Students as Change Agents
Evaluation of Pilot 1
Festival of Creative Learning, February 2019

Executive Summary

The aim of the first Students as Change Agents pilot was to test the feasibility of involving small groups of students working on challenges set by external organisations. Specifically, we wanted to test:

Talent themes
- **Student interest** in participating in a co-curricular programme and their understanding of the concept of change agent;
- The **design of a 5-day model** for delivering the programme;
- The **effectiveness of training** in preparing students to tackle challenges, use data and work in interdisciplinary teams;
- The **impact of the programme** on students' confidence levels in 3 areas (solving problems, using data and working in teams) and in creating opportunities for students to extend their networks.

Adoption themes
- **Interest from external partners** in hosting challenges;
- Process of **designing challenges** with host organisations;
- **Outcomes** for students and hosts.

The learning from this will inform future pilots and the development of a model for effective, large scale 'change-agent' activities involving students and external organisations collaborating on data driven challenges.

The first pilot attracted applications from 47 students for 50 places. Applicants' motivation to participate and their understanding of the concept of 'change agent' illustrated their enthusiasm to effect change, apply their learning, get experience working in interdisciplinary teams and develop their sector knowledge and networks. Applications came from across all Colleges, representing 15 Schools. Ten students cancelled before the programme, with academic pressures as the most cited reason. There was a healthy conversion from sign-up to turn-up of 86%, with 32 students starting the programme and 28 completing, split roughly 50/50 between UG and PGT.

92% of participants who responded to the feedback survey derived value from the experience, (64% found it very valuable) and 86% said that it had either met or exceeded their expectations. There was a reported increase in students' confidence at the end of the programme in working in teams, solving problems and using data. The majority of students planned to take their challenge work further, on their own, with their groups or with the host organisation.

Nine organisations expressed an interest in hosting challenges with a social, environmental or economic impact. These organisations were sourced through university staff involved either directly or indirectly with the DDI programme and 3 were chosen from the fintech, construction and public sectors. The challenges posed were as follows:
1. How can a fintech firm collaborate with the 3rd sector to align with the UN's Sustainable Development Goals?
2. How can clients, consultants and contractors in the construction industry embrace a philosophy of designing out waste?

3. In what ways are online and offline violence affecting children connected? How can the connections between online and offline violence affecting children inform better prevention practice?

Feedback from the host organisations was positive and there has already been further collaboration between the students and the organisations, through meetings and networking events. Future collaborations will be tracked to establish the longer-term impact of involvement in this programme.

It was clear from the students' presentations that more detailed data driven challenges could be developed from these challenges, as a condensed 5-day programme and lack of data or more robust data were all mentioned as a hindrance to progress.

Full Report

Student Interest
Promotion
We chose the Festival of Creative Learning as our testbed to associate the SAChA programme with a wider series of innovative learning opportunities and to take advantage of students' availability. Turnaround times were tight for promotion (3 weeks from programme being published to applications closing), so we were pleased at the interest the programme attracted and the healthy conversion from sign-up to turn-up. The programme was promoted extensively to students through various channels including:
- Festival of Creative Learning programme, IAD and Centre of Experiential Learning
- MyCareerHub and Careers Service social media channels
- Directly to Schools and students via Consultation Group members and Careers Consultants
- Student Facebook groups [Sustainable Development, Model UN, Amnesty International]
- Edinburgh University Students' Association
- Edinburgh Award leaders, including Edinburgh Innovations, Social Responsibility and Sustainability Office and EUSA Volunteering
- Residence Life network
- Widening Participation Office
- CAM's Student Communications team

Recommendations re future promotional activity: Include in University student newsletters, promote via wider group of Edinburgh Awards leaders. Incorporate message that SAChA activities will be run frequently throughout the year to encourage students to plan ahead. Design printed collateral for distribution at student venues and events.
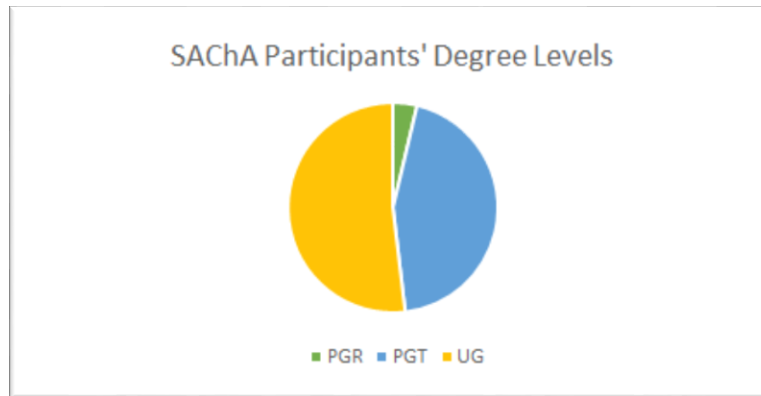
Participation
We had 47 students sign up for 50 places, which was relatively positive level of interest, given the short turnaround time for promotion. 10 students cancelled before the programme, 5 did not turn up, and 4 students dropped out during the course of the week, due to illness or the programme not meeting their expectations. This gave us a very healthy conversion rate of 86% from sign-up to turn-up, which we attribute to students' interest in the programme and challenges, personal recommendations from staff, frequent communications from the team beforehand, and the option of a 'warm-up' event on the Friday beforehand, which was attended by 10 students.

Participation by College

Participation by School
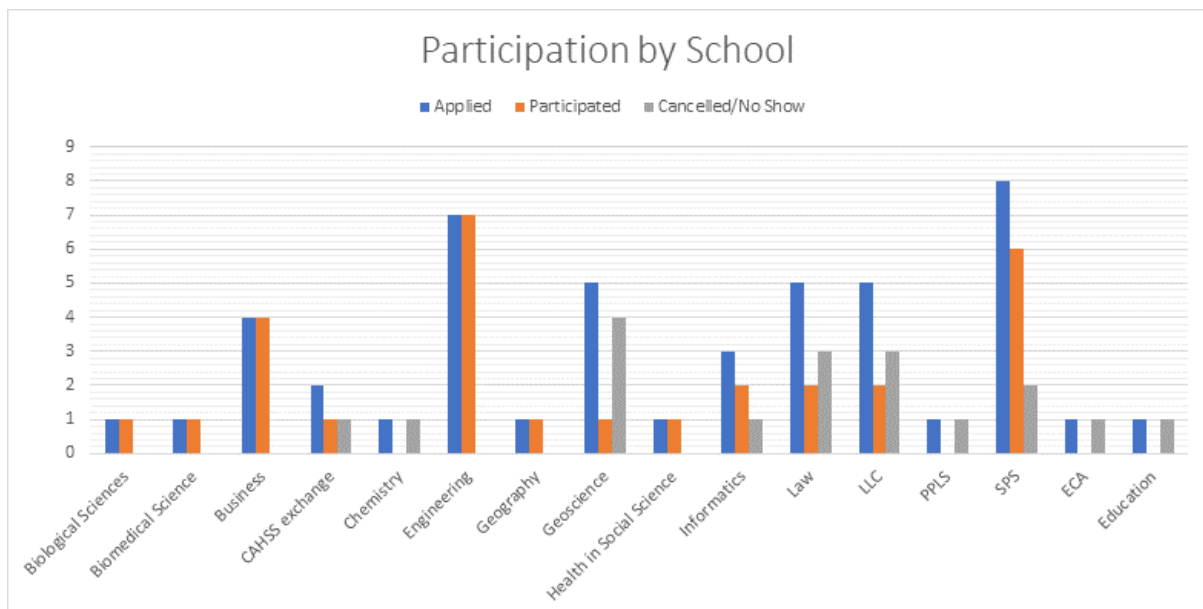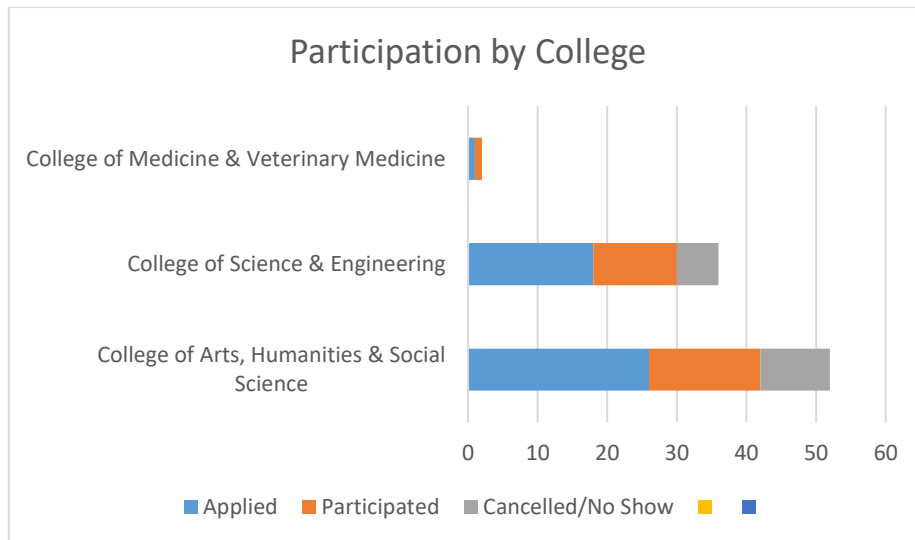
Interdisciplinary groups

Students came from a good mix of disciplines and degree levels – there was roughly a 50/50 split between the College of Arts, Humanities & Social Science and the College of Science and Engineering, with one student from the College of Medicine and Veterinary Medicine (UG from Biomedical Science). Engineering, Business and SPS were the best represented schools, which may reflect the fact that experiential learning is common in these Schools, as well as an alignment with the challenge areas.

SAChA Participants' Degree Levels

■ PGR ■ PGT ■ UG

All participants were allocated their preferred challenge and worked in groups of 4-7. Groups were assigned to ensure diversity, first in degree subject, then by level of study, gender and nationality.

The fintech challenge group was composed of students from Business, Engineering, Informatics, SPS and LLC. Two groups worked on the construction challenge, with a mix of students from Engineering, Geoscience, SPS and a CAHSS exchange student. The violence against children challenge attracted the most interest from students, so the 2 largest groups were assigned to this challenge, with representation from Biomedical Science, Biological Science, Business, Engineering, Health in Social Science, Law, LLC and SPS.

The gender split was 3:1 female to male, with one challenge (violence against children) attracting 100% female participants.

Thirteen nationalities were represented, with multiple students from each of the following countries:
- UK (7)
- India (6)
- China (4)
- Malaysia (3)
- Zimbabwe (2)

The other participants were from Germany, Indonesia, Poland, Netherlands, Norway, Swaziland and USA.

Motivation

Students signed up on the understanding that they did not need any background in the subject – just an inquisitive mind and a desire to a make real change in society. Their motivation to participate was driven by an interest in the challenge areas, both personal and its relation to their degree subject and/or link with a sector area where they were interested in working.

Applicants' understanding of the concept of 'change agent' illustrated their enthusiasm to effect change, their desire to apply their learning, get experience working in interdisciplinary teams and be able to develop their sector knowledge and networks:

Influencing change
- "*I realise the responsibility and the power my generation has to drive change*"
- "*Students as Change Agents simply means realising the impact one can make and that having a position of authority is not the only way to expect change in this world.*"

- *"I feel this is a great learning opportunity to understand challenges pertinent to the real world and how someone with my degree can influence change."*

Applying learning
- *"…while studying there are limited opportunities for us to apply what we have learnt. Therefore, students as change agents is a chance for us to use this knowledge to solve real-world problems."*
- *"I want to participate to have the opportunity to solve real world problems that are relevant today, something which I cannot do in lectures."*

Working in interdisciplinary teams
- *"It's fascinating to pull different approaches together and learn from other people."*
- *"I view it as an opportunity to meet other students from a wide range of degrees and see how we can come together to solve a puzzle that has real and important implications."*
- *"I want to see how different disciplines can combine together in order to provide solutions for environmental or social well-being problems."*

Developing sector knowledge and networks
- *"This would be an interesting way to work with different organisations and develop employability skills. The construction challenge sounds incredible, as I'm interested in sustainable design and infrastructure, and it's a sector I'm keen to work in once I graduate."*
- *"Students as Change Agents means that we can take full advantage of the resources and connections the University of Edinburgh provides and do something meaningful with our time here".*

A further motivation for some students was to use their participation time to contribute to an Edinburgh Award. Around 40% of the participants were enrolled in an Edinburgh Award (Enterprise, Sustainability, Mastercard Foundation or Volunteering). One Lloyds Scholar also used their participation time towards volunteering hours for this scholarship.

All participants were enthusiastic about receiving a certificate evidencing their involvement in the programme, which suggests that, as much as they want to give something back, students are also keen to gain recognition from the University for their efforts. Students also welcomed having a professional photographer at the end event and were sent the photos for their LinkedIn profiles.

We emphasised to participants that part of the motivation for the organisations to be involved was to make contact with the student talent at the University. They took full advantage of the opportunities to network with their hosts, both face-to-face at the launch of the challenges and at the end event, as well as remotely at their daily check-in points during the week. This collaboration has continued to some degree - see below for details.

Recommendations re participation: Follow up with participants who have agreed to be part of a focus group to explore their motivations for participating in more detail; follow up with students who signed up and either cancelled or did not turn up to find out more.

Design of 5-day model

This pilot was designed around students' availability during the Festival of Creative Learning – Monday 18th – Friday 22nd February. To attract participants we promoted the programme as a flexible learning opportunity. Attendance was compulsory on:

- Day 1 for the launch of the programme and training
- The morning of Day 2 to meet the challenge hosts
- Day 3 for a half hour interim review with staff
- The afternoon of Day 5 for the end event.

Most participants welcomed the opportunity to organise their own time during the week. A room was available all week for groups to meet and they all took advantage of this at different stages.

Some participants would have liked more structure to the week, e.g.

- *"Increased interaction, or even a constant on-site member from host organisation to participate in the discussions or guide it"*
- *"I expected to be dedicating most of my time throughout the week to the challenge, but some of my teammates had very different expectations about the time and effort commitment…if we had been given more structured and clearly mandatory work time and that had been strongly enforced, my team might have benefitted. Some of that is definitely down to us, though, and our own inability to get on the same page"*).

As noted, the structure of the week was intentionally loose to allow students to organise their own time and agree within their groups how each participant would contribute. We will continue with this approach for future co-curricular pilots where there is no compulsory time commitment.

Staff and students both recommended changing the design of the programme to allow students to meet their challenge hosts before the training course, dividing the training input into chunks throughout the week to increase its effectiveness and dedicating more time to the end event.

Recommendations re programme design: Review structure of training input, allow participants to meet hosts on Day 1 of future courses, provide more clarity to students about presenting their outputs and rationale of structure of the programme, review time allocated to final presentations and networking event. Review increasing the time challenge hosts spend with their groups, particularly at the launch session for their challenge, balancing this with the need for students to work independently and avoid being overly guided in their thinking.

Training courses and student development

Reflection element

Participants were encouraged to reflect on their personal and professional development before and during the programme to increase their self-awareness and ability to recognise and articulate their growth. At the outset of the training day, they were asked to consider what they were expecting from the week and how they intended to contribute and capture this in a personal IMPACT statement
(**I**nspirational, **M**easurable, **P**ositive, **A**chievable, **C**hallenging and **T**imed). They were encouraged to stop and take stock regularly during the week as an individual and in their groups, prompted with 3 simple questions to aid this process (what's working well for me, what's been a challenge for me today and what could I do differently tomorrow?). This was a very brief introduction to goal-setting

and reflection, which may not have hit the mark as less than half the students who responded to the impact survey had made use of this daily reflection prompt.

Training Course

Two separate training courses were delivered, with one group from each challenge assigned to each course. The training was provided by:

1. **Challenges Worldwide** - a Scottish international development charity and accredited training provider for the Chartered Management Institute. They adapted the CMI course in Professional Consulting to cover:
   a. Team dynamics and learning styles
   b. Project scope and ethics
   c. Data collection and analysis
   d. Critical thinking
   e. The change process
   f. Presenting recommendations

2. **Edinburgh Living Lab** – university staff delivered key elements of the Data, Design and Society semester-long course, including:
   a. Introduction to design methods
   b. Tools for the exploration process
   c. Co-design with stakeholders and users
   d. Presenting recommendations

Feedback from students about their interactions with the trainers was generally positive. Mentors observed students using some of the tools they learnt during the course of the week in their challenge discussions. More work will be needed in future pilots to contextualise the training so that students see the benefit and are able to apply it to their challenge work:
"I found the training on the first day a bit long though, and a lot of it didn't feel as though it related to what we were doing. It would have been better to work more closely with our challenge rather than talk about things that weren't as relevant."

Recommendations:
- Dedicate more time at the outset of the programme to introducing goal-setting and reflection, encourage mentors to check-in with students about their progress with this and send email prompts during the programme to inspire students to take time out to reflect on their learning.
- Deliver training in smaller chunks to allow students to get hands-on with their challenges and then get help with tools for tackling these.
- Incorporate presentation skills practice into the programme.
- Provide individual feedback to students about their presentations after the end event.

Impact for students
Skills Confidence

Students were asked to evaluate the impact of the programme on their confidence levels in problem solving, using data and working in teams. This survey was conducted immediately after the programme with an intention to follow up again in 3 months' time to track further developments in skills and confidence, and any continued involvement in the subject area or with the host organisations.

Solving Problems

	Not at all confident	Okay but room for improvement	Fairly confident	Confident	Very confident
Before		9	6		2
After		2	5	7	4

■ Before ■ After

Using Data

	Not at all confident	Okay but room for improvement	Fairly confident	Confident	Very confident
Before	5	5	6	1	1
After	1	4	7	4	2

■ Before ■ After

Working in Teams

	Not at all confident	Okay but room for improvement	Fairly confident	Confident	Very confident
Before		8	5	4	1
After		2	1	10	5

■ Before ■ After

Survey respondents reported an increase in their confidence levels over the course of the programme, attributing this to a combination of the training and working on the challenges.

Most confidence was developed in team working during the programme (increased from 2.9 to 4 out of 5):

The programme provided an opportunity for interdisciplinary working, none of the participants knew each other in advance and their common interest was in tackling their chosen challenge. They had a relatively short space of time to bond and recognise how they could contribute to the group (some

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pre-work on team roles and learning styles was circulated in advance to help them with this), while getting to grips with the challenge, communicating with their challenge hosts and mentors and establishing a plan of action. (*"I learned a bit more about my topic, but my biggest takeaways were on the value and the challenges of teamwork and mental toughness/resilience"; "I'm more confident in myself to put my own ideas forward"*).

Solving problems (confidence increased from an average of 2.6 to 3.7 out of 5)
Students learnt new theoretical approaches to problem solving and had the opportunity to apply this learning in practice. (*"Tackling a very big issue seems more do-able, now that I fairly understand how to approach it. Not that the problem becomes simpler, but just, I understand the complexity better and learnt how to look at it in multiple perspectives"*; "*learnt new analysis methods*", "*personally got better at working on something step by step*").

Using data (confidence increased from 2.3 to 3.1 out of 5)
Students were asked at application stage what skills and experience they had in using data to solve problems. The majority (72%) had some experience of quantitative and qualitative analysis through their academic or work experience and 15% were studying specific courses. 13% of applicants, all from CAHSS, reported that they had no previous experience of using data to tackle problems.

Recognising the power of data to drive change was mentioned as a motivation for participating: "*We have access to information that was once difficult to achieve*".

Students working on the construction challenge were provided with access to a closed data set (The Building Research Establishment's SmartWaste data software tool) to inform their work. The other groups were signposted to relevant open data sources and were able to make use of their daily check-in points with the host organisations to help them navigate these.

It was clear from the student presentations that more detailed data driven projects could be developed from these challenges, as lack of time and data or more robust data were all mentioned as a hindrance to progress.

Other areas where participants felt they had developed were in time management; public speaking and applying their learning. "*I felt so much smarter this week than I do at University!*"

Extending Networks
Students were asked what potential impact they thought their group's work could have. Responses were generally positive and included **social and organisational change**:
- *"Our work could largely be developed further for education and advisory purposes and as a trial strategy in tackling our challenge"*
- *"Help prevent the problem at grass roots level"*
- *"I think our work might influence the way Sustainably chooses and communicates which UN Sustainable Development Goals they want to work on"*

Participants also recognised that they had developed a better awareness and understanding of the issues they were tackling and the sectors where they were hosted. ("*I have improved my awareness and consciousness on the issues discussed and I have become highly interested in them.*"; "[The programme could*] inspire students to do more like this, maybe even in their work field later.*")

Some participants also highlighted benefits to the University: "*there is a possibility of better dialogue between academia and industry*" and *"course reform"*.

Over 80% of participants who responded to the impact survey reported that they planned or hoped to take the challenge topic further, individually, with their groups and/or with the host organisation. We will follow up in 3 months' time to see if there has been any action arising from this.

External partner involvement

Interest in participating

Organisations were approached through the University's external facing networks – EFI, Bayes, Edinburgh Living Lab and the DDI sector leads. The programme was also promoted to potential hosts via the Procurement Office, ECCI, SRS and Edinburgh Global. We had offers from 9 hosts and we chose 3 organisations to host challenges for this first pilot:

1. **Sustainably**, a social enterprise start-up in the fintech sector;
2. **The Robertson Group** in collaboration with the Building Research Establishment;
3. **The Global Partnership to End Violence Against Children** in collaboration with UNICEF.

These organisations were chosen because they are all aligned in some way to the University's strategic priorities and represent key DDI sectors (fintech, construction and the public sector). They were keen to further deepen their relationship with the University and its students. They were also willing and able to commit to this programme with relatively short notice. The challenges they proposed were pitched to appeal to a broad range of student interest, where prior knowledge was not needed and were complex enough so there was no simple solution or 'right answer'.

Three of the other organisations who proposed challenges have been referred other student activities (two to host challenges for the Mastercard Foundation Summer School and one to host an MSc student project in Social and Political Science). We will explore the feasibility of involving the other organisations in future pilots.

Host organisations were asked to commit 9-12 hours to:

- Negotiate the challenge with staff (~ 1 hour)
- Provide further background about their challenge (~1 hour with staff, plus development of an information pack for the student groups)
- Introduce the challenge to the student groups (scheduled 1 hour but these sessions lasted 1-3 hours depending on the level of detail the organisation went into with the students and how much time they devoted to answering questions)
- Provide a remote point of contact each day to answer questions from student groups (1 hour x3 days)
- Attend the end event, inviting colleagues and other organisations with an interest in the students' outputs. They did a short presentation about their organisation, the challenge and why it was important to them and their ideas of where this could go next.

Negotiating challenges

The challenges posed were as follows:

4. How can a fintech firm collaborate with the 3rd sector to align with the UN's Sustainable Development Goals?
5. How can clients, consultants and contractors in the construction industry embrace a philosophy of designing out waste?
6. In what ways are online and offline violence affecting children connected? How can the connections between online and offline violence affecting children inform better prevention practice?

The student groups developed a presentation for the end event, pitching their ideas to the host organisations, others interested in the topic, the training providers and University staff. Given the

brevity of the presentation and Q&A sessions, they also provided a short business-style report for their hosts to explain their thinking in more depth.

We encouraged the organisations to stay in touch with their student groups and look for opportunities to involve them in activities to support their development and extend their networks. To date, the following further collaborations have taken place:

- **The Robertson Group** released a press article in Scottish Construction Now highlighting the value of the SAChA programme and featuring the students who were involved (https://www.scottishconstructionnow.com/article/students-and-robertson-unite-to-tackle-social-challenge).
- **Sustainably** met with their group to spend more time understanding the decision matrix they designed to help them decide which of the UN's Sustainable Development Goals they should align to and how they could evidence this.
- **The Global Partnership to End Violence Against Children** intend to incorporate the students' ideas into a framework illustrating the links between online and offline violence against children and to continue working with those students who are interested in further research into this topic. They invited their students to meet with senior staff visiting Edinburgh the following week and asked one of the students to take part in a panel at an EFI Lecture Series hosted by their Executive Director.

In addition, one of the groups working on the construction challenge was asked to contribute a post to the Teaching Matters blog about their experiences and to discuss with IAD and SRS about the feasibility of developing their idea into a cross-University course.

Further evaluation work is planned with the host organisations to explore in more depth their motivations for participating, their experience of the programme and plans for future activities with the students and/or University.

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