

LEARNING WITH SCHOOLS TO CHANGE OUR WATER FUTURE

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KEYWORDS

Education; Behaviour Change; Community Engagement

YEAR CASE STUDY WAS IMPLEMENTED

2018 to 2019

CASE STUDY SUMMARY

The aim of Hunter Water's new education program was to engage with teachers and students of the Lower Hunter region to support them to develop innovative ideas that reduce water consumption. Hunter Water's education team partnered with the University of Technology Sydney, Jearni, and principals and teachers from three local schools to establish the program purpose and project outline. The *Learning Together to Change Our World* program challenged students to come up with innovative ideas to help solve the real-world problem of water scarcity in our region. The best ideas from each school were presented at a gala at the end of each year, allowing students to share their innovations with industry and the community. The program showed that when students engage with a real world water sustainability problem over a 10 week period, their understanding of the issue was significantly deeper and were more likely to change their water use behaviour long-term.

CASE STUDY DETAIL

The specific issue

Hunter Water's commitment to be a listening and learning organisation in order to ensure a resilient water future for the Lower Hunter required a very different approach to engaging with students and teachers in the region. It was identified that the education program needed to facilitate a deep understanding about water sustainability and create advocates for behaviour change within the community. The goal of the new education program was to learn with, and from, the young people of the region and develop innovative ideas that reduce water consumption at school and at home.

Approach

Hunter Water's education team partnered with the University of Technology Sydney and Jearni to explore how to best facilitate both an understanding of water resilience, and an intrinsic motivation to use less water on a daily basis. It was identified that the best way to do this was to develop a program that allowed students to be self-directed learners and use critical and creative thinking to solve this complex, real-world problem of water

scarcity. From there a two day workshop was held with principals and teachers from two primary schools and one high school that would participate in the proof of concept, to establish the purpose and project outline for the program. The workshop produced an overview of key activities required to be a success and the level and types of support that would be beneficial to teachers implementing the program and engaging for students. At the end of the workshop the name of the program, *Learning Together to Change Our World* was agreed upon and program milestones were set.

Summary of activities and their implementation

The *Learning Together to Change Our World* program was launched with students at the three pilot schools in July 2018 by way of a video challenge. The video was produced at Hunter Water's purpose built Centre for Education. It featured students from the participating schools to deliver the call to action for infants and primary to their peers, and young Hunter Water engineers for the high school version. The videos challenge students to use their curiosity, creativity and collaboration skills to come up with innovative ideas to help solve the real-world problem of water scarcity in our region.

Over the following 10 weeks participating students worked with Hunter Water education coordinators to learn about water resilience issues in the Lower Hunter, with a particular focus on supply and demand issues. This included an excursion by each participating school to the Centre of Education and the Grahastown Dam catchment. Here students participated in a range of interactive and hands-on activities to learn about Hunter Water catchments, how water is treated and transported through the network to their homes, and then what happens to their waste water. This was the first time all students participating in the program had engaged in learning about the urban water cycle and had started to think about water as a finite resource as opposed to an unlimited supply. It is also worth noting that during the pilot program the Lower Hunter had not yet been affected by drought and the average daily useage was 191L per person per day, so students also learned about ways they could use water wisely outdoors and inside the home.

Students then used the information from the excursion and from their own research to design a way for people to use less water. These designs were based on students' areas of interest to ensure the projects were true to the goal of the program in being as a result of self-directed learning. Students worked in small groups using their curiosity, creativity and complex problem solving skills to develop a wide range of innovative ideas. Students were able to present their completed projects to the education team at their school once they had completed the program.

From these presentations the best ideas from each school were selected to be presented at a gala in December 2018. The gala provided students with a platform to share their innovations with each other and with Hunter Water employees in an expo-style format. All those who attended the gala were able to vote for the project they felt was the most innovate, or would be most effective in helping the community to reduce their water consumption. The winning project received a tour of *The Res*, Hunter Water's first water reservoir built in 1882.

Following the gala teachers that participated in the program had the opportunity to provide feedback on the pilot program and advise on it's implementation the following year.

In Term 1, 2019, the *Learning Together to Change Our World* program was launched to primary schools in the 15 highest consuming suburbs in the Lower Hunter. This was done to maximise the impact of the program in reducing water consumption. Of these 15 schools, one school participated in the program. So in Term 2 it was promoted to all schools in the Lower Hunter and by the end of 2019 a total of six schools had participated in the program. The 2019 program followed the same schedule as the pilot, including the gala which was held during National Water Week.

Summary of outcomes and measurable impacts

At the end of each school's participation in the program teachers were asked to complete a survey of the effectiveness of the program in engaging students, supporting the curriculum and having an impact on behaviour. Actual behaviour change cannot be measured through metering because it is only one class or stage from each school participating, and only one person from each household. All evidence is anecdotal from the teacher delivering the program.

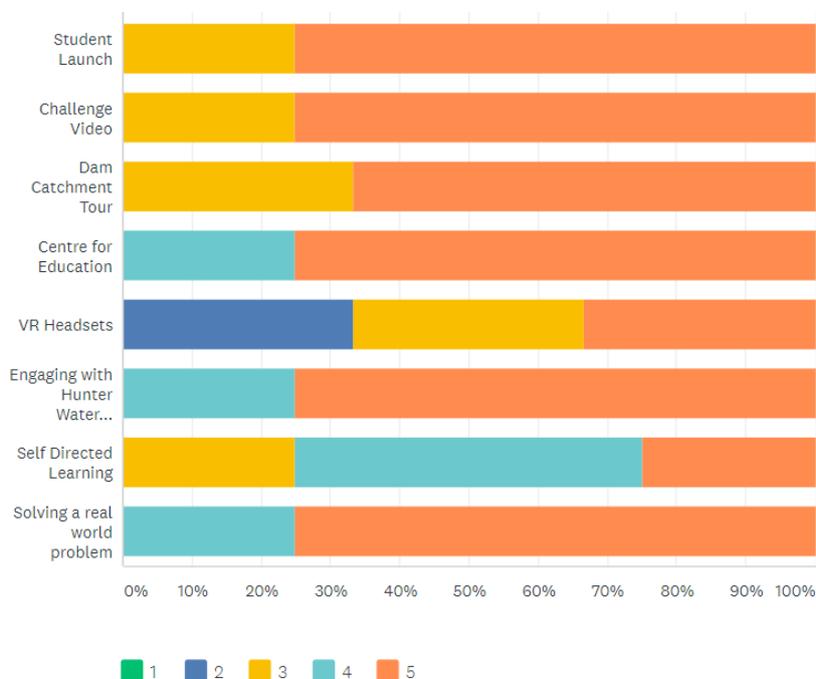


Figure 1: How well each activity supported students' understanding of water resilience

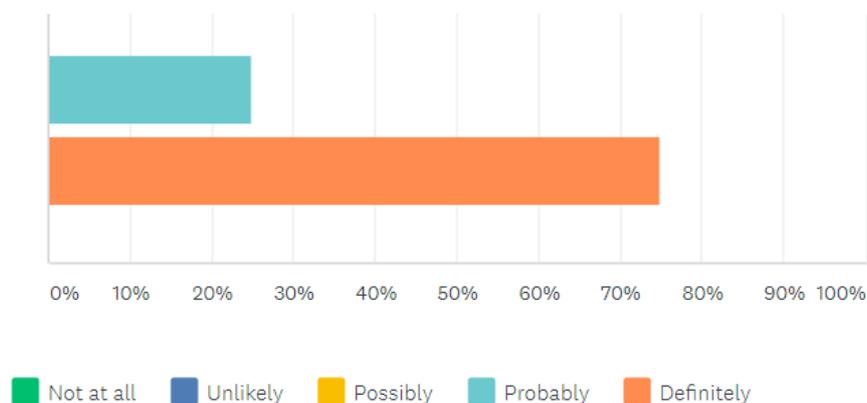


Figure 2: Students communicated what they've learnt about saving water to their families, friends and community

The extent to which the outcomes are sustainable

The outcome of changing behaviour and reducing water consumption of those students participating in the program is sustainable to achieve in the short term with each new cycle of students that participate each year. All teachers that participated in the program in 2018 and 2019 reported high engagement levels from their students and observed most students changing their water consumption at school and sharing water saving messages with their families. What is unclear at this point is the impact of the program on long term behaviour change. Delivering the program, or one similar, with students at another point in their school career would ensure that they deepen their understanding of water resilience issues and continue to advocate for changing water use behaviours with their peers, families and communities.

The outcome of Hunter Water working with students to develop ways to reduce water consumption also becomes less sustainable as the program grows without increasing the resourcing allocated to the program. Delivery of content can be scaled up to meet a larger participation through digital resources such as webinars and videos, but the value of having a person in the classroom to deliver content and answer questions cannot be discounted.

Important lessons learnt and critical success factors

This program was a completely new way of engaging with schools for Hunter Water, so it was expected that many lessons would be learnt not just in the pilot phase, but also during the wider rollout of the program the following year.

At the end of the pilot program it was clear that there is great passion amongst young people to combat water scarcity issues, and that a deeper understanding was achieved as a result of the self-directed, project based learning approach. Stages 2 and 3 were identified as the most impactful age for the program, however, in 2019 when the program was rolled out to the region there was significantly more demand from high schools, especially from those teachers implementing the Water in the World unit of work.

The importance of including the gala at the end of the year to showcase exemplary work carried more importance than what was initially expected. The gala provided a platform for students to showcase their projects and have discussions about their effectiveness with industry experts. This validated the program's real-world context and solidified the relationship between the schools and Hunter Water as a listening and learning organisation.

Collaboration with the local education community was essential to not only ensure that Hunter Water was being true to the statement of being listening and learning organisation, but for validation of the quality and value of the program. Its appeal lies in the fact that it has been designed with teachers to support classroom pedagogy and curriculum outcomes, while not being so specific that teachers need to find time in a crowded curriculum to "fit in" extra activities.

Support from the business is also critical for the program's long term success. The *Learning Together to Change Our World* program has repositioned the wider education program from being viewed as a 'nice to have', to an essential part of Hunter Water's strategy for ensuring a resilient water future. Wider support is also critical to ensure students participating in the program have access to information that is current, accurate and relevant to our local situation to support the development of their innovations.

Other comment/information

The *Learning Together to Change Our World* program engages with young people in our community to increase their understanding of water resilience issues and ask for their commitment to sustainable water practices at school and at home. This is an investment in our future, enabling better decisions to safeguard our lifestyle. The success of the program lies in the collaborative nature of the program between Hunter Water and schools, providing support to teachers to deliver a program that requires complex think to solve a very relevant and tangible issue.