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Article

Gathering the Voices: Disseminating the Message of the Holocaust for the Digital Generation by Applying an Interdisciplinary Approach¹

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Abstract: The aim of the Gathering the Voices project is to gather testimonies from Holocaust survivors who have made their home in Scotland and to make these testimonies available on the World Wide Web. The project commenced in 2012, and a key outcome of the project is to educate current and future generations about the resilience of these survivors. Volunteers from the Jewish community are collaborating with staff and undergraduate students in Glasgow Caledonian University in developing innovative approaches to engage with school children. These multimedia approaches are essential, as future generations will be unable to interact in person with Holocaust survivors. By students being active participants in the project, they will learn more about the Holocaust and recognize the relevance of these testimonies in today's society. Although some of the survivors have been interviewed about their journeys in fleeing from the Nazi atrocities, for all of the interviewees, this is the first time that they have been asked about their lives once they arrived in the United Kingdom. The interviews have also focused on citizenship and

¹ Conference paper: Angela Shapiro, Brian McDonald and Aidan Johnston. "Gathering the Voices: 'Disseminating the message of the Holocaust for the digital generation.'" Case study presented at 12th European Conference on e-Learning; October 2013.

integration into society. The project is not yet completed, and an evaluation will be taking place to measure the effectiveness of the project in communicating its message to the public.

Keywords: learning innovation; Holocaust; multimedia applications; open education resources (OER)

1. Introduction

The Gathering the Voices project (GtV) was started by a group of volunteers from the Glasgow Jewish community with the purpose of taking oral testimony from refugees from Nazi-occupied Europe and making them freely available, digitally [1]. It is partly funded by the Heritage Lottery Fund, and its objectives include: setting up a freely-available website, developing learning packs for use in schools and involving groups of undergraduate students in creating educational materials using the testimonies as a basis. The rationale for involving students in university, as well as school pupils is that although pupils in primary and secondary education in Scotland learn about the Holocaust through formal education, education on the subject of the Holocaust in higher education remains primarily in the domain of history and social science. This project offers a means of introducing knowledge of both the Holocaust itself and aspects of the refugee experience as integral parts of students' learning experience in other subjects. The stories of the survivors illustrate that refugees can become major contributors to society and citizenship. By demonstrating these contributions to society, the lesson can be learned that refugees are worthy citizens in their own right and should not be viewed as being merely dependents on the host country.

The Gathering the Voices project is using blended learning approaches to engage with the general public and, more specifically, young adults and children of school age. Its website enables teachers to link sections easily to the school curriculum. The website contains digitized oral testimonies of Holocaust survivors in Scotland. To ensure accessibility, all of the interviews have been transcribed, and these transcriptions have also been placed on the website pages. The interviews have been divided into sections, and paragraphs have been numbered, as this allows teachers to easily identify the relevant sections for their pupils.

The outcome that will be the focus of this paper is the description of two projects in which students working in interdisciplinary teams, in the disciplines of digital media and design within the School of Engineering, Built and Environment, have contributed to the aims of the GtV project. By involving students from this School in the project, the intention was two-fold: firstly for the students to produce innovative ideas that will appeal to contemporary young learners and, secondly, for the students themselves to learn about the Holocaust from accessing the testimonies on the Gathering the Voices website.

2. The Concept of Employability Skills

In Glasgow Caledonian University, the academic staff in the School of Engineering, Built and Environment (EBE) have enthusiastically endorsed the concept of developing modern, accessible and,

where possible, interactive products for the project. This form of engagement is also clearly consistent with GtV's objective, which is to involve undergraduate students in the development of artefacts for the project. Staff have therefore engaged with undergraduate students in the disciplines of graphic design, product design, interior design and serious games with the aim of enhancing students' knowledge about the Holocaust, but within the discipline, by using the materials from the GtV project as the source material for the assessment, thereby gaining incidental learning rather than the material being regarded as an unrelated topic.

The idea of involving undergraduate students with the project is also consistent with Glasgow Caledonian University's initiative: the Real World project (Realising Work-Related Learning Diffusion) [2], the purpose of which is to enhance students' employability skills through adopting work-related learning activities within their programs [3]. This was set up in response to the views of employers, who had expressed concern for the lack of certain specific attributes in graduates when they entered the workplace. There is an expectation that STEM (Science, Technology, Engineering and Mathematics) graduates will be major contributors in knowledge transfer. However, the Confederation of Business and Industry has expressed dissatisfaction with graduates' levels of communication, leadership, team working and business acumen [4]. The principles adopted by the University include the provision of learning opportunities to integrate theory and practice; the supporting of students' interest in a wide variety of careers; and the requirement for students to take an active role in learning about accommodating cultural diversity. Thus, involving students from STEM in learning about the Holocaust in work-related activities links well with these objectives.

3. The Role of Digital Storytelling

The act of digital storytelling helps to present the narratives of the Holocaust survivors in a form that is suited to 'digital natives' [5], but at the same time, we need to recognize that mature adults also wish to listen to the stories. This means the recordings have both to sensitively reflect the entirety of the interviewee's story, but also be in manageable listening chunks. By the end of the project, there will be in excess of 30 interviews on the website. This rich tapestry of individuals' experiences lends itself to digitally diverse platforms. The combination of the spoken voice with photographs, written words and film extracts makes the narrative a powerful experience that engages the audience and increases the accessibility of the material [6].

Further, the outputs from the project are aligned with the ethos of open education resources (OER). The Higher Education Academy [7] defines open educational resources as "...digital materials that can be used, re-used and repurposed for teaching, learning, research and more, made freely available online..." Open educational resources range from digital assets from course materials, content modules, collections and journals, to digital images, music and video clips. The OER ethos was deliberately selected to apply to all of the GtV resources, because the project team wanted to showcase them to the widest international audience possible. OER has a certain sense of social responsibility in providing "education for all", and the GtV philosophy fits in with this thinking. Lessons about the Holocaust must be taught to future generations, and those involved with this project have a moral duty to ensure that as many people listen to these formerly unheard voices as possible. It is not only that the listener is being educated about the horrors of the Holocaust, but the listener is also being taught about the

resilience of the human spirit and that children have become contributing citizens who have integrated into their new country despite the difficulties they have faced.

Moreover, sometimes, it is not worth the effort to keep the resource closed. If it can be of value to other people, one might just as well share it for free. Primarily, the aim of the GtV project is to educate, and it would therefore be morally irresponsible to block users from accessing the resources of the project. The Gathering the Voices Association holds the copyrights to the testimonies, and every interviewee signed a declaration agreeing to the digitization and curation of the resources. Due to the sensitive nature of the oral testimonies, it was also decided that Creative Commons Licensing would not be a suitable approach and that digitized resources should be accessed only through the Gathering the Voices website. This was to ensure that no information was misrepresented or amended.

4. The Role of Serious Games in Education

Serious games are computer and video games that are intended not only to entertain users, but that also have additional purposes, such as education and training. A serious game is usually a simulation that has the look and feel of a game, but that is actually a simulation of real-world events or processes. Although serious games can be entertaining, their main purpose is to educate and be accessible for all ability levels. Commercial off-the-shelf games can be used, but often, it is better to create the bespoke products, because accurate, more authentic content is sometimes required, as is the case for the Gathering the Voices project.

Zyda ([8], p. 26) proposes that serious games could be defined "... as a mental contest, played with a computer in accordance with specific rules, that uses entertainment to further education, health, public policy, and strategic communication objectives." The key aspect, the author suggests, is that the game should be entertaining and engage the user, and the pedagogical input is subservient. However, when the digital component of eLearning is included, then serious games are incorporating the important element of "...education/learning as [being] the main or sole purpose" ([9], p. 11). Moreover, the authors contend that games encourage the player's efficacy and motivate him/her by enabling the player to make choices. In effect, although the game must be entertaining, the learning takes place undercover, so that the player unintentionally acquires knowledge. By using a serious games in the Gathering the Voices project, the purpose is thus to engage the learner in deep learning, applying an engaging and challenging format.

5. Rationale of the Gathering the Voices Project

The Scottish Government is committed to teaching schoolchildren in Scotland about the Holocaust and, indeed, funds trips to former concentration camps as part of the pupils' studies [10]. Pupils in primary and secondary schools learn about the rise of Nazism, at a level that is appropriate for their age, and are further supported by organizations, including Sense Over Sectarianism (SOS) [11] and the Holocaust Education Trust [12]. This input is extremely valuable and ensures that all children of school age learn about the Holocaust as part of their curriculum. A key pedagogical approach that is currently applied is meeting and listening to a 'survivor'. This interaction has been regarded as being irreplaceable, as the first-hand accounts by survivors gives a meaning to the listener that is truly unique. However, sadly, the remaining survivors are now in their 80s and 90s and, therefore, are no longer

able, in most cases, to give presentations to younger people. Therefore, there is now an urgent need to record their stories to provide a bank of resources that can take the place of face-to-face meetings.

In Scotland, the school curriculum has recently undergone considerable changes. Within the new Curriculum for Excellence, one of the key themes is: "...enterprise, citizenship, sustainable development, international education and creativity" [13]. With the advent of this new curriculum and its emphasis on citizenship, this seemed to be a fortuitous time for the commencement of the GtV project, which wants that society should recognize the contribution made by Holocaust survivors to Scotland. In addition, survivors had noted that they did not want to be remembered only as refugees, but wanted to be acknowledged as citizens of Scotland.

Many interviews have been recorded about the experiences of Holocaust survivors, but these interviews primarily focus only on the "journey" and have not acknowledged the major contribution that these survivors have made as citizens in their final country of residence. There also appear to be several issues around accessing the currently available interviews. In some cases, it is impossible to access detailed extracts of Holocaust testimonies online without payment, or alternatively, only very small sections of the interviews are easily accessible [14,15].

There are several projects that have carried out interviews of survivors of the Holocaust. Without any doubt, one of the most famous projects is that of the University of Southern California's Shoah Foundation (formerly known as Survivors of the Shoah Visual History Foundation). Stephen Spielberg founded this project in 1994 and, to date, has interviewed nearly 52,000 survivors. This project has applied a global approach and has interviewed some individuals from Scotland, but these interviews, although of major historical value, have not been incorporated into the Scottish curriculum, nor do they portray a detailed picture of survivors and their lives in Scotland. In addition, sometimes, these interviews have lasted for one hour or more, without access to the written word, and they are not placed in context, both factors that can inhibit the engagement of the listener [16]. Institutions, such as the British Library, have also carried out detailed interviews with Holocaust survivors; however, the interviews were lengthy, some over seven hours in length [17]. While it is acknowledged that academic researchers may wish to listen to a lengthy interview, it is unlikely that schoolchildren and the members of the general public would listen for that period of time.

The main aims of the GtV project are, therefore, firstly, to inform and educate the general public about the experiences of Holocaust survivors and, secondly, to prepare user-friendly resources for the school sector in Scotland. The website is the main vehicle in delivering these outputs, and the interviews and editing of the interviews have been carried out by a small group of dedicated volunteers. The funding has enabled interviews to be digitized to professional standards, and a web designer has also been employed to build the website and add the interviews as they have been completed.

6. The Gathering the Voices project's Website

Many of today's younger learners are confident "digital natives" [5], and therefore, the information that is being disseminated needs to apply a modern, accessible and, where possible, interactive methodology. A website has been built that is capable of disseminating a vast and rich array of audio narratives combined with fascinating artefacts and other associated metadata objects (Figure 1). Users can click on an oral testimony, which is presented from the viewpoint of the interviewee. Once users

access each ‘individual’, they are then presented with a comprehensive overview of all of the associated objects with the individual, many of which are described in depth within each oral testimony, thus adding an added dimension to the testimony. Users can choose to read the testimony transcript and or listen to the audio and view all associated objects, such as scanned memorabilia; all of which are linked to the oral testimony (Figure 2) [18]. Examples of this include items, such as personal photographs, personal memorabilia and other intimate objects, all of which assist by bringing the oral testimony to life through the addition of a more interactive dimension for the viewer.

Figure 1. Home page of Gathering the Voices.

Gathering the voices

Testimony from people who sought sanctuary in Scotland to escape the racism of Nazi-dominated Europe

HOME TESTIMONIES NEWS ABOUT US CONTACT US RESOURCES LINKS APPLICATIONS HOLOCAUST SPEAKERS

“
My mother spent her life helping other people, and impressing the need not to forget the Holocaust to ensure such evil never happened again...
”

HOWARD SINGERMAN (SUSAN'S SON)

WELCOME TO GATHERING THE VOICES

This project has gathered and made available online oral testimony from men and women who sought sanctuary in Scotland to escape the racism of Nazi-dominated Europe. Some came on the Kindertransport, others survived concentration camps.

Many made remarkable journeys to get to safety in Scotland.

There is much for you to see and hear on this site.

Listen to the voices of the survivors – their accents will tell you a lot about their journeys. There are Scottish accents, continental liits and sometimes a mixture of both.

All the interviewees spoke about the terrible events that brought them to Scotland.

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Glasgow Jewish Community Trust
Queen's Park Charitable Trust

Figure 2. Extract of an interview from the Gathering the Voices website.

GRETLE SHAPIRO
LIFE BEFORE THE WAR

Gretl Shapiro describes her family's life in Vienna after the Nazis took over. She goes on to give details of her arrival in Britain in 1939 through the Kindertransport system

Read the Transcript

NT: How did you come here?

G.S: I came with a children's transport which was arranged by the Quakers, the 'Society of Friends'

INT: And where had you come from?

G.S: I had come from Vienna

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INT: Why had your parents allowed you to come?

G.S: Well, they could see no future for me. They were frightened of what would happen to me and they themselves couldn't get out. And they sent all their children - three children.

INT: Did you know what was happening to you?

G.S: Well, not clearly. I mean, I thought I would see my parents again. I knew I was going to someone I had never seen before but my parents had communicated by letter to the lady, and I knew I was going to a good home but I didn't know where.

20

INT: Can you understand how it must have felt for your mother?

G.S: Well, I think she must have felt absolutely awful. I mean, she, three children you know, disappearing. And she obviously knew that she'd never see them again. Well, it must have been dreadful, dreadful for her.



Listen to the testimony

▶

▶
◻


Gretl Shapiro
Life Before The War.
Click the play button to listen

View images
Click on each image to enlarge and view more information.





Links to other testimonies from Gretl Shapiro

- Life Before The War
- Immigration
- Settling In
- Integration
- Reflection On Life



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Evidence from previous studies indicated that learning is more effective when employing both audio and visual prompts, the use of the written transcript therefore accompanies the audio [19]. At the same time, consideration was given to the amount of material that was available per section. The material has been divided into themes; “before the war”, “life during the war”, “immigration”, “settling in” and “reflection” (Figure 3) [18]. Paragraphs have also been numbered to assist the user in searching for a specific section. Teachers representing secondary and primary schools in Glasgow gave suggestions for subsections on the website that they felt would fit with the Scottish educational curriculum and also hold the interest of the listener.

It rapidly became apparent that carrying out the interviews was much more time consuming and costly than originally anticipated. The poor health of some of the interviewees made un-edited versions very difficult to listen to, and therefore, significant work was required to make them accessible to all of the potential users. As has been noted elsewhere, the younger users of the website are “media savvy” and expect a good quality learning experience. Accordingly, high quality audio and transcripts for educational purposes also had to be integrated into the project. A professional recording studio, Riverside Studio (Figure 4) [20], has spent many hours editing out background sounds that may affect the quality of the interview.

Figure 3. Examples of Front page for testimonies.**VIEW ALL PEOPLE**

Below you will find a list of people who have contributed their stories of coming to Scotland to escape nazi persecution. Each story has been divided into sections, which can be viewed by clicking on the relevant links.

Select options in the box below to view the list in the desired order.

Sort:





<p>Bob Kutner</p>  <p>View testimonies from Bob Kutner using the links below.</p> <p>Life Before The War Life During The War Immigration Settling In Integration Reflection On Life</p>	<p>Dorrieth M. Sim</p>  <p>View testimonies from Dorrieth M. Sim using the links below.</p> <p>Life Before The War Life During The War Immigration Settling In Integration Reflection On Life</p>
<p>Evelyn Strang</p>  <p>View testimonies from Evelyn Strang using the links below.</p> <p>Life Before The War Life During The War Immigration Settling In Reflection On Life</p>	<p>Freda Laird</p>  <p>View testimonies from Freda Laird using the links below.</p> <p>Life Before The War Life During The War Immigration Settling In Reflection On Life</p>

Figure 4. Sound production students studying at Riverside Studio.

7. Engaging Students by Creating Digital Artefacts within their Disciplines: The Game Jam

It is fully acknowledged that the Holocaust is a complex area, which needs to be approached with great sensitivity. At the same time, applying serious games could be an effective method to teach about the Holocaust. Serious games and applications were therefore generated using a game jam. A game jam is an event where developers can come together to create games and other digital products; these 'jams' typically have a compressed timeframe, such as 48 hours. This key constraint, combined with

others, such as those of theme and platform, tend to produce interesting projects, which sometimes are fairly innovative in terms of design or solution [9]. The teams are interdisciplinary in that students from computing, computer games, psychology, interactive entertainment and networking are invited to participate in the game jams, which occur in the students' free time, usually over a weekend.

One of the most widely acknowledged game jams is the Global Game Jam, which had 319 sites in 69 countries with 16,075 participants making 3128 games [21]. While most game jams are effectively fun events, which make more commercial-style projects, there has been a recent growth in game jams for a more serious purpose, such as the recent game jam hosted by Cancer Research U.K. [22], the Health Game Jam [23], the NASA Game Jam [24] or Jamming 4 Small Change [25].

Glasgow Caledonian University has a history of running game jams with a serious purpose. In 2013, it teamed up with Alzheimer Scotland and Glasgow School of Art celebrating the second Jamming 4 Small Change event (Figure 5) [26], where creatives from across Scotland (and sometimes further afield) come together and develop digital solutions that make a difference for a disenfranchised population. At the event, staff and students produced games and apps for people affected by dementia.

Figure 5. Home page of the Scottish Game Jam, 2013.

The screenshot shows the website for the Scottish Game Jam. At the top, there is a navigation bar with the following links: HOME, NEWS, 2013 JAMS, REGISTER, PRESS, FAQ, LEGACY, and ORGANISERS. Below the navigation bar, the page is titled "News". A red breadcrumb trail indicates the current location: "You are at : Home » Uncategorized » Jamming 4 Small Change – The Output". The main article is titled "Jamming 4 Small Change - The Output" and is posted by JonSykes on June 6, 2013. The article features an illustration of three stylized people (two women and one man) in front of a night cityscape with a hot air balloon. The text of the article describes the event held on May 24th, 2013, in partnership with Alzheimer Scotland and Glasgow School of Art, aimed at creating games and apps for people with dementia. A link is provided to view the event's output: <http://www.scottishgamesjam.com/jamming-4-small-change-2013/>. Below the article, there are social media sharing buttons for Facebook, Twitter, Pinterest, and Google+. A sidebar on the right titled "Recent Posts" lists two other posts: "noPills Game Jam - Register Now!" and "Scottish Game Jam 2014 - Registration Now Open!". At the bottom of the page, there is a section for "About the author" featuring a profile picture and the name "JonSykes".

Even though the game jam may not produce finished games or applications, they have the potential to solve some of the issues identified in terms of the dissemination of information from the Gathering the Voices project. In addition, the solutions may have some commercial value. The event did produce a number of applications and games, and three have been selected for production by the Gathering the Voices Association to be used for educational purposes (Figure 6).

Figure 6. Students and refugees at the game jam at Glasgow Caledonian University in August, 2013.



Prior to the event, the former refugees expressed concern that their lives were being portrayed and potentially trivialized by ‘games.’ In order to dispel these fears, they were invited to meet the students during the game jam and discuss the students’ ideas and concepts. The interactions were very positive, with considerable time taking place for discussion and clarification of the stories themselves and of the interpretations by the students. This was an important part of the learning experience for the students, though it will, unfortunately, not be possible to repeat this on future occasions owing to the frailty of the survivors.

8. Designing an Exhibition for Gathering the Voices

Final year undergraduate product design, graphic design and interior design students were formed into interdisciplinary teams and asked to produce ideas for a mobile portable exhibition for the GtV project. The students’ designs were then exhibited at the annual Scottish National Holocaust Memorial event. The purpose of this assessment was two-fold, firstly, to raise awareness about the Holocaust and, secondly, to enhance students’ employability skills [2]. Over 50 final year undergraduate students participated in the assessed task. Students worked in multi-disciplinary teams and presented their designs to academic staff and invited members of the GtV Association. The groups presented, in turn, and students who were not presenting sat in another room and were unable to hear or see the presentations. Although students were not formally asked about their knowledge about the Holocaust, it became clearly apparent when they were presenting their ideas that they had little or no knowledge

about the Kindertransport (organized evacuation of groups of children to Britain just before the outbreak of war) prior to undertaking the exercise and that their awareness of the Holocaust was limited solely to the concentration camps. Furthermore, they had not comprehended the implications of the Holocaust and how it had severely impacted so many lives. Students said that until they had listened to the interviews, they did not know that most of the survivors came to the United Kingdom as children and that those survivors had made the journey without their parents. Several students also said that they found it difficult to comprehend how such young children learned to cope in different cultures having survived, in many cases, horrendous circumstances.

An unexpected additional form of engagement was that one of the survivors then invited the graphic design students to design the cover of a memoir that she had written [27], in the format of an ebook cover. The students were less inhibited about producing designs for the ebook than for the assessed assignment, and several volunteered. The designs sensitively portrayed the main themes of the book with the winning entrant reflecting the author's intentions.

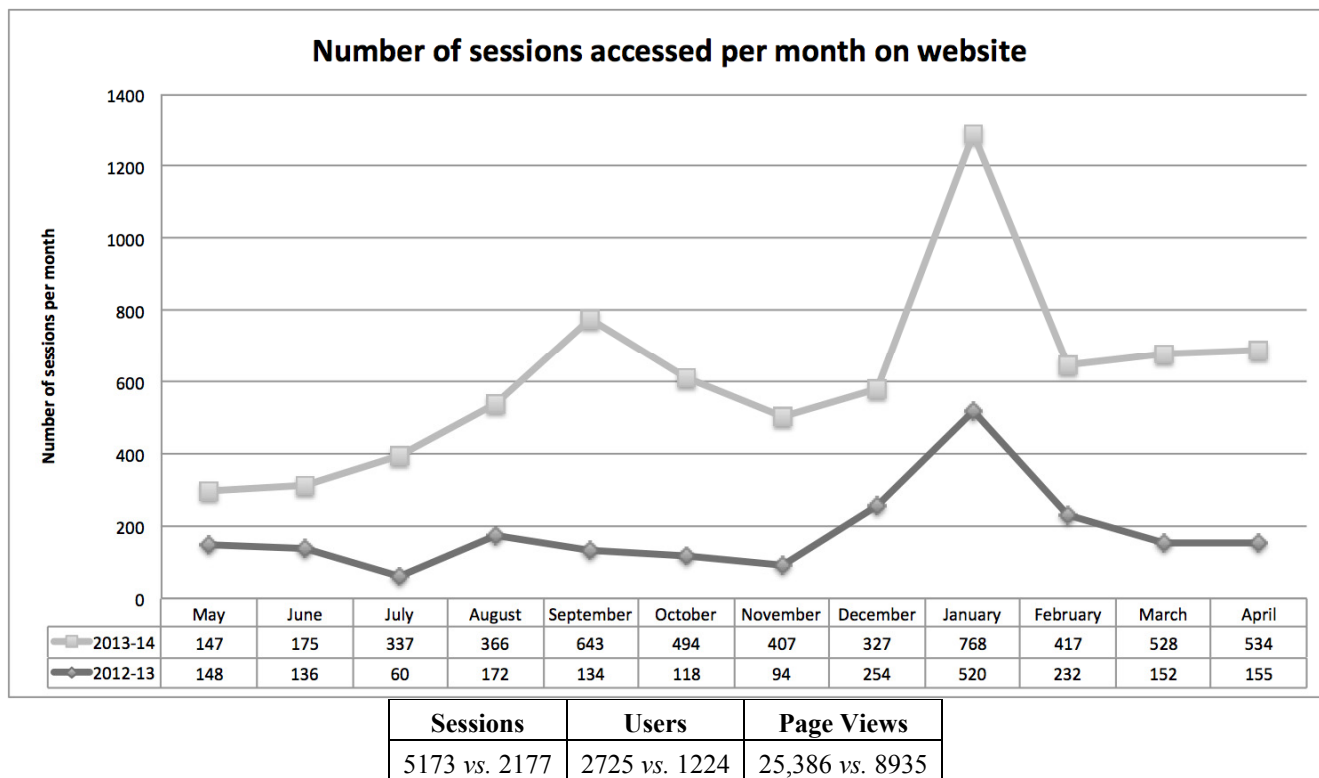
9. Conclusions

Currently, one serious game has been completed, and a further two are being developed. This demonstrates that the interaction between the project and students has continued. Indeed, the undergraduate students have decided to complete the two games in their own time during the summer vacation.

The numbers of users accessing the website increased quite dramatically in the years 2013–2014, as Glasgow Caledonian University has publicised the project extensively, and the website now uses Facebook and Twitter to notify followers when new interviews have been placed on the website. Figure 7 compares the number of sessions, the number of users and the number of page views that have been accessed over two years. Between May 2013 and May 2014, 2725 users, as opposed to 1224, accessed the website. Over the same period, 25,386 pages were viewed, illustrating an increase of over 184%. It is likely that these figures will further increase when the exhibition is launched in August, 2014, and after the dissemination of the eLearning packs in the schools. The latter is due to commence in 2015.

The dotted line in Figure 7 represents a twelve-month period over the years 2013–2014. Two spikes occurred during that year; the first shows an increase in numbers accessing the website during October, 2013. This coincides with the time that the undergraduate students were given the brief for the traveling exhibition. The number of users increased from 81 to 207; and the number of pages accessed increased over 300%, from 793 to 3193. This result strongly suggests that students had actively interacted with the website over that period. The Google analytics report also noted that the predominant age range was 18–25, which concurs with the ages of the students in the program. The second spike occurs in both years, in January, and this result coincides with the Annual National Holocaust Week, which takes place in January, and the Gathering the Voices project was publicised by several organisations. In addition, presentations on the GtV project were given at events in Glasgow for Glasgow schools in both 2013 and 2014. The designs that the interdisciplinary teams had prepared for the GtV exhibition were exhibited at the national event in Stirling, in January, 2014. All of these events helped to publicize the website.

Figure 7. A comparison of usage over a two-year period from May 2012–2013/May 2013–2014.



eLearning packs are also being developed together with colleagues from the Scottish schools’ sector with the anticipated audience including primary and secondary school children across Scotland. Once the three serious games have been developed and the eLearning packs have been completed, training sessions will take place with teachers representing schools across Glasgow to ensure that teachers are familiar with the materials. Thereafter, the teachers’ and pupils’ experiences in using the material will be evaluated.

As knowledge has increased about the project, new refugees from across Scotland have approached the Gathering the Voices Association keen to have their family history recorded on the website. For several of these people, this is the first time they have told their story, so it is incumbent on members of the GtV Association to ensure that their testimonies are recorded appropriately and sensitively. Sadly, the numbers of refugees are decreasing, and some have passed away before their interviews have been placed on the website. In those cases, family members have been asked to listen to the interviews before they are “live”.

Lessons have been learned in that the interview process has proven to be more time consuming than was originally anticipated. This is because survivors have requested changes in their interviews and, on some occasions, re-interviews have taken place. When the project first commenced in 2011, interviews were carried out in the survivors’ homes, as it was felt that they would feel more comfortable in their own surroundings. However, the survivors have stated a preference for the interviews being held in the Recording Studio. Although this has necessitated an interview being repeated, it has proven to be more cost effective, as less changes have occurred post interview. The interviewees have also stated that they feel the recording is much more “professional” as it has occurred in the studio.

As stated earlier, the GtV Association is funding the production of applications that were created as part of the game jam that was held in August, 2013, and Glasgow Caledonian University staff and students intend to continue collaborating with the GtV Association in producing interactive applications. No formal evaluation took place this academic year to study the level of students' learning, as the focus was on producing the artefacts. In the next academic year, undergraduate students studying programs within the computer communications and interactive systems will again be involved in developing artefacts for the GtV project. Similarly, graphic design students will also be invited to suggest some new designs to represent the survivors' journeys on the website. An added dimension will be the inclusion of undergraduate students attending other institutions in Glasgow. These activities will be evaluated through the use of questionnaires and focus groups before the commencement of the activities and, after, to measure the level of learning that has taken place with respect to the students' knowledge about the Holocaust. In addition, students studying audio technology at Riverside Studios will also be using the recordings to learn about the editing processes involved in interviews as part of their Higher National Diploma programs.

eLearning packs are also in the process of being developed together with colleagues from the Scottish schools' sector with the anticipated audience including primary and secondary school children across Scotland. Once, the three serious games have been developed and eLearning packs have been completed, training sessions will take place with teachers representing schools across Glasgow to ensure that teachers are familiar with the materials. Thereafter, the teachers' and pupils' experiences in using the material will be evaluated.

There has been widespread interest in the project, both nationally and internationally, as there is an increased awareness that the refugees' testimonies are an important part of Scotland's cultural heritage. The refugees want their stories to be told. They want younger generations to learn about the effect that wars can have on children, and yet, that children can leave war-torn areas and, with support from the host country, make a contribution to that society. The voice is a powerful tool, and although the production of digital artefacts is an important educational output from the project, the key aim is to educate future generations about the indomitable spirit of the survivor; and that can best be achieved by hearing their original voices.

Author Contributions

Angela Shapiro is a member of the Gathering the Voices Association. Angela edited the article and wrote the sections about the project and the teaching and learning approaches. Brian McDonald is a Lecturer on Video Games Programming at Glasgow Caledonian University. Brian wrote the sections on the Global Game Jam and contributed to the section on Serious Games. Aidan Johnston is a Learning Enhancement Adviser with a background in research of digital audio and video, he contributed to the elements around the GTV website and Open Educational resources (OER).

Abbreviations

GtV: Gathering the Voices.

GCU: Glasgow Caledonian University.

Conflicts of Interest

The authors declare no conflict of interest

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