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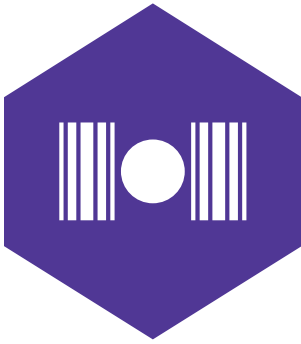
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Cultural Differences in ARCHES

A European Participatory Research Project—
Working with Mixed Access Preferences in
Different Cultural Heritage Sites

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Cultural Differences in ARCHES:
A European Participatory Research Project— Working with Mixed Access Preferences in Different Cultural Heritage Sites

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Abstract: This article discusses the differences and difficulties that the ARCHES project has encountered when setting up and working with participatory research groups as part of a large-scale European project. The article seeks to clarify how participation is experienced across different international partners and research groups. This is explored in relation to recruitment of exploration groups, understanding participatory research, and challenging the definitions of disability. It also shares our methods of working with the participants and the impact upon those ways of working within different cultural environments. The article aims to guide future projects alike.

Keywords: Cultural Differences, Participatory Research, Disability Communities

ARCHES (Accessible Resources for Cultural Heritage EcoSystems) is a Horizon 2020–funded project, which involves partners in heritage and technology across Europe. Its aim is to develop online resources, software applications, and multisensory technologies to enable access to cultural heritage sites within and beyond the project for people with access preferences associated with perception, memory, cognition, and communication. The consortium consists of five technology companies (Treelogic, VrVis, ArteConTacto, SignTime, and Coprix) as well as six leading museums (The Victoria and Albert Museum [V&A] in London, Wallace Collection [WC] in London, Kunsthistorisches Museum [KHM] in Vienna, Thyssen-Bornemisza Museum [Thyssen] in Madrid, the Museo Lázaro Galdiano [FLG] in Madrid, and the Museo de Bellas Artes [MBBAA] in Oviedo), and two universities, the Open University (OU) and Bath University (UBAH). Overall, the project is divided into three phases. The first phase is developing new technological resources in conjunction with participatory research groups. The second phase is testing the technology with those groups. The third phase allows technology partners to finalize the resources and have them ready to share with the public. The proposed technology for this project can be seen in Table 1.

The project adopts a participatory research method that comes under the broad umbrella of emancipatory research. This focuses upon the need for research to be accountable and open throughout to a group run by people with disabilities, with the skills and knowledge of researchers being at the disposal of people with disabilities (Barnes 2003). It is aimed to produce accessible knowledge and place findings within their environmental and cultural context so as to highlight the disabling consequences of social attitudes (UKDPC 2003). This is reflected in three core principles of inclusive research undertaken with people with learning difficulties: "Research must address issues which really matter to people with learning difficulties, and which ultimately lead to improved lives for them"; "It must access and represent their views and experience"; and

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"People with learning difficulties need to be treated with respect by the research community" (Walmsley and Johnson 2003, 16).

This approach involves building participatory research groups in museums, continually assessing the validity and effectiveness of the process, monitoring and supporting the activities of those groups, and training the professionals in charge of each of the research groups among others. Research groups were set up in the different museum sites. These groups have a strong voice within the project, as will be explained in this article. The project started with a pilot group in London. Following the different lessons learnt from the pilot stage, groups were set up in Madrid, then Oviedo and Vienna. All groups shared common goals for the project: design, test, and validate technological products, identify accessibility needs of museums, and develop accessible resources for the museum.

Having three major national cultures (Austrian, English, and Spanish) working together in the context of ARCHES has been a unique experience. This article highlights commonalities and differences in three major aspects of working with the groups with such varied access preferences: 1) challenging the definition of disability, 2) the recruitment of the exploration groups, and 3) our understanding of participatory research and how the groups have understood and adapted these concepts.

Table 1: Proposed Technology for ARCHES Project

Company	Proposed Technology
Coprix Media	Interactive games
Zentrum für Virtual reality und Visualisierung Forschungs GmbH (VrVis)	Context-sensitive tactile audio guide Relief printer prototype
Sign Time GmbH (SignTime)	Text to Sign Language conversion Avatar
Treelogic Telemática y Lógica Racional para la Empresa Europea S.L.	Accessible Software platform Applications for handheld devices (OurStory and Museum Routes apps)

Source: ARCHES Project Proposal

Challenging the Definition of Disability

Understanding Disability

There are two different models of perceiving what disability means: the social model and the medical model. The social model states that disability is a result of the way society is organised (Oliver 1990); people live with the personal experience of impairment, but it is society's responses that disable them. Disabled people can be supported to be independent and valued within society by removing barriers that restrict them (Goodley 2001). The medical model states that people are restricted by their impairment, and these differences should be "fixed" or changed through medical treatments even if they have no pain or illness (Disability Nottingham 2018). This limits the control they have over their lives, creates an overriding identity, and reduces our collective ability to make changes to exclusionary social processes.

At the outset of the project, ARCHES adopted the social model in its choice of terms. Terms are understood differently in different countries, and there is inconsistency in terminology, both within and between nations. The term mostly accepted by disability communities in the United States and in Ireland is with the emphasis on the person before the disability. In Britain, "disabled people" is the preferred term, the emphasis being on the disabling of people through the physical, institutional, systemic, economic, and attitudinal barriers that society creates rather than on an individual's disability (Arts and Disability Ireland 2010). In Austria, the term "disability" (in German *Behinderung* or *Beeinträchtigung*) is widely used but is beyond a simple and uniform definition. The concept of disability covers all economic, social, and legal aspects.

In Austria, the definition of the Disability Employment Act (BEinstG) is decisive for legal application (Rechtsinformationssystem des Bundes 2018; Arbeit und Behinderung 2018). There is no preference for one German term. They are individually chosen and used. The KHM group prefers the term *Behinderung* with the argument that they are restricted (*behindert*) in their lives by their physical, mental, or psychological disability. As in the US and Ireland, in Spain, the term most commonly used is people with disability (*personas con discapacidad*) (Plena Inclusion 2017). It is the term adopted by the groups in Spain.

When recruiting for the research groups we avoided impairment labels and asked for access needs and preferences instead. This approach was supported by the participants and changed our ways of working. We presumed that we could not predict specific needs for any individual and needed to be flexible enough to respond individually according to the situation. None of the museum coordinators had previously worked with a group of this kind, and all had worries about how to meet people's diverse needs simultaneously. We have become aware of each other's needs and confronted our prejudices. This section will explore the needs and challenges we have faced as coordinators as well as analyzing participants' perceptions of access and disability.

Different groups have different access preferences and although the number of participants were similar in each group, it is remarkable how one group of access preferences can dictate the challenges and needs of the rest of the group. Figure 1 shows a section based on a demographic questionnaire designed by the exploration groups to highlight how they wanted to portray themselves. Among other results around their gender, age, and where they come from, they decided to share their access needs rather than their impairments. Participants could make multiple choices from the question: "Please indicate your access needs (You may tick more than one)." Participants wanted everyone to fill it out and not to categorize the needs.
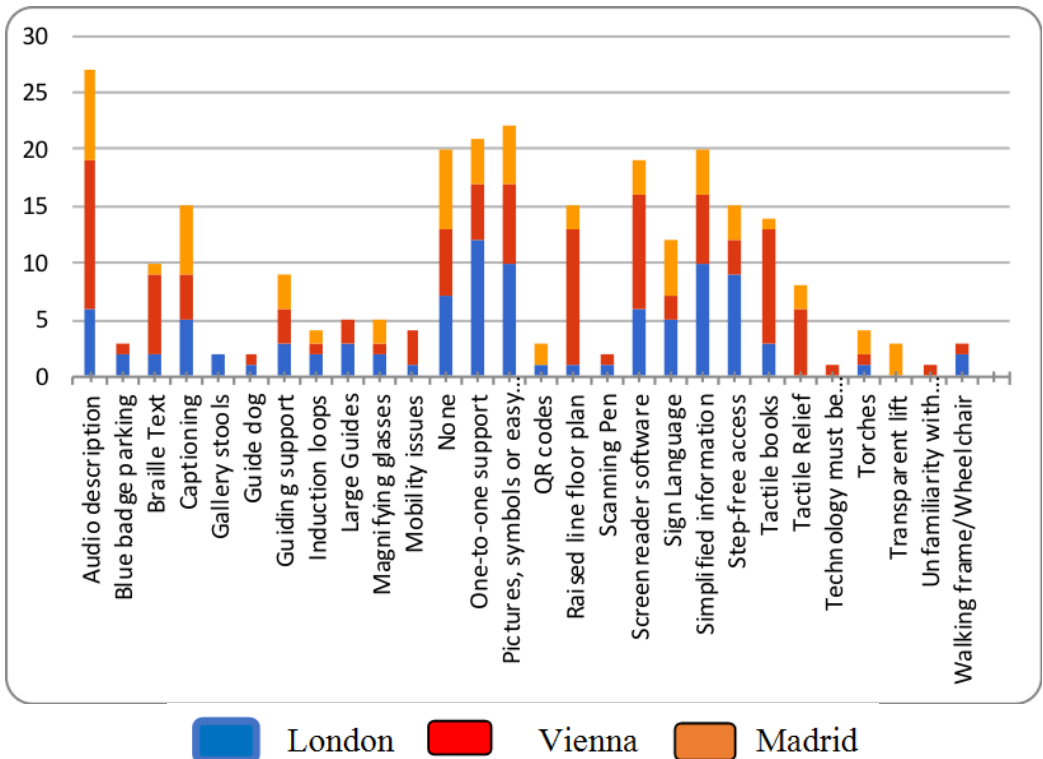
Figure 1: Section from demographic questionnaire from 37 participants from London,
30 Vienna participants, and 24 participants from Madrid.
Source: Garcia Carrizosa

The variation in access preferences is evident and reveals the people's overlapping but individual access needs. They also underline why it was not possible to predict people's needs based on their identified label. For example, one London visually impaired participant introduces himself as having low vision but, in this survey, he ticked that he preferred to have one-to-one support (often associated with being a need of people with learning difficulties). This shows if we would have planned the sessions solely on his identified impairment, he would not have received the attention from a trained volunteer he would prefer.

In addition, instead of job occupations, the group decided to ask about previous experiences within museums, technological experiences, as well as educational background. The graph below shows the results. Participants were asked: What is your level of education (please tick your answer). This graph shows another challenge we faced on a daily basis which was creating material that was intellectually stimulating without dividing the groups. The solution was to create activities that could have multiple layers of difficulty.
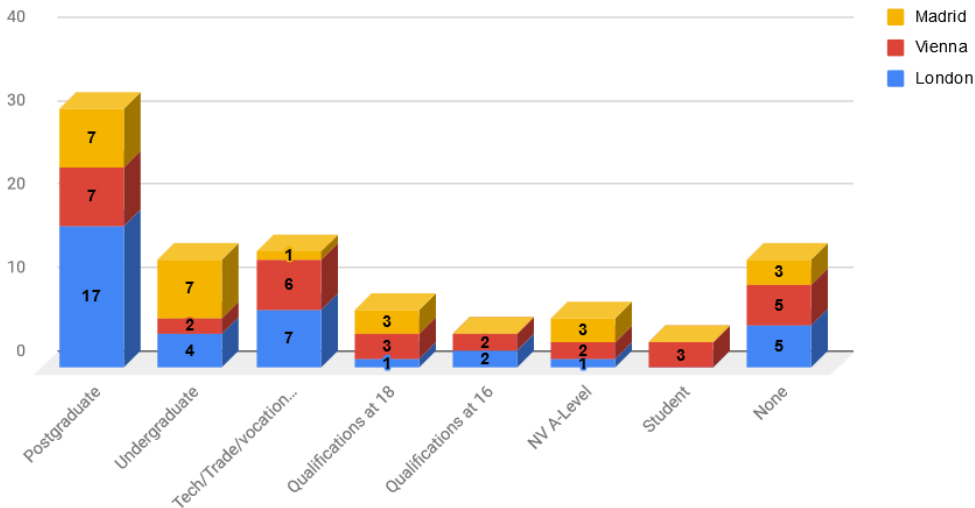
Figure 2: Section from demographic questionnaire from 37 participants from London,
30 Vienna participants, and 24 participants from Madrid.
Source: Garcia Carrizosa

Meeting Each Other's Access Preferences

After a build-up of tensions in response to participants' suggestions, an activity on how a group can help each other overcome access barriers and meet each other's preferences was undertaken. The first group exercise was done in London. It was created with a participant who delivered the activity. She instructed the group to split into pairs and then asked them to interview each other:

a) What are your access needs?
b) How can we (the group/other participants) help improve your access needs?

The image below is an example of the type of answers that were given. Norin mentions "food preferences," "travel costs covered," and "comfortable, friendly venue" as access needs. Other participants understand access needs as anything from "anxiety and depression," "learning disability" to "simplified language," "larger print," "hearing aids," "need to be able to create things," "lift," and "accessible toilets."
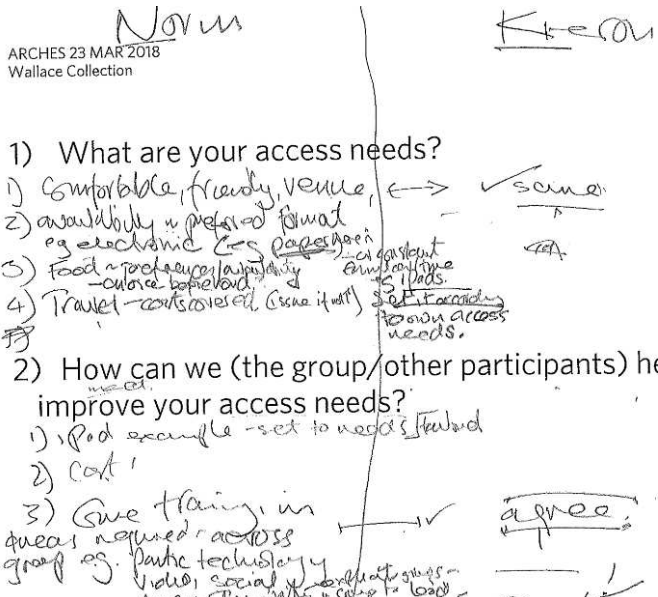
Figure 3: Picture of exercise undertaken by two participants in London
Source: Garcia Carrizosa

In terms of how all can help each other, participants highlighted "quiet, safe spaces needed," "person to check you->express feelings," "look out for signs that I am stressed," "awareness already good. Not putting bags in the way of walking." Interestingly, some of the comments also included supporter's needs "to make sure the interpreter can manage the group to support all the day group." These answers show the different understandings of access preferences within the group and how they reflect emotional, physical, and intellectual needs. These are aspects that go beyond technology and museum collections but enrich not just our awareness in creating inclusive products but also help all involved in the project to have compassion for each other.

In Vienna, the activity was done within the first three months of meetings. Despite being highly professional, this group tends to divide into impairment groups and not engage beyond what is required. This is partially due to communication challenges but also to the fact that they know each other from other projects. This activity was to encourage each other to meet new people and learn about each other. The coordinator actively matched unlikely coworkers together and asked them to interview each other. The reaction was very positive. Participants asked for changes to the physical space such as the addition of an emergency button, and "please be quiet" signs. The group also asked for technological solutions that the London group did not ask for. The group requested an app that would have different description methods and for audio on mobile devices that would link to tactile models. Only one participant noted emotional access need. S/he stated that staff should get emotional engagement training. As in London people wanted quiet spaces and a slower pace.

In Madrid, this activity was done after having had sessions for half a year in May 2018 during a break. The group has a very strong teamwork ethic that is reflected in their responses. All participants valued the opportunity to get to know other people's experiences rather than having to demand support.

> I have a good time at the project and I miss it when we don't come. The project has given me more confidence in the way I act and do certain things, and I feel very comfortable here. (Juan, Participant from Madrid)

Madrid is the group that from the beginning most focused on getting to know each other. Nevertheless, comparing the answers from the demographic data and the answers from this activity shows that the London group expresses more access preferences. This could reflect the UK's long experience of disability rights activism or say something about the participants' experiences of disability. Disability rights were much earlier implicated in the UK as supposed to Austria, for example.

Challenges and Tensions within the Groups

Despite a desire to focus upon access preferences from many participants, one of the major requests that was mentioned in each group was to differentiate between impairments and to separate the groups accordingly. Particularly in London, across the first two months of the project, people with sensory difficulties felt that they were being discriminated against because of the slow working speed. In Madrid, supporters and parents of a large group of participants with learning difficulties approached the coordinators after three sessions expressing their need to slow down otherwise they would leave the project. As a result, the coordinators changed strategy. Now there is a dedicated volunteer giving them one-to-one support. Additionally, special gallery activities were devised according to different access preferences, allowing participants to choose what they could explore and how they explore it. This approach was also adopted in Vienna. In London, staff focused more on team building, for example by creating "ways of working" documents. These were designed within the sessions and were supposed to help each other envision the process of working and serve as checklists before each activity. The items included 1) who is the chair today?; 2) revising our communication rules; 3) what are our proposed activities etc.

Some very specific challenges also emerged related to specific access needs. This preference came strongly across all groups. SignTime is developing an avatar-based signing system. This system will be introduced in applications we produce. The challenge here was the clear preference for human signers over avatars because of their robotic-like translation of the avatars and the importance of clear mouthing and facial expressions to sign language. In London, particular attention was given to the lack of social interaction and the importance of the human-bridge of communication with non-signers; they worried too about signers' future job opportunities. As a result, the coordinators in London invited the partner to come and talk to the group about the working process. They assured the participants that avatars would not replace human signers but be an additional support for more static information.

Perceived favoritism was another issue in London. The coordinators focused on access preferences and wishes that were directly mentioned to them or clearly in evidence; therefore, more visible needs appeared to receive more attention. There were also certain access-related services (e.g. touch typing/note takers) which emerged as necessary, but had not been included in the budget planning. Consequently, budgetary maneuvering was required, which took some time and flexible thinking. However, such delays (and the original oversights) appeared to participants as if staff were not taking their needs seriously. Open and transparent communication was an essential part of resolving these challenges, alongside participants taking a lead in identifying solutions.

For future projects, it is recommended to avoid overloading the first few sessions with project-related worries like testing technology and instead have a greater focus on getting to know each other. Of course, most people will feel at some point the uncertainty of not knowing how to work with others in the group, and this may lead certain people to suggest separating groups according to their access needs. Nevertheless, this is something the group will overcome gradually, unraveling assumptions around impairment categories and getting to know people for who they are. In terms of planning, it is very important in this sense to create spaces that allow each person to bring to the project what they want to work on, allowing them to work with others in ways that suit them (Simons 2001). The aim is to focus more on tasks rather than the obstacles

they might find in communicating ideas and working together. People will come to select working partners according to personal preferences rather than predetermined support needs. For example, in Madrid the group was split into interest groups. Each group would be working on particular aspects of the project like content creation, navigation through the museum, games, and tactile resources. Two participants who would typically be identified as visually impaired decided to join the content group that would be working on easy read material production rather than the tactile resource group, which might have been seen as the "right" place for them to be.

Recruitment of the Exploration Groups

The six museum partners committed to working with participants in the museums on a regular basis during the course of the project. The two museums in London share a group composed of fifteen to twenty participants, in Madrid the group consisted of twenty-five to thirty participants, and approximately twenty participants were included in Vienna. As representatives of the end users of the devices, their inputs are essential for a target-oriented development, but they also provide an opportunity to explore issues of concern that arise from the participants. The process of how the groups came together is explained here.

From the outset, coordinators wanted to include people with a wide variety of access preferences or different experiences of access barriers. Therefore, groups included as many different demands as possible to inform the development of technological solutions. Staff recognized that no one could be the "expert" with all the training, talent, or experience that was required.

Each museum contacted relevant national organisations, charities, and institutions related with the education, care, and social lives of disabled people. The V&A and the WC were sought out as pioneers among the museum partners to start the pilot stage. This was partially decided due to the proximity to the OU, as it was responsible of setting up and leading the pilot group.

Pilot Phase

In London, recruitment and preparation began three months prior to the first session in January 2017. The OU research associate, specifically recruited for this project, was dedicated to setting up the pilot and later to assure the ethically correct and participatory running of all groups. She also recruited "pioneers" as well as future members of the "exploration group." These pioneers could inform early planning of the sessions. This principle was also followed once the sessions began; participants organized briefings that served as the basis for planning the following sessions. The intention was to involve young people and create this opportunity as a form of work placement. An information letter was sent to universities, schools, and organizations for young people, laying out their involvement at the pre-project meetings. As a consequence of their involvement the project introduced a number of practices from the outset. This included a voting system involving an online application called *Answergarden* and the use of colored stickers on name badges to identify people's preferences in relation to photographic consent.

The nature of the initial contact with the potential participants varied according to their wishes and as a result of the gatekeepers involved. The research associate worked with the London museums to identify disability and support organizations to bring the project to the attention of a wider range. Everyone's personal access needs were asked about as well as more general support needs, including those associated with diet and travel. Travel expenses were provided to all those attending, including supporters, and lunch was also provided. In order to engage with these groups a range of communications were developed. Coordinators produced a video outlining the project and inviting people to join at the initial event. This video came in two formats, one signed in British Sign Language and subtitled and the other in a shorter subtitled format. Both general and easy read information sheets were produced. A range of communication

channels were used such as emails, posting on websites, and the use of our own and other organizations' social media.

At the first meeting, all presentations were in plain English and supported by images; there was also a British Sign Language signer in attendance. This information was sent to the participants in advance, as per their request. Certain groups were harder to get in touch with than others. Seeking out young people and young professionals with sensory impairments proved to be particularly difficult. In the UK, the access to work scheme assists employees to get adaptations for their work environments. The scheme meant that many students and young adults were working during the designed session date and time (Access to Work Scheme 2018).

Taking It Abroad

After the first few months of the pilot, the research associate began working with the museum coordinators in the other sites. Since the coordinators of the museums in Spain and Austria were in charge of the recruitment and would lead their development from the beginning, it was important for them to draw on the experiences gathered in London. The recruiting process was similar in all partner museums: different communication channels (telephone conversations, emails, website posting, social media), providing consent and information sheets in easy-read, direct visits to organizations, and recruitment video. For the video, London participants recommended to include an audiovisual description, which was adapted by the Spanish and Austrian partners. In Madrid, both museums, the FLG and Thyssen, decided to work together. Both educational departments have a strong relationship with local organizations working with disability. These sets of networks complemented each other and enriched the final list of organizations that potentially could be part of the ARCHES project.

In doing an official presentation of ARCHES in Madrid, the objectives were explained face-to-face to the local community as well as the main characteristics of the project and practicalities about sessions. The event was announced in different local media and digital platforms that belong to national organizations. This allowed known partners to gather in the same room with new possible allies interested in collaborating with the project in an individual or collective basis. It also enabled us to contact directly with potential participants and not just with organizations. Eighteen partner associations were invited to present by phone or email, and eight of them continued in the project.

In Vienna, an official press release was launched via the Austrian Press Agency together with the rest of recruitment material. The focus organizations held telephone consultations with the museum coordinator to clarify accessibility of museum, attendance of a signing interpreter, proposed timetable, and participant's anticipated interests. These helped organizations to assess who might be interested in the project and would participate in a purposeful manner. From then on, sign-up to the project was done by the participants themselves rather than the organization picking the participants. Only four participants were registered through the organization. One-fifth of the participants responded as a result of the press release, two-fifths because of personal contacts, and two-fifths as a consequence of the focus organizations.

Challenges during Recruitment Process

The number of participants at the initial information meetings in the different museums was nearly equal. In London forty-seven people participated, in Madrid fifty-one, and forty-six in Vienna. During the recruiting process, there were some challenges to overcome.

London encountered several challenges. To improve the recruitment, museums should have been more involved in the recruitment process from the beginning. There was a need for both museums to go to outside organisations or invite organisations in. Recruiting from the D/deaf community took considerable work. One national organisation declined talking to the research associate stating that in the past it had involved members of their community in projects

involving mixed groups and failed to be successful. Another challenge was going through organisations who serve as gatekeepers for the people with learning difficulties and who schedule everything more in advance than the project was sometimes capable of doing. Furthermore, the recruitment was undertaken in one and a half months including December when prior to Christmas many organisations close-up and/or are too busy to prepare in advance. The recruitment would have benefitted from starting earlier but due to the project outline this was not possible; however, this lesson was applied to the other cities in the project.

Madrid also found challenges in reaching people from the D/deaf community. Despite the support from the national organisation, few participants engaged with the project. Apart from this, some of the associations contacted expressed their concern about people contributing to the project on a voluntary basis. Many of these institutions are focusing on finding employment for disabled people as accessibility experts. Though ARCHES covers travel expenses and offers other kinds of rewards (such as entrances to exhibitions, private views, recommendation letters etc.), it does not offer a professional remuneration for their commitment. The regulation around benefits and earnings varies between countries and is an issue of equity, which creates particular problems when working in different contexts with a large number of participants with different financial situations. It is an issue that must be reflected upon at the outset of a project and may well emerge at any time during the project.

In Vienna, four weeks after the start of the recruitment process, there were still no responses from the D/deaf community. During a telephone call with an organisation, the contact person complained about the large number of projects in which they were asked to participate but did not succeed. Many affected people therefore refuse to continue working together on projects. The KHM strengthened its recruiting through personal contacts. Thanks to these efforts, nine participants with a hearing impairment attended the first workshop. Only one takes part regularly in the workshops. In Vienna, only one participant asked about remuneration, but continued to attend despite this.

Maintaining and recruiting volunteers who were not disabled was also a challenge. In London, the museums recruited within the volunteer pool rather than from the outside or create internship positions. In contrast, museum staff (particularly in Madrid) used the project as an opportunity to teach and learn with and from university students. The FLG decided to open up this opportunity to three students per year from the social education and pedagogy degrees from the Universidad Complutense de Madrid.

Another challenge was the frequency of the workshops. Many participants cannot attend during the day due to work requirements, but others can only attend during the day due to support needs. The London experience showed that weekly workshops could take up too much time for many participants. As a result, all the museums reduced the number of workshops after the first month, when workshops took place weekly to get to know each. Now, they run every two weeks. Most workshops take place in the early afternoon, partly due to room availability in the museums, but also because many working programs for disabled people finish at noon.

When comparing the three groups, the participants in Vienna made the least demands about issues such as transport, language support, equipment, payment, dietary preferences, and emotional support. Perhaps this is because the issue of disability has only been widely discussed in Austria since the ratification of the UN Convention on the Rights of Persons with Disabilities in 2008 and the awareness of being allowed to demand something has perhaps not yet been felt so intensively (Bundesministerium 2008).

Seeking a Unified Way of Working

Establishing Museum Relation

Parallel to the pilot group in London and before the rest of the groups started, museum coordinators identified the need to share thoughts and worries on how to meet the project

objectives. There was a need to share previous practice and research in museums and to establish a common ground that would facilitate session planning according to good practices. Museums are places that explore learning through practice, where professionals work on the construction of a cumulative knowledge base. Recently their relevance in society is by means of an adaptation to various needs and interests of audiences (Black 2005). Instead of having a sole authoritative voice, museums are part of a circular process of listening and redefining meaning together with audiences and interpretative communities (Hooper Green-Hill 2012). Their mission is to assist these audiences in their learning processes and provide them with enjoyable spaces and valuable experiences (Witcomb 2003).

Museums identified general objectives:

- to understand and develop the museum as a space for learning and experimentation.
- to promote diversity and transversality in every learning process and knowledge transmission.
- to increase innovation and research with the aim of making museums more accessible to all.
- to promote creativity through knowledge of art and museographic collections.
- to favour participatory processes, based on the autonomy and initiative of its members.

Regular meetings also help to share those issues that museums needed to reflect, learn, and improve upon. We felt the need to agree upon the tools and strategies to work within the methodology. It was agreed on the role of museums coordinators as agents to promote learning situations that allow participants to develop a critical thinking accessible to all. Their aim is to empower participants to propose ideas and activities as well as to lead them.

One of the needs that emerged from this initial process was the need to have a leading museum manager across the different sites. This was not designed into the project and would have provided a common understanding of how research is developed in each museum and adapted to the local environment. Each museum has a specific way to approach their public and work with their collections as well as a diverse logistical and procedural condition that conditions the production of educational materials. We recognised the need to train staff on various aspects to prepare for the planning and running of successful sessions, for example: disability awareness, adaptation and validation of easy read material, how to provide audio descriptions, data collection, and analysis.

Main Issues around Museum Sessions in ARCHES

One of the biggest struggles was in the handing over of power. Initially, staff have to produce a multisensory and multifaceted approach to the artworks through touch, smell, sound, storytelling, audio descriptions, etc. By doing so, we manage to evaluate how the different resources that were planned for certain access needs could contribute to a better understanding of contents and processes for others. By focusing on that which was working for various people, coordinators could also identify different layers of information and allow each person to find a way to approach the work according to their needs and interests. Then, in order to involve participants in the design and delivery of the activities, it is relevant to explore the implications of using quantitative and qualitative evaluation methods and to what extent disabled people were collaborating in design and analysis of these results. In the end, qualitative methods proved to be the most collaborative way of working.

When planning activities, it is vital to be aware of the power relationships between disabled and nondisabled people, especially to guarantee that everyone's voice is being heard. This is something that is changing constantly and often depends on particular actions or gestures happening during the sessions. Everyone involved must be aware that they are accompanying

each other in this research process. It is also very important to identify levels of representation and ensure that all participants are taking part in the research in a level of compromise and collaboration that they are comfortable with. Coordinators needed to assess to what extent people involved are participating in decision-making and the level of control and responsibility that they have. Staff also recognise that there are limitations to the participatory nature of the project, since the overall project objectives were agreed previously to the construction of the groups.

Participants' Understanding of Their Involvement

ARCHES sessions aim to create spaces in which participants feel free to address and find creative solutions and break barriers that prevent them from relating to collections, spaces, and people in museums. Therefore, the planning of sessions had to follow certain steps in order to allow participants to access the research and be able to represent their views and experience in it. It was important to explain the objectives of the project within this space, the role of participants in it, and to find different ways to work together.

All groups shared the same objectives during the first four sessions, as the focus was on understanding the project, getting to know each other, as well as setting communication rules and accessibility needs. Nevertheless, the planning of the following sessions was developed with the group and specific to their interests and needs.

During the first few months, it was important for us to know what participant expectations were and experiences in previous museum projects alike. Their answers allowed us to identify their views and what they wanted to get out of this experience.

According to the results of demographic questionnaire, many participants were interested in museums before participating in the project. In general, they visited museums occasionally as a leisure or touristic activity (see Figure 3). However, none of the participants were familiar with a project like ARCHES or visiting a museum on such a regular basis. Four participants in the London and one in Vienna group mentioned that it was the first time they visited a museum.
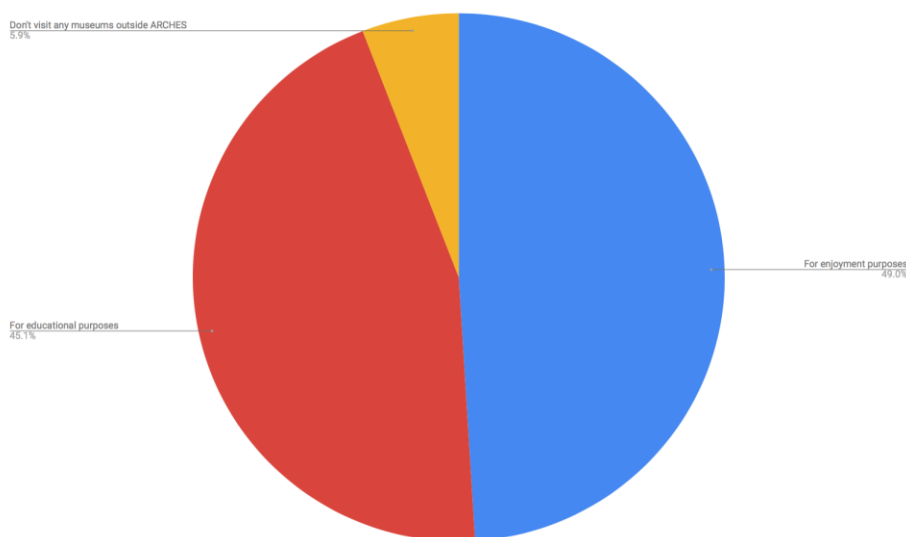
Figure 4: Demographic data on why 91 participants in London, Madrid, and Vienna visit museums.
Source: Garcia Carrizosa

Although all groups pointed out that accessibility has been an important issue for not visiting museums more often, fifteen participants in London, thirteen participants in Vienna, and fifteen in Madrid mentioned that they take part in accessible visits regularly. Autonomous visits to museums were uncommon for all of them.

Learning was one of the first expectations when talking about the project. Many of them expected to learn about artworks and museums; others also wanted to learn about accessibility (see Figure 4).

> A new range of theoretical and practical possibilities for learning about accessibility to museums. (Elena, Madrid Exploration group)
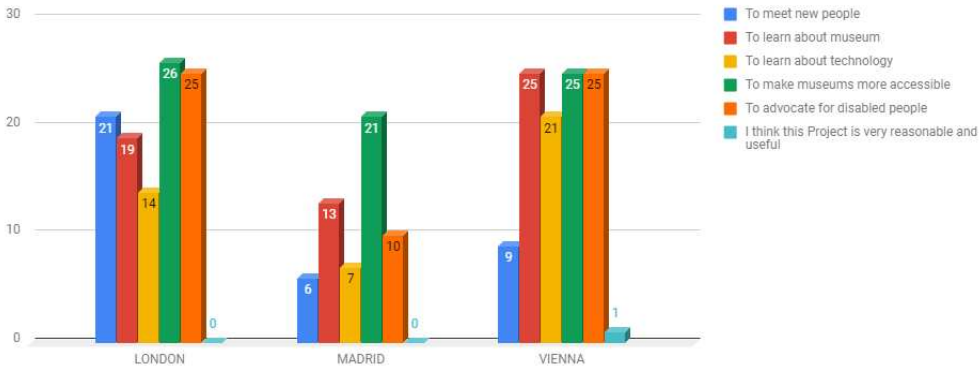

Figure 5: Demographic data on why 91 participants in London, Madrid, and Vienna participate in ARCHES
Source: Garcia Carrizosa

Many highlighted that they were already learning not only about artworks but also about other people:

> To know and participate in an innovative project, but also to meet new people, new institutions that, perhaps in the future, will become a professional relationship. (Alberto, Madrid Exploration Group)

Participants also believed it was important to participate in a European project. They were happy to be asked and believed they could contribute to design new technology and make museums more accessible:

> I'm going to give my contribution whenever I am asked. Obviously meeting new people, going to new galleries that will give me a good chance to explore. (Christine, London Exploration Group)

Participants emphasized the importance of meeting new people and doing new activities.

> I like the discussions. Finding out about other people and how they view things for me. I often think in my own but it is often refreshing to hear other people's views. (Pat, London Exploration Group)

Once the groups started, we wanted to find out their motivations and previous experiences. This was part of an initial warm-up exercise. In Vienna, we asked them on the 27th of March (nearly two months after the first session); in London on March 10, 2017 (three months after the first session) and in Madrid on February 22, 2018 (four months after the initial session). The specific questions were: "What is your previous experience in museums?"; "What technology do you use?"; "What do you think we can achieve with ARCHES?" and "What can ARCHES offer you?" Many of them underlined the social aspect of the project and how they were learning and enjoying it. In some of their responses the importance of inclusion in this project can be seen,

interacting with people with different access preferences with whom they do not meet in other areas of their lives:

> To meet new people that otherwise I would not be able to meet. (Eva, Madrid Exploration Group)

In London, some participants said that they would like to feel more welcome in museums and hope this project will help. One of their main concerns was with autonomous access to museums, and they wanted to find new ways of experiencing them. A participant in Vienna mentioned that he felt discriminated by predetermined visits, as he had no freedom to choose objects and themes of interest to him. This was clearly noted and will hopefully be reflected in the technologies the partners are producing.

> I want to re-learn how I can use museums like I used to and get all that knowledge and joy and exciting new ideas that museums just provide. (Sarah, London Exploration Group)

After these four sessions, gradually, each group evolved in its own way. Participants have established their own objectives and interests within the project, so each group maintains its own identity. In Madrid, people divided into four groups that tackle main issues related to accessible communication and orientation in the museum, games, museum contents, and multisensory experiences. Since the workshop started very late in Vienna the group had the opportunity to test various drafts of the technological partners right from the start. During these tests, working groups crystallized around their impairments. This happened when for the first time the tactile relief for people with a visual impairment was available for testing. While the target group explored the tactile relief, the group of participants with cognitive and hearing impairments corrected objects descriptions. In London technology came quite late and therefore the museum coordinators had to concentrate on three types of activities: museum-related activities, group-bonding activities, and research-related activities. This research focus was influenced by the constant presence of more than one university staff member in each session. Gradually, participants decided to focus on other projects as a whole like the visit to other museums and assessing them; another group focused on the layering of information through one object, analysing qualitative data and creation of a sensory backpack.

Challenges and Opportunities in Working with Participatory Research in ARCHES

The methodology is intended to give participants ownership, have a positive impact upon their lives, and represent their interests. The Open University and the University of Bath were in charge of detailing and giving examples about how the methodology works and what was expected from technological partners. The methodological framework was outlined in the proposal document and all partners were party to this prior to submission. It was also outlined at the initial meeting in Madrid and in London and explained in the various ways of working documents produced by the university partners. However, a deeper exploration between all the members of the consortium of what was understood by participatory research at the outset, beyond the initial presentations, would have been useful.

During this project, it became clear that not everyone understood participatory research the same way and the majority of the partners were new working with this methodology. As described above museums partners had to get used to this methodology very quickly but technological partners, who do not participate regularly in the sessions, have had a harder time understanding some aspects of the methodology. Sometimes, the methodology has been mistaken for a consultation. This was particularly noticeable among the technology partners.

At the beginning, they sent participants test forms that were too long and focused on quantitative results rather than qualitative ones. This has been a challenge for the group, because these questionnaires were not adapted to different needs and did not respect their ways of working. Although it is understood that this process is sometimes necessary due to other aspects of the project (European Union requirements, publication needs, or different approaches and working paces of each partner), we realised that participatory research also has its limits. Therefore, staff progressively modified this type of scientific research and moved toward a more participatory and group-oriented approach. At times technical partners rushed to meet a deadline, despite groups being unable to respond at such speed. The different work rhythms and times of development of the project have brought some conflicts regarding expectation. For instance, during the first year high expectation was a challenge that the London group had to face. Despite the feedback and idea giving, technology did not come and the communication became slow. Deadlines kept moving backwards and participants lost patience and, in some cases, left the project. Parallel to that it was quickly noticed that the technology partners had challenges in understanding the way the groups worked. They were sending things for the group to test without the group having had any part in the conversation of the development. For this reason, other test methods have been gradually introduced to complement these questionnaires, such as guided discussion, video and audio recording, or one-to-one conversations. Different rhythms and a more participatory approach have also been introduced, allowing participants to express their concerns, opinions, and interests beyond the questions of the technical partners. Additionally, it was vital that each technology partner met the group in person. This also helped the participants understand the different parties involved in the project. Meeting the groups in the different settings is a recommendation that the groups from the other sites have taken on board and is highly recommended for projects like this. Improving communications between partners and understanding each other has been a key aspect in the successful development of the project. Participants believe technology could help to improve the access to museums for people with different impairments.

> Bring innovations to museums is important but this project can correct mistakes that are not considered as such. (Raquel, Madrid Exploration Group)

Nevertheless, one of the main challenges for everyone has been to be aware of the limitations of the project in terms of content and technology development. Many participants are aware of all the improvements that are necessary to transform a museum or to develop the best technology, but the project cannot address all of these issues. Open communication with participants has been essential to clarify in which aspect the project can have a real impact as well as to create new priorities.

The research nature of this project itself determines that expectations can and must change along the process. Partners and participants need to be flexible and understand the implications and possibilities of working in a network, where all members contribute to the production and but also work in different capacities. In a research project, results are not defined from the beginning but are gradually transformed during the process.

Conclusion

Every project has a beginning, a middle, and an end. It is easier to think about the beginning and even the middle, but the end is sometimes too far away to describe clearly, especially when talking about a participatory research. The exit strategy is a plan that allows facing the challenges of closing a project after a long-term process. It is important to think about it from the beginning and to be flexible to include new actions that might be envisioned along the process. These actions must be included in a joint strategy that allows each partner to take advantage of project results and ensures that all the voices involved in the project are represented. Attending to the

complex network that defines ARCHES, this is no easy task. Currently, we are planning with each group different ways of disseminating the project and the individual's outputs. Overall, the groups have decided on sharing their final project results during the final event, planned for June 2019. The work and the preparation for the final event will be part of the exit strategy as a way of reflecting and closing the project. Furthermore, each group is planning individual exit strategies. This is very much conditioned by the context of the group and the museum's limitations. For example, in London both of the museum coordinators will continue their employment in the museums and therefore in response to the group's request have offered to continue with regular meetings.

A careful evaluation of the participatory research process will start from November 2018 onwards and will be shared by June 2019. This evaluation will include six validities.

Table 2: Evaluation Framework

Intersubjective validity: the extent to which research is viewed as being credible and meaningful by the stakeholders from a variety of perspectives
Contextual validity: the extent to which the research relates to the local situation
Participatory validity: the extent to which all stakeholders are able to take an active part in the research process to the full extent possible
Catalytic validity: the extent to which the research is useful in terms of presenting new possibilities for social action
Ethical validity: the extent to which the research outcomes and the changes exerted on people are sound and just
Empathic validity: the extent to which the research has increased empathy among participants.

Source: Garcia Carrizosa

At the time of writing this article the project still had one year to go. We wanted to share the findings we have already gathered so far in relation to understanding participatory research, recruitment, and challenges faced when meeting different access preferences. We initially started with the aim of making museums accessible via the technology produced with the participatory groups.[2] For us as museum coordinators, the aim and focus shifted halfway through. We rapidly noticed that the value lies in working with the mixed groups and participatory research methodology. Our aim became to learn and find out how to create activities with participants that would improve and bring creative solutions to accessibility issues. So far, our biggest lesson has been that cultural differences are not only nationalistic. We have faced challenges depending on the cultures within the museums and how they work. (For example, smaller museums, though having fewer resources, have a tendency to be more flexible whereas bigger museums have more restrictions and departmental structures to face when making a change.) We have also faced challenges when working with the different technology companies. Their sense of participatory research is different from the museum's idea. Their concept of how the sessions run and how the group worked as a whole was in many cases more similar to clinical testing. The whole project would have benefited from a more unified understanding of its different aspects; this would have resulted in more open communication and would have been facilitated by partners having more time to meet informally and socialise. Table 3 summarises the main findings within this article and provide the reader with a helpful tool when establishing a similar project.

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[2] Currently, we are unable to share concrete details regarding the technological developments. We hope to share more toward the summer of 2019.

Table 3: Recommendations for Future Project Designs

Overall Factors:
Open and transparent communication from the beginning is important for collaboration
No one is an "expert"
Being flexible is key
Ensure there is a good representation of disabled people through all the stages
Identify what everyone brings to the project
Be aware of the limitations of the project
There will be different rhythms of participants and partners

Approaches to Attract Participants:
Museums need to engage from the beginning with the recruitment process
The wider the recruitment scope, the richer the knowledge
Be prepared to spread out communication strategies and start early with recruitment
Give pioneers and volunteers the chance to be part of the early planning stage
Gatekeepers may be supportive but won't guarantee participants
Expect conversations about remuneration

Attending Different Needs:
Each group is different
Work by access needs and preferences rather than impairment categories
Take time to get to know each other
Participants understand access needs differently than what you may expect
Expect requests for division of the groups according to impairment
Ensure all material is accessible and creative

Strategies for Working with Mixed Abilities:
Create a welcoming space for all
Be aware of the power of relationships between disabled and nondisabled people
Everyone is in this together
Always be alert of perceptions of favoritism and their creation
Know the expectations and experiences of everyone involved
Don't overload the participants
Point out certain basic communication and operational conditions
Produce multisensory and multifaceted approaches to the artworks and technology

From Inside to Outside: How to Establish Communication within the Consortium:
Share knowledge and previous experience
Define common goals and meanings
Expect everyone to understand participation in their own way
Evaluate each other's work constantly
Give staff time for constant training
Think about each step of the process from the start
Results transform during the process

Source: Data Gathered in ARCHES Project

Despite the different and overlapping challenges faced in developing and running these groups, we are convinced by the value of this participatory way of working and its aim to remove barriers to encourage and support each other to express and achieve our collective and individual goals.

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