STEAM programs in collaboration with libraries in ZCL (The August Cesarec Library, The Jekovec Library, Medioteka of the City Library, The Children's Library of The Medveščak Library, The Savica Library, The I. G. Kovacic Library, The Gajnice Library and The Voltino Library). That is in line with the strategic goals of the American Corner project aimed at developing programs with new technologies and promoting STEM areas, programs are gearing up to the new trends and users of the 21st century.

3D printer was acquired by The American Corner in 2016 and was placed in Medioteka of the City Library. ZCL organized the education of librarians that was held by the company from which the printer was acquired and in cooperation with the Graphic faculty student who talked about modeling. Workshops with elementary and high school students were also held, as was a lecture for school librarians from the City of Zagreb. Librarians of ZCL continued to spread education and demonstration workshops at the Jelkovec Library which, in cooperation

with Iskra Association, during the summer holidays in 2018 held workshops for children and worked on creating simple promotional items.

During national manifestation Croatian Book Month, the thematic workshops of Glagolitic scripts were held.

Highly popular among children are 3D-pencil workshops that are regularly conducted at the Jelkovec and Medioteka of the City Library.

In the Jelkovec Library, the first program of robotic workshops was launched, with the support of Faculty of Electrical Engineering and Computing popularization of science among children and the education of librarians in the Jelkovec Library, which are conducted by robotic workshops. The interest in robotic workshops among children and librarians is evidenced by a large number of workshops held so far.

In 2018 there were 108 workshops with 653 individual users.

3D-pencil workshop in Medioteka of the City Library

Micro: bit

The micro: bit is an open source hardware ARM-based embedded system designed for use in computer education. The micro: bit is easy to use with little training, and can be programmed using a variety of free coding platforms on a PC, laptop or Bluetooth-enabled smartphone or tablet. And although it's small enough to fit into the palm of your hand, it has a screen, onboard sensors and the option to add a host of exciting peripherals such as servo motors, lights, switches and all manner of sensors – and even robots.

The Rotary Club Zagreb has donated the 30 pieces of micro:bit to ZCL for the library programming workshops in 2018. Micro: bit can be borrowed in seven ZCL for 21 days (The August Cesarec Library, The Jekovec Library, The City Library, The Children's Library of The Medveščak Library, The I. G. Kovacic Library, The Gajnice Library and in Bookmobile).

This project is being implemented in libraries because they are one of the best parts of social infrastructure, and a great opportunity to reach those children who do not have access to new technologies in schools but also to adults who can understand how easy it is to acquire new skills.

VR workshops (including AR)

Virtual reality technology seeks to create a realistic three-dimensional image or environment that a human can perceive as real, and even interact with in realistic ways. VR in devices like headsets is created entirely by a mixture of hardware and software. City Library acquired VR designed to work with PCs that have been enabled to run VR software in 2018.

The VR is placed in Medioteka of the City Library. A virtual reality workshops are intended for kids older than 12 years and adults and are currently being held on school brakes. With VR workshops in Medioteka of the City Library there are also AR (augmented reality) workshops, which uses an overlay of the real world and adds objects to it. The AR workshops are held in cooperation with The American Corner on iPads that have installed Quiver 3D Augmented Reality coloring apps and are intended for kids from 6 to 10 years.

VR workshop in Medioteka of the City Library

Conclusion

The ZCL had in these examples proven to be a place that can consolidate and fulfill different users' needs who want to develop their knowledge and creative potential. New technologies are here but ways to use them and development of a self-conscious individual who will be able to decide for himself and for the well-being of the community is a task of the modern library what we tried to show in these examples. Public libraries are institutions that must provide their users with an opportunity for educating, learning and applying new technologies.

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