Table ronde 2 : Évolution des organigrammes et des fonctions, formation des équipes : comment accompagner la transformation numérique ?

Intervention du Dr Sally-Anne BARNES, université de Warwick et du Dr Ross PARRY, université de Leicester : *Cartographie des compétences et des professionnels du numérique dans les musées, le* One by One project
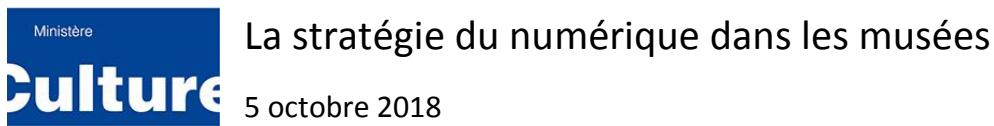
Introduction

'One by One' is a national research project which aims to help UK museums of any size better define, improve, measure and embed the digital literacy of their staff and volunteers in all roles and at all levels.

By introducing a new approach to digital literacy understanding and development, the project's objective is to create new organisational mindsets in museums to help support their digital transformation needs. Digital literacies are defined as 'capabilities which fit an individual for living, learning and working in a digital society. Digital literacy looks beyond functional IT skills to describe a richer set of digital behaviours, practices and identities' (Jisc, 2014). The project advocates the use of human-centred design principles, and this is demonstrated within the project's own methodology: empathising with museum needs, through researching existing museum digital skills provision; defining what museum digital literacies are required to meet museum needs; ideating and prototyping a practical model of digital literacy-building within museums; testing out the prototype model within partner museums of different functions, sizes and locations; and then sharing the final proposed museum digital literacy framework with the sector.

'One by One' is funded by the Arts and Humanities Research Council (AHRC) and is led by the University of Leicester in partnership with Culture24, together with a range of museum and academic partners: National Museum Wales; National Museums Scotland; National Army Museum; Museum of London; Derby Museums; Royal Pavilion and Museums Brighton and

Hove; CAMEo (the Research Institute for Cultural and Media Economies), University of Leicester; and the Institute for Employment Research, University of Warwick. In addition, the project has gathered an important group of strategic stakeholders to represent the needs of all museums, provide vital advisory support, and to share and implement the project's key findings: Arts Council England; Museums Association; Association of Independent Museums; Museum Development Network; Heritage Lottery Fund; National Museum Directors' Council; Collections Trust; and Nesta (a global innovation foundation).

Context

The notions of museum visit and museum object, collection and exhibition, have all been disrupted and renegotiated by the influence of five decades of digital technology. 'Digital' has changed the idiom of 'museum' (Parry, 2007; 2010). And yet, it is widely recognised that the digital literacy of the museum workforce remains one of the key challenges continuing to impede the adoption of technology within the sector (New Media Consortium (NMC), 2015; 2016). According to Nesta, the Arts and Humanities Research Council (AHRC) and Arts Council England (ACE) (2014; 2015) and Nesta and ACE (2017), over a third of museums in England still feel that they do not have the in-house skills to meet their digital aspirations, and rather than improving, some digital skills areas have declined. Challengingly, the most recent findings, captured in the UK Government's Culture is Digital report, point to a cultural sector as a whole with 'particular skills gaps around intellectual property and data analysis' (Department for Digital, Culture, Media and Sport (DCMS), 2018). Addressing this pressing issue, the aim of the 'One by One' project is to leverage interdisciplinary scholarship, and specifically the concept of the 'postdigital museum', to understand how to deliver a transformative framework for museum workforce digital literacy. Specifically, this research is investigating: the existing profile and reach of workforce digital development in UK museums; what new digital literacies are necessary for working in (or to become) a digitally mature museum in the UK today; and what the most appropriate 'activations' are, together with ways of supporting each of these digital literacies, within different museum settings – be that internally/externally, formal/informal, accredited/non-accredited, for individuals/teams. In short, 'One by One' offers a continued scrutiny of the concept of the 'postdigital museum', a further interrogation of the 'Baltimore Principles', and the proposition of an alternative workforce development framework.
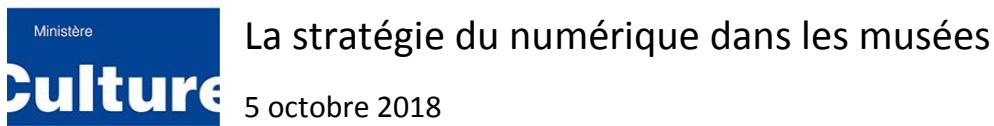
Research methods

The first phase of the 'One by One' project ('Empathise') has mapped the landscape and thinking around digital skills and literacies in the UK museum sector through an empirical study (September 2017 to February 2018). The main objectives of this phase were: to map how digital skills are currently developed and supplied in the museum sector; to understand how digital skills are currently deployed in the museum sector; and to pinpoint the current changes in the demand for digital skills/literacy in the museum sector. For this phase of the project a desk-based review of the skills ecosystem for digital skills in the museum sector was undertaken. This systematic search of the extant literature focused on evidence on the museum sector workforce, skills needs and gaps, training and development and policy, primarily in the UK. Next, primary research, using qualitative research methods, was undertaken to gain in-depth understanding of how digital skills are articulated, developed and used within the museum context through the actors involved and their interpretations. Six case studies of partner museums in England, Scotland and Wales were completed along with analysis of museum strategies and documentation, plus non-participant observation. The research team visited each partner museum and conducted a total of 50 interviews with museum staff from all levels of the organisations. In addition, three interviews were conducted with representatives of small, independent museums to gain insights into the opportunities and challenges around digital skills and literacies that they face, plus a member of the Museum Development Network (MDN) with responsibility for supporting digital in small museums in one region. Finally, an online focus group with curatorial staff was undertaken, which explored indepth how curators have experienced the shift from digital skills to literacies, and the impact on their role.

Understanding the skills ecosystem in the context of the museum sector

Informed by employment studies scholarship, this initial phase of research conceptualises museum digital skills as an 'ecosystem'. This 'skills ecosystem' concept was developed as a way to move beyond the commonly used 'supply and demand' model of skills, in order to take account of wider and more complex educational, economic and political contexts that can impact on skills within a given context. The skills ecosystem is defined by four interdependencies: *deployment*; *demand; supply*; and *development*.

Deployment defines how skills are utilised and effectively practised within the context. Utilisation can be about changing job roles and structures to facilitate multi-skilling. Skills deployment can also be seen where roles have evolved and expanded in response to sector
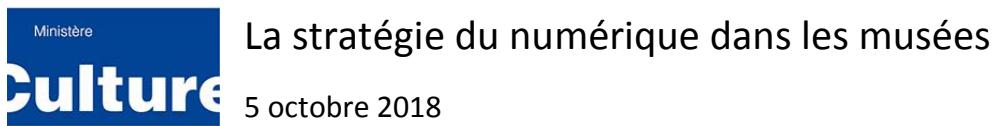
demands, organisational change, technological developments and, in some instances, professional development. In the museum sector, there was evidence that individual roles have expanded to include digital responsibilities.

Demand is concerned with recognising what skills are needed in the ecosystem and what may be needed in the future to address the changing context. So, within the museum sector, the drive to digital is inevitably demanding specialised skills, expertise and knowledge in order to, for example, manage and catalogue collections, to shape exhibitions, to disseminate knowledge and to engage current and new audiences.

Supply is considered to be the 'nourishment' of the system (Finegold, 1999). There is an emphasis on recruitment: extending skills, expertise and knowledge through new staff. Importantly, supply is also about career development pathways and strategies that focus on retention.

Development is focused on how skills, competencies and expertise are nurtured within a context and, importantly, goes beyond training interventions. Skills development can be part of formal learning, in-house or on-the-job training, or informal learning. Within the museum context, where the workforce is encouraged and supported in their use of technology, skills can be developed.

**The digital skills ecosystem in UK museums**

The skills ecosystem framework was applied to evidence on the deployment, demand, supply and development of digital skills in UK museums. Evidence from the study shows that the picture for each of these four dimensions is far from static: digital technologies and opportunities develop, as do museums' engagement with them, and both impact the deployment, demand, supply and development of digital skills in the museums sector workforce. Consequently, at sector-level too the ecosystem for digital skills in the UK museum sector is a dynamically developing one.

Supply: from 'qualifications and expertise' to 'competence and confidence'

The case study museums had, in the past, recruited a workforce with a particular set of qualifications and expertise, focusing on specific technical skills. Skills supplies, however, are still quite targeted and focused, which does not necessarily enable the distributed deployment of digital skills across an organisation. Museums are also increasing the variety of digital
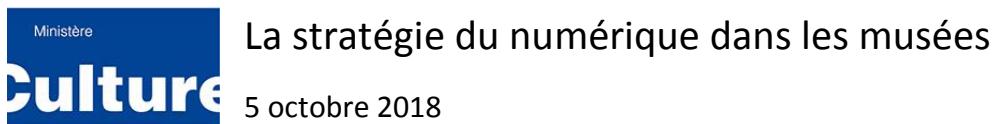
competencies and confidences they recruit, and, depending on the role, creating a skills supply focused more on candidates' experience and confidence in using various digital tools and platforms, and not on their qualifications or experience that are directly relevant to the museum.

Development: from 'siloed training' to 'agile learning'

Developing digital skills and literacy is considered particularly challenging within the museum context. A number of factors impacting on the sector result in a high demand for workforce development, for instance technological change in combination with the need to meet growing audience expectations and remain competitive within the museum sector. Currently, the development of digital skills within the museum sector seems to be undertaken on an ad hoc basis. Overall, a more adaptive learning culture seems to be emerging in relation to digital skills development.

Adapting the digital skills ecosystem for museums

The early findings of the 'One by One' research project suggest much of the UK museum sector is still dominated by a technology-driven understanding of digital: digital is equated with (developing) hardware and software technologies to which museums need to react. Consequently, digital skills are understood as relating predominantly to technical skills which results in the recruitment of specialised and narrow sets of digital qualifications and expertise. Such an understanding of digital skills demands can equip museums with skills that enable some level of digital activity. But it leads to a skills supply of finite technical competencies that are limited in how flexibly they can be deployed across tasks and roles, which then leads to siloed skills deployment and comparatively narrowly conceived, traditional forms of training and development. This cycle tends to reinforce a demand for yet more technical digital skills, resulting a context in which museums create specific projects deploying digital competencies supplied by a small group of IT professionals. The corresponding relationship with digital is reactive, narrow and disconnected both from the expectations of audiences and the wider needs of museums, and typically characterised by a fundamental lack of digital confidence across the museum.

However, importantly, there is also clear evidence that this traditional digital skills ecosystem has the potential to adapt, and is already being challenged and changed to incorporate new sets of interdependencies. As outlined above, the sector is pushing towards an alternative
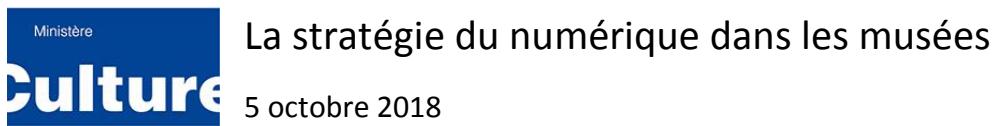
system (if currently more in aspiration than in practice) in which museums prioritise wider digital literacies (instead of narrower sets of technical skills) and recruit more varied forms of digital competency and – perhaps more significantly – confidence. A digitally more adaptable workforce can then provide greater flexibility in how digital literacies and confidences are deployed and can shape the organisation, including to develop more responsive cultures of learning and development that in turn can sustain the valuation of digital literacy over specific technical skills. Such more progressive, more digitally mature skills ecosystems are less about generic technical skills that are determined by a higher national skill set or curriculum. Instead – crucially – they foster digital literacies that grow from below, out of the needs of individuals, within particular professional settings, in the local contexts of their specific institutions. Instead of focusing on developing technical skills within a small specialist group such as an IT team, these more mature skills ecosystems cultivate digital literacies within roles across the whole museum.

Moving from the traditional to the more mature digital skills ecosystem will require conscious changes of digital skills strategy and practices in the museums. Our research has identified a number of challenges museums are likely to face in making these changes, along with some first approaches to overcoming them.

Summary of key findings

- There are different practices in how digital responsibilities and skills are distributed, managed and shared across UK museums. Three models were found that exemplify the patterns of digital engagement, how organisational structures and digital responsibilities are evolving, and what this means in practice for digital skills;

- Digital is increasingly seen as part of everyone's skill set and all roles have some kind of digital element. Digital skills are not in ready supply throughout the workforce. Using, translating and developing in-house skills is a dominant approach to supplying digital skills. This is being achieved through internal recruitment, informal development and, to a limited extent, formal training;

- Digital is becoming professionalised in the museum as digital roles and responsibilities become standard practice. This denotes a shift from responsibility for digital as an 'add-on' to people's roles, towards dedicated digital roles and the democratisation of digital;

- As digital becomes institutionalised, museums are restructuring and evolving. There has been the introduction of new roles and departments, as well as changes to existing roles and a greater demand for digital skills. The distinction between specialist digital roles and other roles is becoming blurred;

- Museums are exploring, learning and demanding new digital skills as they innovate and create with digital;

- There is a deeper understanding by museums of the digital skills, knowledge and expertise needed, as they reflect on the current and potential future of the museum;

- Museums are engaging increasingly in evidence-based digital practice as data from web analytics and social media accounts are being reflected upon and used in decision-making processes;

- Currently, there is little evidence that museums are systematically assessing and identifying digital skills needs. The need and strategic importance of doing some kind of skills needs assessment or analysis to identify in-house digital skills was recognised, but the challenge has been finding the time;

- There is little evidence of in-house formal and planned training around digital skills or digital literacy. However, informal and ad hoc training to upskill and reskill staff and volunteers is being provided. Much development activity around digital is informal, with staff supporting each other and sharing skills;

- There is evidence of an assumption in museums that 'digital skills' relate to a specific set of technical competencies. This can create a relationship with digital that is reactive, resulting in low digital literacy across the museum. However, importantly, there is also evidence showing that the museum sector has the potential and intention to adapt.

Looking ahead

While there are clearly constraints – to understanding or resources, most prominently – that currently impede the development of digital literacies, digital is established as part of the museums' portfolios. The overall challenge is not to introduce digital but to expand the current understanding and mainstream digital into activities, skill sets and cultures. This initial research, as part of the ongoing work of the 'One by One' project, does not only help to explain the lack of digital capacity within the sector, but – tantalisingly – it is also offers an emerging

picture of how the demand, supply and development of digital skills can adapt to create a transformative, innovative, creative and digitally literate workforce.

Full report: Barnes, S-A., Kispeter, E., Eikhof, D. and Parry, R. (2018). *Mapping the Museum Digital Skills Ecosystem Phase One Report*. Leicester: University of Leicester. ISBN 978-0-9933380-8-3. Available from:

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