Augmenting The Archives

A report on using Augmented Reality and a creative coding bootcamp to teach digital skills and creativity in the Borthwick Archives at the University of York.

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Digital Creativity Week is an intensive five day course in which students learn how to manipulate images, sound and video, how to *wrangle* and visualise data, and learn how to code, all in the context of the research in the Borthwick Archives, the University of York Library and the York Minster Library.

Although the students learn lots of skills directly relevant to their studies, the focus of the week is to engage with the archive materials creatively and personally, and relies on being a space to *play* to develop the students' abilities and thinking.

Background

We work in a second line support team called, Teaching and Learning, and we assist academics, students and support staff in the use of technology often helping them to implement solutions and explore new ideas and opportunities. We might help staff improve services for students, enable better collaboration between teams, or help researchers to think differently about their research.



The University of York identified the need for extracurricular initiatives that specifically targeted raising employability skills and develop creative thinking.

One of our responses to this call was to run Digital Creativity Week, a digital bootcamp running in the week following exams, but before the students have left campus for summer. Armed not only with laptops and tablets but also notebooks and pens, students are given the chance to be creative outside the usual confines of an academic discipline or project.

Digital Creativity Week, now in its second year, is a week of lessons and workshops, in which up to twenty students would be introduced to:

- Gathering, cleaning, wrangling and visualising data
- Image, sound and video editing
- Creative coding
- Creativity methodologies

Although giving the students free rein to create whatever they wanted, both to avoid creative stagefright, and to root their work in a research activity, we worked closely with the Borthwick Archives team and used The Yorkshire Historic Dictionary¹ as our primary source, but also were able to explore other materials for creative inspiration.

We had recently purchased 20 laptops for these sorts of uses which were preinstalled with all the software we would need during the course.

¹ The Yorkshire Historic Dictionary (<u>https://yorkshiredictionary.york.ac.uk/</u>) is a collection of over 4,000 words, many no longer used, tracking the development of regional language in Yorkshire containing word data, geographical data and time data.

Our Rationale

When designing the content for Digital Creativity Week, we struggled with the notion of *teaching creativity* and identifying which skills would be genuinely useful to the students.

We also realised that if created a course that was *too finished*, that it would lose all flexibility, and teach how to creative a certain way, or limit the skills learned to all the same skills.

Flexibility

If we were to do this properly, we would need to be creative ourselves, and take risks, allow for student led diversions, and a lot of thinking on our feet. A team of four or five were involved in team teaching, swapping focus, and occasionally contributing to sessions in an ad hoc manner.

All of us were ourselves learning as we went. Although nerve wracking at times, this gave us a lot of flexibility to feel the mood of the room and stretch or squeeze the sessions as appropriate. At times it felt like we were making up as we went along.

Reducing Inhibitions

We tried to design in lots of exercises designed to break the ice, to reduce inhibitions and simply have fun. We built in lots of time for directed play, in which the students would hopefully get lost in a world of possibilities.

In George Land's, The Failure Of Success, he describes how he turns creativity tests used to train NASA astronauts on children, of various ages and found that children *learned to be uncreative* as they got older.

Land also identifies the areas of Convergent and Divergent thinking, the requirement to have the processes both of prolific idea generation and the refining of ideas, to be creative².

Simple Targets

We would have simple targets for the play sessions, such as, when exploring graphics generation, we said, at the end of this session you need to have created three images. Of course, each session fed into the next.

² <u>https://www.youtube.com/watch?time_continue=67&v=ZfKMq-rYtnc</u>

Which Skills?

In terms of crude employability from a software perspective, it might be said that a student would be well served by adding a number "industry standard" tools to their CV, such as tools from the Adobe suite or similar.

We wanted to both beef up a students skill set, but truly develop creative thinking, so we tried to choose free, often open source tools because doing so would allow the student to further develop their creative work beyond the end of the course.

We chose a number of tools that shared certain concepts with their professional counterparts, for example, when looking at graphics editors, we chose Pixlr and Krita because both of those are free, Pixlr runs in the browser, and use similar conventions as Adobe Photoshop, such as masking, selections, layers and filters. It could be argued that using web-based tools with a simpler collection of features, is a good preparation for learning more complex tools like Adobe Photoshop.



We began all the hands-on sessions that demonstrated how to use a given tool, with a show 'n' tell to explain the fundamental concepts. For example, before teaching making montages with Pixlr, we taught the students about image formats (bitmap vs vector), image file types (jpg vs gif vs svg), image resolutions and dpi.

Rooted in research

When you attempt to define what creativity is, you innevitably find yourself contradicting yourself. Creativity should be free from constraints, but benefits from them (sometimes). It should be "outside the box" but within reason. There are processes that help creativity happen, but they aren't a recipe that guarantees that creativity will happen. Creativity is by its nature paradoxical.



We wanted the students to be free to use the Digital Creativity Week experience to explore their own interests, but all of the team agreed that creativity sessions often fall flat on their face when a student is expected to bring their own subject matter, ready to create.

Collaborative and Collective Learning



We asked students to "pool" the media they captured or found into online shared folders, encouraging a whole group approach to their project work.

Encouraging them not to be *precious* about *their* content, and what belonged to their peers is important. It builds on Brian Eno's rebuttal of the myth of the genius³, in which he coins the phrase "*Scenius*" which is like genius and suggests that inventions or innovation is produced out of a scene, (a collection of like-minded people) rather than the genes of an individual.

In the latter part of the course where the students worked on their projects, we encouraged them to work in small teams, which results in the largest team being four people, and one person working solo. This allowed students to focus on the aspects they were most drawn to, some being more visual or technical for example, whilst others took a role more akin to project management or leadership.

Incompetently Teaching How To Learn

If we set out to teach the students a limited set of tools, and perform a limited set of functions with those tools, we would have proscribed all the creativity out of the students. Our students, already proven at learning and delivering the required results, wouldn't have been stretched at all.

Many of the innovators in the digital space are self taught, they need to be, because they are sailing new waters.

We wanted to demonstrate that "not knowing" was OK, and not a limitation to being creative. And so, committing to being open to following up students' questions, forced

³ Where Do Ideas Come From : Myths, and "Scenius" https://kk.org/thetechnium/scenius-or-comm/

us to actually learn on-the-spot in front of the students and reveal the mechanics (finding documentation, google searches, watching Youtube tutorials, looking in forums etc) of this.

When a course is *too well* designed, you often don't learn about the real skills, tricks, workarounds and hacks that are really used in real life. Often watching someone work with no explanation, in the real world or digitally, can be more revealing that being *taught*. This idea came from learning creative coding skills "at the feet" of the amazing Dan Shiffman⁴, a tutor that makes great use of video tutorials, often live. Dan is never afraid "to make a goof" whilst coding, and it is often these very mishaps that help to share the real learning.

⁴ <u>https://shiffman.net/</u>

Our Conceptual Inspirations

As a team with diverse backgrounds and skills we brought a wide range of sources of inspiration to our thinking, that we integrated into the overall approach.

Brian Eno and Creativity

Brian Eno, famous for his work with Roxy Music and David Bowie, is also accredited with creating the ambient genre of music and has had lots to say about creativity in general.

We borrowed five of Brian Eno's key ideas⁵ regarding creativity, which in Brian's case this applied to music creation but we reinterpreted it in a digital media context, integrating them throughout all that we did.

⁵ BRIAN ENO- HIS MUSIC AND THE VERTICAL COLOR OF SOUND by Eric Tamm, <u>https://monoskop.org/images/f/f1/Tamm Eric Brian Eno His Music and the Vertical Color of Sound.</u> <u>pdf</u>

Freeform capture

"Grab from a range of sources without editorializing."

We had short sessions where students would be tasked with *ransacking* online archives (keeping references) and collecting them into online shared folders.



Similarly, whilst walking to different locations we set challenges such as "take photos of non-objects, things that nobody will have taken pictures of before". It was fun as we walked past York Minster to have a gang of students taking pictures of random litter, the backs of road signs or marks on the pavement in close-up.

Blank state. Start with new tools, from nothing, and toy around.

We collected a very large collection of digital creativity tools⁶ and what we called *toys* - small online tools that did unusual things.



These tools and toys might be used in a creative workflow, or perhaps used as inspiration for their project. The page that shares these tools always shows them in a random order meaning each student started playing with a different tool. This meant, as the students "found" a tool that did something cool, they would share how they had created their own cool thing with their peers. The profusion of tools (249) meant that it fostered a sense of exploration and discovery.

⁶ <u>http://bit.ly/digitalcreativitytools</u>

Deliberate limitations

"Before a project begins, develop specific limitations. Eno's example: "this piece is going to be three minutes and nineteen seconds long and it's going to have changes here, here and here, and there's going to be a convolution of events here, and there's going to be a very fast rhythm here with a very slow moving part over the top of it."



In terms of direction for Digital Creativity Week 2019, we simplified it to providing a collection of rooms in the library for a "Library takeover" and access to a number of large screens, computers, ipads etc and gave the task of making those rooms into art installations.

Opposing forces

"Sometimes it's best to generate a forced collision of ideas"



In Digital Creativity Week 2019, the Digital Creativity Tools list had a Random Digital Creativity Generator (above), which collides an *Inspiration* item with a couple of tools a creative challenge for the student.

Creative prompts

In the 1970s Eno developed his Oblique Strategies cards, a series of prompts modeled after the I Ching to disrupt the process and encourage a new way of encountering a creative problem.



Mimicking the Oblique Strategies approach, in Digital Creativity Week 2018, we created a Digital Creativity One-Armed Bandit⁷, based on John Davitt's work with his Learning Event Generator⁸ that took the definitions from the Yorkshire Historic Dictionary and collided them with random concepts such as "as a medieval map" or "as a venn diagram".

We created a slide deck collection of Creative Prompt resources⁹ that could be used to just explore, discover and play.

Regarding using cards as a fun exercise, we agreed with Roy and Warren 2019¹⁰ that "Feedback from the user groups on the first version stated that the cards 'simplified brainstorming, broke the ice, were easily accessible, sparked creativity, and lowered the barrier for proposing ideas'.

⁷ Digital Creativity One-Armed Bandit

https://script.google.com/a/macros/york.ac.uk/s/AKfycbysk6XZMIcC5dcJB5QTniME7J-wAlY5hR9IYsblpjdC-oNNKxs/exec

⁸ Learning Event Generator <u>http://www.davittlearning.net/tools/legfeed.html</u> ⁹ Creative Prompts Slidedeck

https://docs.google.com/presentation/d/e/2PACX-1vSkgxMtJjlGhRoZe9j6iPuE-aCAV4pmPWA-GrZUPIn o_M2w9XbU5r2X92sLigQ72-_IFlb2Nc2tJ6Jv/embed?start=false&loop=false&delavms=3000&slide=id.p

¹⁰ Card-based design tools: a review and analysis of 155 card decks for designers and designing https://www.sciencedirect.com/science/article/pii/S0142694X19300171#sec4

Marxist Inspiration- Seize The Means Of Production!

We live in digital times and the notion of merely being a *creative consumer*¹¹ leaves people disempowered and without a voice in the global mediascape¹². Whilst the whole rise of the Maker phenomenon could be a reaction to the physical distance we feel from what we as workers produce, people wanting to touch what they have created, I think that being creatively "in control" of today's audiovisual and interactive media, is as important as the need to work with our hands.



We encouraged the seeing the web itself as material for moulding, rather than as media to be consumed. One activity provided a collection of *inspirational* web sites¹³, and the students were asked to explore them, not to be impressed but instead to imagine that the technical ability to create something like this was already in their hands, and then to imagine how they would use the concepts therein, or concepts in their own nascent project directions.

¹¹Lessig, Lawrence (2004) Free Culture: How Big Media Uses Technology and the Law to Lock Down Culture and Control Creativity. New York: Penguin.

¹² (Warschauer, 2003)

¹³ Digital Creativity Tools - Inspirational sites

https://script.google.com/a/york.ac.uk/macros/s/AKfycbzWLCnH5NFIW9fmGqPddiwZcvJfQqWnxMVY uvRCEIMYFYfhkw8/exec?sheet=Inspiration

The "Which Coding Language?" Conundrum

During Digital Creativity Week students are exposed to a lot of data and media editing tools, but to truly take control of technology, you need at least some understanding of computers from a coding perspective.

Which language to choose is a difficult choice. Members of the team have been taught languages like Python, a popular and well regarded programming language but found that weeks have passed and at the end of a course they haven't been able to *create* anything beyond some useful scripts that they'll never use.

There are tools we have taught, with which you can get more immediate, visceral results, such as Livecode Community Edition¹⁴ or Thunkable¹⁵ (Scratch), often taught to children learning to code because within a few minutes you are working directly with image, sound and creating interactive applications, the results are amazing and immediate.

We decided to use the Processing language in 2018, and its more modern Javascript version, p5js¹⁶ in 2019. Whilst both these (related) tools might be said to be more *difficult* than the tools above, they too provide almost instant results, with students being able to create animations, with sound and interactions within minutes of starting.

P5js also has a benefit in it being based on Javascript, the primary language of the web. Any skills learned in p5js, including the smattering of HTML and CSS taught would be relevant to anyone wanting employability related skills, or indeed to learn coding in general after the event. Javascript is a language that has many syntactic similarities with many other widely used languages.

¹⁴ <u>https://livecode.com/products/community-edition/</u>

¹⁵ <u>https://thunkable.com/#/</u>

¹⁶ https://p5js.org/

Tech Demystification - "You Can Too" and Hacking

A lot of what we were trying to do is to remove the curtain regarding technology, and to plant the idea that creating in this space was something they were capable of, that it was expected of them.

Learning How To Learn

"There's nothing you can do that can't be done" - The Beatles, All You Need Is Love

At the start of the coding sessions, we shared the time worn way of learning a programming language of starting with a "Hello World" project in p5js, and slowly building up familiarity line by line, introducing the concepts of code blocks, conditions, commands and variables as we went.

But, in a lowering of the curtain¹⁷, we soon cut to "not knowing" how to code something, and have the documentation window open as we worked, or "watching a 5 minute Youtube tutorial", or searching in forums for answers.

¹⁷ And because my memory is terrible

The Power of Hacking

After having been taught a little p5js coding, and having worked on developing their skills for only a short time, for a break they were asked to browse the Openprocessing¹⁸ site and encouraged to find visualisations they responded to and attempt to hack them.



On this site people share code projects, or *sketches*, as they are termed, that can be edited by the visitor. There is the notion of being able to *fork* a project, effectively making your own version of a project you like that you can tweak or develop further.

¹⁸ OpenProcessing <u>https://www.openprocessing.org/browse/#</u>

Interestingly, the project on the left was Leila's starting point for her piece on the right. Some about the way the shapes moved was used by Leila hacking the code to incorporate selected words from the Yorkshire Historic Dictionary and montages assembled from images collected from the archives.



Proven Creativity Methodologies

Interspersed with the skills sessions we introduced a number of what might be called *traditional* creativity methods and shared items we found interesting and inspirational. All of the inspirational items, such as Dada montage, had relevance to the skills they would be learning - for example, being able to expertly isolate and edit images makes making composite images, or montages, very easy.

The creativity methods we shared were:

- Cut-up methods¹⁹
- Tom Phillips' Humument²⁰
- Dada montage²¹
- Punk montage²²
- Edinburgh Collage Collective²³
- Blackout Poetry²⁴
- The Glitch Aesthetic²⁵
- Sonification²⁶
- Randomness and serendipity

Early in the week we explored bringing the element of chance and serendipity by using a creativity card deck called Make It Pop!²⁷, as a fun ice-breaking activity. The cards themselves are based on the Oblique Strategies approach but their subject matter is slightly skewed towards digital production, which was nice.

All of the inspirational material was given to the students in a form that they might be able to both explore further easily, so a Youtube video or Instagram account and all of the inspirational material leant itself to the activities that would follow. For example, dada and punk montage mapped directly onto the lesson on isolating parts of an image with Pixlr's image masks.

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http://www.openculture.com/2019/05/how-david-bowie-used-william-s-burroughs-cut-up-method-to-wr ite-his-unforgettable-lyrics.html

²⁰ <u>http://www.tomphillips.co.uk/humument</u>

²¹ <u>https://www.inthein-between.com/hannah-hoch/</u>

²² <u>https://designobserver.com/feature/the-art-of-punk-and-the-punk-aesthetic/36708</u>

²³ <u>https://www.edinburghcollagecollective.com/</u>

²⁴ https://austinkleon.com/2014/04/29/a-brief-history-of-my-newspaper-blackout-poems/

²⁵ <u>https://www.youtube.com/watch?v=jtle416Twpo&t=2s</u>

²⁶ The Sound of Data (a gentle introduction to sonification for historians)

https://programminghistorian.org/en/lessons/sonification

²⁷Make It Pop cards <u>https://www.makeitpopgame.com/</u>

Other Party Games

We introduced lots of short and fun party games, that had an element of *creation* to them. This we hoped would acclimatize the students to the idea that they would be constantly creating and that it would be OK if those creations "failed" because we would be onto the "next thing", these creations were often just discarded.

We responded to seeing the chapbooks in the archive and the above Make It Pop game by documenting it quickly using a paper zine²⁸. Doing something real, with scissors and glue, is a refreshing break when you are working with things that are predominantly digital.

When walking to the archives, through the streets of York and past the minster, we tasked the students with assembling a collection of photos of non-objects, photos that nobody would have taken before.

We gave the students <u>Leuchtturm 1917</u> plain notepads (because the pages are numbered, meaning you can index your fab ideas) and some nice pens (because nothing creative happens without nice pens). And of course we encouraged continual doodling during the day, and afterwards with a more reflective focus.

²⁸ How To Create A Zine <u>https://www.youtube.com/watch?v=lxqr9e3wCxl</u>

Team Teaching - Collaborative

In most cases, none of the team had taught the subjects we were teaching before. This was a learning curve for us.

Different members of the team took responsibility for different subjects, but all of the team were there (intermittently) to help students when stuck, or pitch in when a colleague was foundering or to help gauge the mood of the room.

Often, the team were learning alongside the students.

Tools

The choice of tools is a hugely important concern. Whilst it might be argued from an employability perspective that teaching *industry standard* digital media tools, in this case it might be the Adobe suite, we took a different approach.

If software is open source, or free or very cheap or available for a reasonable trial period, then the students are able to continue their creative work beyond the duration of the week itself. And if the tools are chosen wisely, then often the students learn many of the transferable concepts that make learning more widely used tools, such as Photoshop or Premiere, easier to learn.

For practical reasons it helps if a tool is browser-based simply because it means that we don't have to ask IT to install the software on the laptops we provide for the week. It also means we can give students many more tools to explore, making their explorations and creations often unique to them, in that other people haven't used the same tool.

Using lots of tools also gets the students to appreciate that often the creative process isn't based in a particular skill with a particular tool, but that a range of tools are used in workflow in combination with each other.

Tools Not Used

There are so many amazing developments in the digital creativity space and a plethora of fantastic opportunities that, so far, we haven't used in Digital Creativity Week, but are either on our list, or taught in standalone sessions that complement our digital creativity and coding offerings.

- Devices such as Arduino and Microbits
- 3D and 3D printing
- Various Augmented Reality tools
- Adobe Photoshop, Premiere etc
- Twine for creating interactive narratives
- Scratch and other block-coding tools
- Thunkable and Livecode Community Edition for creating apps
- Sonic Pi and PD for coding music
- TouchDesigner for complex visualisation, animations and projection mappings

The Tools We Used In Digital Creativity Week

As already mentioned, we used dozens of tools but these were the key tools that were taught, and mainly used to help students achieve their goals.



Image

We used Plxlr²⁹, an online image editor because of its ease of use, it's integration with Google Drive and it's conceptual similarity to Adobe Photoshop. The areas we taught were:

- Formats (bitmap vs vector)
- DPI, resizing, and file types
- Selection, image isolation, layers, filters and effects

PixIr is free and also has three versions with different useful features.

²⁹ <u>https://pixlr.com/</u>

Sound

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For sound editing we used the desktop tool, Audacity³⁰, because of its simplicity and huge feature set. We may also consider the simpler web-based Probe Audio tool³¹

The areas we taught were:

- What is sound, frequency, amplitude etc
- Simple sound, formats (mp3 vs wav)
- Copying, editing, compression, effects

 ³⁰ Audacity <u>https://www.audacityteam.org/</u>
³¹ Probe Audio Tool <u>https://probe.audiotool.com/</u>

Data

Although perhaps the dryest, most challenging area of Digital Creativity Week, working with data so that it becomes something you can work with is often the most important step of the process. Once data is clean and valid, and as soon as you are capable of re-shaping data, the worlds of coding and visualisation open up to you.

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The tools we used were OpenRefine³², Google Spreadsheets, Regular Expressions with Regexr³³, Mr Data Converter³⁴

The areas we taught were:

- The difference between formats, csv, json, text, html/xml
- Common data mistakes
- Little-know spreadsheet hacks and functions
- Cleaning data with OpenRefine
- Using regular expressions to turn free text into data items
- Data-cleansing and wranging

In the second year we focussed less on data wrangling and cleansing, and instead provided cleaner more usable data, focussing more on re-shaping, filtration and finding of data within the Yorkshire Historic Dictionary.

³² Open Refine <u>http://openrefine.org/</u>

³³ Regexr <u>https://regexr.com/</u>

³⁴ Mr Data Converter <u>https://shancarter.github.io/mr-data-converter/</u>

Coding



In 2018 with used the Processing³⁵ language, which is Java-based, but in 2019 we used it's sister language, p5js³⁶ which is Javascript and web-based. The latter has the *benefit* of not being a typed language and being instantly ready for sharing creations on the web.

The areas we taught were:

- The basics of Javascript variables, functions, repeat loops etc
- The basics of p5js setup, draw, geometry, shapes and images
- The basics of HTML how to add extra libraries to your projects

³⁵ Processing <u>https://processing.org/</u>

³⁶ P5js <u>https://p5js.org</u>

Augmented Reality

The Augmented Reality (AR) platform we used and like best is Wikitiude Studio³⁷. Wikitude offers Wikitude Studio, a web-based platform for the assembling of augmented content and a free app with which anyone can then see the content you have created.

To create your content you upload images which are recognised by the Wikitude app and your related content is then displayed on the phone or tablet.

We particularly like Wikitude's Image Triggers because they are so easy to create. Other AR tools are focussed more on the 3D experience, which requires a lot more technical and programming skills, but Image Triggers are ridiculously simple to create. Almost any image, or signage, can be used an Image Trigger.



Although perhaps the most engaging and popular part of the work created in Digital Creativity Week, it is the simplest. Creating AR hotspots only takes a few seconds, anyone could do it in minutes.

The areas we taught were:

- How to prepare trigger images for optimal recognition (with PixIr)
- How to add movies to your project.

³⁷ Wikitude Studio <u>https://www.wikitude.com/products/studio/</u>

Digital Creativity Week 2018

Their final collaborative creation was a presentation in the 3Sixty space at York³⁸. The 3Sixty is a large room whose walls are projected screen that creates an immersive experience.



Embedded in the presentation are augmented reality trigger images that added word definitions, played videos, sounds and animations³⁹.

Each student took their own inspiration from different parts of the dictionary to create a section of the presentation, ranging from words linking to war, the home, and the alehouse to a look at immigration to the area.

³⁸ 2018 Student piece <u>https://www.youtube.com/watch?v=Zlo-C5GXJr4</u>

³⁹ 2018 Student piece with AR being viewed by visitors to the 3Sixty space: <u>https://youtu.be/luisbo8_9ak</u> https://youtu.be/m-bwwsHKatA





Viewers of the final piece in the 3Sixty space some of whom can be seen interacting with the Augmented Reality parts of the presentation.

Digital Creativity Week 2019

In 2019, the week ran again, with more students and a wider theme: Yorkshire.



The students visited York Minster Library and the Borthwick Institute for Archives to get hands on with material relating to the region and consider their relation to it.



They examined chapbooks and playbills, whilst archivists and librarians were on hand to answer questions and assist in the students' research.



Workshops on audio, images, and coding were interspersed with creative prompts and the chance to try out simple VR with Google Cardboard and Google Tour Creator and play with live music coding tools such as Sonic Pi.

This time, the exhibition broke free of a single space and took over rooms in the Harry Fairhurst building in the library. Students created installations for attendees to visit and experience their visions of Yorkshire and its past and present.

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Whiteboard from a session planning the students exhibition						

The Exhibition

The subject matter of the students' work contained reflections on death, the fragility of history and missing data, a look right at the heart of Yorkshire, and pieces considering the continuity of York despite all the change that has taken place. A selection of the final exhibition pieces can be viewed on our <u>Digital Creativity site</u>⁴⁰ and in the DCW Youtube playlist⁴¹.



⁴⁰ DCW 2019 <u>https://digitalcreativityweek.york.ac.uk/2019/dcw19-work</u>

⁴¹ Youtube playlist <u>https://www.youtube.com/playlist?list=PLCRweOpviotTP3kN8duKSYcdXexlKxNGa</u>

THE UNSEEN DATA OF YORKSHIRE	The Unseen Data What happens to the missing data, and will we notice when it is gone?
	Fragile History An interactive artwork representing how delicate our record of the past is and the difficulty of uncovering the full story. This was displayed on a large screen and controlled via an iPad.
	The Continuity of Old vs. New in York A multi-part piece spread across two rooms which looked at York's historical past and its connection to York's present. The first part of the piece reflected on York's past and present by using digital technologies to place old features onto modern York.

Evaluation and Feedback

"I didn't think of myself as creative, but I am, you are, everyone in this room is" -DCW participant

We used a Google Form to ask for feedback after the week, and two students recorded audio feedback detailing their experiences and the impact the week had upon them.

- 100% of survey respondents agreed the activities inspired them to find out more about certain tools and topics.
- 100% of survey respondents agreed that they thought they would use what they'd learned in the future.
- One of the students got an internship as a result of participating in the week and learning editing skills which were required for the role.
- Students mentioned that they would use skills learnt from the week in their university work, dissertation, and in getting jobs.
- One respondee would've liked the final output criteria earlier in the week, which we will consider for next year.
- Student feedback:
 - "I didn't really have a definition about creativity before that week. I didn't know what is creativity. So after this week full of exploring different things, I really got to learn that creativity can be anything literally and everyone will have a different definition of creativity."
 - "I was interested in the different images stored within books, and have since looked into other books to see what they contain"
 - "I have started missing our amazing one week."

We also had verbal feedback from attendees of the exhibition event, with people impressed with the range and quality of the students' work. They thought the use of different rooms showcasing each group's work was very effective.

Related Outcomes

The process of planning, preparing for and delivering Digital Creativity Week has had a huge impact in a number of different areas.

Learning new tools developed our own skills, and then in delivering sessions in which team members were present, was a great way to quickly skill share these newly learned skills.

The sheer amount of learning in the team has not only Increased the variety of sessions we run, but we are able to run them more often because everyone is up to speed.

Maybe it's coincidental, but there has been increased engagement in these new, or shorter sessions, all of them subscribed by five times the capacity for each class. The demand for creative coding, and introductions to working with various media and data is huge.

Even More Augmentation



Our explorations of Augmented Reality as a tool, has resulted in further creative spin-offs and experimented such as:

- A Prototype Chinese Augmented Reality Guide for the library foyer in which the signage is explained using simple animations and audio.
- The Augmented Chemistry Gallery in which lecturers explain what lies behind complex diagrams
- Transcultural Communication⁴² in which students whose first language isn't English workshopped tips to help first language English speakers better communicate with them.

We even *performed* the Augmented Reality Christmas Jumper Orchestra⁴³ to give a rendition of the Twelve Days of Christmas (using AR and a *shake-to-play-bells* app) to spread awareness of the Digital Creativity sessions in the Library foyer to engage passing students. A demo of the image triggers can be found <u>here</u>⁴⁴.

The creation of Digital Tools list made the creation of physical Digital Creativity Cards For York's Festival of Ideas⁴⁵. The postcards were packed with online activities and tools given away at the public-facing event, handfuls being taken back to primary schools in the region by visiting teachers or interested parents.

We are also creating a Creative Community within York of people who are creative, open to new ideas and have a collaborative outlook. Two of the students involvement led to them voluntarily delivering a workshop to other students on skills learnt during the week (image, audio, and video editing). We expect that in future, participants will

 ⁴² The Voices - Transcultural Communication: <u>https://sites.google.com/york.ac.uk/thevoices/home</u>
⁴³ The Augmented Reality Christmas Jumper Orchestra:

https://sites.google.com/york.ac.uk/augmented-reality-xmas-jumpers/home ⁴⁴ Augmented Reality at the University of York:

https://sites.google.com/york.ac.uk/augmented-reality-at-york/all-triggers

⁴⁵ <u>http://yorkfestivalofideas.com/2019/events/</u>

participate again, not as learners so much, but creative experts willing to share their ideas and processes.

Future plans

Due to the success of the week, it will be moved to business as usual as part of the team's work, and we will continue to run it, but have already diversified into different sorts of sessions so that more people are able to attend.

The 'Mediale' style for the exhibition event, where each group created their own piece rather than working on one large piece, was well received by the students and attendees so we will likely use this again.

We are considering whether MOOC-ifying some of the sessions will help to reach more of the students. The repeated delivery of the sessions, and our developing understanding of what works means this is less of a daunting prospect, having has some practice than if we'd have considered this from the outset.

Working with York Minster Library for a session has opened up new possibilities and we are looking to work with Sarah Griffin on a series of events called Wonder on Wednesdays (WoW!) in which archive material is shared in combination with relevant workshop topics, for example, Exploring Medieval Maps vs Visualising Geodata In Your Research.