The European Proceedings of
Social & Behavioural Sciences
EpSBS

Future Academy

ISSN: 2357-1330

https://dx.doi.org/10.15405/epsbs.2019.01.12

9th ICEEPSY 2018
International Conference on Education & Educational Psychology

INTERGENERATIONALITY AND SHARING STORIES IN INCLUSIVE AND DIGITAL CONTEXTS

Cristina Gomes (a), Esperança Ribeiro (b), Sara Felizardo (c)*, Lia Araújo (d), Maria Figueiredo (e), Susana Fidalgo (f)
*Corresponding author

(a) Instituto Politécnico de Viseu, CI&DETS, Escola Superior de Educação, Portugal, mcagomes@esev.ipv.pt
(b) Instituto Politécnico de Viseu, CI&DETS, Escola Superior de Educação, Portugal, esperancaribeiro@esev.ipv.pt
(c) Instituto Politécnico de Viseu, CI&DETS, Escola Superior de Educação, Portugal, sfelizardo@esev.ipv.pt
(d) Instituto Politécnico de Viseu, CI&DETS, Escola Superior de Educação, Portugal, liajaraujo@esev.ipv.pt
(e) Instituto Politécnico de Viseu, CI&DETS, Escola Superior de Educação, Portugal, mariapfigueiredo@gmail.com
(f) Instituto Politécnico de Viseu, CI&DETS, Escola Superior de Educação, Portugal, susanafidalgo@esev.ipv.pt

Abstract

Within the quality of life paradigm, intergenerational and digital activities emerge as a relevant approach to blur boundaries and enhance the participation and inclusion between generations. In this context, we have developed a study that is part of a broader line of research, including the VIAS – Viseu Inter-Age Stories project, whose aim is to promote inclusive and collaborative intergenerationality practices, to enhance support and sense of belonging to a community thereby promoting greater personal well-being. It is an exploratory study, designed to be collaborative and participatory between generations. In this first phase of the project, we present the results of an intergenerational workshop, in which 23 children and seniors participated, using two questionnaires and naturalistic observation. In short, the results of the observations reveal indicators of involvement in the intergenerational interactions; the central role of seniors at the beginning of the interactions and in telling stories about the city and personal memories; the use of technologies emerging as support for narratives. The written reports of the participants show an appreciation of intergenerational relational dynamics and processes of learning and sharing of knowledge between generations. These early results (and subsequent workshops) will allow a cross-generational collaborative mobile application to be designed.

Keywords: Intergenerationality, technology, city, stories, inclusion.

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

1. Introduction

The growing aging population and emerging concerns related to isolation, psychosocial frailty and exclusion in an increasingly technological and ephemeral world, require solid references and creative and participatory responses to be found, thus building increasingly democratic and inclusive societies.

Aging and technologies are two of the most important issues we face in the 21st century (Lufkin, 2017), which is clearly assumed in the world's agenda. Its dimensions and social importance have elevated both topics to an international political discourse, with repercussions into scientific and public opinion domains. Despite often evidenced as negative and risky phenomena, aging and technologies can also be great opportunities, especially if considered together.

Among the core societal challenges, issues related to health and quality of life, as well as demographic changes and the phenomena of exclusion have become relevant, remitting us to situations of greater vulnerability for seniors due to biopsychosocial changes (Bengtson & Settersten, 2016; Kunkel, Brown, & Whittington, 2014; Morgan & Kunkel, 2016; Pfeil, Zaphiris, & Wilson, 2009; World Health Organization [WHO], 2002). As fertility declines and life expectancy rises, the proportion of the population above 65 or over is growing faster than all younger age groups all over the world. Over the next few decades, a further increase in the population of older persons is almost inevitable, given the size of the cohorts born in recent decades. Portugal is one of the most aged countries of the world. The proportion of persons aged 60 and older went from 21.7% in 2000 to 27.1% in 2015 and is projected to represent 34.7% and 41.2% in 2030 and 2050, respectively (United Nations, 2015).

The literature emphasizes the role of social and contextual factors in health and the consolidation of healthy lifestyles. In this regard, we highlight the positive effects of the formal and informal social support network on personal functioning, particularly on subjective well-being. Empirical evidence and clinical observations have implied this in the aetiology and recovery of physical and psychological frailty, making this a central factor in promoting health and well-being (Felizardo, Ribeiro, & Amante, 2016; Saranson, Saranson, & Pierce, 1994). For this reason, participation in social and community activities fosters positive feelings in seniors, improves their self-esteem and fosters the recognition of the community (Araújo & Melo, 2011; Niles-Yokum & Wagner, 2015).

Simultaneously, technology can be a powerful tool in supporting healthy aging, especially in bringing seniors closer to the community and to the world. However, at the moment older people, for the most part, are not making the most of the potential of new technology. Indeed, several demographic, social-cultural and economic factors, such as socio-economic status, education, family structure, race, gender, geography location, as well as cultural and social participation, can push the elderly towards digital and social exclusion (Amaral & Daniel, 2016). Increased age is associated with decreased levels of media literacy. Data from the European Union reveals that the percentage of individuals who used the Internet at least once a week is 79% (males) and 77% (females) in the aged 16 to 24-year-old age group, 61% (males) and 55% (females) for 25-54 year olds and 31% (males) and 19% (females) for 55-74 year olds (AGE, 2008). In Portugal, the proportion of the older age group using Internet is even lower, 13% (males) and 6% (females).

Christensen Doblhammer, Rau, and Vaupel (2009) in a publication about the challenges ahead for an aging population and the importance of living longer without severe disability, drive attention to the

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

contribution of technologies, especially concerning care and assisted living. In addition, in social aspects related with advanced life, technology has been proven a benefit, helping older people engage with society and better access to public and private services. This includes connecting geographically distant people by mobile phone (Amaral & Daniel, 2016), home delivery for housebound older people, improvements in transport information systems and easier delivery of single access points for services for older people (AGE, 2008). The huge gap between those who can access and use digital technologies and information effectively, normally the younger generations, and those who cannot, is contributing to a digital divide between generations and to a digitally excluded condition of second-class citizenship for older people (Amaral & Daniel, 2016).

The intergenerational programs are a privileged means of promoting social interactions between young and old generations. But their associated benefits are not achieved simply by putting different generations into contact with each other more often (Bertram et al., 2018). To be effectively intergenerational, the activities must involve the process of exchanging and pursuing a joint objective together for the benefit of both generations and the community (Vieira & Sousa, 2016).

Reports and papers about several experiences have been relating the potential of intergenerational programs to narrow the generation gap in terms of knowledge, social interaction, values, and mutual attitudes, as well as to diminish the digital literacy gap. Relations between generations improve their closeness, since the perception of how close they feel towards each other improves (Gamliel & Gabay, 2014) as well as each generation's attitudes about the other, i.e., after the intergenerational interaction the thoughts toward children from older adults and vice versa, improve. In addition, intergenerational programs enable community awareness and recognition of seniors as productive members of society, valued as guiding the younger generations (Bertram et al., 2018).

The research highlights the catalytic effect of reminiscences on seniors' well-being and quality of life (Bohlmeijer, Roemer, Cuijpers, & Smit, 2007; Gaggioli, Morganti, Bonfiglio, & Riva, 2014). These personal memory-sharing dialogues positively influence both generational groups because they create opportunities for interaction and affective closeness, as well as for learning in a context of greater diversity, social participation and inclusion (Bertram et al., 2018; Gamliel & Gabay, 2014; Vieira & Sousa, 2016).

Intergenerational reminiscence about the places where projects are developed promotes thinking about the city in which generations grow and live, reflect on it, and even collect memories about their locations, relating location to cultural aspects of community life (Gallagher & Carey, 2012; Silva, Nisi, & Straubhaar, 2017). These experiences foster and constitute challenges to create more inclusive and adapted cities for all people with a sense of belonging to a community (Kaplan, Sánchez, & Hoffman, 2016; van Vliet, 2011).

Regarding the younger generation, they can contribute to fostering the development of a feeling of community among children, to promote the rediscovery of local folk traditions (Gaggioli et al., 2014) and to realizing that "the world wasn't created today, here, on their Internet" (Gamliel & Gabay, 2014, p. 598) as well as to build core values, such as respect for their roots and the places in their city of birth. Intergenerational story sharing provides more meaningful learning (Ausubel, Novak, & Hanesian, 1978),

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

improving the organization of knowledge in children's and young people's cognitive structures, making the teaching-learning process more effective.

Seniors can improve their self-efficacy, expand and enrich their social network, and cultivate positive feelings of being valued, accepted, and respected (Gamliel & Gabay, 2014) and have more positive attitudes regarding their future (Gaggioli et al., 2014). Moreover, engaging in teaching and mentoring activities with younger generations enhances communication and expression skills, improves self-confidence and self-esteem, as well as motivation, involvement in intergenerational activities, and provides a sense of usefulness and belonging to the community (Bertram et al., 2018; Gaggioli et al., 2014).

Contact opportunities also enhance mutual understanding, reduce barriers (Armstrong, 2012; Gaggioli et al., 2014; Gallagher & Carey, 2012; Gamliel & Gabay, 2014) and allow negative stereotypes to be overcome by combating misconceptions and simplistic views about the other generation (Bertram et al., 2018; Gaggioli et al., 2014; Gamliel & Gabay, 2014; Morgan & Kunkel, 2016; Newman & Hatton-Yeo, 2008).

In this context, digital technologies have emerged as an important support in intergenerational activities. Although seniors are associated with low levels of technological literacy, digital contexts may be relevant catalysts for positive intergenerational contact (Armstrong, 2012). Within the large variability of programs that have been developed, new and emerging technologies are being utilized to promote understanding, build relationships, and facilitate cooperation between generations (Kaplan, Sánchez, & Bradley, 2015). Digital technology is a medium for intergenerational interactions, a setting in which it is possible to promote the exchange of knowledge, relationships and empowerment (Gamliel & Gabay, 2014) as presupposed by intergenerational program's assumptions (Vieira & Sousa, 2016).

Due to the characteristics of each generation, normally in these kinds of programs, the younger group help older adult participants to use digital technologies and the older participants tend to make other types of contributions to the intergenerational exchange, according to their knowledge and to the program's objectives such as teaching youth about local history (Kaplan et al., 2015).

The potential of technologies to support the process of intergenerational reminiscence need to be further investigated (Gaggioli et al., 2014). Historypin is an innovative tool developed to bring generations together around a history of time and place, using photos as a starting point for conversations and for bringing people together in positive and meaningful interactions (Armstrong, 2012). Its use proved to contribute to new friendships and better social confidence between older and younger people and to learning new skills and knowledge.

The sharing of digital stories and reminiscences can be an important point of uniting generations, from which the younger and older people can tell and (re)elaborate stories, memories and meanings in collaborative and participatory processes (Botturi & Rega, 2014; Flottemesch, 2013; Lambert, 2013). An environment conducive to bringing together digital, communicational skills and the memories and wisdom derived from life experience emerges (Botturi & Rega, 2014). Storytelling in digital format is a more sophisticated and deeper way of sharing stories, and can associate other elements: images, video, music, thus constituting a new instrument to support the narratives. In this process, the digital narrative

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

can be used to convey local, traditional, and personal stories, and seniors assume a central role as storytellers par excellence from their storehouse of memories (Flottemesch, 2013; Morganti et al., 2016).

Despite the immense and great possibilities of using technologies in intergenerational practices, Kaplan and colleagues (2015), based on their experience, alert to how the use of technology can function as an intergenerational connector or isolator, a communication barrier or barrier remover. The same authors recommend the use of strategies to maintain the interest, keep participants involved, stimulate conversation and exchange, documenting interactions, and providing examples of how technology can connect to relationship building.

2. Problem Statement

Setting out from the framework of the quality of life paradigm, sharing generational and digital stories associated with significant places in the city emerges as an excellent form of intervention in order to reduce barriers and enhance the participation and inclusion among generations, (co)building friendly cities where everyone has a place and belongs to the same community.

3. Research Questions

Given the topics mentioned above and in order to assess the results of an intergenerational workshop with children and seniors, two guiding questions have emerged which we intend to answer: What are the relational and learning dynamics between children and seniors in co-constructing narratives about significant community sites? What are the contributions of the study results to the subsequent collaborative design of a mobile application?

4. Purpose of the Study

This study is part of a broader line of research, including VIAS – Viseu InterAge Stories, a project whose aim is to promote inclusive and collaborative practices of intergenerationality, enhance support and a sense of belonging to a community thereby promoting greater well-being and quality of life. In this context, this exploratory study intends to analyse the experiences and the perceptions of children and young people and seniors about the interactions and the learning achieved in an intergenerational workshop on the histories and memories of significant places in the city of Viseu, Portugal. The results of the study and those of subsequent workshops will contribute to the intergenerational, collaborative design of a mobile application.

5. Research Methods

In order to achieve the purpose of the study, a qualitative and comprehensive exploratory investigation has been developed (Creswell, 2009) on collaborative and participatory design between generations (Rice, Cheong, Ng, Chua, & Theng, 2012). The following methods of data collection were used: a questionnaire survey (with structured and unstructured questions) and naturalistic observation.

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

5.1. Participants

The participants were recruited on a voluntary basis from the Senior University of Viseu, in the case of the seniors; in the case of children, parents submitted enrolments from schools near the School of Education of Viseu. The convenience sample, whose characterization is presented in Table 1, involved 23 participants: 13 children aged between 6 and 13 years, with a mean age of 9.7 years; 10 elderly individuals ranging from 60 to 78 years, mean age 67.8 years. The majority of the subgroups were female (n=9, 69.2%), aged 9 or less (n=8, 61.5%), attending the 1st and 2nd Cycles of primary education [respectively, years 1-4 and 5-6 of schooling] (n=10, 76.9%). In the senior group, the majority were male (n=9, 90%), aged over 65 (n=6; 60%) and who had attended higher education (n=6; 60%).

Table 1. Characterization of the sample of children and seniors

Sociodemographic data	**n (%)**	
	Children (n=13)	**Elderly (n=10)**
Gender		
Female	9 (69.2)	1 (10.0)
Male	4 (30.8)	9 (90.0)
Age groups		
≤ 9 Years	8 (61.5)	
> 9 Years	5 (38.5)	
≤ 65 Years		4 (40.0)
> 65 Years		6 (60.0)
Academic qualifications		
Attended 1st and 2nd Cycles of Primary Education [respectively, years 1-4 and 5-6 of schooling]	10 (76.9)	
Attended 3rd Cycle of Education [years 7-9 of schooling]	3 (23.1)	
Secondary Education		4 (40.0)
Higher Education		6 (60.0)

5.2. Instruments

The participants answered two brief questionnaires, which allowed the sociodemographic data and the pattern of use of the technologies to be measured, as well as their degree of satisfaction and the perceptions of the children and seniors about the intergenerational activities developed. In addition, naturalistic observation was used, and excerpts were collected for observation periods (from 5 to 10 minutes). The registers were later triangulated with field data from the group monitors.

5.3. Procedure

The intergenerational workshop took place in December 2017, in a non-formal context, having taken place in a large room in the School of Education of Viseu library, over an extended temporal period (one morning of activities). Compliance with the ethical norms involved in any research project was ensured and participants were informed about the purpose and the voluntary nature of the participation and the confidentiality of the collected data was guaranteed.

The working session was initiated with group dynamics in order to unlock defences and promote participants' knowledge. Next, the children and elderly people were asked to identify the places they considered to be of greater interest or personal significance on a map of the city of Viseu. After this preliminary survey, five groups were constituted with at least two elderly people and two children,

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

according to the preferences manifested regarding the places in the city of Viseu. It should also be mentioned that five students, in the field of education, from the Higher School of Education participated. Their task was to orientate and mediate the activities carried out in the groups.

In the context of group work, participants were challenged to tell stories about the place(s) they had previously identified as being of most interest. To this end, the groups had at their disposal various materials for drawing (paper, markers, coloured pencils) and tablets and one laptop per group. No guidance was given on the means they could use to develop their stories, so the use of technology emerged as one of the options and was therefore used in an unguided manner. In the final phase of the session, the participants answered the questionnaires in the research protocol.

5.4. Data analysis techniques

The data analysis entailed the use of emerging categorical content analysis (Bardin, 1997). This technique allowed us to analyse the written reports of the unstructured questions in the questionnaires, as well as the records and field notes of the naturalistic observations systematically. For this purpose, a pre-analysis was performed with a floating reading of the material following the procedures involved in the coding process. In the next phase, the purpose was to compare the data that were previously fragmented, with the emerging categories (and subcategories) based on their similarities. To verify the fidelity of the coding, the agreement between the judges method was used (Schutt, 1999), based on the proposals of two coders involved in the study.

6. Findings

The analysis of the participants' responses to the unstructured questions of the questionnaire revealed two major structuring dimensions of the children and seniors' written records: A) intergenerational teaching-learning opportunities; B) intergenerational social interactions.

Dimension A included three categories: i) learning (with 29.7% of mentions in all the categories/subcategories found in the study); ii) shared knowledge (corresponding to 19.6% of the total of the study records); and iii) the places in the city mentioned most often (with 13.5% mentions of all records).

The first category, related to the learning process, as seen in Table 2, included three subcategories: i) general information about the city's locations (36.1% referred to by children and 13.9% by seniors); ii) stories about places (22.2% mentioned by children and 2.8% by seniors); and iii) valuing the knowledge of the other generation (16.7% of seniors and 8.3% for the children). Thus, we found that it is the children who most mention that they have learned from seniors about general information and stories related to places in the city. We also point out that it is seniors who most mention the subcategory of the youngsters' knowledge (16.7% of the reports).

Here are some excerpts from the participants' written reports with explicit references to learning: "I learned a lot, much more about Fontelo (city park). I learned more about the past. Even when I was not born." "[He/she] taught me stories of the past." (child 1: boy, aged 8), "I learned a vast number of things such as the evolution, especially of the Mercado 2 de Maio, over time. I found out that over the years that place went from a place where you could buy the most diverse foods to what it is today - a tourist site to

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

be visited." "I learned the history of the King and that there was food in the Mercado 2 de Maio." (child 3: 13-year-old girl).

The following are excerpts from written reports on the value of the other generation's knowledge: "listening to young people's opinions, the way they manifest spontaneously and genuinely, is very gratifying for those who have an already had a long life." "We can learn a lot from them." (senior 1: 68-year-old man), "It is necessary to be more attentive to the new generations. They have experience, experiences, and sometimes maturity, which needs to be emphasized and valued." (senior 5: 63-year-old man), "I have, once again, made contact with other generations; it is very enriching. I learned things about Viseu, I did not know and I was awakened to future interests." (senior 10: 64-year-old man).

In the category shared knowledge, it is seniors who present more reports (65.5%) referring to the subcategories stories about the places in the city and personal memories. With regard to the places in the city most often mentioned, we highlight the most significant places, particularly for children, namely: city monuments, the train station, the city park (Fontelo) and the old local market (Mercado 2 de Maio).

We present records related to shared knowledge: "… the life path I lived in the city of Viseu for almost 40 years. The experiences I reported related to my professional activity and the importance of a place of social experience" (senior 1), "to remember with some nostalgia moments lived in the places where we focus our stories", "I taught [them] about how the old part of the Mercado 2 de Maio was ... how the market was so different from today" (senior 4: 76-year-old man).

Table 2. Results of the questionnaire assessing intergenerational activities applied to children and senior citizens

	Content Analysis		Participants' records					
Dimensions	**Categories**	**Subcategories**	**Children**		**Seniors**		**Total**	
			n	**%**	**n**	**%**	**n**	**%**
Intergenerational teaching-learning opportunities	Learning	General information about places	13	36.1	5	13.9	18	50.0
		Stories about places	8	22.2	1	2.8	9	25.0
		Valuation of generational	3	8.3	6	16.7	9	25.0
		Category total	24	66.6	12	33.4	36	100%
	Shared knowledge	General information about places	8	27.6	7	24.1	15	51.7
		Stories about places	1	3.5	4	13.8	5	17.2
		Personal memories	1	3.5	8	27.6	9	31.1
		Category total	10	34.6	19	65.5	29	100%
	Places in the city most often mentioned	City monuments	6	30.0	1	5.0	7	35.0
		Train station/Railway	4	20.0	3	15.0	7	35.0
		City park (Fontelo)	2	10.0	1	5.0	3	15.0
		Old local market (Mercado 2 de	1	5.0	2	10.0	3	15.0
		Category total	13	65.0	7	35.0	20	100%
Intergenerational social interactions	Relational dynamics	Conviviality	6	20.7	10	34.5	16	55.2
		Affective experience	3	10.3	5	17.2	8	27.6
		Personal satisfaction	2	6.9	3	10.4	5	17.2
		Category total	11	37.9	18	62.1	29	100%
	Means of expression	Painting/drawing	4	11.8	0	0.0	4	11.8
		Photography	4	11.8	1	2.9	5	14.7
		Technology	0	0.0	2	5.9	2	5.9
		Dialogue	13	38.2	10	29.4	23	67.6
		Category total	21	61.8	13	38.4	34	100%

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Dimension B encompassed two categories: (i) relational dynamics (with 19.6% mentions of the total records); and ii) means of expression (22.9% of total records).

As shown in Table 2, the first category, relational dynamics, includes three subcategories: i) Conviviality (34.4% of the seniors and 20.7% of the children); ii) affective experience (17.2% seniors and 10.3% children); and iii) personal satisfaction (10.4% seniors and 6.9% children).

In an overall analysis of the category, we found that most reports belong to seniors (62.1%) compared to children (37.9%). We also emphasize seniors' references to affective experiences and satisfaction with intergenerational activities (Table 2).

Here are excerpts of reports related to the dynamic relationship category: "what I liked the most in this activity was interacting with adults" (child 5: 9-year-old boy), "I enjoyed interacting with young people; I enjoyed observing their joviality and how they are so evolved. I was no longer used to socializing with young people, which was very pleasant" (senior 4: 76-year-old man), "Listening to and observing the behaviour and performance of young people and adults is very rewarding" (senior 1).

In relation to the category means of expression, we find that the subcategory most often referenced by the children and the seniors is dialogue (respectively, 38.2% 3 29.4%), followed by children's reports on the use of painting/drawing and photography (11.8%). Regarding the use of technology, the seniors allude to it, but the children do not mention its use, although they did use it in the intergenerational activities.

As for the results of the naturalistic observation of the behavioural descriptive of the children and seniors in the developed activities, as we observed in Table 3, two structuring dimensions of the registers were observed: A) intergenerational narratives; B) intergenerational social interactions.

Table 3. Results of the naturalistic observation of the behavioural descriptive of the children and seniors in the developed activities

Content Analysis				**Records**					
Dimensions	**Categories**	**Subcategories**		**Children**		**Seniors**		**Total**	
				n	**%**	**n**	**%**	**n**	**%**
Intergenerational Narratives	Format	Oral		7	21.2	9	27.3	16	48.5
		Written		4	12.1	1	3.0	5	15.1
		Graphic (drawing,		9	27.3	3	9.1	12	36.4
		Category total		20	60.6	13	39.4	33	100%
	Temporality	Past		0	0.0	12	57.1	12	57.1
		Present		9	42.9	0	0.0	9	42.9
		Category total		9	42.9	12	57.1	21	100%
	Use of technology	Laptop		4	44.4	1	11.1	5	55.6
		Tablet		0	0.0	4	44.4	4	44.4
		Category total		4	44.4	5	55.6	9	100%
Social Interactions intergenerational	Who initiates interaction								
		Category total		2	20.0	8	80.0	10	100%
	Involvement in interactions	Attention/concentration		11	27.5	9	22.5	20	50.0
		Reciprocity in interaction	No	4	10.0	4	10.0	8	20.0
			Yes	7	17.5	5	12.5	12	30.0
		Category total		22	55.0	18	45.0	40	100%

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

Dimension A covered three categories: (i) format (with 29.2% of total observation records); ii) temporality (with 18.6% of all records); and (iii) use of technology (7.9% of the records).

In category format of the narratives, observation registers revealed three subcategories: i) oral (27.3% seniors and 21.2% children); ii) written (12.1% children and 3% seniors); and iii) graphic (27.3% children and 9.1% seniors). As can be seen, both groups use oral expression to refer to places, stories and memories. However, children also use the graphic format, especially drawing/painting and image (seniors also use photos and pictures). Regarding the category use of technology as a support for the sharing of stories and information, we observed that seniors have more records of observation (55.6%), especially showing a preference for using the tablet as a support for the narratives. Children preferred to use the laptop. Regarding the category temporality of the narratives, as can be seen in Table 3, seniors use the past (57.1% of the category's records) and the children use the present (42.9% of the records).

Dimension B covered two categories: (i) who initiates the interaction (with 8.8% mentions in all records); and ii) involvement in interactions (35.4% of total records). As shown in Table 3, the first category, who initiates the interaction, the results reveal that the seniors are responsible for initiating most interactions (80% of the category records).

Regarding the involvement in the interactions category, the observations suggest interesting indicators of involvement in that children and seniors present records in the sub-category attention/concentration (respectively, 27.5% e 22.5%). This reveals interest and active participation in intergenerational interactions. These data are corroborated with the records in the subcategory reciprocity in interactions, in which the children and seniors present more reciprocity records (Table 3).

7. Conclusion

Intergenerational teaching-learning opportunities

From the results obtained in the study and taking into account the purpose and guiding questions, we underscore the children's references in terms of their learning from seniors regarding general information and stories about places in the city. These results are in line with the literature, which highlights the positive effects of sharing intergenerational experiences on younger generations (Gaggioli et al., 2014), enabling meaningful learning (Ausubel, Novak, & Hanesian, 1978) and the longer lasting retention in their cognitive structures.

Simultaneously, the results present seniors as central figures in the transmission of knowledge, sharing reminiscences and as storytellers about places in the city, allowing a guided tour of the city of Viseu. This raised awareness of responsibility is consistent with studies in this field, which indicate that intergenerational activities may have implications on the communication skills and self-esteem of seniors. Seniors also recognise that they are productive members of the community and are valued in their role as counsellors and trainers of the young (Araújo & Melo, 2011; Bertram et al., 2018; Niles-Yokum & Wagner, 2015).

In addition, the results of the observations regarding the temporality of the narratives indicate that seniors fundamentally rely on stories and memories of the past. These data are consistent with the literature because they highlight the motivation of seniors to share old stories about places and reminiscences, which has a positive influence on their well-being and quality of life (Gaggioli et al.,

https://dx.doi.org/10.15405/epsbs.2019.01.12
Corresponding Author: Sara Felizardo
Selection and peer-review under responsibility of the Organizing Committee of the conference
eISSN: 2357-1330

2014; Kunkel, Brown, & Whittington, 2014; Morgan & Kunkel, 2016). Intergenerational dialogues are important for both groups because they create opportunities for participation and social interaction, creating more inclusive relational spaces (Bertram et al., 2018; Gamliel & Gabay, 2014).

We highlight the appreciation for the other by seniors, who emphasized the knowledge, attitudes and maturity of the young, suggesting that these intergenerational activities provided a better understanding of the younger generation, altering stereotypes and erroneous perceptions (Abrams, Eller, & Bryant, 2006; Armstrong, 2012; Gallagher & Carey, 2012; Gamliel & Gabay, 2014; Morgan & Kunkel, 2016; Newman & Hatton-Yeo, 2008).

Intergenerational social interactions

In an overall analysis of the results in the social interactions dimension, we find that most of the reports are from the seniors, which is in line with studies that highlight the positive effect of personal memory sharing dialogues that positively affect the two generational groups. This is because it promotes social interactions, conviviality and affective bonds (Bertram et al., 2018; Gamliel & Gabay, 2014). This makes these experiences more participatory and inclusive, where all members have a place regardless of their developmental and intellectual condition and level.

Consistently, data from observations are also clear; seniors are responsible for initiating most interactions. This is in line with the literature that highlights the benefits of intergenerationality for seniors because they enhance social interactions and provide context in which they feel valued by clearly assuming the role of mentors and guides of the young (Bertram et al., 2018). In addition, sharing reminiscences impacts on seniors' well-being and quality of life (Gaggioli et al., 2014).

The results also reveal that both groups use oral expression, but children also use the graphic format, especially drawing/painting and images. As for the use of technology as a support for story-sharing, we find that seniors use the tablet and children, the laptop. These data suggest that, if stimulated seniors may include technologies to support their narratives. In fact, for a greater effectiveness of intergenerational programs, there should be good planning of activities and resources, more in line with the needs of generational groups (Sánchez, Díaz, Sáez, & Pinazo, 2014). In future workshops this dimension should be more reflected, and the session monitors should play a central role in the intentional and planned inclusion of technologies.

We also emphasize the involvement of the participants in the interactions, and in the observations. Both groups showed indicators of attention/concentration and reciprocity in their interactions, which suggests interest and motivation in participating in the activities. These results are consistent with studies that emphasize the role of intergenerationality in promoting interactions, optimizing intergenerational communication and approximation processes (Bertram et al., 2018; Gamliel & Gabay, 2014). Thus, children and seniors provide informal social support, which may have positive implications for the personal functioning of both generations. In line with the empirical evidence, we emphasize the role of support as in the recovery of psychosocial difficulties and in promoting health and subjective well-being (Saranson, Saranson, & Pierce, 1994).

These early results (and subsequent workshops) will enable the cross-generational collaborative design of a mobile application. The data refer to strategies of intergenerational involvement that will

allow us to delineate the conceptual model of the application, by creating and sharing collaborative stories about places, (re)creating appropriations and meanings of places in the city.

Acknowledgments

To the Centre for Studies in Education, Technologies and Health - Polytechnic Institute of Viseu (Portugal).

References

AGE – The European Older People´s Platform (2008). *Media literacy, digital exclusion and older people*. Retrieved from http://www.age-platform.eu/images/stories/EN/pdf_AGE-media-A4-final-2.pdf

Abrams, D., Eller, A., & Bryant, J. (2006). An age apart: The effects of intergenerational contact and stereotype threat on performance and intergroup bias. *Psychology and aging*, *21*(4), 691–702.

Amaral, I., & Daniel, F. (2016). Ageism and IT: Social Representations, Exclusion and Citizenship in the Digital Age. In Z Jia & G. Salvendry (Eds.), *Human Aspects of IT for the Aged Population* (pp. 159-166). Switzerland: Springer.

Araújo, L., & Melo, S. (2011). Relacione-se com outros. In O. Ribeiro & C. Paúl (Coords.), *Manual de Envelhecimento Ativo* (pp. 141-170). Lisboa: Lidel.

Armstrong, N. (2012) Historypin: Bringing Generations Together Around a Communal History of Time and Place. *Journal of Intergenerational Relationships*, *10*(3), 294-298.

Ausubel, D., Novak, J., & Hanesian, H. (1978). *Educational Psychology: A Cognitive View* (2nd ed.). New York, NY: Holt, Rinehart and Winston.

Bardin, L. (1997). *Análise de conteúdo*. Lisboa: Edições 70.

Bengtson, V. L., & Settersten, R. A. (2016). *Handbook of Theories of Aging* (3rd ed.). New York, NY: Springer Publishing Company.

Bertram, A. G., Burr, B. K., Sears, K., Powers, P., Atkins, L. D., Holmes, T., Kambour, T., & Kuns, J. B. (2018). Generations learning together: pilot study for a multigenerational program. *Journal of Intergenerational Relationships*, *16*(3), 243-255.

Bohlmeijer, E., Roemer, M., Cuijpers, P., & Smit, F. (2007). The effects of reminiscence on psychological well-being in older adults: A meta-analysis. *Aging and Mental Health*, *11*, 291–230.

Botturi, L., & Rega, I. (2014). Intergenerational digital storytelling: four racconti for of a new approach. Formazione & Insegnamento. *European Journal of Research on Education and Teaching*, *2*, 211 - 224.

Christensen, K., Doblhammer, G., Rau, R., & Vaupel, J. (2009). Ageing populations: the challenges ahead. *Lancet*, *374*(9696), 1196–1208.

Creswell, J. W. (2009). *Research design. Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Thousand Oaks, California: Sage Publications.

Felizardo, S. A., Ribeiro, E., & Amante, M. J. (2016). Parental adjustment to disability, stress indicators and the influence of social support. *Procedia – Social and Behavioral Sciences*, 217C, 830-837.

Flottemesch, K. (2013). Learning through Narratives: The Impact of Digital Storytelling on Intergenerational Relationships. *Academy of Educational Leadership Journal*, *17*(3), 53-60.

Gaggioli, A., Morganti, L., Bonfiglio, S., Scaratti, C., Cipresso, P., Serino, S., & Riva, G. (2014). Intergenerational Group Reminiscence: A Potentially Effective Intervention to Enhance Elderly Psychosocial Wellbeing and to Improve Children's Perception of Aging. *Educational Gerontology*, *40*, 486–498.

Gallagher, P., & Carey, K. (2012). Connecting with the Well-Elderly Through Reminiscence: Analysis of Lived Experience. *Educational Gerontology*, *38*(8), 576-582.

Gamliel, T., & Gabay, N. (2014). Knowledge Exchange, Social Interactions, and Empowerment in an Intergenerational Technology Program at School. *Educational Gerontology*, *40*(8), 597-617.

Kaplan, M., Sánchez, M., & Bradley, L. (2015). Conceptual Frameworks and Practical Applications to Connect Generations in the Technoscape. *Anthropology & Aging*, *36*(2), 182-205.

Kaplan, M., Sánchez, M., & Hoffman, J. (2016). Intergenerational Strategies for Sustaining Strong Communities. In M. Kaplan, M. Sanchez, & J. Hoffman. *Intergenerational Pathways to a Sustainable Society* (pp. 109-139). New York, NY: Springer Publishing Company.

Kunkel, S. R., Brown, J. S., & Whittington, F. J. (2014). *Global Aging. Comparative Perspectives on Aging and the Life Course.* New York, NY: Springer Publishing Company.

Lambert, J. (2013). *Digital storytelling: capturing lives, creating community* (4th ed.). New York, NY: Routledge.

Lufkin, B. (2017). *10 Grand challenges we´ll face by 2050*. Retrieved from http://www.bbc.com/future/story/20170713-what-will-the-challenges-of-2050-be

Morgan, L. A., & Kunkel, S. R. (2016). *Aging, Society, and the Life Course* (5th ed.). New York, NY: Springer Publishing Company.

Morganti, L., Scaratti, C., Cipresso, P., Gaggioli, A., Bonfiglio, S., & Riva, G. (2016). How can technology help intergenerational reminiscence? A pilot study. *International Journal of Web Based Communities*, *12*(1), 35.

Newman, S., & Hatton-Yeo, A. (2008). Intergenerational learning and the contributions of older people. *Ageing Horizons*, *8*(10), 31–39.

Niles-Yokum, K., & Wagner, D, L. (2015). *The Aging Networks. A Guide to Programs and Services*. New York, NY: Springer Publishing Company.

Pfeil, U, Zaphiris, P., & Wilson, S. (2009). Older adults' perceptions and experiences of online social support. *Interacting with Computers*, *21*(3), 159–172.

Rice, R., Cheong, Y., Ng, J., Chua, P., & Theng, Y. (2012). Co-creating games through intergenerational design workshops. In *Proceedings of the Designing Interactive Systems Conference on - DIS '12* (pp. 368-377). New York, NY: ACM.

Sánchez, M., Díaz, P., Sáez, J., & Pinazo, S. (2014) The Professional Profile of Intergenerational Program Managers: General and Specific Characteristics. *Educational Gerontology*, *40*(6), 427-441.

Saranson, I. G., Saranson, B. R., & Pierce, G. (1994). Relationship-Specific social support: toward a model for the analysis of supportive interactions. In B.R. Burleson; T.L. Albrecht, & I.G. Saranson (Eds.), *Communication of social support: messages, interactions, relationships, and community* (pp. 91-112). Thousand Oaks, California: Sage Publications.

Schutt, R. K. (1999). *Investigating the social world: The process and practice of research* (2nd ed.). Thousand Oaks: Pine Forge Press.

Silva, C., Nisi, V., & Straubhaar, J. D. (2017). Share yourself first: exploring strategies for the creation of locative content for and by low-literacy communities. In *Proceedings of the 8th International Conference on Communities and Technologies - C&T '17* (pp. 236-245). New York, NY: ACM.

United Nations, Department of Economic and Social Affairs, Population Division (2015). World Population Ageing. New York, NY: United Nations.

van Vliet, W. (2011). Intergenerational Cities: A Framework for Policies and Programs. *Journal of Intergenerational Relationships*, *9*(4), 348-365.

Vieira, S., & Sousa, L. (2016) Intergenerational practice: contributing to a conceptual framework. *International Journal of Lifelong Education*, *35*(4), 396-412.

WHO - World Health Organization (2002). Active ageing: A policy framework. Geneva: WHO.