

OLDER ADULT INSIGHTS FOR AGE FRIENDLY ENVIRONMENTS, PRODUCTS AND SERVICE SYSTEMS

Linda SHORE¹, Adam de EYTO^{1&2}, Louise KIERNAN^{1&2}, Deirbhile Nic A BHAIRD², Anne CONNOLLY³, P J WHITE⁴, Tracy FAHEY⁵ and Siobhan MOANE⁶

¹Design Factors, School of Design, University of Limerick, Ireland

²Product Design & Technology, School of Design, University of Limerick, Ireland

³ISAX, Ireland Smart Ageing Exchange, Ireland

⁴Design CORE, Institute of Technology Carlow, Ireland

⁵Limerick School of Art & Design

⁶Limerick Institute of Technology, Ireland

ABSTRACT

It is estimated that by 2020, a quarter of the European population will be aged over 65, and expected to grow further by two million annually after 2012 [1]. There is also an expectation that children born after 2011 may live to 100 years old [2], these factors are expected to impact on economy, social security and health care systems. The importance of these systems and environments to accommodate and adapt to our changing needs as we age presents opportunity to research through design. Environments, in the context of this paper, are the spaces, products and product service systems that we engage with, alone or with others, within and outside the home.

A design coalition [3] was generated between a number of academic Institutions and ISAX (Ireland Smart Ageing Exchange) an 'ageing think tank' organisation in Ireland. The intention of this coalition was to generate awareness of needs requirements for older adults, in environments that facilitate and are beneficial. In addition, it would provide an example of how participatory design research can inform innovation in business and policy development at a local and state level.

A five-week study was conducted using design and ethnographic methods with twenty-two Older Adult participants (age range 69 – 80). The themes of study were identified as: Mobility, Public Spaces, Safety, Social Engagement, Services & Facilities. Cultural probes, semi-structured interviews and user observation, by both researchers and older adult participants, were used as methods to identify the unmet needs of participants within the sample group. The outcomes of research were presented at a Co-Design Symposium in June 2016. This Symposium was attended by over 100 people of various backgrounds (town planners, architects, transport experts, retailers, builders, health and other service providers). The older adult participants and designers (staff and researchers from the School of Design at the University of Limerick, IT Carlow, Limerick Institute of Technology and Limerick School of Art & Design) were placed within a team of ten. The research was presented using audio/visual presentation as well as artefacts from the fieldwork, completed diaries, scrapbooks, storyboards etc. Solutions were worked on, and delivered at end of day. This Symposium has impacted positively whereby policy makers in local government have invited ISAX to further discuss research outcomes and needs of older adults as a means to develop access areas in and around Limerick City.

This paper outlines in further detail the design research methods used and the benefits through design education Student/ Researcher /Stakeholder collaboration by application 'in the 'field'.

New, relevant work: This work displays the effectiveness of design coalitions in influencing and affecting change and insight into policy. It highlights how Co-Design collaborations can impact and generate design solutions that improve day to day experiences.

Keywords: Older Adults, Co-Design, Needs Identification, Collaborative Coalitions, Product Service Systems.

1 INTRODUCTION

As a result of a rapidly growing ageing population there are a number of age specific agencies focusing on the needs identification and mobilization of the older adults voice as a means to influence and deliver product and service systems that benefit all. One such agency is ISAX (the Ireland Smart Ageing Exchange). The ageing population is a design concern that requires ensuring that design in industry, and third level design education, generate awareness by engaging with older adults using participatory or Co-Design methods. A collaborative coalition of academic institutions, (University of Limerick, Institute of Technology Carlow, Limerick School of Art and Design, & Limerick Institute of Technology) came together with ISAX; with the intention to organize a Co-Design Symposium to exemplify how this activity can affect change and influence policy. Research through design [4] is an activity that diarizes and documents the paths to understanding and defining needs requirements. This is an activity that opens up opportunity to look and listen beyond a discipline. It also facilitates a variety of stakeholders to engage in a project in a Co-Design context. Co-Design as described by Manzini as a “*social conversation*” was deemed a suitable approach on which to build the collaborations required for the Symposium. There was an approach agreed that in order to build the structure of a Symposium, themes would need to be identified that would offer insight to ageing and day to day activities and tasks. A strategy to recruit participants, including an ethics approved plan for fieldwork, was devised. Older Adult participants, students, researchers and staff from the School of Design, University of Limerick created a collaboration to work together and learn from each other and through each other. This activity, would deliver identified needs statements as the brief for each theme and work for the Symposium.

2 METHODS

As a means to display credibility, integrity and rigour, both to older adult potential participants and other stakeholders, ethics approval for the research was sought and approved through the normal ethics procedure of University of Limerick. This enabled an action plan to present to groups and individuals, and an invitation to participate in field studies. These would involve observed tasks and activities using ethnographic methods, and self-observed diarizing of a period of time (one week) using cultural probe packs. The criteria for participants were: participants aged over 65, living in the Limerick environs, who were deemed independent and living in the community.

The pool of participants was twenty-two Older Adults, as displayed in Figure 1:

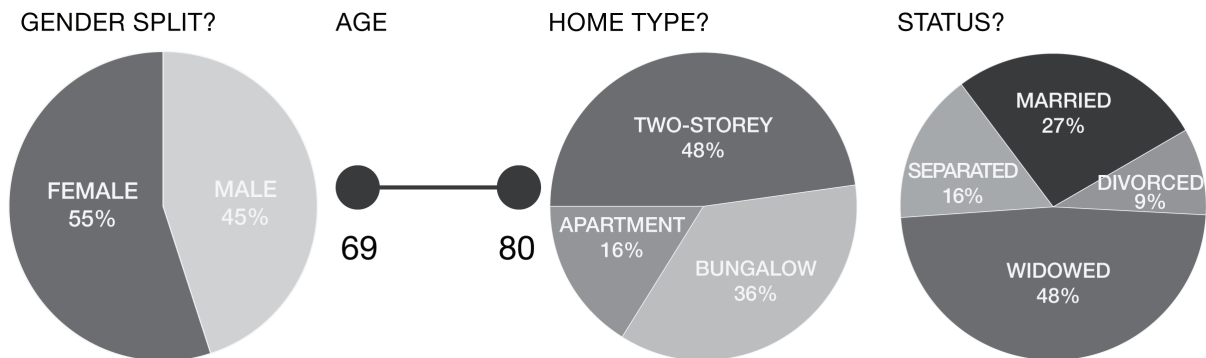


Figure 1. Statistical breakdown of the twenty-two participants

2.1 Fieldwork

The themes identified by the coalition to pursue in the fieldwork were: Mobility, Public Spaces, Safety, Social Engagement, and Services & Facilities. The fieldwork began in April 2016 and continued over a period of five weeks. At this point the PhD researcher (from Design Factors, UL) was joined by an undergraduate student of Product Design & Technology in UL who was working on a Faculty scholarship. The role of the student was to learn through experience of fieldwork by accompanying the researcher and engaging with the older adult participants in their homes, and while out and about on task observation studies. The participants were split into two groups of eleven. Group One engaged in semi structured interview and were observed undertaking various daily activities and tasks. Group Two were issued with cultural probe packs that would be left with the participants for the course of one week. These participants were initially briefed prior to pack issue and agreed to diarize and record items or experiences of interest.

The items issued with each cultural probe pack were: a diary, scrapbook, disposable camera, stickers and visual chart to document quickly items of pain or joy daily. One of the opening questions to each of the participants in addition to the typical age, home type etc., was “are you active?” –Interestingly this was a good conversation opener; 100% of the participants in both groups answered yes, and proceeded to list activities and interests they pursued.



Figure 2. Cultural probe pack (left image) Older adult participant with researcher (image right)

2.2 Co-Design Symposium, Limerick, June 2016

The strategy for the Co-Design Symposium was to invite participants and partners of ISAX to work together for one day on design solutions identified through a selection of Needs statements for each of the five themes observed during the fieldwork:

1. Mobility – Need: Improvement of accessibility experience outside the home – Bus access, parking, cyclist awareness & pedestrian experience.
2. Public Spaces – Need: Older adults with reduced mobility and their carers require access to busy areas safely, efficiently and conveniently, as a means to conduct everyday tasks and social engagements.
3. Safety – Need: Older adult safety and reassurance when outside the home.
4. Social Engagement – Need: Interaction, support and communication across communities and generations.
5. Services & Facilities – Need: Impartial trustworthy guidance to manage and plan finances and bills in the following areas: Banking, General Utilities, Mobile Phone options & Estate Planning.



Figure 3. Sample of attendees, including older adult, under graduate & post graduate participants from University of Limerick

There were various artefacts of research evidence (video displays, storyboards, photographs, diaries etc.) displayed and available for all attendees to view. The research evidence expressed in tangible ways the older adult experiences recorded during the research. Highlighted were various ‘joy and pain points’. The ‘joy points’ ranged from simple things such as well-placed park benches, opportunities

for social engagement, volunteering, gardening, friendships and family life. The ‘pain points’ showed up problems as diverse as a lack of ‘set down’ areas for cars in Limerick City to ‘drop off’ a relative, unsafe street crossing areas, car park spaces with limited ambulatory accessibility, tablet blister medication packs that were a challenge to open, and personal security devices that didn’t offer reassurance to users.

Participants then worked in teams of ten to build new solutions for these problems, facilitated by design staff and students. Each team focused on one of the themes and comprised of stakeholder attendees, designers (students and staff from School of Design, University of Limerick., Institute of Technology, Carlow, Limerick School of Art & Design & Limerick Institute of technology) as well as two to three older adults who had been involved in the research.

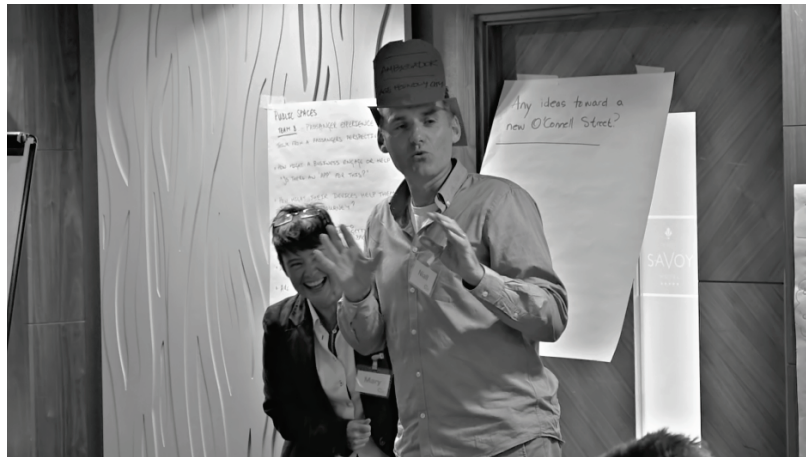


Figure 4. ‘Pitch’ role-play delivery by group facilitator

3 FINDINGS

Towards the end of the Symposium, each team was invited to ‘pitch’ their idea and express the benefits of each design solution. There were ten design solutions offered:

1. Mobility
 - Solution 1: Volunteer Support Service Club
Create a new membership club, which is aimed at improving access by foot or transport links to commercial or public buildings. The club would engage early retirees, second level transition year students and others interested in volunteering their time, to ‘map’ good pathways or access links to bus schedules for onward/return journeys by public transport or for car parking spaces.
 - Solution 2 – Improved Car Parking Spaces
Getting in and out of cars more easily by alternating (L-shaped) car parking spaces, to ensure that car doors can be opened fully, and designing Age Friendly ‘logo’ for specific car parking spaces.
2. Public spaces
 - Solution 3 – Designated Drop Off Points
Create ‘drop-off’ points accessed by drivers, dropping off less mobile persons. Each car would have a sticker ID on the windscreen that would be provided by local policy makers. Signs and way finders would ensure the person dropped off is aware of route back to pick-up point.
 - Solution 4 – City Ambassadors
Focus on passenger experience with reduced mobility. City Ambassadors working within 1km of city centre, near banks, post offices and hotels, to provide support and information at drop-off points and main car parks.
3. Safety
 - Solution 5 – Safety in the Home Poster
Design an interactive poster for the home that is linked to a smart device. Buttons will have short cut icons to activate calls to family, emergency services, taxi, house alarm.
 - Solution 6 – Sub-dermal implants
Automatic contact that is always on and is always worn. Sub-dermal implant worn by users for fall or other security alerts.

4. Social Engagement
 - Solution 7 – Hands of Friendship Network
This group would engage with new members of communities or areas with older adult population to make new friends and/or re-engage with an area. Building trust, a “Hand of Friendship” group would grow through word of mouth and social activities.
 - Solution 8 – Generation Allies
Inter-generational activities through a Generation Hub – a community space, to facilitate trust, collaborative learning and laughter. Using ‘Generation Allies’ over the life span, so that security, respect, health, friendship, advocacy and wisdom can travel in both directions. Suggested tasting event, e.g. BBQ, communal garden. Inform and invite new members using radio, social media and ‘Tell-a-friend’ methods.
5. Services & Facilities
 - Solution 9 - Digital Training
Fear of technology is limiting access to online services. Access to a connected device and internet availability are two major issues. The suggestion was that the state offers retirees access to training that will enable people to become digitally literate. Once they are trained, an incentivised scheme would empower people by providing internet access with a suitable device with apps to access banking, flight booking, payments from government agencies etc.
 - Solution 10 – Service Navigators
Service system to help people to manage their affairs and provide information that leads to informed decision making, e.g. appointing an executor for a will, putting ‘power of attorney’ in place for future, opening/closing accounts with utility companies. Part of the service would be to provide trusted ‘navigators’ who can facilitate when needed, e.g. set up a meeting with someone from a utility company, go to medical appointments, or to provide knowledge to assist decision making for major purchase (car). Put a loop system in place to ensure that every service item is managed to its conclusion.

On conclusion of the ‘pitch’ the attendees were issued with stickers and invited to vote with their feet! Visiting and issuing preferences by applying a sticker to their favourite solution. This democratising and validation of opinion led to a clear winning solution; however, the real objective of the day was achieved, a demonstration that cross collaborations between older adults, students, researchers, policy makers and industry stakeholders can deliver efficient and tangible solutions to identified unmet needs.



Figure 5. Older adult participant ‘pitching’ the benefits of their design solution to the attendees

4 DISCUSSION

As has been shown, the value of collaborations between students, industry, organisations, and in this example, older adult participants, display the effectiveness and impact these kind of coalitions can influence on product and service system design. Furthermore, it offers students in third level education insight to see beyond the studio and gain experiential awareness and empathy for the value of Co-

Design. In a studio-based learning environment the student can be encouraged by the facilitative approach of lecturers. This can motivate the students to become critical thinkers and display an ability to influence and research through design. Kolb's [5] experiential learning model, which is described as "the process whereby knowledge is created through the transformation of experience", displays the responsibilities learners (students) have when undertaking this type of project. Design students are further encouraged to have the courage to *create* [6] and become *self-starters*, *self-motivated* and *driven* towards *sustainable change* [7]. By encouraging learning beyond the studio and immersion with users as a Co-Design strategy; minds, curiosity and empathy can be embedded as a subconscious tool. This collaboration paradigm has previously been shown by DeVere et al. to encourage social responsibility and sustainability among students. It also influences an approach to develop a responsibility to design, delivering projects that can influence real world problems [8] The Co-Design Symposium is a clear example of what can be achieved when a cross disciplinary approach is undertaken. This is not always addressed through application in a design education context. Suggestions to improve this approach would be to encourage workshops or small studio team based projects. Students would work with a specific cohort through a user based approach to enquire into and explore the unmet needs of daily problems people experience with product and service systems. A further suggestion would be to undertake a cross disciplinary post graduate program with an industry partner to 'mesh' design through research and collaboration with specific user groups. The objectives of this collaboration would be to identify and define unmet needs in product and service systems.

Addressing Collaborative Practice between Stakeholders encourages the use of Co-Design and Collaborative Coalitions to maintain User Experience at the centre of the Design Method.

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