



leadership in Action project
Making archives interactive to inspire future
STEM leaders

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Introduction

Over the summer, taking the teaching I had got over the academic year through the Laidlaw Scholarship, I began my leadership in Action programme. Since I had travelled internationally earlier in the year to present my research at international conferences from my first summer, I looked closer to home for my leadership in Action project this summer.

Therefore over the summer I worked at a local heritage and education charity, working on making heritage more accessible, as well as making it inspirational for the next generation of STEM professionals. This project saw me using my background as a history student, though working in an unfamiliar field of STEM education. It also saw me working in the North East, which while local to me is considered “left behind” with 13.3% of wards in the region considered to be so and 1/3 children in the North living in poverty¹. For the first time last year the North East of England overtook England as the highest rate of Child Poverty, overtaking London for the first time.²

Overview of the project

Over my leadership in Action project over this summer I worked with the Common Room of the Great North³, a STEM and heritage based charity based in Newcastle, to create an interactive resource for their archives. The archives, which are some of the best in the world for mining related history, are a great resource for inspiring a younger generation into STEM based careers, something currently lacking in the North East.

Therefore part of my project was to use these amazing resources to help inspire the next generation of young engineers by connecting them to their industrial heritage. While many ideas of how to do this were discussed, ultimately I went with an interactive map.

Project goals and objectives

The main aim of the project was to use heritage to inspire the next generation of STEM leaders, as well as make the archives more accessible to all.

One of the key stakeholders of the project was the local community. One of the areas that the Common Room’s archive team has struggled with is how to engage a non academic audience to engage with their archives. Due to the technical language needed to understand much of the material, it has often meant that some key stakeholders such as younger people and people without a STEM background struggle to engage with the archives. By making the archives more accessible in an interactive format meant that this could be achieved.

This links to the other main objective of the project, to encourage and support STEM education in the North East. STEM education is vital for the future, but their a growing gap in

¹ Oxford Consultants for Social Inclusion, “Left Behind? Understanding Communities on the Edge,” Local Trust, 2019, <https://localtrust.org.uk/insights/research/left-behind-understanding-communities-on-the-edge/#:~:text=Some%2045%20wards%20in%20the%20North%20East%20fall>.

² Patrick Butler, “North-East England Overtakes London as UK’s Child Poverty Hotspot,” the Guardian, July 11, 2022, <https://www.theguardian.com/society/2022/jul/12/north-east-england-overtakes-london-as-uks-child-poverty-hotspot>.

³ [Home - The Common Room](#)

STEM supply and demand⁴. While the North East in 2019 had the highest percentage of students in STEM related fields there is still a skills shortage in the region⁵. This has been something highlighted this summer. Over the summer the educational divide between the North and the rest of the United Kingdom has been highlighted through both GCSE and A-level results highlighting the need for educational resources in the this area⁶. This has simply recognised the development needed in this area and therefore makes any work to combat this divide more important⁷. This therefore makes it more important than ever to provide unique educational resources.

Using the archives to inspire young people to pursue this, meant this was a huge part of the project and its objectives. This meant I worked to engage young people within the archive, making sure that all language used was appropriate for a younger audience

Project development

The project saw me testing myself as I worked on creating an online resource using GitHub. During my time I had to learn the software required to complete the project as well as setting realistic goals for myself on the amount of resources I could create.

I also delegated some parts of the project to the wider team, such as the social media design which I knew were not my strengths, to make sure the most was achieved out of the project and educational opportunities.

In my time at the Common Room I also found a way of developing my leadership skills further with helping with summer workshops for children. These free workshops saw me help lead activities with a STEM focus, including a bridge building competition and “scribble bots” and were attended by 30-100 children in each session.

This put me outside my comfort zone. My academic background is within the arts and humanities and having to work with STEM learning material meant I had to quickly adapt to the new set of skills. Therefore to be able to lead more effectively I had to learn from all of those around me, including the children. I also had never worked with children before though I made sure to

Project outcome

By the end of my Leadership in Action project I had developed an interactive map which located the archives to where they are relevant to. This was what I wanted to achieve within

⁴ Correspondent, Brigid O'Rourke Harvard. “Increasing Access and Opportunity in STEM Crucial, Say Experts.” Harvard Gazette, November 18, 2021.

<https://news.harvard.edu/gazette/story/2021/11/increasing-access-and-opportunity-in-stem-crucial-say-experts/>.

⁵ Charlie Spargo, “The Tech Skills Gap: How the North East Is Bridging the Divide - Prolific North,” Prolific North, August 6, 2019, <https://www.prolificnorth.co.uk/feature/tech-skills-gap-how-north-east-bridging-divide/>.

⁶ Alice Evans, “GCSE Results Day 2023: England Results Show Widening North-South Divide,” ed. Sam Hancock, BBC, 2023, <https://www.bbc.com/news/live/education-66575574#:~:text=Overall%2C%2026.5%25%20of%20this%20year%27s%20GCSE%20grades%20in,while%20in%20the%20North%20East%2C%20it%20was%2017.6%25.>

⁷ Nicole Winchester, “Educational Attainment Gap: Regional Disparities,” House of Lords Library, 2022, <https://lordslibrary.parliament.uk/educational-attainment-gap-regional-disparities/>.

the project and meant I left the organisation with an interactive map to inspire the future generation.

A link to the map can be found here - [Peripleo \(thecommonroomofthegreathnorth.github.io\)](https://peripleo.thecommonroomofthegreathnorth.github.io)

Future of the project

Due to the nature of the project and the fact that initial development was only completed by the time I had left the Common Room a lot of thought went into how I could ensure the impact for the future.

As the project was done over summer, with schools not being open and the Common Room itself not having any available electronic devices for children to explore the map on, the impact of the project will happen over this upcoming academic year.

The Common Room has an incredible outreach team who I helped incorporate the map into their resources for schools, both when they go in person and online ensuring an impact in education after I left.

However an important element of my project was also making sure that the map could be updated. During my limited time at the Common Room I was only able to scratch the surface of the available archival material. The Common Room is still receiving archival material, mostly through deaths of men who worked in the mines but also more modern archives about new mining development in the North East, something that is shaping the region today. This meant an important element for my project was making sure this new material could be incorporated into the map as it came in, allowing for a I completed a project handover guide, along with sections on how to fix common errors. This has now been handed over, meaning the project will be continued.

The Common Room was happy with what I created as I helped fit a hole within their educational resources. The resource has now been incorporated into their website.

Takeaways

My leadership in the Action project has been one of my highlights of my time in the Laidlaw Scholarship. Being able to take positive action within my community but in an unfamiliar academic community has been rewarding especially as I was able to put my leadership teachings into an unfamiliar environment with people who I usually would not need to lead.

I am especially proud of the resource I created to inspire the future generation and the fact I was able to leave the Common Room with such a good tool for education.

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