
From 'La Piazza' to 'Puente': How place, people and technology make intergenerational learning

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Abstract: The divide between generations and the need to integrate aging populations through life wide learning strategies have been evidenced by researches and policy documents. Yet, the lack of mutually beneficial learning practices calls for innovative solutions to prevent societal fragmentation. In 'La Piazza' the purpose was to identify good practices through the use of case studies and interaction design techniques and gauge the potential of digital technologies as enablers of intergenerational learning. In 'Puente', the goal is to further explore the transformative power of existing good practices and to provide guidelines for the design of environments in which young and old can grow in connection.

Keywords: intergenerational learning; divide between generations; places people and technology; case studies; good practices; interaction design.

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Martin Owen is an independent researcher into the ways technology transforms learning. Currently, he is active in EU partnerships that are exploring ambient and mobile technologies that enhance the ways we can learn in particular locations. He is also director of SMALTI Technology – a company producing innovative new digital manipulable devices for learning. Previously, He was director of development and learning at Futurelab where he worked on innovations in mobile and games technologies. Prior to that, he held a teaching and research post at the School of Education in the University of Wales, Bangor. Here, he conducted a wide range of learning technology projects, including working with teachers on primary school numeracy with multimedia computers for the Welsh Assembly, and building a virtual e-village for UK and French teenagers. He has also worked as an advisory teacher and as a secondary science and technology teacher.

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1 Introduction

The growing divide between generations has been widely evidenced by researchers and practitioners alike (Hatton-Yeo and Ohsako, 2000; Prensky, 2001; Newman, 1997). Yet, the lack of integrative learning practices, and models calls for innovative solutions to prevent further societal fragmentation. European projects 'La Piazza' and 'Puente' address this challenge by *bringing together old-timers and newcomers to a group, or community, in mutually enriching ways*. In 'La Piazza', the purpose was to identify, help grow, and disseminate good practices through the use of case studies and interaction design techniques, and to gauge the potential of digital technologies as enablers of intergenerational learning. In 'Puente', the goal is to further explore the transformative power of the existing good practices, to observe and choreograph learning-rich encounters and activities in different contexts, and to provide guidelines for the design of environments (event-spaces) in which young and old can enjoy each others' presence, negotiate their differences, broaden their views, and grow in connection.

Research questions include: What are the relational qualities and socio-cultural dynamics that are conducive to inter-generational learning? Could we identify some of the self-orienting/grounding techniques that people, young and old, invent for themselves to play, learn, feel whole as a person, and belong to a community? Which types of technological tools may best suit the design and evaluation of digitally enhanced event/ambient spaces to support inter-generational learning? As a whole, we are looking at the key elements for the development of what we are calling a sustainable 'learning ecology':¹ (Nardi and O'day, 1999) a dynamic system that takes into account the diversity, the evolution, the histories, the integration and the interdependence of its members as well as the technologies involved.

Existing research stresses the importance of intergenerational programmes that enable

"all generations (irrespective of age, race, location and socio-economic status) [to] bind themselves together in the process of generating, promoting and utilizing ideas, knowledge, skills, attitudes and values in an interactive way for the improvement of self and community." (Oduaran, 2002)

Researchers have identified some of the characteristics essential to the success of intergenerational programmes (Hatton-Yeo and Ohsako, 2000), they should: demonstrate their mutual benefits for participants to establish new roles and new perspectives for young and old participants, involve multiple generations (including non-adjacent and non-familial generations), promote increased awareness and understanding between the younger and the older generations and the growth of the self-esteem for both generations.

Existing research can be classified into two main streams:

- focus on the impact on human development outcomes, and how various intergenerational endeavours contribute to the cognitive, social and emotional growth of young and adult participants² (Davis et al., 2002)
- understanding the significance of intergenerational exchange at the community level³ (Kaplan, 2002).

The need to integrate aging populations through lifelong and life-wide learning strategies (both in formal and informal settings) has been stressed in several policy documents (EU Lisbon declaration, 2000; OECD, 2003). In recent years, there has been a proliferation of local and isolated intergenerational practices. In the USA, shared

intergenerational website programmes are developed to provide new opportunities for learning that engage both young and elders while creating stronger intergenerational relationships (Arfin, 2002; Steinig and Peterson, 2002). However, little research is completed to further implement and evaluate these experiences and to envision in a systematic way the role that technology could play in inter-generational learning.

Much of the rationale in educational literature is based on a societal need and historical evolution of generations' separation. Researchers generally agree that generations appear much farther apart today in spatial, emotional and cultural terms than before, and that groups are institutionally segregated (e.g., pediatric definition, social security). Theories of aging stress the need for elderly people to be more connected with society (Granville and Ellis, 1999). Also being engaged in meaningful activities together with others is a condition of their well-being. On the other hand, the increased development of a 'youth culture' with a life of its own is seen as evidence to the widening gap between young and old (Loewen, 1996). Retirement villages and 'homes' for the 'golden age' entrench the elderly on the one end of the generational spectrum, while MTV and the advertisement industry generate a 'youth culture' and entrench the younger generations at the opposite end of this spectrum. And this is without speaking about the technology-driven divide between 'digital natives', 'native speakers' (Prensky, 2001) of the digital language of computers, video games and the internet, and 'digital immigrants' those older folks who were not born into the digital world but who have, at some later point, adopted aspects of the new technology but will always retain their 'accent', that is, their "foot in the past". In Prensky words, "Today's older folk were 'socialized' differently from their kids, and are now in the process of learning a new language".

What is missing to this day, beyond evidencing the gap and stressing bleed societal effects, is a solid body of work around the potential of inter-generational learning. Likewise, the role that technology could play to enhance it, to stimulate creative expression, collaborative problem-solving, richer environments and learning in multi-dimensional spaces (physical and virtual) is largely unexplored. Projects La Piazza and Puente have been designed to investigate these questions and bring insights from different case studies in Europe.

The first project, 'La Piazza' (2006–2007), was mainly exploratory, and conducted within the European Network of Excellence KALEIDOSCOPE (2004–2008). It was a one-year Jointly Executed Integrating Research Project (JEIRP). 'La Piazza' specifically had three main aims

- look at the issue of intergenerational learning mediated by technologies in social spaces
- progress in the definition of a model for intergenerational learning scenarios, enriched by different technology tools and interfaces
- set scientifically and socially sound basis to generate models for the co-design of architecturally interesting social spaces in which technologies are ecologically integrated and where roles of adults and youngsters are defined to support a mutual, socially rewarding learning experience.

Techniques used in this first phase of the research included: case studies (in four sites) and participatory design sessions.

The second project, 'PUENTE' (2006–2008), is currently being carried out in the framework of the programme Socrates – Minerva. It is strongly grounded in the outcomes of 'La Piazza', and involves more closely and over a longer period of time the stakeholders on the case studies. It aims at further elaborating the model for the design of intergenerational learning in public spaces, validating it, and testing its transferability from informal to formal learning contexts.

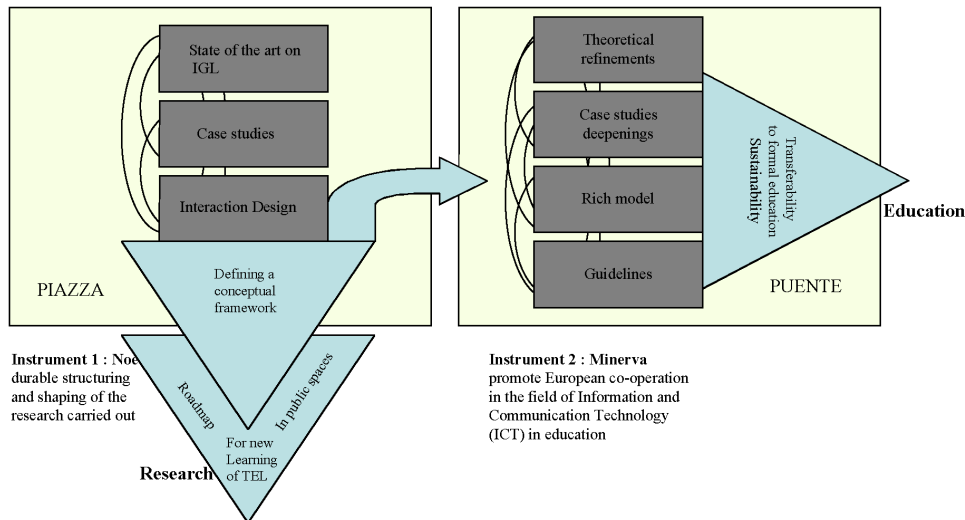
Relating to European research instruments, 'La Piazza' was built in the spirit of its supporting programme, i.e., within a Network of Excellence as an integration opportunity among different European teams: that is as an

“instrument for strengthening excellence by tackling the fragmentation of European research, where the main deliverable is a durable structuring and shaping of the way that research is carried out on the topic of the network.”⁴

We proposed the second project, PUENTE, with the purpose of strengthening our research outcomes through an action-research approach within the MINERVA Action,⁵ which “seeks to promote European cooperation in the field of Information and Communication Technology (ICT) and Open and Distance Learning (ODL) in education”.

Through both projects, under these two different action schemes, we followed a general strategy with specific related project tasks and deliverables to establish a comprehensive research roadmap on how, under what conditions and with what social benefits, TEL in public spaces can effectively and meaningfully support intergenerational learning (Figure 1).

Figure 1 Two related projects to investigate the potential of inter-generational learning: 'La Piazza' and 'Puente' (see online version for colours)



2 LA PIAZZA: Defining a conceptual framework for intergenerational learning

In the exploratory phase of ‘La Piazza’, the team focused on rethinking the nature of conviviality, community, and informal learning in the digital age, and identified some of the human, environmental, and technological qualities that make for rich *event-spaces* in inter-generational learning. The research stressed the importance of *third-places* – great good places between home and work – and focuses on their transformative power, or capacity to draw in people from different ages and walks of life to jointly *turn the habitual into the extraordinary* (Oldenburg, 1989). The spatial dimension of learning and the knowledge construction where the knower and the setting are part of an intertwined system are also seen as an important feature (Mannion and I’Anson, 2004). Drawing from case studies (Denscombe, 2007; Yin, 2003) and interaction design methods (co-creation of concept cards), we provide a conceptual framework to help drive the design of experientially rich places for inter-generational learning. Research questions included: Why re-unite old-timers and newcomers? What places for young and elders to meet, enjoy each other’s presence, and learn from one another, at a time when communities, as we know them, dissolve? What ‘displacements’ are needed to unleash people’s imagination while, at the same time, bringing them closer, and back into place! The approach used was iterative, and drew insights from two complementary methods.

- We based our research on case studies in four sites: Cosmo Caixa in Spain, MAMAC in Belgium, Space Signpost and Bristol Harbourside Cultural Quarter in UK, Computer Club House, Viborg in Denmark (Ackermann et al., 2006, 2007; Barajas, 2006; Barajas et al., 2006). A first series of themes emerged, mostly from interviews, which helped researchers to narrow down some of the characteristics that make for great good third-places, including safe havens; dream spaces; room for symbolic exchanges and play; room for personal expression, mutual respect and empathy. All these dimensions are drivers in informal learning and community building. They play a key-role in inter-generational learning.
- Making use of interaction design, or co-creation methods, researchers and site participants joined forces to imagine new forms of integrated third-places (the piazzas, cafes, marketplaces of tomorrow). Based on first-hand experience, and drawing from diverse expertise, the team drafted a handful of *innovative concept cards*. Participants were encouraged to merge digital, physical, and virtual to generate engaging and ‘futuristic’ event-spaces.

Comparing and contrasting the outcomes of the two approaches (fragments of interviews and concept cards) has been instrumental in refining and articulating emerging dimensions.

3 LA PIAZZA to PUENTE: Fleshing out dimensions to build on and further explore

Recurring themes from interviews and co-creation sessions in phase one of the research (La Piazza) have been grouped into five categories, or dimensions, to be taken into

account when designing or facilitating events and spaces for intergenerational learning. These dimensions constitute the ground for further exploration in Puente.

Space-time

Take your time and find your place. In their everyday lives, people do not usually separate time and space the way scientists do. The word 'chronotope' (Greek for time/space) captures the notion that, in human experience, place is tied to events, i.e., evocative of what happened in it over time. Conversely, timely events are associated with, and evocative of, place. Intergenerational learning calls for dedicated space/times that enable shifts between private and public, comfort and challenge, 'connivence' and inclusiveness (like-minded and extraneous). Time and place are experienced differently at different ages, and so are levels of tolerance for 'filled' vs., 'empty' time/space (noisy/silent, crowded/void, fast/slow).

Traces and trails/routines and rituals

Keep track and come back. In Casey's words, "Who we are is where we are and when we are" (Casey, 1997). Finding one's way around (navigating) and keeping a bearing (having a direction or destination) are needed for people to exist, physically and mentally, in time and space. Traces and trails are *self-orienting device* to help people in transit – or minds in motion – be grounded and able to return. So are routines and rituals. They also convey an identity to place itself (*genius loci*), and stimulate a sense of belonging by the people who contributed to the construction of its identity.

ME ++ (self-expansion, personal growth)

Tell your tale and find your voice. Identity formation is about staying in touch with what one feels, perceives, understands and likes. It also involves an ability to speak one's mind, and be heard. To Bruner, stories happen to those who know how to tell them (Bruner, 1990). Early on, children learn to tell their tales to those who are willing to listen, and they soon become silent if their gift is not heard. People, young and old, speak in a 100 languages to express themselves (words, gestures, humour, music) (Malaguzzi, 1995).

Togetherness (relating to other, us/them)

Belong and be loved – Mingle and share. As a member of a socio-cultural community, a person's identity has much to do with becoming an active and respected member of a group. It also has to do with being able to negotiate differences. Intergenerational encounters are a means for old-timers and newcomers to reshape their roles in society, define a new identity for themselves, and regain a voice as a group.

Dream space: Imagine, Create!

Dream it up and make it happen! The future belongs to those who invent it! Making dreams come true is a key to both personal and societal growth. Envisioning possibilities, or gauging *what is* in terms of *what could be*, opens new horizons and sheds different light into one's reality. Imagination naturally occurs in make-believe activities, such as storytelling, or play. Creativity reigns in the mind of the artist.

From experiential qualities to design guidelines (cf. Table 1)

Table 1 Summary of dimensions, examples, and lessons for design

<i>Dimensions</i>	<i>As experienced</i>	<i>Example</i>	<i>Lessons for design</i>
Space-time	Chronotope.	Sun-dials	Time-aware spaces, spatially grounded moments
Self (expanded)	ME++ There's more to me than my individual self, here and now	Me as I was (past) Me as I will be (future) Me as I 'd like to be Me when I go there Me when I am here	Design stages/events to boost personal expression, self-expansion, and identity formation. Ex: story telling; performance
US (relations)	Connectedness Empathy Dance/dialogue	Me seen through other Other seen through me Many kinds of others	Design stages/events for Sharing, trading, dancing Ex. Become other/carnival
Dream-space	Envision new horizon. Open possibilities. Invent future	How I wish things were How things could be Fictionalise. Dramatise Think out of the box	Design stages/events for Co-creation, co-invention, Building fictions together Theatre. Poetry. Story-telling

4 Preliminary outcome: roadmap for intergenerational learning scenarios

Based on these dimensions, a roadmap for new learning and communication architectures of technology-enhanced public spaces for intergenerational learning scenarios (Owen, 2007) has been defined.

Because the technological capabilities are changing, we present a working model of the ways that people and technology can interact with space and illustrate with few contemporary activities. This model, together with the early concepts defined above, constitute the basis for further elaboration within Puente.

The technological issues

We can identify a number of dimensions that can be problematised for research and development processes:

- The pervasive overlay: an electronic sea of information provided by a wireless network available to people wherever they are.
- Technology in the space or technology that people bring to the space: in some cases, there is technology in the space that people visit, in other cases they bring the technology with them into a space such as a mobile phone.
- Technology that provoke or scaffold conversations or technologies that mediate conversations: in some cases, technology is there to make people imagine virtually or abstract possibilities, in other cases it is there to promote conversation about real things already in the space.

- Augmenting the space or making the space a different place – in some cases, the IT in the space tells people about the space as it is, in other cases we can make the space virtually somewhere else.
- Synchronous interaction or asynchronous interaction: Sometimes, the interaction with other people is when people are in the same space at the same time – in other cases, it may be that the interaction is with knowledge left by a person at some other time – or the visitor may leave information for others to act on in the future.
- Deliberate and casual – sometimes, people may visit a space deliberately to have a specific experience and in some cases people may just happen upon an experience.

5 Conclusions

The ultimate goal of our investigations on intergenerational learning is to help educators, practitioners, and policy-makers tap into communities' untapped potential and distributed intelligence. In this early phase of the research, we discussed on the role of third-places in allowing folks who do not normally meet to invent new possibilities for themselves. We fleshed out conditions for old-timers and newcomers to feel at home, learn from each other, and grow-in-connection. The dimensions emerging from several case studies (in Belgium, Denmark, Italy, Spain and UK) are meant, as well as the working model presented serve both as guiding principles in the design of digital places, and as a ground for further elaboration in Puente. We address how digital technologies can be used to augment existing or imagined third-places and the research lays the ground to define tasks force targeting museum, local policy decision-makers and IT industry.

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References

- Ackermann, E., Chabert, A., Decortis, F., Magli, R., Napoletano, L. and Owen, M. (2006) 'La Piazza: Convivial spaces for intergenerational learning: What places for the digital age?', in Mendez-Vilas, A., Solano Martin, A., Mesa-Gonzalez, J. and Mesa Gonzalez, J.A. (Eds.): *Current Developments in Computer-Assisted Education*, Formatex, Badajoz, Spain, Vol. 3, pp.1359–1363.
- Ackermann, E., Decortis, F. and Safin, S. (2007) '“La Piazza”: state of the art on research on technology enhanced spaces for inter-generational learning', *Literature Review and Theoretical Approach*, Kaleidoscope, D38.2.1.42 pages, Available at <http://www.ub.edu/euelearning/lapiazza/public.htm>

- Arfin, P. (2002) 'An observational research project, research methodology and issues', *First ICIP International Intergenerational Conference, Connecting Generations, A Global Perspective*, 2–4 April, Keele University, UK.
- Barajas, M. (2006) *Case Studies: Technology Enhanced Public Spaces for Intergenerational Learning*, Kaleidoscope, D38.3.1.
- Barajas, M., Magli, R., Owen, M., Safin S., Toccafondi, G. and Molari, G. (2006) 'La Piazza-convivial spaces for inter-generational learning: which role can learning technologies play?', in Mendez-Vilas, A., Solano Martin, A., Mesa-Gonzalez, J., Mesa Gonzalez, J.A. (Eds.): *Current Developments in Computer-Assisted Education*, Formatex, Badajoz, Spain, Vol. 3, pp.217–222.
- Bruner, J. (1990) *Acts of Meaning*, Harvard University Press, Cambridge, MA.
- Casey, E.S. (1997) *The Fate of Place: A Philosophical History*, University of California Press, Berkeley.
- Davis, L., Larkin, E. and Graves, S.B. (2002) 'Intergenerational learning through play', *International Journal of Early Childhood*, Vol. 34, No. 2, pp.42–49.
- Denscombe, M. (2007) *The Good Research Guide*, 3rd ed., Sage Publishing, Beverly Hills, CA.
- EU Lisbon declaration (2000) *The Lisbon European Council- Economic and Social Renewal for Europe Contribution of the European Commission to the Special European Council in Lisbon*, 23–24 March, Available at <http://www.euractiv.com/en/future-eu/lisbon-agenda/article-117510#links>
- Granville, G. and Ellis, S. (1999) 'Developing theory into practice: researching intergenerational exchange', *Education and Ageing*, Vol. 14, No. 3, pp.231–248.
- Hatton-Yeo, A. and Ohsako, T. (2000) *Intergenerational Programmes: Public Policy and Research Implications: An International Perspective*, UNESCO Institute for Education, Hamburg & Beth Johnson Foundation, Stoke-on-Trent.
- Kaplan, M. (2002) 'Impact of intergenerational programmes on community initiatives and settings', *First ICIP International Intergenerational Conference, Connecting Generations, a Global Perspective*, 2–4, April, Keele University, UK.
- Loewen, J. (1996) *Intergenerational Learning: What If Schools were Places Where Adults and Children Learned Together*, Report EDRS.
- Malaguzzi, L. (1995) 'I cento linguaggi dei bambini', in Edwards, C., Gandini, L. and Forman, G. (Eds.): Edizioni Junior, Torino.
- Mannion, G. and I'Anson, J. (2004) 'Beyond the Disneyesque: children's participation, spatiality and adult-child relations', *Childhood*, Vol. 11, No. 3, pp.303–318.
- Nardi, B.A. and O'Day, V. (1999) 'Information ecologies', *Using Technology with Heart*, MIT Press, Boston.
- Newman, S. (1997) *Intergenerational Programs: Past, Present, and Future*, Taylor & Francis, Washington.
- Oduaran, A. (2002) 'Intergenerational approaches to sustainable community development in Botswana and Nigeria', *UNESCO Symposium 'Intergenerational Strategies for Sustainable Community Development in Developing Countries'*, *First ICIP conference Connecting Generations – A Global Perspective*, Keele.
- OECD (2003) *The Policy Agenda for Growth An Overview of the Sources of Economic Growth in OECD Countries Paris*, OECD, Available at <http://www.euractiv.com/en/future-eu/lisbon-agenda/article-117510#links>
- Oldenburg, R. (1989) *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*, Paragon Publishing, New York.
- Owen, M. (2007) *Roadmap for New Learning and Communication Architectures of Technology Enhanced Public Spaces for Intergenerational Ludic Learning Scenarios in Informal Contexts*, Kaleidoscope, D.38.5.1, <http://www.ub.edu/euelearning/lapiazza/public.htm>

- Owen, M. (2007) *Roadmap for New Learning*, Available at <http://www.ub.edu/euelearning/lapiazza/public.htm>
- Prensky, M. (2001) *Digital Game-Based Learning*, McGraw Hill, Princeton, NJ.
- Rizzo, A. (2006) *Report on Results from the Co-Design Sessions*, Kaleidoscope, D38.4.1, Available at <http://www.ub.edu/euelearning/lapiazza/public.htm>
- Steinig, S. and Peterson, J. (2002) 'Intergenerational shared sites and services for children, youth and families', *First ICIP International Intergenerational Conference, Connecting Generations, a global perspective*, 2–4 April, Keele University, UK.
- Yin, R. (2003) *Case Study Research: Design and Methods*, 3rd ed., Sage Publishing, Beverly Hills, CA.

Notes

¹In the same way Nardi and O'Day (1999) defined an 'information ecology' "We define an information ecology to be a system of people, practices, values, and technologies in a particular local environment. In information ecologies, the spotlight is not on technology, but on human activities that are served by technology".

²For example, intergenerational learning through play has been studied by Davis et al., (2002). Play being universal is a good way for all to learn about themselves and the world. Shared play experiences are important in building mutually beneficial relationships among younger and older generations, and they contribute to cognitive growth, improved social skills, physical development and emotional wellbeing. They show how older adults can be involved in children's play; appropriate toys and materials, and play games in ways that bring generations together successfully.

³Kaplan (2002)³ for instance explored the intersection between domains of intergenerational programming and community development, and investigated how young people and senior adults may collaboratively study neighbourhood development issues, explore and pursue civic involvement possibilities. Efforts to facilitate meaningful intergenerational exchange within community participation endeavours are highlighted, as well as broadening the base of professional participation in the intergenerational studies field to community planners, architects, geographers, and anthropologists as well as gerontologists, child development specialists, and educators.

⁴"NoE are designed to strengthen scientific and technological excellence on a particular research topic through the durable integration of the research capacities of the participants. They aim to overcome the fragmentation of European research by: gathering the critical mass of resources; – gathering the expertise needed to provide European leadership NoE also have to spread excellence beyond the boundaries of its partnership".

⁵The Action has three main objectives

- to promote understanding among teachers, learners, decision-makers and the public at large of the implications of the use of ICT in education, as well as the critical and responsible use of ICT for educational purposes
- to ensure that pedagogical considerations are given proper weight in the development of ICT and multimedia-based educational products and services
- to promote access to improved methods and educational resources as well as to results and best practices in this field.