

**BadgeLAB Leeds : Exploring Open Badges for the Arts.  
Research and Development Report.**

BOOTH, Alison, GARRISON, Laurie, RICHES, Tim, DEARDEN, Andy,  
GLOVER, Ian, HILL, Katie, MCSEVENY, Kerry and WESTAWAY, Sarah

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# BadgeLAB

# Leeds: Exploring

# Open Badges for

# the Arts

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## Research & Development Report

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### Digital R&D Fund for the Arts

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## Contents

<b>Executive Summary</b>	<b>5</b>
<b>Background</b>	<b>9</b>
<b>The Project</b>	<b>20</b>
<b>Results</b>	<b>40</b>
<b>Insights</b>	<b>52</b>
<b>Future</b>	<b>57</b>
<b>Further Resources</b>	<b>59</b>
<b>Glossary &amp; Abbreviations</b>	<b>62</b>
<b>Acknowledgements</b>	<b>63</b>
<b>Appendix A: Summary of BadgeLAB Leeds Badges</b>	<b>64</b>
<b>Appendix B: Qualitative Analysis: Full Coding Framework</b>	<b>66</b>
<b>Appendix C: The Quantitative Survey Questionnaire</b>	<b>69</b>
<b>Appendix D: Quantitative Analysis - Does the availability of badges affect activity choice?</b>	<b>71</b>

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# Executive Summary

## BadgeLAB Leeds

BadgeLAB Leeds was conceived to investigate Open Badges as a means of promoting young people's engagement and participation in the arts. It explored the potential of Open Badges through a series of public events and workshops and was the first project to investigate the use of Open Badge technology in this context. In collaboration with local practitioners, arts organisations and schools, BadgeLAB Leeds developed, implemented and evaluated a small scale badge programme in the Leeds area. The project developed a model for implementing city-wide arts-based badge schemes and investigated the experiences and opinions of the different groups of stakeholders involved.

## What are Open Badges?

Open Badges are an increasingly popular new web technology used across a variety of games, social media, and online learning platforms. They are digital representations of an individual's skills, experience, or learning and can be awarded for any type of accomplishment or activity (e.g. mastering a skill, completing a task, or being a member of a team). Badges can be awarded by individuals or organisations, and can be displayed on the earner's online profile, or shared across social media (including Facebook, Twitter, LinkedIn and WordPress).

While people may not currently be aware of Open Badges, they are likely to have encountered digital badges in some form, as they are widely used online, for example in online gaming, to build trust in e-commerce platforms like eBay and Amazon, and to encourage engagement in platforms such as Wikipedia and FourSquare. Open Badge technology, which was established in 2012, aims to apply these principles to learning, by providing motivation and by recognising learning across different contexts, helping users to represent and share their learning across the web.

## Project partners

- Arts Partner: ArtForms is the music and arts team within Children's Services at Leeds City Council. They were responsible for all aspects of

project management, brokering partnerships with arts organisations and artists, and supporting schools' engagement in the project.

- Digital Partner: DigitalMe is a Leeds based digital business (a social enterprise) that offers consultancy on education, technology and design for Open Badges projects. They were responsible for the development of technology used in BadgeLAB Leeds, collaboration with technology partners, and visual and educational design services for individual badges. DigitalMe led on the implementation of the project marketing plan.
- Research Partner: The Cultural, Communication and Computing Research Institute at Sheffield Hallam University was responsible for conducting the evaluation of the project.

## Project activities

A group of art practitioners and arts organisations attended a one day workshop, where they used DigitalMe's 'Badge Canvas' to design one or more badges relating to their arts offering. These badges were made available to young people at a range of workshops, which took place in schools, at arts organisations, and at public events (including the Leeds-based [Light Night](#) and [March of the Robots](#) and the [Mozilla Festival](#) in London). Some badges were also made available as 'instructables', which provided online step-by-step guides and could be earned remotely by young people. Once earned, badges could be claimed via the BadgeLAB Leeds page on the [Makewaves](#) platform.

Information about earners' badge claim behaviour was used to learn more about the contexts in which Open Badges were most successful and to find out whether badge earners were motivated to pursue further badges. To gain insight into considerations when applying Open Badges in this specific context, the research team investigated the experiences and viewpoints of key stakeholders (arts practitioners, arts organisations, teachers, young people and the project steering group) throughout the project, via interviews, focus groups, questionnaire surveys and event observations.

## Findings

The project revealed that attitudes towards Open Badges were generally extremely positive, and that the availability of badges may influence young people's choices between arts activities. However, to encourage continued engagement with arts based badges, future projects must situate their badge offerings within a wider context which is meaningful to the potential audience. Projects must actively raise awareness of Open Badges, communicate clear goals and highlight user pathways for earners.

## Insights

The project activities highlighted five key insights, which arts organisations should take into account when considering incorporating Open Badges into future projects.

- Most young people respond positively to Open Badges.
- Open Badge projects need a co-ordinated promotion strategy.
- Badges can be used to structure quality assurance and to develop bespoke qualifications.
- Projects should carefully plan the badge earner's whole journey.
- Larger scale and city-wide projects must provide a wider social context in which to locate the badges.

## Future

The BadgeLAB Leeds experience suggests that a larger scale city-wide approach to badging (similar to the [Cities of Learning](#) initiatives in the USA) may be a useful way to raise awareness of Open Badges and to reduce the costs of offering badges for individual arts practitioners or organisations. To make this possible, the BadgeLAB team are currently developing a network in Leeds which builds on the existing relationships formed during the project, and includes a wide range of new partners, including arts practitioners and organisations, the local authority, teachers, employers and social enterprises.



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Open Badges are digital representations of an individual's skills, experience, or learning and can be awarded for any type of accomplishment or activity

# Background

## Open Badges and the Arts – BadgeLAB Leeds

BadgeLAB Leeds (BLL) was a pilot project to explore whether Open Badges can broaden, deepen or diversify arts engagement through a series of events and school workshops. The project investigated how Open Badge technology could be adopted by artists, arts organisations and individuals in the UK, and to explore what badge schemes may have to offer in this context. Through the development, implementation and evaluation of an arts based badge scheme in the Leeds area (see Figure 1), the project uncovered issues that artists and arts organisations may need to consider when implementing Open Badge programmes.



*Figure 1: Examples of the Open Badges offered by BadgeLAB Leeds*

**Source: DigitalMe/Chris Harman/Sam Paechter/Playful Leeds**

Open Badge technology, though relatively new, has been applied to science, technology, engineering, art and maths (STEAM) but has not previously been investigated as a way to create learning pathways and promote engagement in the arts. BadgeLAB Leeds explored the potential of badges from the perspective of the different stakeholders involved in the promotion and delivery of arts activities for young people in Leeds, via ArtForms, the music and arts team within Children's Services at Leeds City Council.

ArtForms believe that all children and young people growing up in Leeds should have access to a rich and exciting range of arts and cultural activities with clearly identified progression routes and pathways through their learning. To achieve this they work closely with schools to support them to deliver high quality, cross-curricular learning in and through the arts, and

maintain long-established partnerships with the arts and cultural sector including individual artists and practitioners.

Working together with these partners ArtForms offers an extensive range of arts and cultural programmes both in and out of schools. Open Badges have the potential to help to strengthen this offer because they offer a powerful way to recognise, reward and celebrate children's engagement and achievement in arts and cultural activity.

The project engaged a group of arts practitioners in the design and implementation of a range of badges relating to the arts activities they offer for young people. 'Badged' arts workshops and activities were delivered at public events, in schools, and at specialist workshops with targeted groups of young people.

## Project Partners

- [ArtForms](#) is the music and arts team within Children's Services at Leeds City Council and is the co-ordinator for the project.
- [DigitalMe](#) is a Leeds based digital business (a social enterprise) that offers digital badging services and is the digital partner for the project.
- [The Cultural, Communication and Computing Research Institute](#) at Sheffield Hallam University is the research partner for the project.

## What are Open Badges?

Open Badges are digital representations of a person's learning and experience that can be displayed as part of an earner's online profile (in a personalised 'Backpack'), or shared across the web through social media, such as WordPress, Facebook, Twitter and LinkedIn. Badges can be awarded by organisations or individuals, and signify accomplishments (e.g. mastering a skill, understanding a new topic or completing a project) or interests (e.g. regular attendance at a club, volunteering for a charity or membership of a sports team). Open Badges were developed in 2012 by the Mozilla Foundation, creators of the Firefox web browser, and the MacArthur Foundation, a US-based charitable foundation, as a way to provide a richer, more accurate, and personalised picture of an individual's learning and experience which can be shared with others (Mozilla Foundation, 2012).

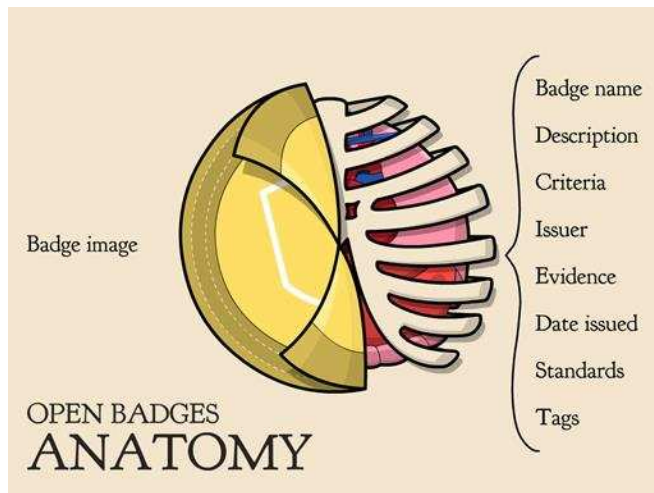
Digital badges are already widely adopted across the web:

'Representing achievements as badges or trophies is a standard practice in online gaming. Awarding badges has also become a key ingredient in "gamifying" online social media experiences. Social systems such as Foursquare, StackOverflow, and Wikipedia have popularized badges as a way of engaging and motivating users' (Antin and Churchill, 2011)

Mozilla estimates that more than 300,000 Open Badges have been issued worldwide, and DigitalMe has issued 8,000 of those badges. DigitalMe runs two projects that aim to document Open Badge projects: Badge the UK and Badge the World. Badge the UK provides advice and support for badge projects, and more than 23,000 Open Badges have been issued by Badge the UK partners. Badge the World offers a website documenting the locations and nature of badge projects worldwide.

Each Open Badge represents (and provides evidence of) a specific skill, experience or interest. They were developed as a digital equivalent of the principles underlying the merit badges awarded by the Scouting and Guiding Movements, and the markers of achievement increasingly found in mobile apps and video games. Badges provide the opportunity to reward discovery, engagement and motivation and to build self-confidence. They provide a currency for learners to collect, opening up new opportunities for learning and career progression.

Each badge is comprised of an image file that contains data consisting of a badge name, a description, criteria for award, the issuer, evidence (which may take the form of a URL link to where the evidence can be found), the date issued, standards, and tags. Open Badges are stored in the Mozilla Backpack, which allows the learner to create collections of achievements from different learning providers. Each badge is unique to the user and verifiable against the issuer's requirements.



*Figure 2: The 'anatomy' of an Open Badge*

**Source:** Kyle Bowen - [classhack.com](http://classhack.com)

This means that a collection of badges can be used as a portfolio of evidence of development that can be shared or used personally for tracking progress. A key principle of Open Badges is that there is no built-in restriction on who can create and issue them, which means that earners can acquire badges across a wide range of activities and contexts, developing a collection of badges which can be displayed in tailored ways for different audiences, including friends and family, potential employers, training providers, as well as schools, colleges and universities.

## Using Open Badges to evidence learning

Open Badges also provide an alternative means to provide evidence of skills and learning which may 'fall outside' more traditional forms of award or accreditation. This type of 'micro-credentialing' may offer a way for people without formal educational qualifications to demonstrate their learning to employers and assist people with formal qualifications to stand out from fellow job seekers.

Badges also give individuals the opportunity to bring specific details of their learning or experience to the surface, rather than them being subsumed by grades or larger certifications or credentials (Glover and Latif, 2013). Glover and Malone (2014) propose that badges could be used as a mechanism to allow accrediting organisations to partially devolve the administration of their awards processes, for example by accepting Open Badges from 'trusted' third-parties as equivalent in content and rigour to their own.

## Using Open Badges to encourage participation

In the context of online social media, badges are 'virtual goods' – digital artefacts that have a visual representation – which are awarded to users who complete specific activities. In order to understand why earners may place value on the badges that they earn online, Antin and Churchill (2011) identified five individual and social functions that these types of achievements perform, depending on the nature of the activity that badges reward and their particular contexts.

- **Status/Affirmation:** Badges are symbols of achievement. In a group context they can advertise accomplishments to others, with more difficult achievements leading to greater social status. On a personal level, badges also serve as reminders of past achievements, which can provide personal affirmation. Some users are likely to attend more to the individual benefits of badges while others are more likely to attend to the social ones.
- **Goal Setting:** The challenge presented by obtaining a goal has been shown to motivate users, particularly if they are able to see their progress towards reaching that goal.
- **Instruction:** Badges can help to diversify and maintain engagement by enabling users to identify further opportunities for participation.
- **Group Identification:** Achieving badges can promote a sense of solidarity, encouraging group identification through shared experiences.
- **Reputation:** Badges provide information about a user's interests, expertise and engagement levels, which can demonstrate their trustworthiness, or the reliability of their contributions.

Although a potential benefit of badges is one of increasing earner motivation, it is important to note this effect is not always a straightforward one. Research has shown that extrinsically motivated individuals (who are encouraged to do something by external rewards and recognition) may respond positively to badged activities, while those who are intrinsically motivated (reflecting an independent self-motivated interest in a topic or activity) may actually be less likely to participate in an activity offering an external reward (Buckley and Doyle, 2014). Therefore, any use of badges to



motivate and encourage participation requires careful consideration in order not to reduce participation by the intrinsically motivated while still providing extrinsic rewards for those who require such motivation (Abramovich, Schunn and Higashi, 2013; Glover, 2013).

## Challenges to uptake of Open Badges

Open Badge technology has been promoted extensively in the USA and is experiencing increasing interest in the UK. However, despite the potential benefits offered by badges there are still a number of challenges facing their spread as a recognised form of evidence of learning and experience.

### Awareness

As a relatively new technology, the main cultural obstacle to overcome is a lack of general awareness and understanding of badges. Open Badges have had little time so far to become understood and accepted by a wide cross-section of society, and this may limit their current potential. However, while badges may not yet be well known in the general population, awareness and understanding within a specific culture or community (such as a company or school) may be easier to achieve. Attitudes towards Open Badges may also be an issue, as the perception of badge collecting as a child-focused activity, and the language used to describe badge collecting (including the 'Backpack' where they are displayed) might make them less appealing to teenagers and adults (Bull, 2014).

However, digital badges are used across the web in a variety of environments, though they may not be recognised as such by the general public. Ebay and Amazon, for example, use badges to designate trusted sellers, which may influence buying decisions on those sites. Even if the public does not know how digital badges are issued and claimed, most internet users have already been in contact with them and may have made decisions that were influenced by them.

DigitalMe is working to overcome the barriers of awareness and attitude through its [Badge the UK](#) project. Badge the UK is supported by Nominet Trust and consists of more than 100 partners, including accrediting bodies, schools and school networks, teachers, universities and employers. One of the primary goals of the project is to support those who are seeking to raise

awareness of Open Badges and create practical examples that can be applied by others.

### Standards

The 'openness' of Open Badge technology provides the opportunity for anyone (from multinational corporations to individuals) to create and issue badges, but this brings with it problems regarding the 'value' ascribed to individual badges. The variation in standards and validation methods makes it difficult to compare badges from different issuers because the rigour and underlying merit of two very similar badges could be wildly different.

To address issues around validity and trust that may be presented by Open Badges, DigitalMe is developing an innovative trust model based on evidence, endorsing partners, and recognition by educational centres, peers and employers. In the case of BadgeLAB Leeds, feedback from arts commissioners suggested that they saw the process of badge design, which requires careful planning of the activity and learning goals, as an indication of a certain amount of rigour within the provision.

### Portability

In addition to the potential cultural barriers, there are also some technical challenges posed by the existing Open Badge technology. As learning takes place in a wide range of different contexts, the aim of Open Badges was to create a distributed system underpinned by an open source standard so that badges could be presented in multiple locations depending on what the users wanted to achieve. In 2011, the Digital Media and Learning (DML) competition (supported by the Mozilla Foundation and the MacArthur Foundation) brought together teams of learning providers and platforms to help achieve this. However, while the advantage of an open system is that it encourages wide adoption, the challenge is that providers will choose to implement the technology in different, potentially inconsistent, ways. A key consideration for badge providers is how to make badges portable between different platforms in a straightforward and user-friendly way.

Whilst the ability to migrate awarded badges to different platforms remains an issue for BadgeLAB Leeds, the project did find that different implementations were possible - even within the small cohort of Leeds-based providers. Some badges were taken and awarded remotely, others were awarded following a face to face, instructor-led activity and some arts



organisations hoped to use badges as steps along the way to more formal qualifications such as the [Arts Award](#).

## Existing badge schemes

A review of current uses of Open Badges illustrates some of the ways in which existing schemes use this technology to engage young people in learning activities. Key examples include:

### Chicago City of Learning (CCoL)



Perhaps the most mature and high profile example of digital badging in a community context is the Chicago City of Learning initiative. [CCoL](#) aims to make the 1000+ informal learning and development opportunities provided by institutions in the Chicago area more visible to over 200,000 local people aged 4 - 24.

Museums, schools, libraries, arts charities, businesses and churches, among other organisations, offer badges to recognise achievement and participation in an activity. The learner can add these badges to their account and share their achievement with friends and family. In addition, each time a badge is earned the badge earner receives suggestions about other programmes and activities that may be of interest. These '[learning pathways](#)' assist the learner in seeing the connections between badges, and following them can 'unlock' special opportunities, including entry into prize draws.

CCoL has its origins in the 2013 [Chicago Summer of Learning](#) project. In addition to expanding within the Chicago area, the Summer/City of Learning concept has since expanded into five additional US cities under the [Cities of Learning](#) initiative.

### SomewhereTo\_



[SomewhereTo](#) assists young people in finding spaces in which to host creative exhibitions, such as theatre and art exhibitions, and sports-related events. SomewhereTo is supported by Nesta as well as the Big Lottery Fund and commercial sponsors. Badges are used to help make the process of planning and staging an event more visible and provide a method by which the young person can track their progress from their [initial idea](#) to the [final event and beyond](#). The badge collecting and award process also allows local support teams to mentor participants and guide them through the stages of developing their plans.

The badges encompass the important skills developed during the process, such as time management, project planning and communication.

### Supporter to Reporter (S2R)



[S2R](#) is a programme from [DigitalMe](#) that uses young people's interest in sport as a mechanism to encourage them to develop confidence and communications skills. Participants can earn badges as recognition for gaining skills as a Journalist, Producer or Coach and share these through the [Makewaves](#) platform. Each of the three badge categories has multiple tiers, which allows earners to see their current level of development and understand what they need to do to reach the next level.

### Sheffield Hallam University (SHU)



Sheffield Hallam University has a long tradition of innovation in e-learning and has recently been experimenting with Open Badges. As well as several small scale initiatives, two major programmes have been adopted in the Business School and in the Faculty of Health and Wellbeing. Student representatives in the Sheffield Business School are able to claim badges for their participation in [training and development activities](#). In the Faculty of Health and Wellbeing a Massive Open Online Course (MOOC) delivered in partnership with Prostate Cancer UK (PCUK) has adopted Open Badges. In common with other MOOCs, participation was voluntary and the [badges](#) were used to encourage participants to deeply engage with the course materials and activities. The badges carry recognition of achievement from both SHU and PCUK and a full set of badges can be used as credit against part of a formal Masters-level course at the university. As a result of the reaction to the badges used on the MOOC, as well as other small pilots within the faculty, the radiotherapy and oncology department will be making use of Open Badges across their formal learning programmes from the 2015/16 academic year.

### Smithsonian Institution



The Smithsonian Institution has created '[Smithsonian Quests](#)' to encourage learners to interact with their extensive collection of online learning resources in a structured way. By making use of online materials and completing tasks, learners can obtain badges in many artistic and cultural fields. Badges are divided into two types: 'community badges' (which reward engagement with the learning platform)

and 'quest badges' (which are associated with the primary learning content). For example, the first community badge that most learners obtain is the 'Quest Seeker' badge, which is given as a reward for starting work on the learner's first quest badge.

Quests exist in a wide range of subject areas from Civil Rights to Astronomy. These online learning tasks are assessed by staff and volunteers at the Smithsonian to determine whether to make the award. Different levels of difficulty are available for each badge, helping to keep learners focused and active. Although the Smithsonian Quests site is available to any learner independently, the content of the site is clearly aimed towards activities led by schools and teachers.

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The aim of BadgeLAB Leeds was to explore what Open Badge technology may have to offer arts practitioners and commissioning organisations to support, enrich, and encourage engagement with the activities they offer to young people

## The Project



The aim of BadgeLAB Leeds was to explore what Open Badge technology may have to offer arts practitioners and commissioning organisations to support, enrich, and encourage engagement with the activities they offer to young people. Through the design and implementation of an arts based badge scheme, the project has developed and tested a model of using badges in an arts context, and has investigated the responses of a range of relevant stakeholders. As Open Badges are a relatively new technology that has not previously been applied to this specific sector, there is no established set of practices or approaches to badging in this context that could be subjected to a comparative evaluation. Instead, the researchers have worked collaboratively with key stakeholders capturing their reflections and experiences throughout the process to identify issues that will be relevant for future applications of Open Badge technology in this field.

The project set out a clear research aim of:

Testing the potential for arts organisations (and schools) to broaden, deepen and diversify community engagement in the arts and creative digital media by embracing Open Badge technology as both an alternative and complementary approach to the conventional accreditation of learning.

This was tested through:

- 1 reviewing experiences from other relevant OB projects internationally;
- 2 exploring the expectations of arts organisations about the potential of open badges and the challenges of introducing open badges into their practice;
- 3 monitoring the proportions of young participants motivated to claim their badges on-line against the total number of participants in badge related activities;
- 4 monitoring the proportions of participants who went on to gain other Badges;

- 5 exploring young peoples' responses to digital badges;
- 6 exploring teachers' and artist/facilitators' experiences of using badges;
- 7 investigating arts organisations' experiences of integrating open badges into their activities and their assessments of the benefits and challenges; and
- 8 exploring how OBs can complement/add value to established accredited learning such as Arts Awards.

## The Project Team – Partner Roles and Responsibilities

The BadgeLAB Leeds partnership came about because of a mutual interest in Open Badge technology and how badges could be applied in various contexts. ArtForms was introduced to Open Badges following a briefing session delivered by DigitalMe and Playful Leeds. As the local authority's music and arts service they were particularly interested in the idea of a 'City of Learning' and how this model, developed in Chicago, could work in Leeds.



ArtForms (Arts Partner) is an experienced broker and project manager of innovative city-wide partnerships. ArtForms was responsible for all aspects of project management including partnership agreements and service contracts, financial monitoring and project reporting. ArtForms brokered the partnerships with the arts organisations and artists, and supported schools' engagement with the project.



DigitalMe (Technology Partner) delivers large-scale and national partnership projects piloting Open Badge development in new contexts. DigitalMe led on technology development and managed technology collaborators. DigitalMe was responsible for implementing the marketing plan in close consultation with the project partners.



Sheffield Hallam University (Research Partner) conducted the evaluation of the project, including the design of research instruments, data collection and analysis. The research team have a rich history of working collaboratively with arts and

community organisations, other universities and the public sector to deliver research projects, along with expertise in project evaluation and digital badging in learning.

All three partners were jointly responsible for initial project planning, including the identification of realistic milestones, and potential risks which might impede project completion. The project partners mitigated these risks by using robust proven technology to develop and host the badges, and by drawing on existing relationships with arts organisations, artists and schools to ensure engagement. Strong project management by the lead partner (ArtForms), and regular close communication between project partners ensured that milestones were met in a timely fashion, and the project progressed as anticipated.

From the experience gained, partners are now in a strong position to work together on a city model, exploring how badges can be used to recognise arts and cultural learning across Leeds.

## Stakeholder Groups

The primary stakeholder groups identified in the project are:

- young people engaging with arts activities which award Open Badges;
- artists who run activities with young people;
- arts organisations who commission and co-ordinate arts activities with young people;
- teachers in schools hosting arts activities provided by external artists;
- digital service providers who offer Open Badge systems and services; and
- the project steering group.

## Project Activities

Project preparation began in summer 2014, with the recruitment of artists and arts organisations. To ensure the project engaged with a broad range of young people participating in different arts activities, specific arts organisations and artists were targeted and invited to take part. Criteria for selecting arts partners included type of setting, activity delivered and target audience. Once the involvement of artists was confirmed, arrangements were made for badged workshops to be delivered in schools and at public events. Data collection also began in the early stages of the project, with a



review of existing Open Badge schemes and design of research instruments (including interview schedules and questionnaires), and a preliminary focus group with the project partners.

The main BadgeLAB Leeds activities began in September 2014. Following the initial development of the badge claim platform and claim code system, the BadgeLAB hosted a badge design workshop day which was attended by members of the project team and 14 artists/arts organisation representatives. During the day, attendees used DigitalMe's 'Badge Canvas' (see figure 3) to create the badges they planned to offer.

Badge Name: \_\_\_\_\_

<b>USERS</b> Who is your badge for? Earner:  Audience:	<b>ENDORSERS</b> Who supports and recognises your badge? Earner:	<b>VALUE PROPOSITION</b> What need does the badge help you meet? What is the value for the earner? Earner:  Your organisation:	<b>SKILLS KNOWLEDGE + BEHAVIOUR</b> What skills does the badge represent? What behaviour does it encourage? Earner:	<b>CRITERIA</b> Describe what someone needs to do to earn the badge. <input type="checkbox"/> Skill <input type="checkbox"/> Knowledge <input type="checkbox"/> Behaviour	
	<b>CHANNELS</b> Where does a user find out about your badge? Earner:	<b>AWARDED</b> Who awards your badge and how? Earner:	<b>EVIDENCE</b> What artefact will show the criteria has been met? Earner:		
	<b>LEARNING PATHWAYS</b> What other badges exist in your scheme? Are there different levels?	<b>RESOURCES + SUSTAINABILITY</b> What resources are needed for your badge to work? Eg. technology, expertise, money?			

Figure 3: The Badge Canvas

Source: DigitalMe

A total of 14 badges were developed and loaded onto the Makewaves digital badging platform. Following this session, interviews were conducted with the participating artists and organisations to discuss their views on badges and their hopes and fears about the upcoming project.

Badges were offered by the following arts organisations and artists. A full overview of the badges offered and their requirements can be found in Appendix A.



- [Playful Leeds](#) is a project developed by Emma Bearman of Cultivate Ltd. with the goal of encouraging playful and creative digital engagement across the city. During the research period, Playful co-ordinated a major city-wide festival 'March of the Robots', where Open Badges were used to support arts activities offered at public events and in workshops coordinated by ArtForms in Leeds schools.
- [Buzz](#) at West Yorkshire Playhouse's First Floor provide a wide range of artistic activities for young people with learning disabilities, including Arts Award courses.
- [Studio12](#) is an audio-visual media project based in Leeds City Centre that provides free access to production facilities, training and qualifications for young people, with priority given to young people who are not in education, employment or training (NEET).
- [Boffin Projects](#) provide educational and artistic services in a variety of media, including musical instrument making, 3D photography, musical composition, ceramics and stop-frame animation.
- [The Den Experiment](#) encourage collaborative sculpture as a means of enabling young people to develop their creative capacities through play, team work, problem solving and material exploration.
- The research team at [Sheffield Hallam University](#) offered a 'Badge Researcher' badge, designed to examine whether the opportunity to earn Open Badges provided motivation for young people to learn new skills, by engaging young people as co-researchers about digital badges.

The badges were made available at a series of workshops throughout October, November and early December 2014. The workshops took place at public events, arts organisations, and primary and secondary schools in the Leeds area (coordinated through ArtForms).

These included:

- [Light Night](#): Playful Leeds participated in the city-wide Light Night arts festival, which included two badged robot-themed activities - building a robot in Minecraft, and constructing a 'Cube Robot'.



*The Cube Robot badge activity*

**Source: Sally Molineaux**

- [March of the Robots 'Minecraft party'](#): Playful Leeds held a 'Minecraft Party' in the Leeds City Museum as part of their March of the Robots festival. Within this event young people could engage in many different creative digital activities around the theme of robots, two of which offered a digital badge.



*Earning the Minecraft Robot badge at the March of the Robots Minecraft Party*

**Source: Maekstar**

- Mozfest Open Badges Lab. A group from DigitalMe and Playful Leeds participated in this event at the annual [Mozilla Festival](#) (Mozfest) in London. More than 300 young people participated in the Open Badges

Lab where every creative activity was linked to a digital badge, which they were encouraged to collect and claim at a dedicated 'claim station'.

- Buzz workshops: Buzz conducted a badged drama workshop at West Yorkshire Playhouse's First Floor for young people with learning disabilities.
- Studio12 masterclass: Studio12 ran a masterclass in 3D animation for young people who are NEET. The Masterclass badge was awarded to trainees who used these skills to collaboratively create a short film of a robot moving around a Leeds cityscape, which was shown as part of the [March of the Robots](#) festival.



*The Studio12 Masterclass - shooting during the workshop and a still from the final video*

**Source: Studio12, Leeds**



- School workshops: a series of workshops offering badges (including pottery, den building and Roboquilt badges) were held in primary and secondary schools in the Leeds area.



*A primary school Roboquilt workshop and the finished Roboquilt*

**Source: Alison Booth/Maekstar**

Throughout the project the research team engaged in observations of the workshop activities, and administered survey questionnaires, either in person or remotely, to capture the opinions of the young people engaged in the badged activities. After the workshop sessions, researchers interviewed teachers about their views on Open Badges and their experience of hosting a badged workshop, and held a follow up focus group with the artists and arts organisations about their experiences of running workshops offering badges.

Regular focus groups were conducted with the project partners to capture data throughout the project. Data coding and analysis was carried out in December, and work started on the production of the project report. Once project findings were available, a learning event was held in Leeds, which shared the research results and provided training to arts organisations in the use of Open Badges.

ArtForms and DigitalMe are jointly developing further activity to include training events and a possible partnership of arts organisations for a Leeds City of Learning initiative. Conversations are ongoing with various teams within Leeds City Council as well as arts organisations across the city and especially within the dance sector.

More detail about the timeline of the project activities can be seen in figure 4 on the next page.

# BadgeLAB Leeds Project Timeline

## July - August 2014

**Project Start.**  
**Preparatory work** and recruitment of artists and schools.



## September 2014

**Review** of existing badge projects and badge-related literature.  
**Badge Design Day** and development of BadgeLAB Leeds badges.  
**Telephone interviews** with artists and arts organisations.  
**First focus group** with project partners.  
**Development** of BadgeLAB Leeds site and claim code system.  
**Design** of cube robot with claim code.  
**Launched Twitter campaign** for increasing badge uptake.



## October 2014



Published press release, **blog post** and **video snippet** on DigitalMe website.  
**Refined the claim code** user journey.  
**Light Night Festival.** Research observations and iPad survey.  
**Workshop:** Buzz at West Yorkshire Playhouse's First Floor. Research observations and interviews.  
**Workshop:** Studio12. Interviews with young people.  
**March of the Robots** and **Minecraft Party.**  
**Research observations** and iPad survey.  
**MozFest 2014**  
**Updates** to the badge library and intractables.



## November 2014

**Second focus group** with project partners.  
**Workshops in schools.** Research observations and questionnaire survey.  
**Final focus group** with partners.  
**Launched Twitter campaign** for dissemination event.  
 Published **blog post** and **video snippet** on DigitalMe site.  
**Telephone interviews** with teachers.



## January 2015

**Analysis** of research findings.  
 Published **BadgeLAB Leeds project page** on DigitalMe website.



## December 2014

**Focus group** with artists.  
**Data coding and analysis.**



## February 2015

Development of **final project video.**  
**Dissemination event sign up** launched and sold out.

## March 2015

**Dissemination event.**

Figure 4: BadgeLAB Leeds timeline

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ArtForms and DigitalMe are jointly developing further activity to include training events and a possible partnership of arts organisations for a Leeds City of Learning initiative.

## Development Approach

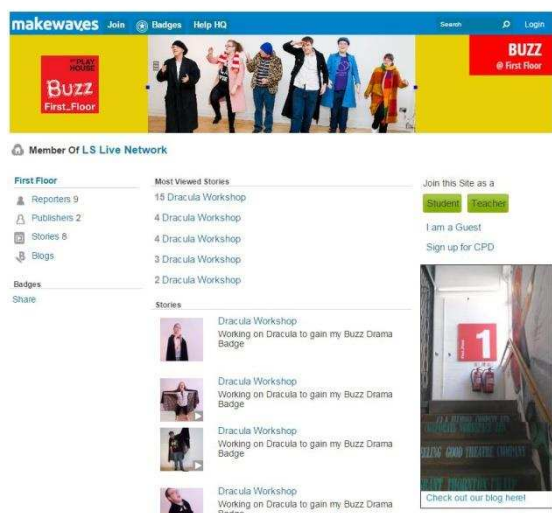
In addition to utilising existing Open Badges technology and the [Makewaves](#) badge issuing platform, BadgeLAB Leeds developed new software to meet the requirements of recognising arts practice in different settings. Each setting (e.g. activities in school provided by individual arts practitioners, informal arts provision and mass participation events) presented its own specific challenges, which were approached by creating separate user journeys and/or technology to test in that particular context.

### Mass participation and arts practice in schools

Two of the most challenging settings were mass participation public events and artist led sessions in schools. In most cases immediate access to the internet was not available in these contexts, so to address this a new 'claim code' software was developed. This allowed the arts practitioner to issue paper-based codes which the participant could use to claim their digital badge after the event or school session. In school, teachers were encouraged to facilitate the badge claiming process with their pupils.

### The Makewaves community and Buzz group

There are over 1,500 schools across the UK who actively engage in badges via the Makewaves platform. BadgeLAB Leeds was made available to these users, who could engage in the badges which could be completed remotely. The platform allows teachers or group leaders to set up accounts for users, create their own badge schemes, and issue badges directly to learners. Learners can use their account to upload media and blog posts which can be submitted as evidence for badges. The Buzz group also used the Makewaves platform in this way to award badges and upload evidence. The project leader created accounts for each young person on their site, then helped them to upload their badge evidence (photos and videos) and awarded the badges to each learner's account.



### *Sharing evidence on the Buzz Makewaves site*

**Source: Makewav.es**

Badges are also automatically displayed on users' pages as well as integrating with the Mozilla Backpack (for users over the age of 13). Integration with the Backpack allows users to transfer, store and share their badges, either directly from the Backpack or via other web services supporting the Open Badge standard.

DigitalMe are offering support to arts practitioners and organisations to allow them to submit a badge into a national arts badge library which can be taken up by schools and individuals via the Makewaves platform

### **Informal learning for 16yrs +**

Informal learning groups provided another challenge for the project, as the Makewaves platform is designed for younger users. An alternative approach was designed and tested with this group which utilised Mozilla's Badgekit, a set of tools that helps issuers create, assess and award badges. However, feedback from the participants indicated that the platform didn't meet their needs of developing a digital CV of badges. Instead, badges were issued from the Makewaves platform via email directly to users and stored within the Backpack. The email issuing technology was also used by facilitators at Mozfest to easily award badges to learners over 13 at an event with limited internet access.



## The user journey

Young people earned badges across a range of contexts, from large-scale public events to smaller bespoke workshops delivered to a focused group. In some cases the badge claim process was conducted as a guided group activity, while in others badge earners registered on the badge claim platform and claimed their badges independently. Figure 5 illustrates each of the potential user journeys available for young people participating in the BadgeLAB Leeds workshops.

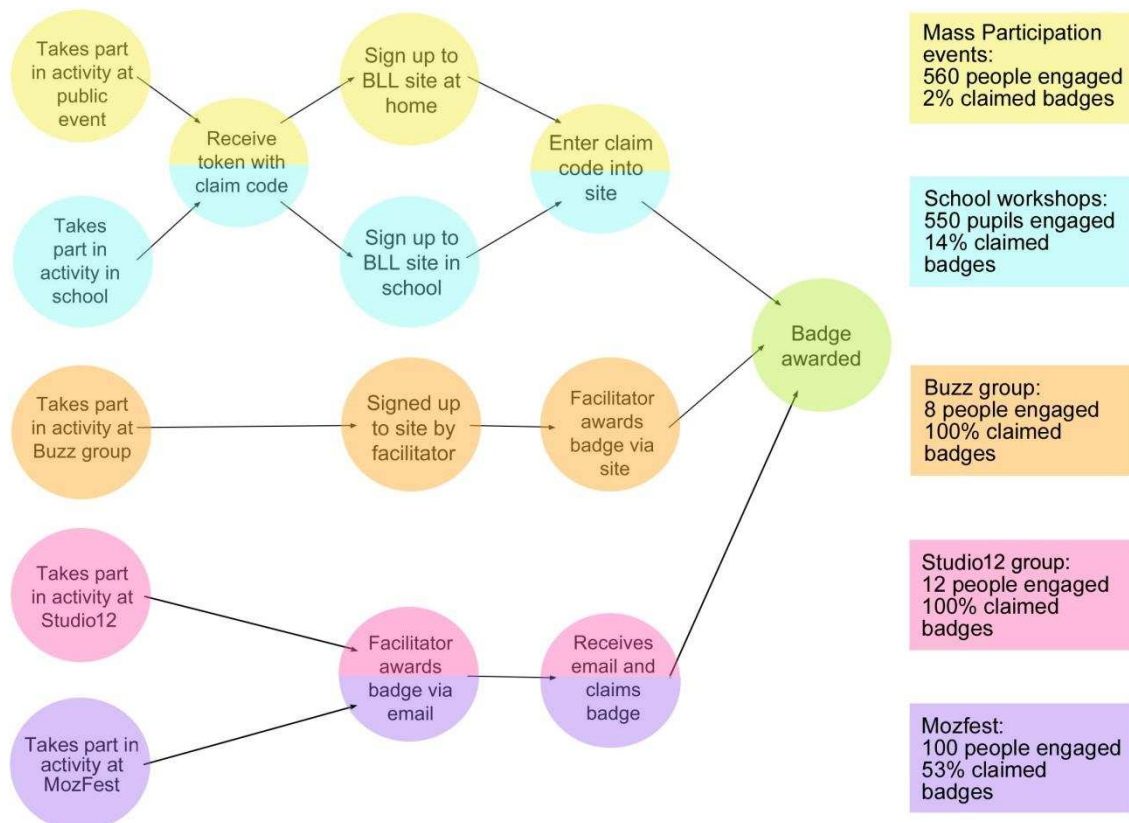


Figure 5: Badge earners' user journeys

## Displaying badges on partners' websites

Whilst the Backpack and Makewaves provided the ability for users to discover, claim, store and share their badges, organisations also expressed the desire to display their badges on their own websites. To meet this requirement software was developed to allow partners to display badges within their own websites using an API (Application Programming Interface). Although integration work needs to be completed by partners, the software provides a legacy to the project. It could be used for new partners or to develop apps which display arts related badges.

## Project Resources

Arts organisations considering conducting similar projects may want to consider the following costs. It is important, however, that these costs are taken as an example rather than a rule because each project will have different needs.

### Badge and Platform Development Costs

DigitalMe Open Badge development consultancy (educational, design and technology) costs for the creation of 14 badges were £11,700, These included:

- project management support,
- core partnership and technology planning meetings,
- development of technical specification for platform development,
- planning and delivering the badge canvas workshop,
- badge development and uploading,
- support for web integration for March of the Robots,
- uploading new badges onto the badge platform,
- system testing and
- supporting badged workshops.

Development costs for adapting the Makewaves platform and creating the API for use with other organisations' websites were £15,750. This included:

- technical specification,
- project management,
- technical build,
- web interface design and integration with the March of the Robots website,
- live system testing,
- technical support and
- system maintenance for project duration.

### Artists' Time, Project Management, Marketing

Costs for artists' time were £14,300 for an overall total of 44 days. This included:

- Open Badge development,
- attendance at briefings and Badge Canvas workshops,

- planning and delivery of arts workshops and
- participation in research.

Project development and management from ArtForms was £13,650 and marketing costs were £7975, but, as noted above, this project had particular needs that included the development of public events as well as school uptake, which had an impact on project management and marketing. Full costs are listed in table 1.

Key Activity	Cost
<b>Project Set Up</b> Contracts. Case study research commenced. Research instruments designed. Finalised technical spec. Commenced technical build. Arts partner briefing event.	£22,428
<b>Tools and Content Creation</b> Badge design workshop for artists and arts organisations. First badge missions launched. Researcher badge designed. Research instruments completed. Baseline interviews completed. Technical build continues. Claim code & email service set up. Badge claim monitoring & reporting set up. Documentary video commissioned.	£29,428
<b>Live Project Activity and Testing</b> Badge workshops commenced in school & community settings. Public online badging launched (downloadable missions). Live testing of systems - technical support and debugging. Live data collection at workshops. Researcher badge implemented.	£13,198
<b>Project Activity (Final Phase)</b> Final badge workshops. Public online badging concluded. Technical support and debugging. Live data collection, focus groups & interviews. Badge claim monitoring. Documentary video completed.	£10,294
<b>Data Collection and Cleaning</b> Badge claim monitoring reporting completed & claims analysed. Interviews & focus groups transcribed & analysed. Rough cut of documentary video.	£18,913
<b>Research Findings and Evaluation Report</b> Draft research report with key findings. Partnership review of lessons learned. Planned open badges for the arts learning event. Set up of arts badge library; preparation of tools and resources to support future arts badge services. Documentary video completed.	£11,630

Key Activity	Cost
Learning Event and Launch Activities Press & PR for launch/learning event. Production of final evaluation report & case study, documentary video, access online. Delivery of arts badge learning event with launch of key findings, arts badge library, tools and resources.	£8366

*Table 1: BadgeLAB Leeds budget highlights*

## Project Outputs

The BadgeLAB Leeds activities led to a deeper understanding of the potential considerations for arts organisations and artists who may wish to include Open Badges as part of their offering. The project trialled a model for incorporating badges into arts activities in a range of different contexts, raising awareness and engaging a number of artists and badge earners in the process. There are also tangible outcomes, including new badge claim technology, and the design of a set of new Open Badges. The main project outputs include:

- **Development:** Developed 14 new arts-related badges, which remain available on the Makewaves platform. Four of these badges are 'instructables' - online learning activities that can be taken remotely and without the guidance of an instructor.
- **New Models:** Created and tested new models for using Open Badges at mass participation events (using a claim token system) for instructables independently found online by learners, and at one-off school sessions.
- **Workshops:** Organised activities at large scale events where more than 700 children and young people took part in activities offering badges; held school sessions where more than 500 children and young people took part in badged activities.
- **Awards:** Awarded a total of 181 Open Badges to children and young people.
- **Gathered Evidence:** Obtained evidence of young people's attitudes towards badges and badged arts activities through observations, interviews and a survey questionnaire.

- Gained Insight: Furthered our understanding of the experiences of artists and arts organisations in adopting badges as part of their arts offer, obtained via observations and interview/focus group accounts.
- Online presence: Documented BadgeLAB Leeds with a project site on Makewaves, a project page on the DigitalMe website, blog posts, videos, and via the content posted on the Nesta Native website.
- Dissemination and networking: Used social media to develop relationships with potential future partners and generate interest. Held a dissemination event where 38 attendees were introduced to the research results and trained in the use of Open Badges for arts organisations. DigitalMe and ArtForms have presented initial findings at a number of meetings including the Leeds Dance Network and for the Culture and Sport Leadership team, Leeds City Council.
- Tools: The DigitalMe Badge Canvas has been updated for an arts audience and shared as part of the project dissemination.
- Development of a city-wide model of Open Badges for the arts: Learned key lessons to support BadgeLAB Leeds' efforts to create a city-wide model of badging that could be applied in Leeds and other cities.

### Technology Outputs

- Claim code technology: To issue badges at events / informal learning settings.
- An arts badge library: This allows arts organisations and individual arts practitioners to submit a badge into a national arts badge library which can be taken by schools and individuals.
- API: Software was developed which allows arts organisations to present and offer badges through their own websites using the Makewaves platform as a hidden 'back end'.

### Research Objectives and Methodology

The main aim of the research element of the project was to explore the experiences of each group of stakeholders involved in BadgeLAB Leeds, and to:

- identify potential benefits, opportunities and motivators for these different stakeholder groups;
- uncover challenges and barriers that might impact on the use of Open Badge technology in this context; and
- discover solutions and approaches to the adoption of Open Badges that might enhance their potential as a way of encouraging engagement with the arts.

In order to do this, a range of data collection strategies were used at all stages of the project.

- Audio recordings of regular steering group discussions (4.5 hours in total).
- Observations of a range of badged workshop sessions, including public events (Light Night, March of the Robots 'Minecraft Party'), school events, and events held by arts organisations (Buzz and Studio12).



### *The March of the Robots Minecraft Party*

**Source: Maekstar**

- Interviews and focus groups with stakeholders, including artists and facilitators (both before and after conducting badged activities), teachers who had hosted badged arts activities in their schools, and young people who had participated in badged workshops (8.5 hours in total).



All transcripts were coded, and a full copy of the coding framework can be found in Appendix B.

- Questionnaire surveys, completed by young people who had earned badges at public events and school workshops. Badge earners were asked to rate the extent to which they agreed with statements about the workshop activity and the badge earned for completing it, including whether they intended to claim their badge online. The questionnaire also asked young people to choose between two hypothetical future workshops, one of which (selected randomly) offered the opportunity to earn another badge. There were 165 responses from young people aged between 7 and 11 (see Appendix C for a full copy of the questionnaire).
- Online tools were used to generate monthly reports to monitor traffic on the web platform and track users who claimed BadgeLAB Leeds badges.

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Badge programmes may provide a useful quality assurance mechanism for arts commissioners



# Results

## Overall Conclusion

The research revealed that artists and arts organisations found the process of creating and issuing badges to be relatively straightforward, and consequently badge programmes may provide a useful quality assurance mechanism for arts commissioners. Young people expressed enthusiasm about badges, and their responses suggested that offering badges may influence their choices between arts activities. However, the goal of creating a programme which is recognised by stakeholders across a given learning context (such as a city-wide scheme) would require further investment.

Future projects should offer an Open Badge framework which provides clear goals and positive user experiences at each stage of the user journey, to encourage continued engagement. Projects must focus beyond individual badges to think about badge schemes as a contextually dependent, ongoing, social experience for audience members.

## Responses to Open Badges

One of the aims of the research element was to gain an insight into the attitudes of different stakeholder groups towards the idea of adopting Open Badges. Responses to badges were generally very positive, and in this section we present an overview of the main points raised by, and issues affecting, each group.

### Artists

The freelance artists who participated felt that Open Badges could be a way of distinguishing their offering from competitors, and might provide a new channel for promoting their work (e.g. people discovering the artist via badges that they have awarded).

They found the amount of work required to create and establish their badge (and the associated online resources) was quite manageable within the three person days that they were allocated in the project, with support from DigitalMe in completing the Badge Canvas exercise and producing video materials.

A key issue raised by the artists in relation to their workshops concerned the lack of time available to explain (and 'sell' the concept of) Open Badges, when the amount of time available to conduct the workshops was already extremely limited:

'Sometimes there wasn't time to talk to the children about the badges, which was something I was worried about anyway because they're pretty full-on ... when I did talk about the badges they weren't particularly interested in that because they were interested in doing the activity' (Artist, focus group)

The artists were also aware that a single badge, which does not form part of a collection of other badges, may not hold much appeal for workshop participants. The potential added value for an individual artist, therefore, may depend on the pre-existing awareness about badges in the domains where they are promoting their work.

### Arts organisations and commissioners

Arts co-ordinators felt that Open Badges have potential as a mechanism to encourage and to manage quality assurance for the artists that they work with. This process was relatively light-weight (and could be completed in a one day workshop), but ensured that key issues of quality assurance were addressed.

The two specialist organisations working with groups of young people with specific needs also recognised an opportunity to develop bespoke awards targeted to meet the needs of their clients, who often did not have many traditional qualifications. Open Badges offer organisations at both local and national level a flexible way to recognise artistic activity which is valuable within the context of their particular organisation. Open Badges can be used in this context to build a structured portfolio of evidence towards qualifications like the Arts Award.

'The Arts Award is very hard to deliver as part of our membership, where our young people can choose as and when they want to come in ... the badges, they are fairly achievable and we can design them to be achievable with a number of different kinds of users that we work with' (Arts organisation co-ordinator, focus group)

## Teachers

The teachers hosting badged workshops showed a clear interest in incorporating badges into their teaching practice, particularly as a form of motivation or 'reward' for participation or accomplishment. They noted the potential to tailor the badges offered to the teaching curriculum, and to recognise extracurricular achievements.

'There's no consolidation, there's no one place for that; for the curriculum and the non-curriculum. Seeing all those [badges] and building them up over time, I think it's something that pupils would be really proud of' (Secondary school teacher, interview)

Although teachers recognised clear potential benefits in adopting digital badges, they felt that to be successful a badging scheme would require school support and promotion. There was also some concern that an online badge scheme which was not solely school focused would exclude pupils who did not have access to the internet at home, or who were less confident online.

## Young People

Young people's responses to badges were collected using three methods: via the reports of others (e.g. teachers, artists), a survey questionnaire completed by badge earners at public events and school workshops, and interviews conducted with young people who participated in workshops at arts organisations.

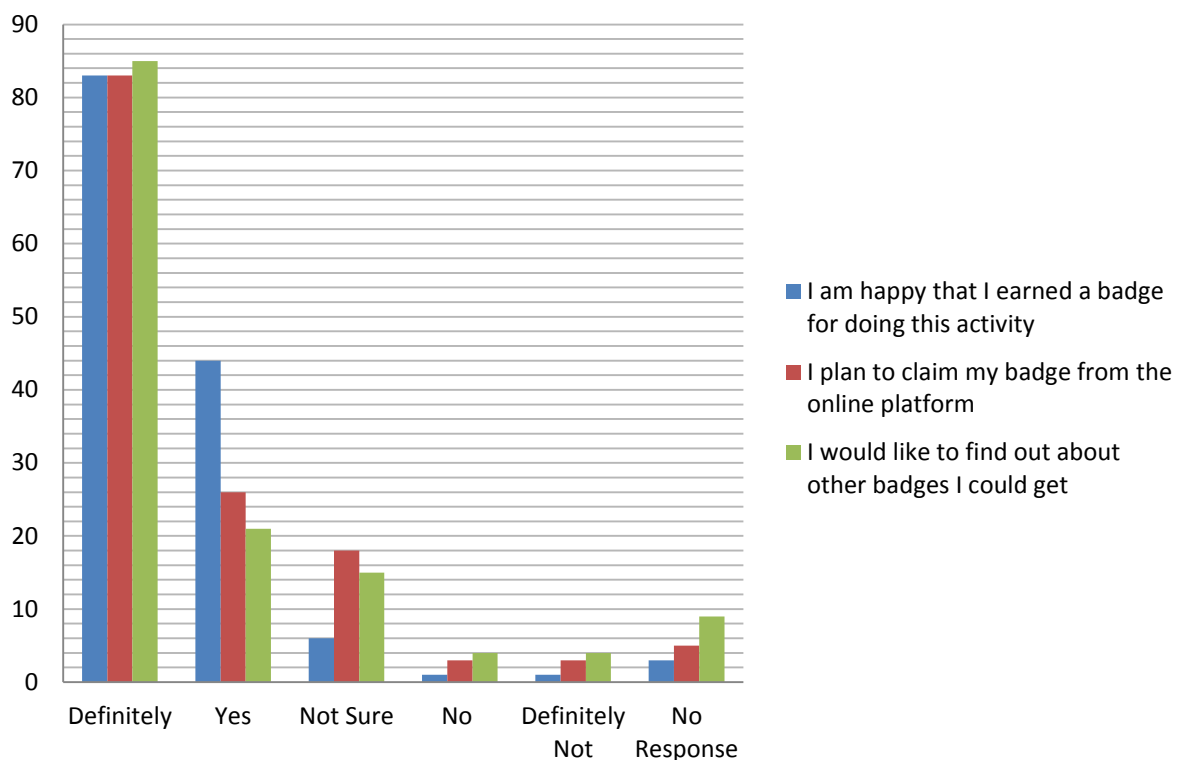
Teachers reported that the idea of badges received an extremely enthusiastic response from most pupils, and they were excited about using the badge platform and creating an account:

'They were really excited ... they are quite a tricky class and for them to have been so enthusiastic for the whole morning was a big thing really ... They kept mentioning the badges throughout the morning as well, they couldn't wait to get them' (Primary teacher, interview)

Although there was some suggestion by individual teachers that badges may appeal more to younger children, or that there may be gender differences in pupils' responses (one teacher felt that the girls in the class were more

interested in badges than the boys), this view was not supported by the questionnaire response data.

We gained further insights into young people's opinions from their survey responses (see figure 6). 92% of badge earners reported that they were happy (Yes, or Definitely) that they had received a badge for their work. Over 82% of the young people stated that they intended to claim their badge from the online platform, and over 82% said that they would like to find out about other badges that they could get.



*Figure 6: Young people's questionnaire responses to statements about earning badges*

95 young people gave explanations for why they were happy to receive a badge, with major themes being:

- pride and achievement (e.g. "because badges make you proud");
- being rewarded (e.g. "I am happy because I haven't got a lot of rewards");
- having a record of the achievement (e.g. "Because when I am older I can think about this day"); and
- the act of collecting (e.g. "I like collecting things").

This very positive response should be treated with some caution however, as the survey was conducted at a time when the young people had just undertaken a novel artistic activity. In their responses, the young people were generally positive about the workshop activity as well as the badges, and were just as enthusiastic about the opportunity to do more workshops as they were about the potential to earn more badges. However, a small number of respondents reported that they did not enjoy the activity, but were pleased to have earned a badge, while others rated the activity positively, and were particularly enthusiastic about the prospect of earning more badges.

### Does the availability of badges influence activity choice?

In order to further examine the relationship between positive attitudes towards activities and enthusiasm about badges, the final question on the survey provided a test to explore whether young people would be more likely to choose to attend an artistic event if it offered the opportunity to earn another badge.

The question provided a choice of two exhibitions, with only one exhibition offering a badge. The 'badged' activity was randomly selected for each participant.

- 10 Imagine that there are two exhibitions on in Leeds next weekend – one is about Egyptian mummies, the other is about the history of the Leeds music scene. Both of them have lots of activities that you can do and make. The **Leeds music scene exhibition is awarding badges**. Which one would you want to go to? Please tick one.



Egyptian  
mummies



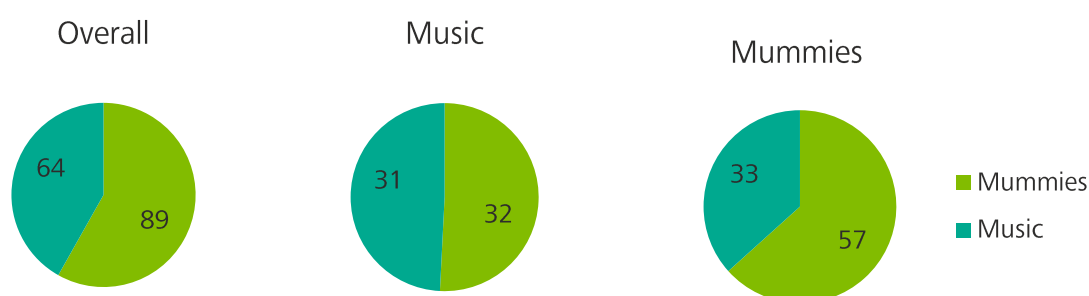
Leeds music  
scene

Why? Please explain your answer.

Figure 7: The 'activity choice' question on the BadgeLAB survey questionnaire

Source: Sheffield Hallam University

Combining results from schools and from the public events, the question was answered by 153 respondents (see figure 8). The Mummies exhibition was chosen by more of the young people than the Music exhibition (89 versus 64). When the Music exhibition offered badges, 31 respondents chose Music and 32 chose Mummies. When the Mummies exhibition offered badges, 57 chose the Mummies against 33 choosing Music.

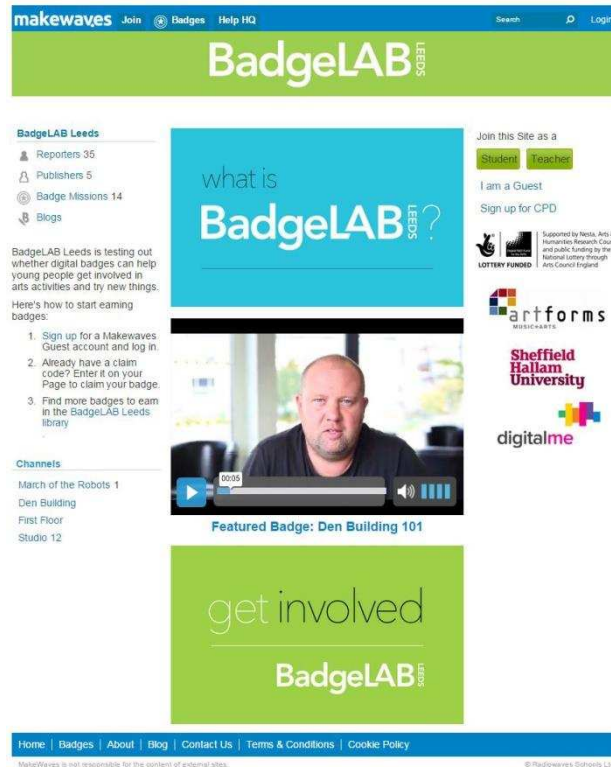


*Figure 8: Workshop choice a) overall, b) when music exhibition offers badges, c) when mummies exhibition offers badges*

Statistical analysis of these responses revealed that when an exhibition is offering badges it is more likely to attract interest from young people than when it is not offering badges. This finding is statistically significant at a value of 0.05, which means there is less than a 1 in 20 probability of these results occurring purely by chance. A full description of the research hypothesis and Chi-square analysis can be found in Appendix D.

## Badge Claim

The badge claim data taken from the Makewaves platform shows that a total of 181 BadgeLAB Leeds badges were claimed during the project, and over 1000 users of the site have 'taken' the badges (which means that they have shown an interest by saving the badge to their profile, but have not yet earned them).



The BadgeLAB Leeds page on the Makewaves site

Source: [www.makewav.es/badgableeds](http://www.makewav.es/badgableeds)

Table 2 shows all badges claimed by the three main types of earner:

- those who signed up after a BadgeLAB Leeds event or session (BLL User),
- existing Makewaves users (MW User), and
- those who earned badges at the Mozilla Festival (Mozfest) in London.

Badge*	Earned by BLL users	Earned by MW users	Earned at Mozfest	Total
Minecraft Robot	5	18	11	34
Cube Robot	6	2	23	31
Make a Robot	0	0	10	10
Light Night	1	0	0	1
Roboquilt	53	0	0	53
Thumb Pot	0	0	0	0
Den Building 101	0	0	0	0
Buzz	8	0	0	8
Greek potter	0	0	0	0
Roman potter	3	0	0	3



Badge*	Earned by BLL users	Earned by MW users	Earned at Mozfest	Total
Den master	20	0	9	29
Researcher	0	0	0	0
Studio12	12	0	0	12
Total	108	20	53	181
% of total	60%	11%	29%	

*Table 2: BadgeLAB Leeds badges claimed*

\*NB: Some of the badges (e.g. Drama Buzz Badge, Studio12 Masterclass, Flashing Roboquilt, Den Master, 2000 Year Old Potter: Romans, 2000 Year Old Potter: Greeks) were only available to young people who attended specific workshops, and so we would not expect to see more general uptake of these badges.

A comparison of the number of young people claiming badges with the total number of young people engaged in the badged activity gives an indication of how successful different types of events were in motivating badge earners to claim their badges from the Makewaves site (see Table 3).

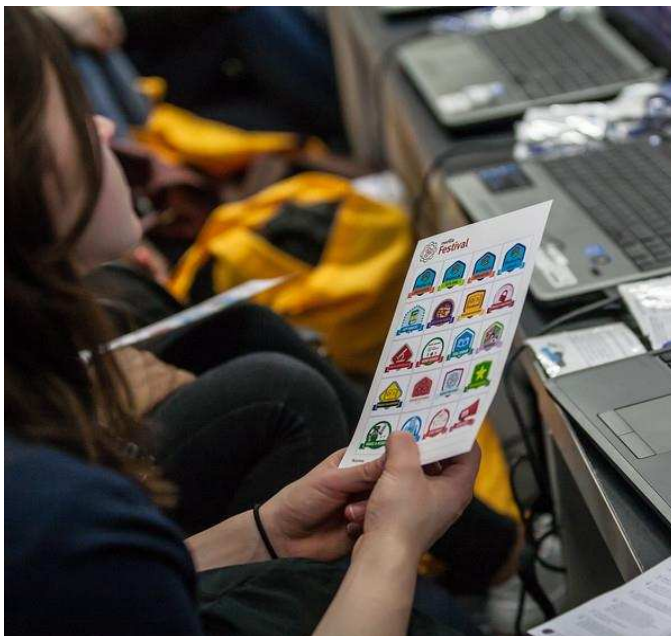
Session format	Users engaged	Badges claimed	% badges claimed
MOTR events	562	12	2%
Mozfest	100	53	53%
School workshops	552	76	14%
Studio12	12	12	100%
Buzz	8	8	100%
Total	1234	161	13%

*Table 3: Badges claimed by event type*

These figures show that Buzz and Studio12 were the most successful in engaging their whole group in the badges, which is perhaps not surprising as the badge claim process was supported by the organisations offering these badges. School sessions saw a 14% claim rate, which is a fair result considering the badge claiming was not facilitated during all of these sessions.

The claim results for the mass participation events offer an interesting point of comparison – the March of the Robots events had little success in terms of badge claiming, which we feel was caused by a lack of visibility and

context for the badges in the wider event, where there were large numbers of people spending only a short time engaged with the activity. At these events there was a lack of public awareness of badges, with little time available to explain them, and badge earners were given a physical token to take home featuring a claim code and directions to the badge claim site. In contrast, the Mozilla Festival, where many participants were already familiar with the concept of badges, was much more successful. The high level of engagement may also be explained by the structure of the Mozfest Open Badge Lab event, where multiple badges were available, and attendees were given a card listing the badges they could earn, enabling them to track their progress as they moved around the event.



*The Mozfest Open Badge Lab badge collection card*

**Source: Simon Allen**

IT facilities at Mozfest also meant that badge earners could claim their badges at the event immediately, rather than waiting until they returned home. A new Makewaves mobile app, which is currently under development, will allow people to submit pictures, video and text to evidence and claim badges. This may be a valuable tool to address some of the issues regarding badge claim at public events in the future.

Further insights into factors affecting engagement with badges can be gained by examining the rates of badge claim in each of the workshops offered in schools (see Table 4).

Session	Pupils engaged	Users registered	Badges claimed	% badges claimed
Den building	240	24	20	8%
Roboquilt	134	64	53	40%
Pottery	178	3	3	2%

*Table 4: Rates of badge claim following school workshops*

The Roboquilt sessions saw by far the highest level of badge claiming, which we feel may be due to the fact that the artist facilitating the workshops also works for DigitalMe. As a result, she has a good understanding of badges and was able to explain them to the school groups clearly and confidently. Badges were introduced at the beginning of each Roboquilt session, and the claiming process was explained to teachers in detail.

These findings demonstrate the importance of raising awareness of badges independently of the activities offered, as other artist facilitators who were new to the concept of badges were not sufficiently confident in explaining badges to be able to introduce and 'sell' them to the workshop participants in the limited time available.

Although the survey responses suggest that young people would be keen to earn more badges, these results are not reflected in their badge claim behaviour. Participants who had gained a digital badge in a workshop were also offered the opportunity to obtain a 'Researcher' badge, which required them to conduct a short investigation into digital badges by following a step-by-step printed guide. The main purpose of the badge was to see whether any young people would be sufficiently motivated by additional badges to engage with this task, but although the badge was explained to over 120 young people at different workshops, and was available to all users of the BLL site, none of them actually attempted to earn it. Only eight of the users who first learned about Open Badges via BadgeLAB Leeds have gone on to investigate any of the other badges on the Makewaves site, and none of them have gone on to earn any of those badges. This highlights a need to

ensure that visitors to the site are directed towards opportunities to earn further badges which they may find relevant to their interests.

## Impact of the project

- Over 1000 young people were reached.
- Three arts organisations (and related artists) and two arts practitioners benefited from training in digital badging.
- The technology developed has created a platform where other arts organisations can launch a badge into the arts badge library.
- The project research and the model created provide a road map for developing arts organisations' own badge programmes.

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The research found that larger scale and city-wide projects must provide a wider social context in which to locate the badges.

## Insights

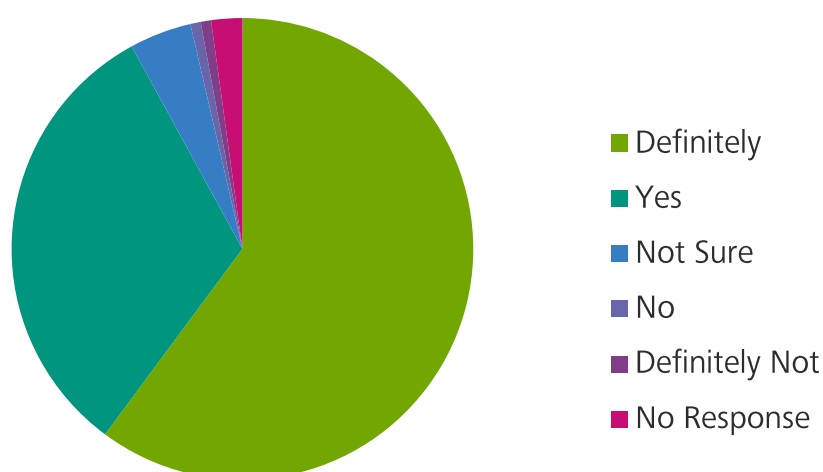
Below we report five key insights that other arts organisations should review when they are considering projects involving Open Badges.

- Most young people respond positively to Open Badges.
- Open Badge projects need a co-ordinated promotion strategy.
- Badges can be used to structure quality assurance and to develop bespoke qualifications.
- Projects should carefully plan the badge earner's whole journey.
- Larger scale and city-wide projects must provide a wider social context in which to locate the badges.

These points are examined in more detail below.

### Most young people respond positively to Open Badges

Young people were overwhelmingly positive about the value of badges, with over 90% of respondents stating that they were happy or very happy that they had gained a digital badge. The main reasons given were a sense of pride and achievement, a sense of being rewarded, and having a record of work.



*Figure 9: Questionnaire responses to the statement "I am happy that I earned a badge for doing this activity"*

Young people wanted to show their badge to other people, most notably parents and friends. Young adults identified the potential of badges, but wanted to be reassured that they would be recognised by employers and other external agencies.

The responses to the survey questionnaire suggest that young people are more likely to choose an artistic activity if it offers badges (over other similar activities that do not offer badges).

### Lessons learned

- Young adults can see the potential of digital badges to organise a portfolio of their achievements but want assurance that the badges will be widely recognised.
- The value in a badge is dependent on the recognition of the badge within a wider social network.
- Badge projects need to consider how badges are going to be shared, particularly with family members, but also with others such as employers.

### Badges need a co-ordinated promotion strategy

A major concern for the BadgeLAB Leeds artists was having time to 'sell' the idea of Open Badges when workshops in schools were already under severe time pressure and explaining badges might distract from their primary goals. The artists were also concerned that gaining one badge in isolation, not connected to other badges, would not be meaningful for their participants.

The most successful example of a badged activity in BadgeLAB Leeds was at Mozfest 2014, where visitors to the 'Open Badges Lab' were handed a floor guide which included a grid showing all the badges available and allowing them to collect evidence as they earned each badge. The visitors could then claim the badges online before they left the exhibition.

Having multiple badges available provides a wider context adding value to the individual badges.

### Lessons learned

- For individual artists, the value of adopting badges depends on wider promotion and uptake.



- Offering multiple badges across an event, and adopting a structured promotion strategy, adds value to each individual badge.

## Using badging for quality assurance

Arts co-ordinators can use the process of developing badges as a quality assurance mechanism for the artists that they work with. The Badge Canvas process forces the individual artists to examine the skills, content and standards associated with their offering.

The organisations working with young people with specific needs recognised an opportunity to develop bespoke awards. In the past, both organisations had worked with external course validation agencies, but were concerned about the cost (per student) of such qualifications, and a mismatch between the qualifications offered and the needs of the individuals. Specialist organisations can add value to the badges through local efforts to explain the badges to relevant employers and other stakeholders.

### Lessons learned

- The Badge Canvas process enables arts commissioners to establish a light-weight quality assurance process.
- Specialist organisations can use badges to develop bespoke awards for groups with special needs who may hold few formal qualifications.
- Specialist organisations will need to work with other stakeholders to ensure that their badges are recognised (for example by employers).

## Planning the badge earner's journey

For public workshops it was not always possible to connect to the web platform at the event, so young people who had successfully completed the activity were issued with a token (a printed bookmark), that included a badge claim code. This physical token appears to have been successful in reminding some badge earners to register and log onto the website. The process may be simplified via a mobile app which Makewaves plan to launch in the near future.

The hope was that badge earners would explore other badges and go on to earn more, but only a few did so. This may be because, when the badge earner first claimed their badge, the home page that was displayed did not

emphasise opportunities to earn other badges. The design of the site, and the 'user journey' must be carefully considered.

Arts organisations using Open Badges should move beyond thinking about individual badges to explore badging as a systematic digital engagement strategy. Organisations should examine all their different contacts with the audience and consider how badges could be related to each encounter. Organisations can also break a badge down into multiple steps with the badge seeker submitting evidence (for example photographs or links) to the organisation at each step. Badging then provides an overall structure for relationship building.

Badging projects should consider how their project connects to other Open Badges that audience members may have acquired. Currently, usability improvements are needed so that it becomes easier for users to move badges between platforms. Indeed, some platforms do not currently provide this facility at all.

### Lessons learned

- Projects should explore the complete badge earner journey, from first hearing about badges, through claiming a badge, to choosing and attempting new badges.
- Arts organisations should think beyond individual badges to consider how badging might be used as an overarching audience engagement strategy.
- Projects should test whether their badging platform providers allow badge earners to easily move badges from and to other platforms.
- Badging platform providers should consider how their platform structures a badge earner's journey so as to promote ongoing engagement.

### Providing a social context – city-wide schemes

Multiple findings in the research highlight the social context in which badges are situated. For badge earners, it is the wider social context that provides the meaning and value in the badge.

Efforts to promote engagement with the arts at a city-wide scale need to build a social framework and to engage multiple stakeholders so that badging and badges are promoted consistently and effectively. At a city-

wide scale, the cost to benefit ratio for adopting Open Badges is more favourable for each individual artist or small organisation.

### Lessons learned

- Strong network effects influence the adoption of badging as a strategy. As more stakeholders offer badges and recognise badges offered by others, the perceived value for earners and providers increases.
- For a city-wide initiative, it is important to recruit key stakeholders such as local employers and major arts organisations, as well as individual artists and schools.

In implementing a city-wide initiative, project coordinators need to attend to the badge earner's journey and ensure that opportunities are taken to lead badge earners from the badge they are currently claiming to other arts activities and events.

# Future

## Next Steps/Future Collaborations

One of the findings of BadgeLAB Leeds is that a city-wide approach to badging might be beneficial both in terms of costs and getting past the current lack of awareness of Open Badges. City-wide badging has the potential to create lasting pathways that help users take up learning opportunities. Each time a beneficiary is awarded a badge, for example, sharing a list of other badging opportunities can help the user locate both online and offline opportunities for learning elsewhere in the city. Creating and maintaining such pathways would require and encourage close collaboration amongst the arts and technology communities in Leeds.

To this end, we are developing a network and building relationships with people providing these activities in Leeds. This includes a broad range of partners, such as arts practitioners and organisations, the local authority, teachers, employers and social enterprises. In particular, we are seeking to add the dance sector to our list of participating arts organisations. We aim to formalise a model for Cities of Learning, similar to the Chicago Summer of Learning project that first used Open Badges in 2013, which can then be shared with other UK regions.

## Further Development of Outputs

Attendees of the project dissemination event were invited to engage in and test out Open Badges using the arts badge library. Those who express an interest in this will be supported to create and launch a badge which can be earned by any young person remotely promoted to the community of schools on Makewaves and shared with other young people via the claim code technology. A paid offer of a training day and site on the Makewaves platform was also advertised at the event and several organisations have expressed an interest in this.

We are planning to work with Arts Council England staff to map and implement a structure for badging different elements of the Arts Award. Laura Gander-Howe, Director Children, Young People & Learning, stated:

"We believe that Open Badges have the potential to offer added value to the Arts Award. We are keen to encourage the different ways artists and arts organisations are beginning to use Open Badges, to support arts learning, and further explore how they can complement the Arts Award."

The two specialist arts organisations working with groups of young people, Buzz and Studio12, valued Open Badges as a way to provide progressive recognition on the route towards earning the Arts Award, allowing each learner's achievements to be recognised even if they did not complete all of the requirements for the complete award. We would like to carry out further work to map and implement a structure for badging different elements within the Arts Award. To inform this, DigitalMe will continue to work with the Buzz group to support the creation of more badges and train the young people to claim their badges via the new Makewaves app.

Badge claim success for the mass participation events was quite low, so to further develop and test the potential of using claim codes in this context DigitalMe plan to work with artist Chris Harman to incorporate badges into his plans for a Den Building Festival in Leeds in summer 2015.

In addition, we found that the current lack of familiarity with Open Badges and the costs of running programmes using Open Badges would make a city-wide approach to future projects time, cost and knowledge efficient. The artists and arts organisations had a lot of enthusiasm for Open Badges but felt they needed to be more widely known since explaining what they are and what their purpose is could be time consuming, eating into the time available for conducting arts activities. An organised programme of badged events and activities could efficiently spread knowledge about badges and allow events to be run cost effectively spreading the costs of promotion.

Finally, we think that more research and testing can be done to explore whether a sector-based approach can be successful and whether this is best conducted on a city, regional or national basis. We are discussing collaboration possibilities with contacts in the dance sector.

## Further Resources

### Further project information

- BadgeLAB Leeds page on DigitalMe website:  
<http://www.digitalme.co.uk/badgelab-leeds>
- Blog posts on the DigitalMe site:  
<http://www.digitalme.co.uk/blog/Open%20Badges%20with%20First%20OFloor%20Buzz/>  
<http://www.digitalme.co.uk/blog/open-badges-for-march-of-the-robots/>  
<http://www.digitalme.co.uk/news-and-events/Open%20Badges%20and%20Arts%20Engagement/>
- BadgeLAB Leeds page on Nesta Native website:  
<http://artsdigitalrnd.org.uk/projects/artforms/>

### Tools and guidance

- Mozilla Foundation, the creator of the Open Badge standard, provides extensive advice on how to get started: <http://openbadges.org/issue/>
- DigitalMe offers a Badge Canvas and Badge Design FAQs as free, downloadable pdfs on the website: <http://www.digitalme.co.uk/badges>
- The Open Badges blog on Tumblr lists advances, advice and examples of badge projects as well as reflective pieces on conceptual issues related to Open Badges.
- The Badge Alliance offers a regular community call where those wishing to use Open Badges can get free advice and hear about the experience of others.

### Further reading

Abramovich, Samuel, Schunn, Christian and Higashi, Ross (2013) 'Are badges useful in education?: It depends on the type of badge and expertise of learner'. *Education Tech Research Development*, March 2013. Online at: <http://www.lrdc.pitt.edu/schunn/research/papers/Abramovich-Schunn-Higashi.pdf>

Antin, Judd and Churchill, Elizabeth (2011) 'Badges in Social Media: A Social Psychological Perspective'. *CHI 2011*, May 7-12 2011, Vancouver, BC, Canada. Online at: [http://uxscientist.com/public/docs/uxsci\\_2.pdf](http://uxscientist.com/public/docs/uxsci_2.pdf)

Buckley, Patrick and Doyle, Elaine (2014) 'Gamification and Student Motivation'. *Interactive Learning Environments*, DOI: 10.1080/10494820.2014.964263

Bull, B. (2014) *Want to issue open badges? Here are some options*. [Blog]. 27 July 2014. Online at: <http://etale.org/main/2014/07/27/want-to-issue-open-badges-here-are-some-options/>

Glover, Ian (2013) 'Play as you learn: Gamification as a technique for motivating learners'. *World Conference on Educational Multimedia, Hypermedia and Telecommunications*, 24 June 2013, Chesapeake, USA.

Glover, Ian and Latif, Farzana (2013) 'Investigating perceptions and potential of open badges in formal higher education'. *World Conference on Educational Multimedia, Hypermedia and Telecommunications*, 24 June 2013, Chesapeake, USA.

Glover, Ian, and Malone, Cathy (2014) 'Towards the Devolution of Lifewide Learning Awards through Verifiable Digital Badges'. In Norman Jackson (ed) *Lifewide Learning and Education in Universities and Colleges*. Learning Lives.

Mozilla Foundation (2012) *Open Badges for Lifelong Learning: Exploring an open badge ecosystem to support skill development and lifelong learning for real results such as jobs and advancement*. Online at: [https://wiki.mozilla.org/images/5/59/OpenBadges-Working-Paper\\_012312.pdf](https://wiki.mozilla.org/images/5/59/OpenBadges-Working-Paper_012312.pdf)

## Other examples

Badge Culture: <http://www.badgeculture.com/>

Badge the World: <http://www.badgetheworld.org/>

Chicago City of Learning: <https://chicagocityoflearning.org/index>

Chicago Summer of Learning: <http://www.chicagosummeroflearning.org/>

Cities of Learning: <http://citiesoflearning.org/>



Sheffield Hallam University MOOCs: <https://credly.com/u/2033707>

Smithsonian Quests: <http://smithsonianquests.org/>

Somewhere To: <https://somerhereto.com/>

Supporter to Reporter:

<https://www.makewav.es/story/463170/title/introducings2rmedals>

# Glossary & Abbreviations

## Glossary

**Digital Badge:** A visual indicator of having met defined criteria that can be displayed on an online platform.

**Mozilla Backpack:** A free platform for collecting and displaying Open Badges.

**Open Badge:** Digital badge shareable through the Mozilla Open Badges standard. Open Badges contain some combination of the following items encrypted within them: badge name, description of the badge, criteria for earning it, issuer, evidence required for award of the badge, the date it was issued, the standard for determining its award and tags for searching.

**Open Badge Standard:** Technology infrastructure enabling digital badges to be shared on social media or wherever the Open Badges standard is integrated.

**Instructable:** Online learning activity that can be taken remotely and without the guidance of an instructor, typically a step-by-step guide supported by photographs or videos.

## Abbreviations

API	Application Programming Interface
BLL	BadgeLAB Leeds
MOTR	March of the Robots
Mozfest	Mozilla Festival
NEET	Not in education, employment or training

## Acknowledgements

ArtForms: Jane Zanzottera

DigitalMe: Lucy Neale, Matt Rogers, Yvonne Dean

### Arts Organisations

Playful Leeds: Emma Bearman, Marie Millward, Alison Booth

West Yorkshire Playhouse and First Floor: Sam Perkins; Maria Thelwell, Bee Skivington

Studio12: Jamie Hutchison, Emma Hayton

### Artists

Stephen Reid, Kirsty Sparrow, Adrian McEwan, Gemma Lathan, Julian Coburn-Hough, Jim Bond, Hayley Mills-Styles, Adam Clarke, Sam Paechter, Chris Harman

### Schools

St Benedict's Catholic Primary School

St Phillips Roman Catholic Primary School

Westerton Primary School

Adel Primary School

Pudsey Waterloo Primary School

Whingate Primary School

Rufford Park Primary School

Leeds City Academy

Pudsey Grangefield High School

# Appendix A: Summary of BadgeLAB Leeds Badges

## BadgeLAB partners



### Playful Leeds

Playful Leeds is a project developed by Emma Bearman of Cultivate Ltd. The goal of Playful is to encourage playful and creative engagement across the city, in particular in relation to creative digital engagement. During the research period, Playful co-ordinated a major city wide festival, March of the Robots, which was inspired by the question, "What would it take to involve the widest population in Leeds to come together in being creative, resourceful and play a part in imagining the future of our city together?" Playful (and the freelance artists that they work with) adopted Open Badges to support activities at public events as well as for robot related arts workshops held in Leeds schools in collaboration with ArtForms.



The Light Night badge is awarded for taking a photo of Light Night and sharing it via social media or a gallery on the BadgeLAB site.

**Where:** Light Night  
**How many earned:** 1



The Flashing Roboquilt badge is awarded for making a decorated fabric square incorporating an LED powered by conductive thread.

**Where:** March of the Robots, Minecraft Party, School workshops  
**How many earned:** 53



The Minecraft Robot badge is awarded for building a robot in the online Minecraft environment, and uploading it to the March of the Robots website.

**Where:** Light Night, March of the Robots, Minecraft Party, Online instructable  
**How many earned:** 34



The Make a Robot badge requires earners to make a robot out of any materials and upload a photo to the March of the Robots website.

**Where:** March of the Robots events, Online instructable  
**How many earned:** 10



The Cube Robot badge is awarded for making a robot using a pre-printed foldable template.

**Where:** Light Night, Mozfest, Online Instructable  
**How many earned:** 31

### West Yorkshire Playhouse

Buzz at West Yorkshire Playhouse's First Floor initiative provide a wide range of artistic activities for young people with learning disabilities, including Arts Award courses.



The Buzz Drama badge is awarded to earners for the completion of a warm up exercise, creating a short dramatic scene with a partner, and self evaluation of work.

**Where:** Buzz Workshop  
**How many earned:** 8

### Studio12

The Studio12 Masterclass badge is awarded for participation in a two week 3D animation workshop, leading to the collaborative creation of a short film screened at the March of the Robots festival.

**Where:** Studio12 Masterclass  
**How many earned:** 12



Studio12 is an audio-visual media project based in Leeds City Centre that provides free access to production facilities, training and qualifications for young people with priority given to young people who are not in education, employment or training.



# BadgeLAB partners

The Thumb Pot badge is awarded for making a simple thumb pot from clay or other materials and emailing a picture to Boffin Projects.

**Where:** School Workshop, Online Instructable  
**How many earned:** 0



## Boffin Projects

Boffin Projects provide educational and artistic services in a variety of media, including musical instrument making, 3D photography, musical composition, ceramics and stop-frame animation.

**Boffin Projects Ltd**



The Greek Pots badge requires earners to learn about Greek pottery shapes, and to make and decorate a pot in this style using ancient coil techniques.

**Where:** School Workshop  
**How many earned:** 0



The Roman Pots badge requires earners to learn about Roman pottery shapes, and to make and decorate a pot in this style using ancient coil techniques.

**Where:** School Workshop  
**How many earned:** 3

To earn the Den Building 101 badge, earners must build a den out of found materials and send a photo to the Den Experiment.

**Where:** Online Instructable  
**How many earned:** 20



## The Den Experiment

The Den Experiment encourage collaborative sculpture as a means of enabling young people to develop their creative capacities through play, team work, problem solving and material exploration.



The Den Master badge requires earners to participate in a group den design and building task and evaluate the den and their experience of team working.

**Where:** School Workshop  
**How many earned:** 20



## Sheffield Hallam University

The research team at Sheffield Hallam University offered a 'Badge Researcher' badge, designed to examine whether the opportunity to earn Open Badges provided motivation for young people to learn new skills by engaging young people as co-researchers about digital badges.



To obtain the Badge Researcher badge earners are required to interview a family member about the arts and digital badges and enter their responses into an online survey. An information pack is provided to guide them through the process.

**Where:** Offered at public events, school workshops and as online instructable  
**How many earned:** 0



## Appendix B: Qualitative Analysis: Full Coding Framework

Code and subcodes	Scope
<u>Access</u> <ul style="list-style-type: none"> <li>To internet/badge platform</li> <li>Usability of platform</li> <li>Comfort in digital environments</li> <li>Needing support from parents/carers/school/organisation</li> <li>Literacy</li> <li>Access/exposure to arts in general</li> </ul>	Extracts relating to issues relating to access for earners – including factors which might prevent them from claiming badges, or from engaging in further arts activities
<u>Potential value to the earner</u> <ul style="list-style-type: none"> <li>Acknowledgement of unrecognised skills</li> <li>Size and scope of badges more achievable?</li> <li>Immediacy of receiving badge</li> <li>Badges as reward/motivation</li> <li>Sense of achievement/confidence building</li> <li>Perceived value of peer recognition</li> <li>Displaying and sharing/memento of activity</li> <li>Potential route for progression</li> <li>Value of building a portfolio</li> <li>Fit to creative careers</li> </ul>	Extracts which describe potential benefits of badges for the earner, including emotional/motivational benefits, attainability, the opportunity to share achievements with others, and practical issues around progression and portfolio building
<u>Earners' enthusiasm (including parents and carers)</u> <ul style="list-style-type: none"> <li>Enthusiasm about all things digital</li> <li>Enthusiasm about arts activities</li> <li>Enthusiasm about badges (including possible age differences)</li> <li>Enthusiasm about other things</li> <li>Gender differences</li> </ul>	Extracts containing evaluative statements about earners' responses to/opinions of badges, arts activities, and digital/online activities. Includes extracts relating to potential gender and age differences
<u>Extrinsic/Intrinsic motivation</u> <ul style="list-style-type: none"> <li>Is it necessary to offer badges?</li> <li>What added value do badges provide?</li> <li>Awarding virtual badges for concrete things (e.g. pots)</li> </ul>	Extracts relating to what badges may have to offer in terms of extrinsic motivation – should engagement in arts activities be motivation in itself? Are badges necessary, particularly if the activity they are awarded for has a physical outcome, like a pot or piece of artwork?
<u>Functions of badging</u> <ul style="list-style-type: none"> <li>Opportunities for progression</li> <li>Way to collect and organise evidence</li> <li>Digital badges vs. physical awards (e.g. certificates)</li> <li>Links between different organisations' awards</li> <li>Access to metadata</li> <li>Bespoke awards appropriate to level of earner</li> </ul>	Extracts which outline some of the practical benefits offered by badging schemes, including customisable awards and progression. Also includes discussion of badges as a way to present evidence of achievements, including metadata, and comparison of digital badges with more 'traditional' physical awards
<u>Details of badges offered</u>	Extracts which describe the badges offered by the artists participating in the project

<p><u>Cost/Capacity of organisations offering badges</u></p> <ul style="list-style-type: none"> <li>• Cost of badging services</li> <li>• Fitting badges into busy workshops</li> <li>• Funding and funders</li> <li>• Managing badge claim process</li> <li>• Planning and preparation time/cost</li> <li>• Time cost of award administration</li> <li>• Time to explain badges</li> <li>• Ownership of the award – who owns it?</li> </ul>	<p>Extracts which identify some of the issues encountered by organisations offering badges, including practical issues around the time involved in developing and integrating badges into artistic practice, the financial cost associated with this, and the implications for funding</p>
<p><u>Potential value to the awarding organisation</u></p> <ul style="list-style-type: none"> <li>• Control over badge content/bespoke awards</li> <li>• Developing organisation's online relationships</li> <li>• Differentiating/raising awareness of organisation's offer</li> <li>• Supporting impact (engagement in the arts)</li> <li>• Tool for monitoring impact</li> <li>• Value of being engaged in research</li> </ul>	<p>Extracts relating to discussion of the potential benefits of badging schemes for the organisation who offers them. Includes themes around control over badge content and assessment, the possibilities for promotion of the organisation and their arts offer, and the potential for supporting engagement and relationship management, and monitoring the extent of this engagement. This code also incorporates a subcode relating to the benefits for these organisations of being involved in the research project.</p>
<p><u>Market recognition</u></p> <ul style="list-style-type: none"> <li>• Branding</li> <li>• Link to school curriculum</li> <li>• Quality of the awarding body</li> <li>• Recognition by employers</li> <li>• Relationship with other accreditation</li> <li>• Criteria for awards – effect on external perception of badges</li> <li>• Where do badges fit?</li> </ul>	<p>Extracts concerned with external perceptions of badges by educational establishments and employers. Includes discussion of the reputation of the awarding organisations, and the reputation of badges more generally</p>
<p><u>Quality assurance</u></p> <ul style="list-style-type: none"> <li>• Assurance for commissioners</li> <li>• Badges as a resource for schools</li> <li>• Forgery/security risks</li> <li>• Offering multiple levels of badges</li> <li>• Too many badges?</li> <li>• Criteria for awards – what is acceptable standard (attendance award, group participation etc.)</li> </ul>	<p>Extracts which consider issues relating to the quality of badges, and whether badges are considered to be valuable and trusted evidence of achievement. Includes discussion about what types and levels of activities might be badged, and potential risks relating to forgery and authenticity. Also includes extracts exploring the potential of badges for arts commissioners and schools as a way to provide quality assurance.</p>
<p><u>Critical mass</u></p> <ul style="list-style-type: none"> <li>• Business model</li> <li>• Community of practice</li> <li>• Context/location of badged activity</li> <li>• How are badges incorporated into events?</li> <li>• Anticipated adoption</li> <li>• Promoting badges – who is responsible?</li> <li>• Understanding/knowledge of badges</li> <li>• Whole school approaches</li> <li>• Wider take up</li> </ul>	<p>Extracts relating to the adoption of badges, including how they are promoted and incorporated into events. Includes discussion of anticipated take-up of badges, and how this may work in different contexts.</p>



<p><u>Future potentials</u></p> <ul style="list-style-type: none"> <li>• Ideas and potential</li> <li>• Potential for organisations</li> </ul>	<p>Extracts which reflect on the future potential of badges, either generally, or for specific organisations</p>
<p><u>Project management and time issues</u></p> <ul style="list-style-type: none"> <li>• Lessons learned</li> <li>• Capacity to offer workshops</li> <li>• Planning timeframe for schools</li> <li>• Boundary spanners (people who hold dual/multiple roles in stakeholder groups)</li> </ul>	<p>Extracts relating to project-specific issues relating to the project timeframe and project management. Also includes discussion of 'boundary-spanning' individuals, who held roles in multiple stakeholder groups, and the effect this had on project organisation</p>

# Appendix C: The Quantitative Survey Questionnaire



BadgeLAB LEEDS

## BadgeLAB Survey

### About the project

This is a research project finding out about digital badges and whether earning badges encourages people to try new activities. The research is being done by Sheffield Hallam University and the results will be used by arts organisations to find out what people think about badges. The research is supported by the Digital R&D Fund for the Arts - Nesta, Arts & Humanities Research Council and public funding by the National Lottery through Arts Council England.

We would like to find out what you think about the activities that you did today and how you feel about the badge you have earned.

Answering these questions is voluntary and you do not have to answer them if you don't want to. You are welcome to do the activities and claim your badge without taking part in the research.

Your answers are anonymous, we do not ask for your name but we do ask for your age, gender and school so that we know a bit more about who is giving us this information.

### Your interview questions:

- 1 Age  years
- 2 Gender: Male  Female
- 3 School.....
- 4 Do you have access to the internet at home? Yes  No

Please turn over

	Please tick one					Why? Please explain your answer.
	Definitely 😊	Yes 🙂	Not sure 😐	No ☹️	Definitely not 😞	
5 I have enjoyed today's activity						
6 I would like to do more activities like this one						
7 I am happy that I have earned a badge for doing this activity						
8 I plan to claim my badge from the online platform						
9 I would like to find out about other badges I could get						

10 Imagine that there are two exhibitions on in Leeds next weekend – one is about Egyptian mummies, the other is about the history of the Leeds music scene. Both of them have lots of activities that you can do and make. The **Leeds music scene exhibition is awarding badges**. Which one would you want to go to? Please tick one.



Egyptian mummies



Leeds music scene

Why? Please explain your answer.

## Appendix D: Quantitative Analysis - Does the availability of badges affect activity choice?

In the study, young people were asked to choose which of two exhibitions they would prefer to attend. The two exhibitions were one about the Leeds Music Scene, and one about Egyptian Mummies. The structure of the quasi-experiment was a between groups study with two conditions. In one condition the Music exhibition offered badges. In the other the Mummies exhibition offered badges.

The hypothesis was:

- H1: When an exhibition is offering badges it will attract more interest from young people than when it is not offering badges.

The opposite conclusion (or null hypothesis) would be:

- H0: Which exhibition offers the badges has no influence on which exhibition young people choose

To test the hypothesis, one of two versions of the following survey question was presented to respondents at random:

"Imagine that there are two exhibitions in Leeds next weekend – one is about Egyptian mummies and the other is about the history of the Leeds music scene. Both of them have lots of activities that you can do and make. The Egyptian Mummies exhibition is awarding badges. Which one would you want to go to? Please tick one"

The alternative formulation of the question had equivalent wording, but in this version the Leeds Music Scene exhibition awarded the badges.

Combining results from schools and from the public events, the question was answered by 153 respondents. The Mummies exhibition was chosen by more of the young people than the Music exhibition (89 versus 64). When the Music exhibition offered badges, 31 respondents chose Music and 32 chose Mummies. When the Mummies offered badges, 57 chose the Mummies against 33 choosing Music. Table A1 shows these results, and compares the numbers from the survey responses with the value that would

be expected in each cell on the basis that the chance of choosing Mummies was simply  $89/153$  (= 58.17%).

Applying the Chi-square statistical test<sup>1</sup> generates a value of 2.395 (see table A1) corresponding to a 12.5% (1 in 8) probability that these results simply occurred by chance. For this reason, these results do not qualify as 'statistically significant'.

Chi-square Contingency Table	Music has badges	Mummies have badges	
Music (observed)	31	33	64
Music (expected)	26.35294118	37.64706	
Difference	4.647058824	-4.64706	
Mummies (observed)	32	57	89
Mummies (expected)	36.64705882	52.35294	
Difference	-4.647058824	4.647059	
Total	63	90	153
		Chi-square value	2.395

Table A1: Results of Chi-square test to investigate whether young people are more likely to choose a badged workshop over a non-badged one

However, the school survey also asked respondents to explain their choice. There were 109 responses. 5 of the respondents who specifically mentioned obtaining badges as their motivation for choosing their exhibition actually chose the Mummies, when their survey sheet showed the Music exhibition was awarding badges. This suggests that they had not read the question correctly. If these five responses are excluded the new contingency table is as shown in table A2.

<sup>1</sup> Yates's correction is not applied because the expected values in each cell are sufficiently large.

Chi-square Contingency Table (corrected)	Music has badges	Mummies have badges	
Music (observed)	31	33	64
Music (expected)	25.08	38.92	
Difference	5.92	-5.92	
Mummies (observed)	27	57	84
Mummies (expected)	32.92	51.08	
Difference	-5.92	5.92	
Total	58	90	148
		Chi-square value	4.047065

Table A2: Results of corrected Chi-square test, amended to take into account contradictions between workshop chosen and reasons given

This value for Chi square is significant at a probability value of 0.05, i.e. there is less than a 1 in 20 probability of these results occurring purely by chance. On this basis we can reject the null hypothesis and support the conclusion that:

H1: When an exhibition is offering badges it will attract more interest from young people than when it is not offering badges.



Booth, A., Dearden, A., Garrison, L., Glover, I., Hill, K., McSeveny, K., Riches, T., Westaway, S., (2015) *BadgeLAB Leeds: Exploring Open Badges for the Arts Research and Development Report* London: Nesta

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