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Co-designing Digital Strategies for the Museum and Education Sectors

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Merendino, A. and Meadows, M. (2023), Co-designing Digital Strategies for the Museum and Education Sectors, Coventry University.

Foreword



The use of digital technologies in education has grown rapidly over recent years. This growth includes the museums sector, where we have seen the expansion of both digital activities during in-person visits, and the development of online offerings by museums, some made available to schools. However, schools and museums often struggle to connect through digital activities, despite the many potential benefits of such offerings for schools, students and museums.

This project goes to the heart of significant debates in the museums and education sectors by identifying examples of ‘good practice’ with digital activities, their benefits for both museums and schools, and the challenges that both sectors face when engaging in digital activities.

A number of important recommendations are highlighted. For example, museums should aim to go beyond the replication of onsite offerings when designing new digital activities, to ensure that their offering to schools is exciting (e.g., including new content), meets curriculum needs and is grounded in sound pedagogy as well as highly engaging and appropriate for the target audience. Innovation can be cocreated with teachers and students and other digital partners.

We call for museums directors to rethink their digital strategies, to make cultural experiences and learning both inclusive and fun. As museums develop their digital strategies, directors need to give time, space and budget to their education leaders to take risks and to experiment; they should adopt a blended approach, i.e., digital **plus** physical offerings. Digital activities are not necessarily a substitute for an in-person visit, e.g., they can be used in preparation for a visit and/or as a follow-up to it.

In addition, we point to a clear need to make it easier for schools to identify the digital offerings that are right for their students. As it is time-consuming for teachers to search for suitable digital resources, we offer recommendations for action that can enable schools and museums to connect more easily over suitable digital offerings.

Helen Frost
(Senior Programme Manager – Arts Connect)

Executive Summary

COVID-19 has prompted the museum sector to provide novel services to schools, including remote digital offerings such as videos, podcasts, events and games, and digital membership. Despite the challenges of the pandemic, some museums have seized the opportunity to connect with schools in new ways, such as exploring existing museum collections through digital activities.

The museums sector is experiencing a new impetus to design digital strategies and promote digital activities to schools. However, the two sectors often struggle to collaborate and maximise the benefits of digital offerings. Based on rich qualitative data, this project seeks to understand the benefits and challenges of such digital activities, and to draw out some key learnings that can benefit both sectors.

Key Benefits

1. Digital activities can provide teachers with new, flexible approaches to teaching and learning
2. Digital activities can make a real difference to the learning process for many schools and their students
3. Digital activities can create an additional source of revenue for museums
4. Digital activities can give potential visitors a 'taste' of a museum's onsite offering.

Key Challenges

5. Museums may lack the internal resources and capabilities to develop digital activities
6. The Senior Management Teams (SMTs) of museums may be reluctant to invest in digital activities, given other priorities
7. Schools /teachers may be unaware of the digital activities that a museum can offer

8. Some digital offerings may not be appealing for students or teachers, e.g. those based on translating an in-person experience (such as a talk/lecture) into an online format.

Key Learnings

9. "To Zoom or not to Zoom: is this the question?"
10. "How to find the right digital offering at the right price?"
11. "What is the role of the museum's Senior Management Team (SMT) in digital strategy?"

Key recommendations for museums and schools

12. Digital offerings should be **co-created** between museums and schools, i.e. new ideas should be discussed and tested before promoting them to schools
13. It would be valuable to create a **repository** where museums can promote their digital activities, and teachers can browse and select suitable resources
14. Both sectors should seek to **improve communication channels** between museums and schools, e.g. enabling direct contact with key individuals such as the coordinator for a particular subject within a school
15. To improve communication and shared understanding of the needs of schools, museums can consider joining **teachers' fora**, online groups, networking events etc.
16. Museums should adopt a blended approach in their digital strategy, balancing digital **and** physical offerings. Digital activities are not necessarily a direct substitute for a physical visit, e.g. digital activities can be used in preparation for a visit and/or as a follow-up to it (flipped learning)
17. Charging for digital activities (e.g., membership) is appropriate **only** if the quality of the offering is high, and the activities are well targeted to meet schools' needs.

Acknowledgements

We are grateful to all the anonymous participants for generously giving their time to participate in the study. We would also like to thank our colleagues at Arts Connect – in particular, Helen Frost – for their support throughout the project. The project leverages the work of, and benefits from input from, the Heritage Education Leaders Group at Arts Connect.

Context and objectives of the study



The COVID-19 pandemic has created an imperative to 'do digital' for many organisations, including those in the museums and education sectors. However, the importance of adopting a strategic approach to digital activities has sometimes been neglected by arts and heritage organisations up to now. Our recent project on "[The Museums Sector: Be Digital to be Strategic](#)" (Merendino and Meadows, 2021) identified a range of important issues around digital strategies in the museums sector, including: Digital should not sit in a functional 'silo' such as the IT department; Digital is about experimentation and 'trial and error'; and Digital is about collaborations with different organisations and sectors, including the education sector.

The pandemic has fostered an increasing interest from museums in producing digital content aimed at school students. Digital activities already allow many museums to connect with schools, sharing knowledge and exploring existing collections (Arts Connect, 2021). However, there is scope for museums and the education sector to do more to maximise the benefits of digital activities. The pandemic has given many organisations in these sectors the impetus and opportunity to "think outside the box". It is now essential, therefore, to identify: first, what are the characteristics of a successful digital strategy for museums engaging with the education sector in the future, and second, what should the 'in-person', 'digital' and 'blended' offerings from such organisations look like, as we emerge from the pandemic.

This project draws upon two pieces of research: one by Maureen Meadows and Alessandro Merendino on "[The Museums Sector: Be Digital to be Strategic](#)" and one by Arts Connect (2019) on "[Challenging Conversations](#)". Its aim is to investigate the challenges and 'good digital practice' activities undertaken by museums, primarily with schools, during the COVID-19 pandemic. It explains how in-person, digital and blended offerings can best be shaped to strengthen the future relationship between museums and schools.

To summarise, this project:

1. Explores how schools and museums have worked together during the pandemic utilising digital channels
2. Generates lessons and challenges for future collaborations between the two sectors.

Methodology



In order to capture examples of innovative digital strategies, good digital practices and activities, and the challenges around the implementation of such new strategies and activities, this project applied a multiple case study approach. We conducted an in-depth analysis of how schools and museums have worked together during the pandemic, undertaking 11 semi-structured interviews with teachers and managers of museums in the West Midlands. We interviewed participants from four museums and four schools, and one freelance expert. The interviews were recorded and transcribed verbatim. The data analysis was conducted using NVivo software.

The table below provides a concise, anonymised description of the museums and schools that took part of this research project, and the digital activities they undertook during the pandemic, with brief quotations to support conclusions drawn.

Museums

Museum A is a charitable trust managing local museums and heritage sites, attracting national and international visitors, and offering digital programmes created during the COVID-19 lockdowns. In 2022, they launched a paid membership scheme for schools:

“We’ve seen a couple of new members come through since launching that, but we’ve not been inundated ... we’ll continue to push it and use it as an alternative strategy.”

Museum B is a small local museum and art gallery, offering permanent exhibitions of objects related to the history of the area. They have a limited digital offering. During the COVID-19 lockdowns, they translated their onsite activities into Zoom offerings:

“Given the choice, I’d probably not [deliver the project online] ... but I wouldn’t dismiss it as an option for schools generally. If there was a reason that a school couldn’t visit, we now know that we can deliver talks online.”

Schools

School E serves children aged 4 to 11. During the lockdowns, they signed up for a free membership with a museum – but they did not renew it in 2022, when a charge for membership was introduced:

“We thought it was going to be more resources than it was, but obviously given it was free, we weren’t going to complain about anything at all.”

School F serves children aged 4 to 11, in an area of deprivation. During the lockdowns, they successfully replicated their cultural activity online. After the lockdowns, they use digital materials for ‘flipped learning’ (see page 8) with students undertaking preparation before the lesson:

“We’ve just introduced ‘Prep for Learning’, which is like flipped learning. I can see if somebody’s going to do a ‘Prep for Learning’ session for art, that would definitely be based digitally ... I can see that it will be useful in that way”.

Museums (continued)

Museum C is a local heritage organisation that manages a museum and some heritage sites. They have a small team dedicated to onsite activities, and a limited digital offering. During the lockdowns, they replicated their onsite activities online. They now offer online workshops as part of their subscription:

“We have used what we learnt doing the virtual deliveries ... and we’ve completely reshaped our offer for schools. From the subscription service, it’s growing and there’s more schools signing up, but there’s a huge disparity between who’s booking the basic package and who’s paying for the enhanced package with the virtual workshops. They’re not so interested in the virtual workshop.”

Museum D is an independent educational charitable trust relying on visitors’ donations and fees. It attracts national and international audiences, and has a sophisticated digital programme that was improved during the lockdowns. It puts its success down to discussing and piloting digital content with schools:

“We’ve always been incredibly led, influenced by the conversations that we have with teachers, because ultimately if they’re going to be coming out of school or even taking time out of a class, you know that they want to be giving something that is absolutely going to enrich their students’ experience, expand it ... it’s something that they don’t feel they can hit in their own classroom or in their own teaching without bringing something in from outside.”

Freelance Expert has experience both as a teacher and an education officer for a museum – a unique set of capabilities that crosses both the museum and education sectors. They point out that the leadership teams of museums often struggle to embrace digital, and may view it purely as a potential source of additional income:

“One of the problems we had with developing digital provision is that the leadership (of the museum) were not open to the idea that it could work ... one of the difficulties with developing online learning is that our understanding of the field as museum educators was at odds with the beliefs of the leadership at the organisation. There was a clash there.”

Schools (continued)

School G serves children aged 4 to 11. During the lockdowns, they took part in the digital activities of a museum:

“The online session was better than not doing anything, which was the only other option at that time because we weren’t able to do any trips.”

They are still looking for suitable digital activities, but find it difficult to identify the right offerings from museums:

“Most times, it’s schools searching for opportunities. And it definitely was in this particular one we did last year (2021) ... I was actively looking around at different things that we could do ... And since doing it, I’ve signed up to their list and now I’m getting emails ... but initially it was me doing the searching ...”

School H serves students aged 7 to 11. For many students, English is not their first language. During the lockdowns, the school engaged in digital activities with museums, but it now struggles to find digital offerings:

“Museums don’t communicate with me. I bet my school office get emails of offers. I bet they get educational offers. So, if something says science, they’d send it on to the science lead.” There was a clash there.”

Findings

Developing digital strategies: The Journey of Museums

Developing digital strategies: The Journey of Schools

Few or no digital activities

- Sporadic or no digital activities
- Basic knowledge of how to deliver online.

**Before
lockdowns**
(before 2020)

No digital activity with museums

Schools engaged in online activities – but little or nothing with museums, as onsite visits were typically preferred.

Urgency and immediacy

- Trying to translate chosen activities from in-person to online, e.g., learning software such as Zoom
- Sense of crisis, and high pressure to move quickly.

**During the
first
lockdowns**
(2020/2021)

Zoom lectures

Schools searched for suitable digital activities while museums were closed. Teachers signed up for mailing lists to get updates from museums. Their main engagement with museums was via 'basic' digital activities (such as talks via Zoom).

Refining, maintaining or abandoning digital activities

- Some museums refined their offerings to create something more sophisticated
- Other museums abandoned their digital activities when in-person visits were permitted
- Others maintained a version of the digital activities developed during the lockdowns.

**After the
lockdowns**
(2021/2021)

Increasing interest, but...

Some schools were increasingly interested in the digital offerings available from museums. However, as restrictions eased, some schools preferred to withdraw from digital activities in favour of a return to in-person visits.

New digital plans and strategies

- Some museums are providing a predominantly in-person offering, with few or no digital offerings
- Others are developing a blended approach, combining onsite and online offerings.

**Now and the
future**
(2023/future)

Digital must be high quality

While many schools lack a clearly articulated digital strategy, many teachers are keen to engage with the digital offerings of museums, if the offering is high quality, cost-effective and relevant to the curriculum.

Benefits of digital activities for museums

- Digital activities can create another source of revenue for museums
- They can differentiate a museum from other institutions with less strong digital offerings
- They can give potential visitors (schools) a 'taste' of a museum's physical offerings
- They can attract new audiences to the museum, e.g. schools that are not able to visit in-person because of geographical distance.

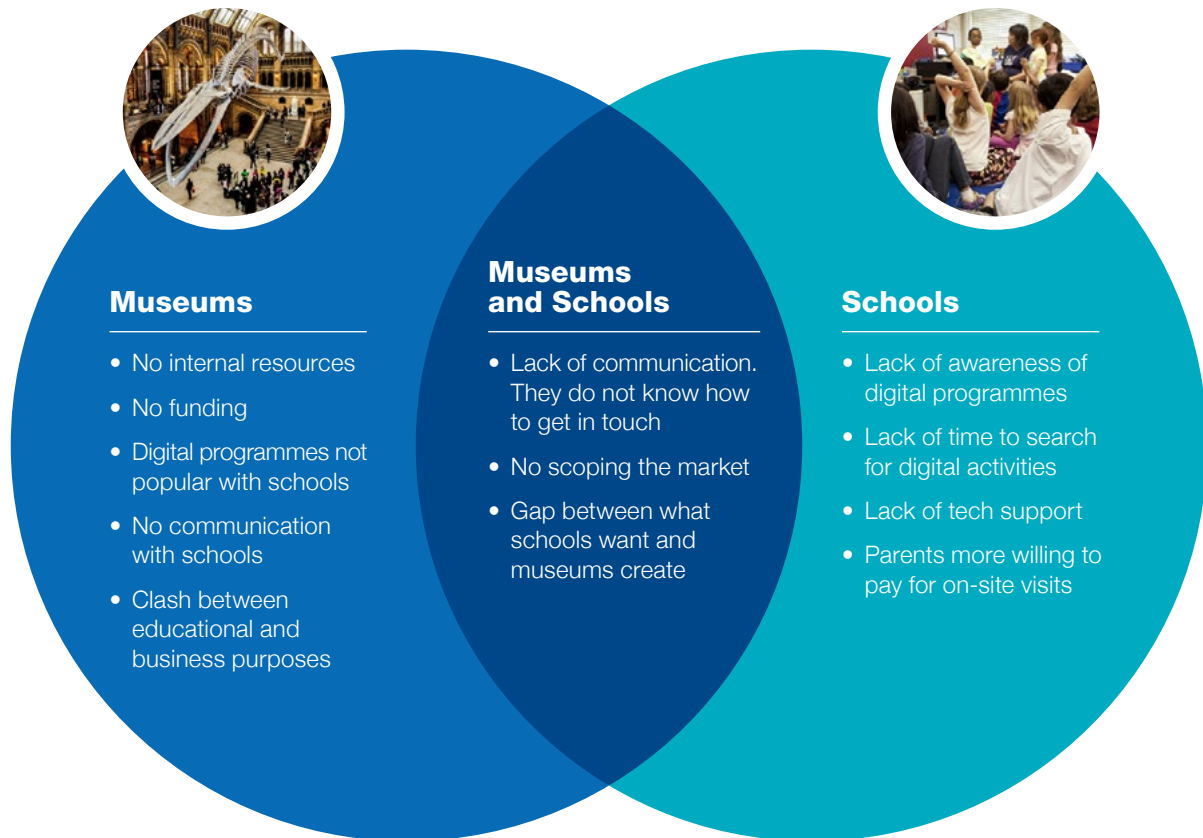
Benefits of digital activities for schools

- Digital activities can be highly engaging for students, if done well
- They can be cheaper than in-person activities such as trips to museums
- They can make a real difference in the learning process for students, e.g. flipped learning¹
- They can provide flexibility; for example, students can access resources as homework as well as during the school day
- They can be helpful to students with special educational needs; digital offerings can be tailored to meet individual needs, helping students to feel less isolated and to unleash their creativity at their own pace.

1. In flipped learning, the conventional notion of classroom-based learning is inverted: students are introduced to the learning material before class, with classroom time being used to deepen understanding through discussion with peers and problem-solving activities facilitated by teachers (<https://www.advance-he.ac.uk/knowledge-hub/flipped-learning>).

Challenges

There are some inherent challenges that museums and schools face, when developing their digital activities.



Challenges facing museums

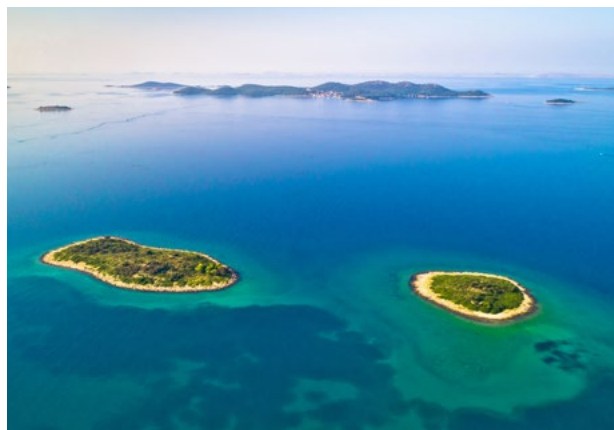
- A lack of internal resources and digital capabilities (such as poor technology or a shortage of staff with relevant expertise) can prevent museums from designing and delivering high-quality digital programmes for schools
- A lack of funding can prevent museums from developing sophisticated digital offerings or hiring experts to help with digital strategies
- Some museums find that their digital programmes are not popular, yet struggle to identify and fully understand the reasons why
- Museums may not always communicate their digital offering to schools in an effective manner. For instance, a lack of signposting on the website, a lack of advertising, etc.
- Some museums create digital offerings without consulting schools, i.e., they are 'second-guessing' what schools need or want, resulting in content or quality that is not well targeted
- Museums may find that it is complex to balance onsite and online offerings; traditionally, most would prefer to have visitors at their premises
- It can be difficult for museums to design and adopt suitable pricing strategies for online activities
- There may be a clash between an 'educational' and a 'business' perspective on digital activities. Museums want to deliver digital offerings that offer important educational benefits for schools; however, they may find that their digital offering is not always financially viable or sustainable
- Schools may not make good use of the digital offerings that museums make available (e.g., inactive users)
- Digital is not always seen as a priority or a key part of the museum's strategy.

Challenges facing schools

- Teachers may lack awareness of the digital activities that museums can offer
- Teachers often lack time to search for digital activities that are suitable
- Schools have a limited budget for engagement with digital, e.g., to pay for online membership and digital activities, or to purchase necessary hardware
- Schools may lack necessary technology support
- Schools in deprived areas may struggle to participate in digital activities, e.g., if their limited resources are invested in onsite visits
- Parents may be more willing to pay for in-person visits than for digital activities
- Schools may find that digital content is not always engaging, e.g., a Zoom version of a lecture, or other in-person activities, may not provide an exciting or age-appropriate activity for a particular class
- Schools may find that digital offerings are underdeveloped, making it difficult for them to engage with or pay for such activities
- Some schools may feel that the digital activities offered by museums are not of the best quality, or do not fully address the needs of the school and its students.

Challenges facing both museums and schools

- Communication between museums and schools is often lacking. It is difficult for museums to contact schools; in particular, it can be challenging to reach the right person within a school, such as a teacher with responsibility for the subject area that is most relevant to the museum's remit
- Museums sometimes prepare digital materials for schools without scoping the market or consulting schools and teachers; therefore, some programmes have low uptake
- There can be a gap between what schools want and what museums create; mutual understanding can be hampered by a lack of appropriate communication between the two sectors.



Summary of the Challenges: Why do some digital programmes have low levels of uptake in schools?

Museums and schools can be like two isolated islands; they need each other, but there's a missing link or bridge between the two.

1. Demand for some digital activities may be low because some schools are more interested in particular physical offerings
2. Some schools/teachers have 'digital fatigue', leading to reduced interest in digital offerings
3. Some schools know very little about the digital activities that are available, i.e. an issue of better communication, marketing and promotion of the activities and resources that are available
4. Some digital programmes may be of poor quality, i.e., not sufficiently interesting or engaging, or not well designed for the age group in question
5. Some digital programmes are judged by schools to be out of scope, i.e., not relevant to the defined curriculum
6. Digital programmes may be judged to be too expensive, with schools having insufficient funds to engage with them
7. Some schools lack the necessary technology / equipment, e.g., museums often use MS Teams while schools often use Google Meet.

Learnings for the Future



To Zoom or not to Zoom: is this the question?

Many museums are acknowledging that online workshops (e.g., an online version of an activity that was traditionally delivered in-person) are not in great demand. Schools want something else, like a pre-visit online activity (flipped learning) or a follow-up digital activity (to consolidate the in-person experience).

The translation of physical to digital began to happen during the lockdowns in 2020. Some museums have retained this modus operandi, i.e., creating an online version of a previously in-person activity, such as offering a talk/lecture over Zoom or similar software. However, the uptake of such offerings can be low, perhaps because many schools are not interested in the replication of physical visits in an online format if they can physically visit the venue.

During lockdowns, schools found that digital was 'better than nothing' – but when they have a choice, some will choose a physical visit to a selected museum rather than a digital experience. This has implications for museums, because it is not enough to replicate or translate their past in-person experience into a digital offering. Museums should look to create something new, that:

- a) offers a different learning opportunity;**
- b) gives schools a taste of a museum's wider digital offering;**
- c) provides a taste of the in-person activities that a museum can offer.**

While museums should not rely on simply translating their physical offering into a digital offering, a digital offering can be valuable for targeting schools that are not able to visit the museum in-person (because they are geographically distant, for example).

The design and delivery of digital offerings from museums should be tailored to meet the needs of the audience. For instance, consider the example of YouTube broadcasting; while some learners may prefer to engage with the activity by typing into the comments box, other learners may not interact well in this way (e.g., this may depend on the age or ability of the students). Hence, museums need to diversify not only the content but also the delivery/platform of their digital activities.

How to find the right digital offering at the right price?

Our interviewees emphasised that searching for the right digital offering could be a time-consuming and frustrating experience for teachers. Schools want the range of digital offerings to be easily accessible and well-organised; they are also likely to pay close attention to word-of-mouth recommendations from other schools/teachers.

It may not be sustainable for a museum to offer all of its digital activities for free; however, in order to persuade a school to 'buy' a product or service or join a membership scheme, the quality of the digital offering must be high. A 'free trial' of a museum's digital offering is likely to be attractive to many schools. Yet few museums offer schools the opportunity to try their digital activities before paying for it – this should be re-considered in the future.

For schools, in-person trips are expensive, and digital activities can provide 'added value' at a lower cost. However, schools report that parents are more likely to be willing to pay for in-person trips rather than online activities. Hence, museums need to be able to provide a good explanation of their digital activities, demonstrating their 'added value', and how digital activities are differentiated from in-person activities.



What is the role of the museum's Senior Management Team (SMT) in digital strategy?

Those museums with a clear digital strategy, and a commitment to prioritising the development of appropriate digital activities, can be a step ahead of other museums. While the SMTs of many museums are open to digital, some remain reluctant to move further in this direction. A **flexible mindset**, open to experimentation with digital, should be adopted, e.g. digital activities can generate an additional revenue stream for museums. However, digital activity needs to be well planned, with each museum developing a digital strategy that reflects its own unique position and resource base.

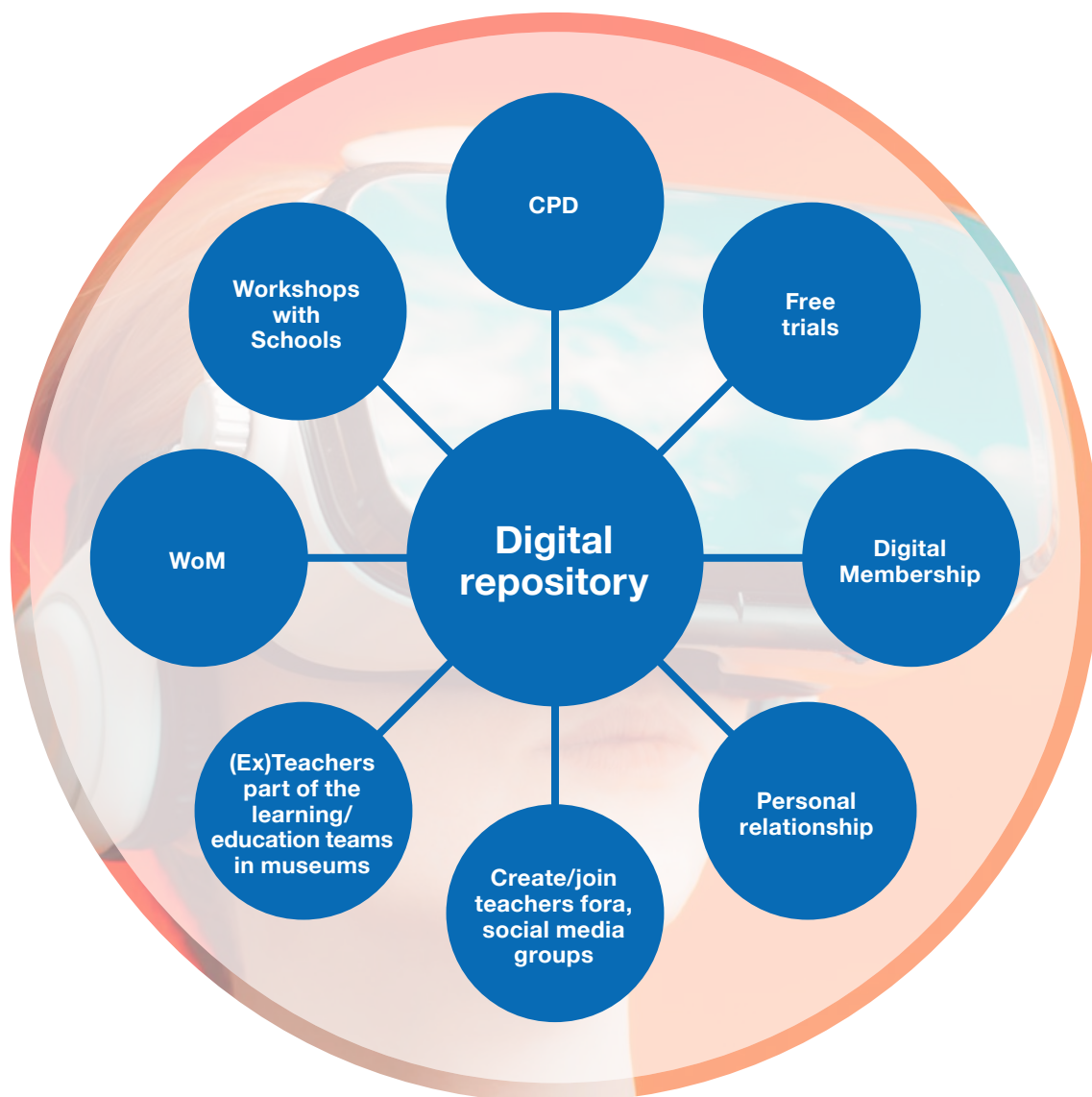
A digital offering is not a substitute for a museum's current physical offering; SMTs should not be afraid of 'cannibalising' their current user base. As we emerge from the pandemic, museums should focus on the potential benefits of digital activities in building relationships with new and existing audiences. Museums should adopt a blended approach (digital **plus** physical). Digital activities are not necessarily a substitute for a physical visit, e.g., they can be in preparation for an in-person visit and/or as a follow-up to it.

Recommendations for the museums sector

- **Diversify** the digital offering from the physical/onsite offering
- Ensure that digital offerings are **accessible** and suitable for people with special educational needs
- **Listen closely to teachers**, when designing digital offerings for schools. Consider joining teachers' network events, conferences, fora and other groups. For instance, join teachers' Facebook groups – not to advertise offerings but to understand their needs.
- Run **pilot studies** of new digital offerings with teachers; it is essential for schools to understand how a new digital offering works before signing up
- Try to make **direct contact** with the subject coordinator within a school, as they are often seeking opportunities to engage with relevant museums
- Organise **workshops** with schools, to demonstrate and promote digital offerings
- Strengthen **'Word of Mouth'** (WoM), as teachers often listen closely to recommendations from other teachers/schools when selecting a digital activity
- **Charge schools** for digital activities **only if** the digital content is known to be of high quality and well targeted
- **Collaborate to create a repository** where museums can upload their digital offerings; teachers can then easily make informed choices based on a number of criteria including subject, year of education, special needs and price. Further work is required to explore exactly how such a repository can be developed and hosted.

How can museums promote their digital offerings?

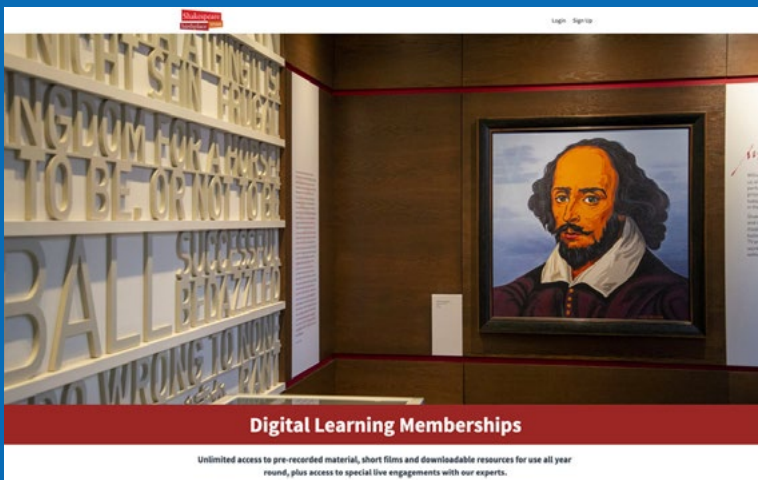
1. Create a digital repository
 2. Run workshops with schools
 3. Provide free trials to schools
 4. Provide membership schemes
 5. Build personal relationships with teachers
 6. Create, or join existing fora or networks with teachers
 7. Offer CPD to showcase digital offering to teachers
 8. Invite teachers and/or ex-teachers to be part of the learning/education team in museums
 9. Promote word-of-mouth (WoM) recommendations between teachers and schools
 10. Work with organisations and networks that are used and well-regarded by teachers, e.g. TES
-



Appendix

Some examples of digital offerings

The examples of activities between museums and schools cited in this section are available on the internet at the time of writing, and include small, medium and large museums in England.



Shakespeare Birthplace (Stratford-upon-Avon)

Offer a digital learning membership to schools. The content is tailored to Key Stages 1-5 and includes short films, pre-recorded talks by experts and other resources.

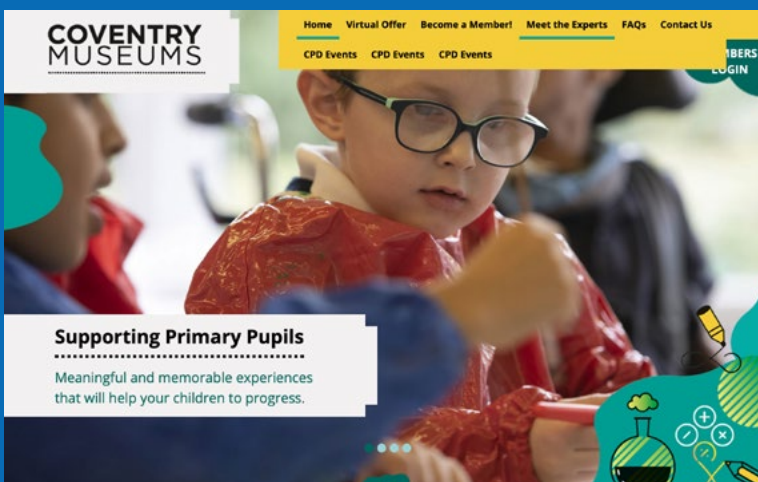
<https://learn.shakespeare.org.uk/p/digital-learning-membership>



Birmingham Museums (Birmingham)

Offer a series of online sessions for schools. The content is tailored to suit the subject and Key Stage.

<https://www.birminghammuseums.org.uk/schools/sessions-for-schools>



Coventry Culture (Coventry)

Offer a digital membership to schools. The content includes workshops, assemblies and CPD opportunities for teaching staff, led by museum experts.

<https://coventrymuseums.org.uk>

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