

Satellite Meeting: Recruiting and Managing the New Generation of Employees to Attract New Markets and Create new Services

Date: 21 – 23 August 2019

Location: Pythagoreion, Samos Island, Greece

Introduction of Interactive and Product Design in reshaping the Public Library's services through ICT and public engagement: The case of Mytilene Public Library's archives

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Abstract:

Deep into the Information Age, traditional Public Libraries should evolve into modern Digital Libraries. A new approach is being proposed, in order to make local history accessible and draw the attention of the public by revitalizing the Library's traditional facilities. This could happen by using interactive ICT (Information and Communication Technologies) and new scientific fields, while simultaneously introduce Library's digital product in new, competitive markets.

Recognizing the importance of including the user experience into this process, Library's strategy is to attract new groups, especially the potentials of younger people whose experience with new technologies is far more advanced. Achieving this, the organization creates and delivers digital content to its audience and improves their experience in the Library.

The present work poses a question on how new scientific fields can help expanding Mytilene Public Library's reach through public engagement, by enabling access to this vague collection of archives and making it more appealing to the public. The fields of Interactive and Product Design set a promising perspective into succeeding these goals. Using integrated design principles and methodologies such as brand identity, user experience mapping, digitization, merchandise product design and QR coding, a viable strategic plan was determined.

Initially, a series of questionnaires was given to the public audience in order to ascertain the user's experience, concerning the conceptual model of the library. Having collected a sufficient number of answers, a series of interactive merchandise products was designed, inspired by the Library's most famous collections. The outcome is a collection of notebooks, mugs, t-shirts, bookmarks etc. which by using QR coding creates an innovative, interactive means of exploration through the Library's collections that the visitor can wear, use, carry around and share through social media simultaneously. The idea of attaching QR coding in the designs helps promote the Library's collection as the user can discover the cultural heritage and context behind the tangible object, through the Library's digital database. The proposal received great acceptance from the local society and was characterized as an innovative alternative of the traditional memorabilia.

Keywords: Central Public Library of Mytilene, ICT (Information and Communication Technologies), QR Code, Product Design, Merchandise Products

1. INTRODUCTION

Public libraries' mission in many countries is to offer equal opportunities of access to information and resources to all citizens. Especially, in Greece according to Regulation for the Operation of Libraries (Government Gazzete (GG), 20-08-2003), a Public library's role is to (a) *function as a local information centre providing access to all types of knowledge and information for all users, (b) promote knowledge, information, education and culture, with no discrimination based on political, religious, racial or other characteristics, (c) enhance readability and all forms of educational and cultural activities, (d) consist meeting place and a spot for people to get familiar with books and (e) provide special services and material to users who cannot make use of the regular services and existing library material (i.e. foreign language minorities, people with disabilities, etc)*

Setting foot into the 21st century immediately poses a great number of challenges for the traditional Public Library to face. In the age of Information and Communication Technologies' (ICT) explosion, every aspect of our daily life has changed. The amount of information available to average citizen has been increased tremendously (American library Association, 2014 ; Posner, 2014 ; Lyon, 2012). Libraries shall serve a new generation of tech-savvy users who are more demanding than ever before, claiming updated technology for faster, more accurate and easier approachable library services (Bhoi, 2017). Therefore, one of the contemporary biggest challenges for libraries is to find out what users want and need. Libraries' policy should be adapted to users' needs, taking mainly into account the importance of ICT in their daily life, so as libraries be more interesting, relevant and valuable to the communities they serve (Gould and Gomez, 2010 ; Shukla, 2018).

Nowadays, the advent of ICT tools has brought tremendous changes in the information landscape. They provide speedy and easy acquisition, storage, retrieval, transfer and dissemination of huge amounts of data or information to anyone, from anywhere, at anytime (Islam and Islam, 2006 ; Khan, 2016). Libraries, Library and Information Science (LIS) and Librarians need to adapt to challenges of the new era (Fraser-Arnott, 2018; Janakiraman et al, 2015). Considering of this, there is no other option than redefining their role and profile or they will become obsolete and irrelevant to a tech-savvy audience, especially to young people whose experience with new technologies is far more advanced. This transition couldn't be accomplished without overcoming old practices and employing new strategies, focusing on understanding and evaluating users' needs, as the most important aspect is the human

interaction (Scott, 2011). Public engagement must be at the heart of this change. To achieve this transformation, librarians, playing a vital role, should go beyond their comfort zone and change the traditional way they work (Godin and MacLeod, 2012 ; Polderman et al., 2014). They ought to think “out of the box”, inspire and motivate users to get more involved in the library’s functions. This means that they have to be open-minded, think creatively, be open to breakthrough innovations and be able to communicate their ideas to the users. In order to keep up with new trends, it’s essential and inevitable to be trained in new uncommon, unusual or non-traditional fields, acquiring new skills relevant with new technologies and cooperate with people from a variety of professional backgrounds (Fraser-Arnott, 2018 ; Posner, 2014 ; Buriro et al., 2018). Additionally, the importance of using Library’s brand, in order to promote its resources and services in a competitive environment of information and technology, should be considered (Chandrate and Chandrate, 2015 ; Sharma et al., 2017). To meet successfully the aforementioned challenges, public should be given opportunities for effective and active participation in design process of the libraries’ renovation. Libraries should “invest” in their users and exploit the user-generated content as a really engaging reshaping tool, making them eventually ambassadors of the library (Polderman et al., 2014). Taking all the above into account, libraries, LIS and library staff have to re-position, re-profile and re-structure their strategy through new ICT tools, public engagement and cooperation with innovative scientific fields.

The present paper poses the question on how Central Public Library of Mytilene can achieve these goals through the recruitment of new positions and innovative scientific fields such as Interactive and Product Design, combined with ICT and user experience analysis. In this context, the library employed a strategy based on using integrated design principles and methodologies such as brand identity, user experience mapping, digitization, merchandise product design and QR coding.

2. CENTRAL PUBLIC LIBRARY OF MYTILENE

The Public Library of Mytilene was initially found as a Municipal Library in 1945 and became Public in 1952 (Government Gazette (GG) 89, 17-04-1952). At present time, amounts more than 110.000 items which are constantly increasing. A significant number of rare, unique and valuable publications and collections dating back to 1523 enriches the library’s collections, the most important of which are the Local History Collection, the collection of the local press, the press of Smyrna (Izmir), personal and families’ archives, manuscripts, photographs and more. All of these collections relate to Lesvos Island and cover different aspects of human life such as history, social life, culture, customs, politics, economy etc since 19th century.

The Library counts approximately 11.250 registered members, from which 5% are foreigners, 77% of them are female and 23% are male. Members’ age ranges from 1 to 94 with the majority of them belonging to age range from 18 to 55 (Figure 1). There is a tremendous increasing number of the members between the age group up to 17 and those who are aged between 18-28 years old. This is due to the several numbers of students of the University of the Aegean that library serves daily. It is observed also, that a notable part of library’s members are graduates of secondary and higher education, while remarkable is the number of members who completed Postgraduate and Doctoral studies. On the other hand, only a small percentage comes from elementary level education (Figure 2). Concerning, the digital repository “[Digital Herodotus](#)”, users from all over the world, especially from European countries, visit and retrieve information for Lesvos’ culture and history.

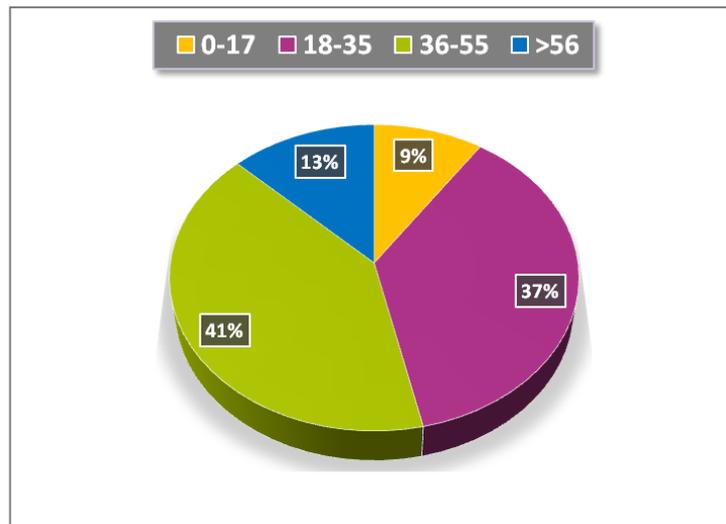


Figure 1. Age groups

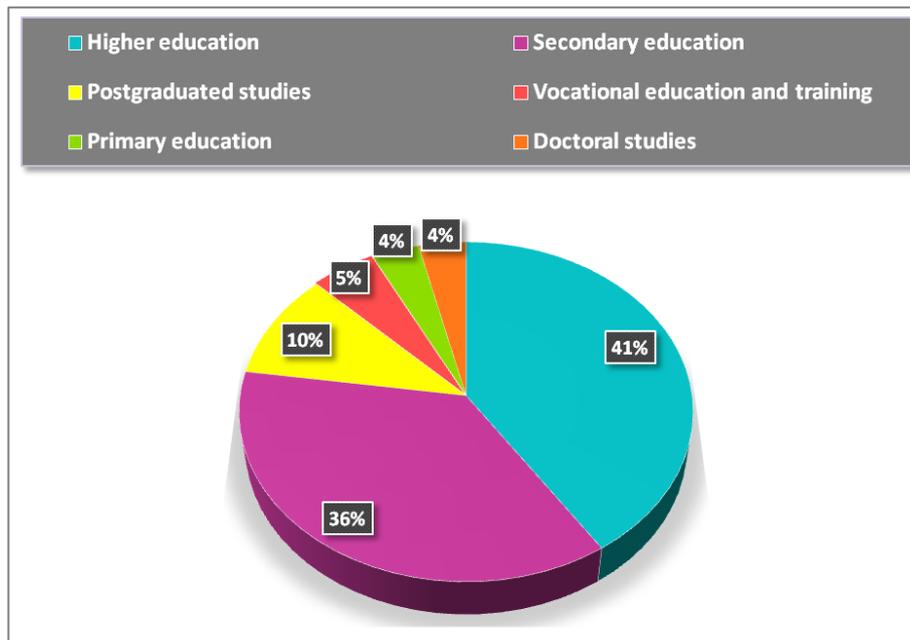


Figure 2. Educational level

Since 1992, Central Public Library of Mytilene gradually started using ICT tools such as OPAC, free access to computers and internet, digital repository, social media and more. However, taking into account the rapid ICT's development and the increasing users' demands, it is necessary to upgrade and revise its functions. It is needed to adapt to changing time and update its services in order to promote library's collections and connect users with local history in a more appealing way. Through this transformation, library could encourage new visitors, especially teenagers and young people, to join the library, change their perception about its content and familiarize them with cultural heritage of their land. Nowadays, library's vision is to function as a memory bank which, through the use of latest ICT and public engagement, will preserve, highlight and promote items related to the history, culture, tangible and intangible traditions of Lesvos Island for free and become more interesting and relevant to its audience.

3. METHODOLOGY

Since 2006, Mytilene Public Library's intention has been to embrace and incorporate new practices and concepts and seek cooperation with people and organizations from a variety of professional backgrounds. The first but important step of accomplishing the goal mentioned above, has been the digitization and documentation of Library's archives and their storage in a digital repository, which can be accessed by anyone, anytime and anywhere in the world. However, the poor funding and lack of staff would be a barrier for the library to achieve this aim. In order to overcome the obstacles library searched for alternative and viable solutions, such as cooperation with Greek Universities and mainly the University of the Aegean. The library has been hosting numerous of internship positions for many years in collaboration with the University of the Aegean, focusing in the process of digitization and documentation of its archives, responding to the requests made by library's users and concerning the increased demand for the local press. Such cooperation was that with the Department of Product and Systems Design Engineering (University of Aegean) in 2018.

During this internship, the library run the piloting project presented in this paper. Library, taking advantage of the scientific field of the above Department, which is focused on Product Design, expanded the usual digitization of archives to a different approach. At the same time, keeping in mind the potential of marketing in the information sector, library decided to use it as a tool to improve its image, promote existing and new services and draw attention to its content (Chandratre and Chandratre, 2015). In this direction, concerning the so-called *7Ps of Marketing Strategies* (product, price, place, promotion, participants, physical evidence and process), library picked out **branding** as the most suitable channel to connect with users and boost its reputation (Sharma, A. K. and Bhardwaj, S., 2009). Eventually, getting inspiration from library's unique documents, evaluating users' demands and using ICT tools, a series of merchandise products were designed to promote library's primary resources and services and familiarize users with them.

The whole process was completed in 35 days, in which the internship position lasted. It was divided in smaller tasks within the 5 weeks. Those tasks were:

- week 1 / defining users' needs through questionnaire, search and digitization of archives
- week 2 / evaluation of the findings, selection of material to be used and types of merchandise products to be designed
- week 3 / ideation and preliminary design
- week 4 / detailed design and attachment of qr code in products
- week 5 / final outcome and evaluation by library's users

Within the first week, the designer in cooperation with the library's staff conducted a brief search on the archives of the library that could be used as inspiration for the design process. With a great variety to choose from, some of the most valuable documents of the library were selected, including old and vintage European fashion magazines dated back to late 19th century, such as Wiener Mode & La Nouvelle Mode, important local newspapers of the island dated back to 1910-1950, as well as other significant archives related to Lesvos Island. The following task was the digitization, editing, documentation and uploading the documents to library's digital repository.

At the same time, in order to proceed with the extended design process, a questionnaire was constructed so as to define users' needs and determine:

- the qualitative characteristics of the public
- the users' experience background concerning the library
- the users' experience concerning ICT

The structure of the questionnaire was organized in three parts each one of them would provide a clearer picture of the target group the design process was focusing on. This target group is no other than the current users of the library, combined with the future potential users that this project aims to attract, focusing mainly in younger generations. The questionnaire was released in a digital form and was distributed to the audience for a week and 78 answers were collected.

Based on questionnaire's results 75% was female, leaving only 25% to male. Referring the age groups and educational level the results are shown at Figures 3 and 4 respectively. Concerning the skills and convenience of the participants in using modern technology and more specifically digital applications, such as QR coding, the vast majority described their relationship as "very good" and "excellent". They are also owners of smart phone devices and use social media, mostly the famous platforms such as Facebook, Twitter and Instagram. It was notable to observe that 73%, regardless of their age, feel comfortable using ICT tools. It is also remarkable that almost all of the participants are interested in discovering the cultural heritage of Lesvos Island through the use of digital applications by incorporating them in the content of the library. Focusing on QR code, 94% would actually like to see how this technology could be adopted in the library's services. In addition, design of merchandise products, inspired by library's collection, as well as the rebranding of the library, seem to be appealing in a noteworthy number of participants. Concerning the Central Public Library of Mytilene most of the participants are familiar with the library and use it mainly to borrow books, study, contact research and have access to Internet and available computers. Furthermore, 33% was informed about library's digital repository "Digital Herodotus", while a smaller percentage has actually used it.

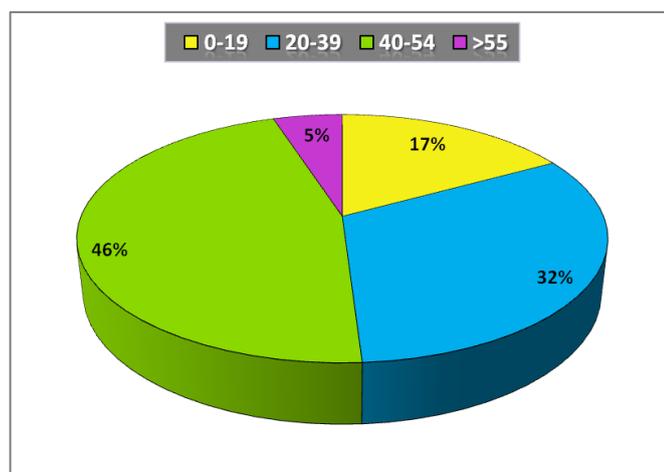


Figure 3. Age groups

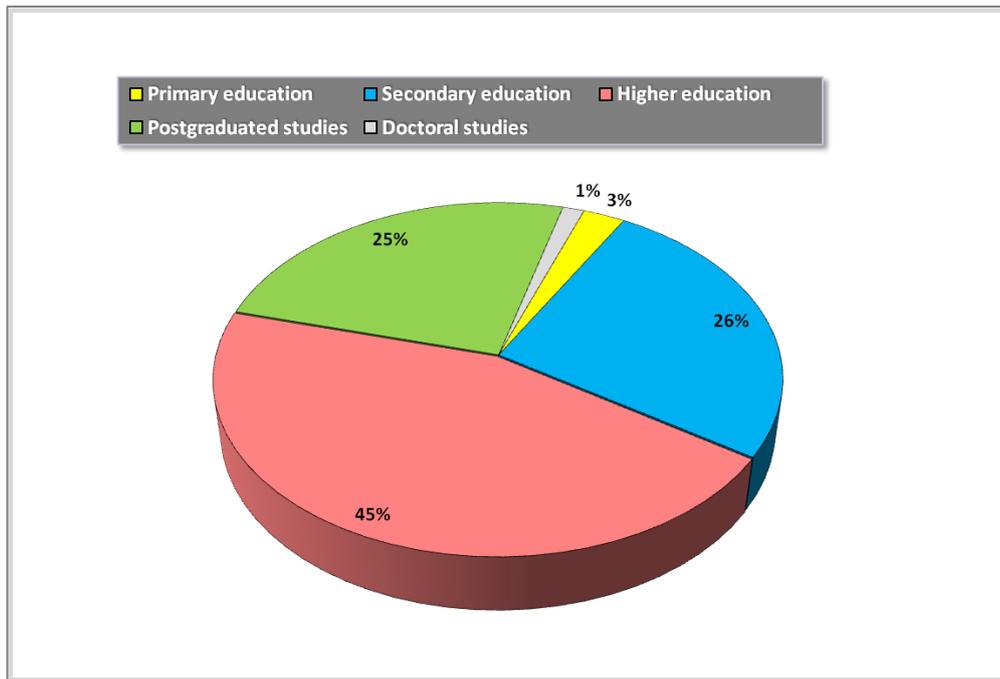


Figure 4. Educational level

The next step was the selection of the final material to be used in the design process. A series of small merchandise products that could be offered by the library to its users was decided to be designed. Those products varied from tote bags to notebooks, including t-shirts, bookmarks, mugs etc. almost similar with the products someone can find in a gift shop of a cultural institution. The designer began experimenting with the digitized material, keeping in mind the existing brand identity of Mytilene Public Library and its users' needs according to the questionnaire's results. Almost 40 different patterns were collected, edited and designed to be incorporated to the merchandise products mentioned above. At that time posed the question on how these products could become interactive and more appealing to users, especially young people, through ICT.



Figure 5. Archives' selection

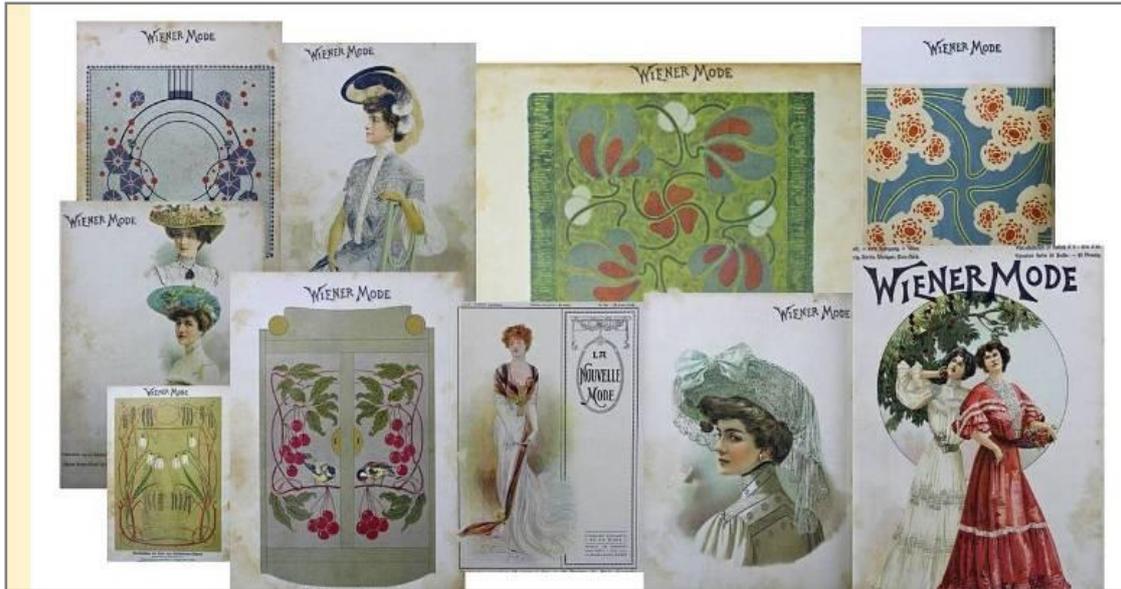


Figure 6. Archives' selection



Figure 7. Archives' digitization

Based on questionnaires' findings and Library's member records, teenagers show little interest in library's content. Young people considered having the tendency to use mobile devices and internet on everyday basis mostly for entertainment and leisure however, they have poor searching skills and find it difficult to locate and evaluate specific information for learning (Griffiths and Brophy, 2005 ; Combes, 2009, Rowlands et al., 2008). Furthermore, young people browse for quick and easy results, having in mind to retrieve information in minimum time, without caring about its relevance and accuracy (Griffiths and Brophy, 2002 ; Gulatee and Combes, 2018). Library, taking into consideration the above, in its effort to communicate with its users and attract new audience, especially teenagers and young people, focuses on digital interactive multimedia tools, such as QR code. Through QR code, library can create a new more

efficient seeking tool, spread the information, promote its unique documents and connect users with Lesvos' Island culture in a free, easy, quick, amusing and friendly environment (Parabhoi et al., 2017 ; Ansari and Nazim, 2014 ; Pons et al., 2011).

QR code is a machine readable optical label which contains information associated with a product or an item and provides direct access to resources through mobile devices (Mishra et al., 2017). Among a wide range of free QR generators, library chose the **qrinfopoint** (<https://qrinfopoint.com/>), a dynamic QR Code generator, through which multimedia content (video, audio, image and document) can be uploaded, connecting users with authorized resources, such as library's digital repository or OPAC. Multimedia can make library's content more interesting and more appealing to users, mainly to young people, by converting entertainment technology to an educational tool (Gulatee and Combes, 2018).

The final outcome is a collection of interactive merchandise products such as notebooks, mugs, t-shirts, bookmarks etc. which by using QR coding creates an innovative, interactive means of exploration through the Library's collections that the visitor can wear, use, carry around and share through social media simultaneously. The basic concept is **Scan-Learn-Share**. The idea of attaching QR coding in the designs promotes the Library's collection as the user can discover the cultural heritage and content behind the tangible object, through the Library's digital database and spread information and knowledge widely.



Figure 8. Final products. Notebook

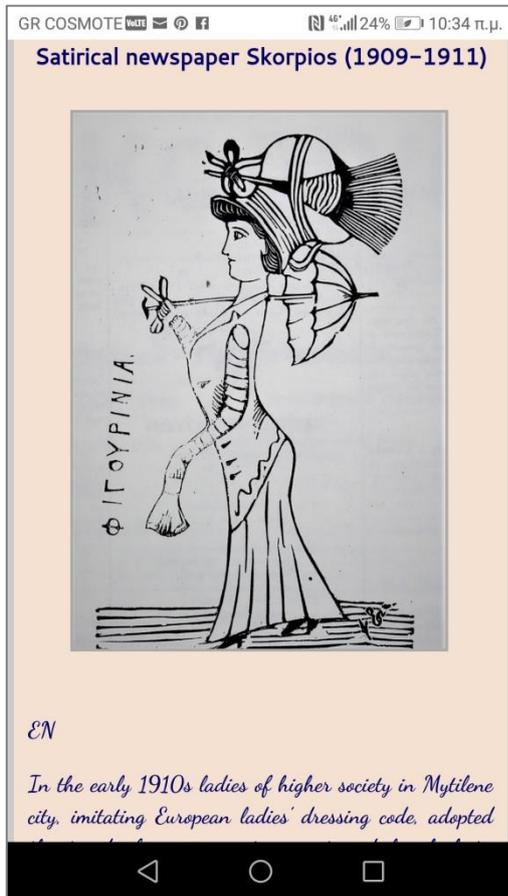
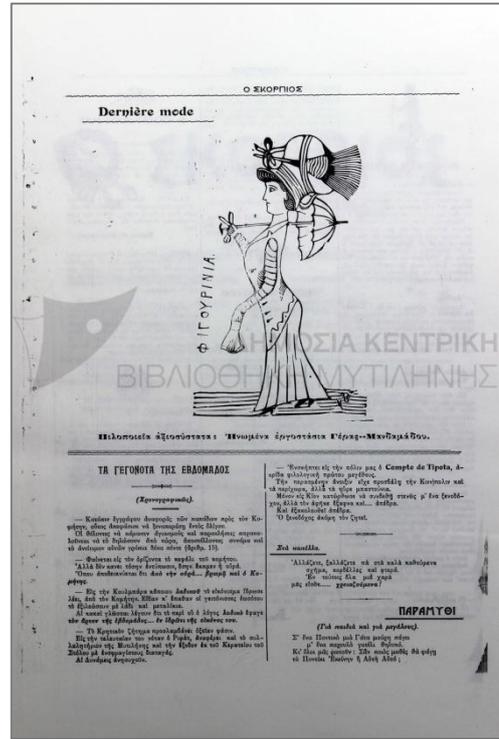
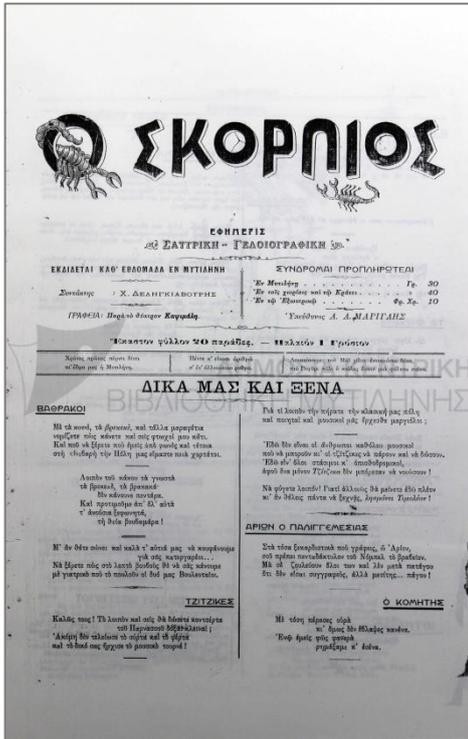


Figure 9. Newspaper “Skorpios”, 14-05-1910

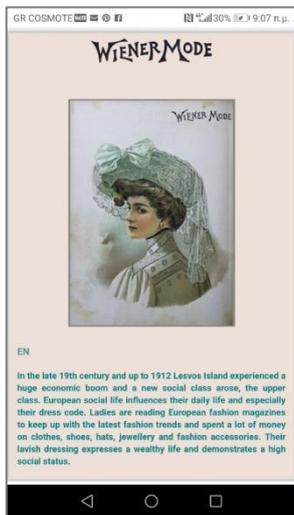


Figure 10. Final products. Tote bag



Figure 11. Final products. Mug



Figure 12. Final products. T-shirt

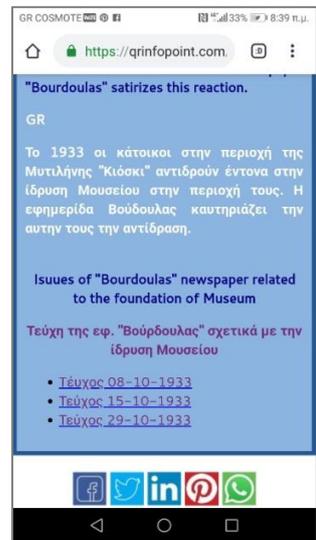


Figure 13. Final products. Tote bag

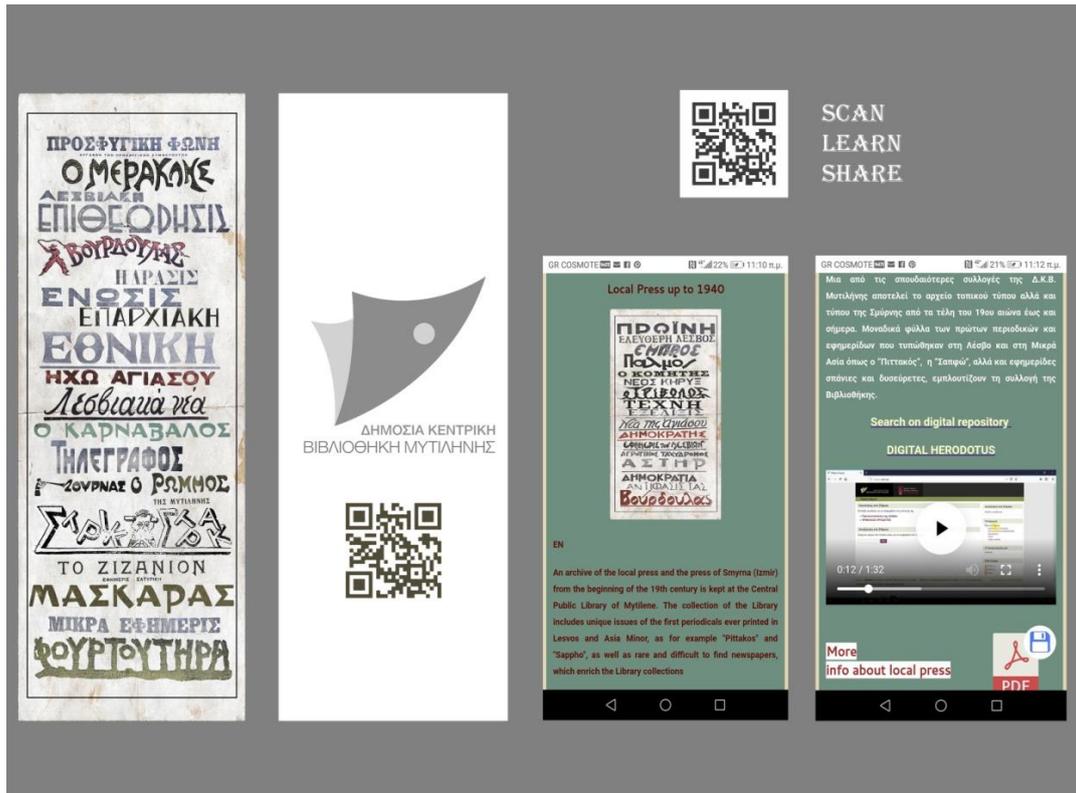


Figure 14. Final products. Bookmark



Figure 15. Final products. Mug

4. RESULTS AND DISCUSSION

At the end of the project, participants were briefly interviewed about their experience and their thoughts concerning the interactivity of merchandise products through QR. They were also asked about the degree of satisfaction their needs were met. The majority of them, including teenagers and young people, found the project very innovative and interesting. They were surprised how easy, fast and accurate access they had to information, mainly to local culture and heritage. Phrases such as “didn’t know how easy is to discover my land’s history”, “how many important facts ignored about Lesvos Island”, “it’s so cool, gonna share it”, “it’s impressive that can share this wealth of information through social media in all over the world”, were given by the participants. Furthermore, users characterized the merchandise products as an elegant memorabilia beyond the traditional ones, which promote local history in a different and more appealing way.

The project reached its completion successfully. However, this project could go one step beyond by enhancing these products with augmented reality and other innovative applications. Moreover, concerning users’ desire, the products could be sold as alternative memorabilia, improving library’s financial status and also be exposed in universal exhibitions of Region of North Aegean, advertising both library’s services and Lesvos’ History.

In the direction of reshaping, Public Library of Mytilene has already focused on a new trend, the **gamification**, aiming to connect children and teenagers with local history through ICT in an innovative and amusing way.

5. CONCLUSION

In the digital information era, the content and the services of public libraries are rapidly changing. Libraries and librarians have to serve a new tech-savvy audience and in order to meet their demands, they should embrace new concepts and practices by adopting new ICT tools. Public Library of Mytilene taking advantage of its cooperation with the innovative Departments of the University of the Aegean, run a pilot project based on integrated design principles and methodologies such as brand identity, user experience mapping, digitization, merchandise product design and QR coding. The outcome was a series of merchandise products which were greeted with enthusiasm from users, who gained fast and easy access to information about Lesvos history by using new ICT tools. The project offered a valuable experience in how different scientific fields could be combined, so as to update library’s content, making it more interesting and relevant to public, especially to young generation. Taking into account the success of this project the Library’s council decided to print and market these products.

Acknowledgments

This project couldn’t be accomplished without the support of Library’s council and especially the Head of Library Management Committee Professor Th. Paradellis. The members of the council are always open to innovative proposals related to re-imaging and reshaping the Library through new technology and encourage staff to achieve these goals.

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