Development of a Digital Museum for the Immigration of Greeks to Canada

Charalampos Tsimpouris*, Christos Papanagiotou*, Stavros Bompolas*, Michalis Marinis*, Tonia Tzanavara** & Angela Ralli*
University of Patras*, Municipal Art Gallery of Corinth**

Abstract

This article presents the design of a first version of the digital museum developed within the research project “Immigration and Language in Canada. Greeks and Greek-Canadians”, funded by the Stavros Niarchos Foundation and involving research teams from four universities (University of Patras, McGill, York and SFU). The museum deals with the first-generation Greek immigrants who went to Canada from 1945 to 1975 and exhibits various aspects of their lives (e.g. language, work, family, etc.). The implementation of the technical part of the museum was undertaken by the research team of the University of Patras, while the research team of McGill University was responsible for the selection of the exhibits of rooms (1-6 and 8-9), the graphics and the music. For the development of the museum, state-of-the-art technologies have been used to create a user-friendly digital environment, in which the user navigates easily. The museum’s material has been gathered from the interviews of informants living in various Canadian cities, from multimedia files, from written sources and from photographic archives.

Keywords: Digital museum, Greek immigration, Canada, ImmiGrec.

1. Introduction

The digital museum, presented in this article, is a first version of the museum developed within the research project “Immigration and Language in Canada. Greeks and Greek-Canadians” (January 2017 - December 2018), funded by the Stavros Niarchos Foundation and involving research teams from four universities, namely the University of Patras, McGill, York and Simon Fraser University. The technical part of the digital museum was designed and implemented by the research team of the University of Patras with the support of the other teams and concerns the first generation of Greek immigrants in Canada who went to this country during the years 1945-1975. It presents various aspects of their lives, underscoring information on the points of departure and arrival, the process and difficulties of their integration in the Canadian environment, the role immigration played in the Greek family, the organization of the Greek communities in the Canadian host cities and finally the cultural identity and collective memory of the immigrants. In this article, emphasis is given on the thematic unit of the museum which presents language issues, such as the preservation of Greek and its dialectal varieties, the Greek language in the multilingual Canadian environment, socio-linguistic identity, code mixing, etc.

For the development of this museum, cutting-edge technologies were used to create a digital environment in which the user gains access to a variety of exhibits (e.g. image, sound, video) of different thematic units. The material of the museum has been gathered from interviews with informants from many Canadian cities, from multimedia archives, written sources and photographs. The hardware is located on a specially constructed...
platform, a digital repository and is organized in an electronic *database* (DB) built with Drupal 7 CMS (v.7). Both the digital repository and the electronic database were designed and implemented at the University of Patras within the framework of ImmiGrec research program, on the basis of its specific research needs (see also Tsimpouris *et al.* in this volume).

The present paper is organized as follows: after the introduction, the second section presents some key issues concerning the immigration of Greeks to Canada, as well as the scientific research in this regard. The third section contains the presentation of issues concerning the concept of the digital museum, in general, as well as the presentation of various digital museums on immigration. The fourth section details the technical characteristics of this museum, focusing on the infrastructure and the necessary phases of its implementation. In the fifth section, the organization in rooms and the thematic units and sub-units of each room are provided. The work is completed with the epilogue, and at the end, the bibliographic references are listed.

### 2. Immigration to Canada

Canadian Greeks and Greek speakers are a dynamic and integral component of today’s multinationality/and multilingualism of the Canadian society. Greek-speaking communities and various societies and clubs are currently in the largest Canadian cities, such as Montreal, Toronto, Ottawa, Winnipeg, Calgary, Edmonton, Vancouver, Victoria, Halifax and Regina. Their history is inextricably linked to the history of Canada and Greece, the immigration policy of the Canadian state, the socio-economic conditions of Greece after the end of the Second World War and the complexity of the experience of the ethnic communities in the Canadian social, cultural and linguistic environment. Apart from few exceptions, the Greek-Canadian communities and the various associations have attracted little academic interest in the past (among others, Gavaki 1977; Chimbos 1980; Maniakas 1991; Tamis & Gavaki 2002; Aravossitas 2016) without significant issues regarding the interaction of the concepts of immigration, adaptation and assimilation being investigated whatsoever.

ImmiGrec deals with three main topics aiming to explore the Greek-Canadian history and language and to clarify their connection with the social and cultural history of Canada, as well as the effect of the dominant English on Greek:

(i) the change of ethnic communities over time;
(ii) the multiple social and cultural levels of the experience of the immigration;
(iii) the issue of language.

The project’s deliverables are expected to increase the public interest in Modern Greek history and to create a reference point for educational and social purposes.

### 3. Museum and digital museums

In antiquity, the term “museum” referred to the space that is dedicated to the worship of the Muses and was connected with the arts and philosophy. According to Avgerinou-Kolonia (2007: 124), the term museum in the Renaissance was associated with the idea of the historical monument “as a representative element of the national identity, including
the protection of the historical and ethnological heritage”. It had a predominantly teaching nature”.

Today, a museum, as defined by ICOM (International Council of Museums), is “a non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits, for purposes of study, education and enjoyment, material evidence of people and their environment.” (ICOM Statutes, No. 2).

Mouliou (2014: 77) underlines the fact that in recent years museums “have been experiencing multiple pressures to redefine their institutional substance, values and strategic priorities in order to respond to the social, political, technological and economic challenges that, as a whole, determine the modern world.”

In the past, museums were considered as places where objects were placed in specific thematic units and exhibited in tasteful cases or pedestals, underlining their special status for knowledge, intellectual culture and cultural heritage (Stergiaki 2012). In recent years, the evolution of museums has been rapid, due to the incorporation of new technologies and digital tools, the use of which enables the visitor to retrieve the information they desire according to their personal interests, time and mood (Kayafas 2007). Schweibenz (1998: 185) points out that the Internet opens a new dialogue between a digital museum and a digital user for a new museum experience.

Through the systematic use of technology in the field of museology, digital museums were created (Schweibenz 1998; Huhtamo 2002; Sylaiou et al. 2009), an idea of which was introduced for the first time by André Malraux in 1947. These museums are virtual, that is, they do not have physical spaces or exhibitions. With IT tools, however, they build a virtual reality, presenting real or digital exhibits in a variety of ways. According to Oikonomou (2007: 139), in addition to the usual features of the combination of visual and acoustic information, a new feature is now provided by digital applications, namely personalization, based on the user’s needs, while mobility through the exhibition areas and spaces of cultural heritage, as well as interaction with objects, ideas and people, are ensured. For Schweibenz (1998), a digital museum is a reasonably correlated collection of digital objects in a variety of media and, due to its ability to provide connection from different access points, it overtakes traditional communication methods and interacts with the needs and interests of the user. Yet, it does not have a real place or space and its objects and information can be spread all over the world.

Museums with these features correspond to the terms virtual museum, digital museum, virtual Cybermuseum, web museum, electronic museum, on-line museum and hypermuseum (Arvanitis 2002).

According to Papaioannou (2010), there are four categories of virtual museums on the Internet:

(i) The “brochure museum”: It is usually a simple web site that shows a natural/real museum, such as its location, opening hours, etc.
(ii) The “content museum”: This is a set of web pages detailing the contents of the collections and the exhibits of a real museum.
(iii) The “learning museum”: It is a site with a diverse interactive learning environment.
The “virtual museum”: It concerns a web site or a web-based simulation application of a conventional (or non-conventional) museum, usually in a three-dimensional or pseudo-dimensional environment. This allows the user to navigate the digital environment of the museum through an interactive guided tour, where the user selects how to navigate in space and focus on exhibits of his choice.

The last category of virtual museums (iv) includes the digital museum described in this article. In this museum, the users can navigate a virtual environment of visual, acoustic and textual information, while they are allowed to focus on different exhibits and aspects of these themes, according to their needs and desires (see section 5 for the technical characteristics).

In order to design and implement the digital museum under the project “Immigration and Language in Canada. Greeks and Greek-Canadians”, there has been a research on the existing digital museums, which was carried out by the research team of the University of Patras. Among the museums under examination, of special interest were the Migration Museum project, the Immigration Museum, the Virtual Museum of Canada, the Virtual Museum of Italian Immigration in the Illawarra.

The Migration Museum project (http://migrationmuseum.org) is an ongoing project on migration in Great Britain, without imposing restrictions on the origin of migrants. It is organized into thematic sections (Reports, News, Education, Learn more about migration), and the material is organized according to different types of files (e.g. image, sound, text). Particularly interesting are the videos of the museum with narratives of the immigrants, combined with artistic effects, while emphasis has been placed on the communicative nature of the museum, which is interconnected with various means of social networking.

The Immigration Museum (https://museumvictoria.com.au/immigrationmuseum/) is not a digital museum (although the digital visitor is allowed to come into contact with some of the exhibits), but a website of a typical museum. The organization of its themes, however, covers a wide range of issues related to immigration. The thematic sections cover issues, such as the immigrants’ travel, their adventures, but also issues, such as the ethnic and cultural identity of immigrants.

The Virtual Museum of Canada (http://www.virtualmuseum.ca/home/) has a wide variety of themes, one of which is immigration to Canada. Due to the proximity of the content of this subject with the research interests of the ImmiGrec program, special attention was given to the particular museum. The material in the immigration section consists mainly of photographs, texts and audio files, while the educational games in which the user can be involved, and which are related to the issue of migration, are of particular interest.

The Virtual Museum of Italian Immigration in the Illawarra (http://vmiii.com.au/) is a very interesting digital museum, which presents the immigration of Italians to Australia. It is structured in four thematic sections that correspond to four digital rooms: “The Journey”, “Life in Australia”, “Identity 1”, “Identity 2”. The exhibits are mainly photographs and accompanying/explanatory texts on each subject. At the same time, another part of the museum functions as a database with more material for the visitor-researcher, organized on the basis of the above thematic units. The characteristics of this museum are significantly related to our own research work which, in addition to the
digital museum, organizes its material in a database, designed and implemented according to the needs of the ImmiGrec program (see relevant article in this volume).

Taking into account the new technologies, as well as the study of the latest trends in immigration museums, specific decisions were taken regarding the technical characteristics and the organization of the thematic units of the ImmiGrec digital museum. The thematic section related to linguistic issues of Greek immigrants in Canada are particularly highlighted in this article, while the content of the other thematic units is briefly mentioned.

4. Technical description

The construction of the digital museum by the research team of the University of Patras is based on two separate elements of implementation, the digital museum and the accompanying DB. This separation was deemed necessary because a large amount of information cannot, and is not advisable to be posted in virtual spaces. Therefore, the accompanying DB is an important digital area, where all information is recorded and which cannot only support the collection of museum exhibits but also the research purposes.

The first and basic implementation element is the digital museum itself, which the user-visitor can see virtually. Browsing is done with the mouse and in combination with the keyboard arrows the user-visitor can be transferred from room to room, but also from exhibit to exhibit by tapping predefined Points of Interest (POI). A simplified form of the navigation chart is shown in Figure 1.

![Navigation chart](image)

**Figure 1:** Navigation chart

All spaces are designed to optimize the use of the screen, along with a high level of functionality and usability, so as not to tire the visitor.

The museum’s function is based on records of the following main types:

(i) Static Content Files
(ii) Content generating files with PHP extension

More specifically, the static content files are separated into a) navigation aids and b) exhibit material.
The Navigation Utility consists of static JPEG images without transparency and with transparent PNG. The Navigation Utility also includes CSS and HTML formatting files. CSS (Cascading Style Sheets) is a computer language that belongs to the language class used to control the appearance of a document written with a markup language. HTML (HyperText Markup Language) is the main markup language for webpages, and its elements are the basic building blocks of webpages. They constitute the basics about the display structure of information, such as, for example, the paragraph row or the list or table format.

Also, the Navigation Utility includes JavaScript programming files to add interaction to the page loaded locally by the user’s browser. These files are necessary for the optimal functionality of the museum in a variety of mobile and/or computer screens. They fully assume the management of the browser and follow the user on their journey inside the museum so that in any case, the functionality remains at a high level, while watching the operation of the background music, depending on the viewing object, which may be a map, a room, an interview exhibit or a photo exhibit. Finally, the Navigation Utility includes FLAC/MP3/OGG compressed audio files for room music. Each file is stored in at least two compression formats of the aforementioned three for maximum support of all browsers. The multiple audio file format is a common practice for maximum support. Thus, if a browser cannot open a file type, it will continue to try with a different type. All three options are the most common formats for audio and navigation files.

Regarding the Exhibit Material, it is worth mentioning that, for each exhibit, it is necessary to store all the image and sound files with the audio and video files, respectively. They are in a special folder associated with the exhibits, which is not the same as the folder of the navigation files. In addition, the Exhibit Material includes waveform files for PEAKS audio files, which are automatically generated by the system for each audio file, and include the appropriate information to quickly create and display the chart of an interview (Figure 2).

![Interview Graph](image)

**Figure 2: Interview Graph**

Finally, the Exhibit Material includes YAML (yet another markup language), which contains a detailed description of each room and each exhibit. This form facilitates the easy handling and processing of the material by all team researchers (Figure 3). At the same time, the display of the exhibit is released from the information it contains, resulting in the minimization of errors, and allowing the researchers to concentrate on their core work, which is the correct completion of the information.
The second main type of the museum’s files are Hypertext Preprocessor (PHP) files, which undertake reading all YAMLs (rooms and exhibits), confirming their proper structure, and dynamically create HTML files that can understand a browser and project it to the end user.

At this point, the process of storing and recording GIT changes is worth mentioning. GIT is a publishing control system (see also revision control system or source code control system) with emphasis on speed, data integrity, and support for distributed, non-linear, workflows. The GIT was initially designed for the development of the Linux kernel in 2005 and has since become the most widely-used publishing control system for software development.

The exhibits are interactive, displaying audiovisual material, depending on the theme of each room. This material is selected from the DB. The construction of the digital museum is based on a variety of technologies that work together to achieve a functional and aesthetic result. Specifically, the web browser of the user-visitor using JavaScript and the 3D library babylon.js uploads all the appropriate information via HTTPS from the program server and creates the appropriate representation of the site after an agreement between the developers and the museologist as to the general plan view of all rooms. Then, using AJAX, the web application is able to communicate with the server after downloading the page, to download additional objects and exhibits in the site. The technique of the progressive loading of objects improves the speed of execution of the digital museum and the page’s usability.

All tasks are based on the user-friendliness of the system, as well as the maximum accessibility of visitors, regardless of specific devices or browsers. In other words, the
visitor can successfully navigate the digital museum and the accompanying public DB through the computer, mobile tablet and mobile phone.

5. Thematic sections of the museum

In order to present globally the issue of first-generation Canadian immigrants, the digital museum was designed in such a way as to consist of nine digital rooms, with nine corresponding thematic units and several sub-sections, containing a variety of exhibits. A first form of the museum has already been presented at the 2nd EUROMED Pan-Hellenic Conference on the Digitization of Cultural Heritage in Volos, and at the Annual Conference of the Associazione per l’Informatica Umanistica e la Cultura Digitale, which took place in Bari, Italy (see Ralli et al. 2017; Ralli et al. 2018).

In what follows, emphasis will be placed on the language room, the exhibits of which have been selected and shaped by the research team of the University of Patras, while there will be a brief reference to the themes of the other digital rooms, and the atrium, the content of which has been developed by McGill University.

More specifically, Room 1, entitled “Departures”, includes exhibits regarding the journey of Greek immigrants from Greece to Canada, as well as the stops until they reached the final destination. The exhibits focus on the means of transport used for the purpose of migration (e.g. ships, airplanes), travel proofs (e.g. tickets, passports, passenger calendars) and the conditions of each trip. At the same time, there is mention of the economic, political and social reasons, which appear to have played an important role in the decision to migrate to Canada, as well as of the immigrants’ expectations for a better life in Canada.

In Room 2, entitled “Arrivals”, the different ways of the arrival in Canada are presented, such as the reception gates. Moreover, the first impressions of the newly-arrived Greeks, as well as the first contacts with acquaintances, relatives and friends who were already settled in Canada are described.

![Figure 4: Example of a multimedia exhibit (image, sound, text)](image-url)
Room 3 “Arrival in the new country” is related to the settlement in Canada. The themes presented in this room refer to the first accommodation of Greek immigrants, their occupations, the attitude of the Canadian society and the Canadian state towards them, and the difficulties they faced in their attempt to get integrated into the Canadian society.

Room 4 is about the Greek family in Canada. The sub-sections included in this thematic framework are marriage ties, as described by the informants, as well as the everyday family life in Canada.

In the first sub-section of Room 5 entitled “Communities and Identities”, the Greek-Canadian communities are presented. The second sub-section refers to the relations of Greek immigrants with the Canadian state and other ethnic groups. Finally, the third sub-section is related to the structuring of the national identity of the informants.

In the content of the “Studies and Education” room (Room 6), particular emphasis is given on the education of younger generations in Canada, but also on the selection of Greek education by several informants.

Room 7 (Figure 5) is dedicated to the Greek language and its relation to Greek immigration to Canada. More specifically, in this room, the visitor can find material about how English has influenced the Greek language, the attitude of Greek Canadians towards language, the role of Greek in the Greek-Canadian families. Particular emphasis is given on the use of various dialectal features which have been preserved in the speech of some immigrants.

This room is divided in three sub-sections, entitled “linguistic attitudes”, “language learning” and “language use”.

In the sub-section of “linguistic attitudes” among the issues presented are: the wish of Greek Canadians not to be recognizable as “Greeks abroad” because of their

---

1 For more specific issues about the language of Greek immigrants in Canada, see the related work in the same volume.
pronunciation, the desire of dialectal speakers to eliminate their particular pronunciation, the awareness of the informants as to whether they change the Greek language or not, while staying in Canada, the shrinkage of the dialectal varieties among Greek-speaking Canadians, as well as the gradual decrease of the Greek language in general, which, according to the informants, may lead to linguistic death.

Figure 6: Example of a sound exhibit

In the “Language Learning” sub-section, there are topics related to the learning of mainly English (French to a lesser extent), the difficulties of use, inhibitors for language skills (e.g. heavy hours of work, child upbringing, etc.) and conventional (e.g. migrant schools), but also non-conventional ways of teaching (e.g. the workplace). At the same time, emphasis is placed on the difficulty of understanding and communicating the first-generation Greek immigrants face in public services, health care services, etc., as well as in their relations with the Canadian society. In the same sub-section, the issue of the Greek language is highlighted in the Canadian multilingual educational system and more generally in the multicultural and multilingual Canadian society.

The sub-section “Language use” focuses on code-mixing, the phenomenon of language borrowing and the integration of mainly English words in the Greek inflectional system (e.g. leki (< lake), bara (< bar), car (< car)). It also underlines the issue of code-switching in relation to communication circumstances and the choice of different languages depending on the environment (e.g. in Montreal, English is used at work and French for social gatherings).

In Room 8, entitled “Politics”, the visitor can get information on the engagement of the immigrants with politics in Canada and with politics in Greece.

In Room 9, entitled “Social life”, aspects of the social life are presented, such as ways of entertainment in past years and today, their interests in their leisure time, but also meetings in various places, as in the church, the community, traditional Greek cafes, etc.

Finally, in the atrium of the museum, the user will find an interactive map showing the areas from which the immigrants left from Greece and the regions of Canada where they settled. The visitor will also find historical information about Greece and Canada for the decades 1940 and 1950.
6. Epilogue

This article presents some basic issues regarding immigration of Greeks to Canada, with focus on the description of the digital museum of the ImmiGrec project and the thematic sections of each room.

John Cotton Dana stated that museums should not look for what a community can do for them, but what they can do for the community (Pes 2008: 49). The digital museum of the research program “Immigration and Language in Canada. Greeks and Greek-Canadians” hopes to become a reference museum for the Greek communities in Canada. Focused on the first generation of immigrants from 1945 to 1975, it aims at the connection among different generations of immigrants, as well as the connection with Greeks in Greece. At the same time, the museum enlightens the phenomenon of Greek immigration to Canada, emphasizing the points of departure and arrival in the new homeland, the integration into the Canadian environment, the preservation of the mother tongue, their work, the organization of Greek communities in the Canadian host cities and finally their cultural identity and collective memory. The digital museum is designed with the help of modern technologies, it is organized in the thematic units described above and contains exhibits of various types.

The new features and new roles of a modern museum can be associated with descriptions, such as “Emotional”, “Attractive”, “Networked” (Mouliou 2014: 23). The design of this digital museum takes into consideration these new museological dictates, without ignoring its traditional assumptions, in order to create a modern museum that meets the objectives of the program “Immigration and Language in Canada. Greeks and Greek-Canadians”, but also the requirements of the modern digital user-visitor.

Acknowledgements

We are grateful to the Stavros Niarchos Foundation, sponsor of the project ImmiGrec, for the generous financial support. We also warmly thank our partners in Canada, Tassos Anastassiadis (McGill University), Sakis Gkekas (York University) and Panayiotis Pappas (Simon Fraser University) for the material collected by their research teams in the context of the program, from which the exhibits of the museum have been selected. We particularly thank the McGill research
team, who were responsible for choosing the material of digital rooms (apart from that of Languages, Room 7), the graphics, the texts of the Atrium, as well as the musical investment.

References


