INNOVATIVE INTERDISCIPLINARY SOLUTIONS TO REAL-LIFE PROBLEMS

PROJECT Z

REPORT

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As someone who has always had a passion for science, and fire for policy-making, Project Z seemed only natural.

The divide between disciplines is something that has been taught from an early age. Growing up and going through school, I was always taught you’re either a mathsy person or an englishy person.

Naturally, those who excelled in English thought it was better, and those who excelled in maths, thought maths was better.

It is something that is driven into us during our developmental years, and as we progress in our educational and professional journeys, we tend to stick to the path we’ve chosen - more often or not until we’re forced to do otherwise.

The reality is, within our careers, we will work in a multidisciplinary setting. We will have to work with partners, colleagues, or customers who come from different areas and disciplines.

Currently, the world around us has highlighted the implications of ineffective collaboration between disciplines. Policy-makers and scientists are prime examples of where better collaboration could reap significant results.

That got me thinking - how could we solve this ongoing issue that seems to be passing by unseen in the shadows? That's where Project Z comes in. It focuses directly on the next generation of the workforce. All our future scientists, policy-makers, writers, public servants, astronauts, and mechanics. It equips young people and early professionals with the skills they need in order to work as collaboratively as possible.

With the support from Leaders Unlocked, I was able to design and develop Project Z throughout the last year. This was made possible by the National Lottery Community Fund who funded the internship and provided support for future goals.

As a current change-maker and aspiring astronaut, there is a significant amount I've learnt, and am still learning from simply being exposed to a range of disciplines.

The ambition is for Project Z to change the way the upcoming workforce will impact society. The Gen Z workforce will have openness to different perspectives and intuition of seeking collaborative solutions because the best solutions are those that have been created with a variety of insights.

Don't tell me the sky is the limit when there are footprints on the moon. - Paul Brandt
History has continually demonstrated the need for different disciplines to collaborate more effectively with one another. Recent crises such as climate change and the COVID-19 pandemic in particular have highlighted the lack of teamwork between the scientific and policy-making communities.

Project Z seeks to tackle real-life issues with an interdisciplinary approach through an early-intervention programme by engaging the next generation of world leaders, scientists, and policymakers. The project is targeted at those who are currently in higher education or early stages of their careers, studying scientific or humanities subjects. It allows for the next generation to develop and build a new perspective on tackling issues in the future.

By engaging at an early stage, Project Z allows young people to progress through their education and their careers with preliminary access to key skills. After carrying out consultations with professionals it became apparent that interdisciplinary engagement occurred at some point in all their careers. However, during the early stages of their careers and during their higher education, interdisciplinary working was not taught at all. It was a unanimous understanding that Project Z is a programme they wish they had access to better prepare themselves for the world of work.
Prior to the launch of the pilot for Project Z, numerous consultations with young people and professionals were carried out. The stats below outline the responses from the professionals. This allowed for the project to be shaped and adjusted by taking into consideration relevant field experience alongside user experience.

Background Experience

100% of the professionals had experience in higher education, either through studying or work.

54% studied more than one degree, with 36% studying for more than two degrees.

36% directly worked in higher education and had active student interaction.

Respondents across both groups were from a range of senior roles. These included professions such as Cosmetics Research and Innovation Manager, Higher Education Project Manager, NHS Improvement Officer, Director of Civil and Environmental Engineering, and Embryology Practitioner.

54% of professional consultations were carried out with those from a humanities background.

46% of professional consultations were carried out with those from a scientific background.

Each consultation provided essential information, both on individual experiences but also suggestions in the shaping of Project Z. From practical elements of delivering a successful programme to their personal opinions of the need for Project Z. Ultimately, each consultation provided a solid foundation for establishing the necessity of a programme like Project Z.
In the first workshop, once each group had had time to discuss amongst themselves, they came up with some solutions, before coming together as one larger group to share their ideas. The hypothesis was that the scientific group and humanities group would discover they had different approaches to the question based on their way of learning, therefore providing a perspective shift.

**WORKSHOP 1 METHODOLOGY**

In the first workshop, once each group had had time to discuss amongst themselves, they came up with some solutions, before coming together as one larger group to share their ideas. The hypothesis was that the scientific group and humanities group would discover they had different approaches to the question based on their way of learning, therefore providing a perspective shift.

**WORKSHOP 2 METHODOLOGY**

For the second workshop, the main group would be split into two groups again, however, this time they would be in mixed groups, with both scientific and humanities backgrounds. The second workshop allowed for further discussion of the recommendations and the space to thoroughly understand a different disciplinary perspective through smaller group discussions. The two groups would then present the developed recommendations and solutions alongside sharing any key findings including the differences and similarities in the range of perspectives and thought processes.
The first pilot workshop had a turnout of 50% from scientific backgrounds and 50% from humanities backgrounds. The recruitment particularly targeted to reach an even split between the two fields. Engaging with pre-existing networks and allowing several weeks for recruitment contributed significantly to reaching a 50-50 participation ratio. The participants were split into two groups, sorted by their choice of profession/study. Each group worked to list priorities and methodologies to tackle a question. The two groups were then brought back together to exchange ideas and justify their priority items. The question asked was:

‘What would your priorities and plan of attack be for the post-COVID recovery plan for Britain?’

When the groups shared back their points, as predicted, each one had different priorities. There were some crossovers in fields like education and prioritising lost learning to ensure young people are caught up. However, there were some sectors such as emotional wellbeing that weren’t considered by the scientific group. Mental health was brought up in the conversation but soon got outvoted by other sectors and therefore did not make the subgroup priority list. The humanities group listed support for trauma and grief as a priority and this was quite a shock and provided a big perspective shift. The humanities group did not mention any quantitative solutions to their approach in answering the proposed crisis, but rather solely qualitative solutions. This was a significant contrast to the scientific group, where quantitative measures were mentioned almost instantly.

'It’s so interesting to see how we have such an overlap but also such a big difference

- a participant describing the experience of working in the subgroups.
The main finding from the first workshop was the shock factor that was experienced; the new perspective allowed young people to explore ideas that they had not even considered until speaking to someone from another discipline. From previously being in environments surrounded by those studying the same subject or working in the same career sector, the exposure to different disciplines was limited.

When put in an environment in which you are tackling the same issue, but with a completely different background from those around you, it allows you to fully appreciate and truly comprehend the vast differences in thought processes.

"I would never have thought of that - a participant, after hearing an idea from the opposite group."

"It's really made me think about things differently and look at things I never would have - whilst referring to the knowledge exchange, a participant was really surprised by the big differences in the way of thinking between groups."
The second workshop allowed the young people to really develop their ideas and come up with recommendations. During the second workshop, the meeting brought together both groups to share their ideas and begin to understand different perspectives.

We need to show the benefits of adaption

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**Child Poverty**

The group spoke about the importance of advocating for children. There was discussion about how the long-term impacts of child poverty and experiences during childhood could significantly impact the future.

- **Health**: Physical and mental health needs of children need to be priorities. The pandemic has significantly impacted a lot of things. In particular, the group highlighted the fact that food banks were becoming institutionalised. This directly impacts the quality of life for children who did not have access to food.

- **Long term**: It is important to understand that whilst initiatives are in place to encourage young people from low socio-economic backgrounds to enter higher education, there needs to be follow-up with research on the experiences before and after.
We don’t want to run from the issue

Education

It was discussed that the education system has suffered significantly due to COVID-19, and the recovery plan would need specific plans of attack.

- **Motivation**: The group spoke about how learning became a chore more than anything for a lot of students. This has led to a loss of interest and therefore motivation. The education system needs to be able to respond in a way that can invoke passion for subjects again, as opposed to over-the-screen teaching where possible. It was discussed that over the pandemic, it has been significantly difficult for a lot of students to engage in their learning when not in person.

- **Community**: Schools should be more active in playing a community role in the sense that the entire focus is not only education, but also pastoral care. This includes a greater focus on personal development and the mental health of students.

- **Personalisation**: It is important to recognise that the term ‘students’ entails different experiences. Each year group in education faces different struggles and has different issues; therefore, the recovery plan should be reflective of this, and aim to tackle each year with a personalised plan.

- **Curriculum**: It should not be a young person’s number one priority to be thinking about exams during a pandemic. The recovery plan should look at incorporating more pastoral care into the curriculum for a well-rounded education.
We are taught that the way things are must be the way they are and that they cannot be changed.

Healthcare

The NHS workers and healthcare system were hit hard by the pandemic and are still suffering the effects. The recovery plan should look at all aspects of the NHS and combat the issues arising accordingly, both in the short- and long-term.

- Public image: It is important to ensure that confidence within the NHS is instilled and kept up. Low wages for nurses have caused significant damage to individual lives but also the public's confidence in the system. This can have a knock-on effect that we may not see until later in the future, so it is important to tackle this.

- Future workforce: With the education system facing significant impact, as well as the public image of the NHS being affected and the shortage of medical staff within the UK, there is a real threat of a loss of interest in the medical field. The impacts of this can be catastrophic and therefore there needs to be a plan in place to combat this. This can involve fast track routes into medical professions where possible, as well as an initiative to involve young people in the field.
COVID has highlighted that we can change when we need to. When you adapt, look at what’s possible.

**Grief**

One of the most overlooked impacts seems to be the grief that is being experienced. It is a universal experience that does not discriminate against anyone. Therefore, there should be a high focus on tackling the grief and an emphasis on supporting the nation to go through it.

- **Taskforce**: One of the solutions can involve employing a grief task force. This would involve the task force directly working within communities, with a high focus on mental health and the development of individuals but also communities collectively.

- **Acknowledgement**: In the recovery plan it is essential to acknowledge the high amount of grief. It has almost become normalised in a pandemic but that does not mean it should be treated as mundane.

- **Child-centered**: One of the biggest focuses of the trauma and grief task force is that it should be child-centered and aim to support as many children and young people as possible.
**Colonialism**

Many issues and impacts that people experience, specifically ethnic minority groups, are due to the deep-rooted issues of colonialism. There needs to be more education and change around this. During COVID lock downs, young people became more politicised due to more exposure to social media content. This allowed for movements such as the Black Lives Matter Movement and Palestinian Movement to gain amplification.

- **Action:** There needs to be acknowledgment of colonialism and new actions in reparation for previous actions. The University of Glasgow donated millions of pounds in reparation for their role in the slave trade. (https://www.theguardian.com/uk-news/2019/aug/23/glasgow-university-slave-trade-reparations)

- **Accountability:** This is one of the first steps in ensuring a future in which everyone can be held accountable for their actions. It builds the foundation of a better, more transparent method of governance.
Why are we focusing on the areas being controlled, and not the people that control it?

Communications

This refers to the communications between local and national government, but also the communications within and without different disciplines’ sectors.

- **Transparency**: there needs to be an extremely high degree of transparency for the recovery plan. This is setting the scene for future governance, to ensure that everything done, is done in the public eye and so that every promise and claim can be held accountable.

- **Interdisciplinary**: the communications between different sectors need to take place, and really allow for all areas to be a part of the decision-making. Open communication allows for a smoother way of working.
We cannot be named as the snowflake generation, when you’ve warmed our climate!

**Empowerment**

The group looked at the empowerment of young people specifically. This includes the part that different organisations can take and how it is important to understand that young people are going to be making decisions around governance.

- **Accountability partners**: this looks at organisations such as universities and schools, acting as accountability partners to ensure that decisions around young people are made with the best interests of young people at the heart. By holding decision-makers accountable, it ensures that the needs of young people are truly met.

- **Upskilling**: organisations should work with young people in their communities to help upskill and provide young people with the correct tools to further develop, both personally and professionally. The health and wellbeing of young people should also be a focus of the upskilling, to ensure that organisations take on more of a community role.
The successful pilot of Project Z took a concept and innovated it into a tangible experience. It demonstrated the power of collaboration and the increased level of innovation through combining disciplines and thought processes.

The programme equipped a set of young people with the foundations of a new way of thinking alongside the insight and potential of working with a multi-faced perspective. It invoked realisation and true comprehension of understanding the differences each field holds and the strength in bringing them together. For the future of Project Z, organisations can volunteer time through employees and provide significant industry insight into the conversations that take place within the workshops. This invaluable insight will allow participants to further their discussions and further develop informed solutions.

Project Z has the potential to change the way people think, the way people make decisions, the way governance works, and ultimately, it has the potential to change the world.

“It is inspiring to think about being the change”
Moving forward, Project Z is open to research collaborations, alongside partnering with organisations to deliver workshops in a meaningful and impactful way. Project Z has the potential to cover a wide range of disciplines, and not just the ones piloted in the study.

The vision for Project Z is to be able to deliver an intensive early-intervention programme to young people and early career professionals across the country. The ambition is to start bringing together perspectives to form strong recommendations for current issues. We want to be able to show the strength in interdisciplinary collaboration and ensure that the upcoming workforce is equipped to solve problems in a new, innovative way.

01. Reflections

Please feel free to share your reflections on Project Z alongside your own experiences of interdisciplinary work in your career so that we can continue to ensure that Project Z is as targeted and equipped as can be.

02. Investment

If you’d like to explore the potential of partnering up with Project Z, whether it’s a research collaboration or an organisation collaboration, please reach out.

03. First Cycle

As Project Z looks to secure funding for its first cycle, we will need Universities where we can deliver the programme to students. If you are at a University, whether as faculty or a student, and you’d like this to be delivered, please get in touch.
Project Z started with a simple concept, and it was brought to life in ways I could not have imagined. I’d like to thank everyone for their support in this journey. It has allowed me to grow significantly, both professionally and personally.

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