The NZIFST CREST Student Product Development Challenge - authentic learning for students

(11 June 2015) When we designed the NZIFST CREST Student Product Development Challenge seven years ago, our goals included providing participating students with an authentic experience of what product development technologists in the food industry do, and in doing so, giving them an insight into what a career in our industry could involve. Feedback from teachers and students indicates that the Challenge is achieving these goals.
By Jenny Dee.

Wellington High School has entered 8 teams into the Challenge over the years; **Principal Nigel Hanton** explains why he supports it:

“As an educator I have long been interested in the notion of authentic learning and what this can look like in terms of school programmes and curricula. This does not presuppose that discrete subject disciplines do not deliver authentic learning within their subject discourse, but it does challenge models of subject integration and how authentic and relevant learning happens in subjects, between subjects, across subjects and in the spaces in between subjects and disciplines.

Having seen students at our school engaging in the NZIFST CREST Student Product Development Challenge I think there is ample evidence that authentic learning best occurs across and between discrete subjects.

Working to answer the students' own questions in real life contexts, the Challenge draws its strength from the technology, science, mathematics, art design, marketing and language curriculum areas and provides the opportunity for transdisciplinary learning and authentic learning which results in the most fantastic range of products.

Through the process and experience of the Challenge, students are encouraged to understand that all knowledge is interconnected and interdependent. The process of investigation generates a range of outcomes that show that a problem has many possible solutions and that there may be many right answers. Challenge investigations also show students that subject disciplines can be identified through the inquiry process but more importantly, the context given by real life development tasks is the most important factor in the learning.

The mentoring aspect of the Challenge provides another academic strand to developing knowledge and skill through the inquiry. Working with industry experts, mentoring explicitly supports the quality of thinking, processing and learning, as well as again profiling the real context of the work that the students do in seeking workable solutions to support their product development.

At the individual student level I have observed students working on Challenge projects demonstrate a real sense of excitement as the projects have progressed, I have seen the frustration of failure transform into the joy of success. I have seen absolute dedication and high levels of motivation. Above all I have seen a passion for inquiry and learning that is unsurpassed.

Authentic learning?….I think so.”

Three ex-Challenge students from Wellington High have gone on to study food technology at Massey.

Heather Meikle, Extension Coordinator at **Palmerston North Girls' High**, also thinks the Challenge is a valuable experience for their students.

“The learning through this scheme is immense - time management, project planning, GANT charts, food safety, experimental protocol, resilience and learning to work as part of an effective team. In addition having to prepare a scientific poster and then present their research to an industry panel has taught them excellent communication skills and enhanced the student's self-confidence.”

Raquel Lopez-Lozano, who did the Challenge last year when she was at Palmerston North Girls' High, is in her first year of a food technology degree at Massey. Raquel says:

“The challenge confirmed my decision to study food technology at Massey. I had always been interested in working with food but did not actually consider it a serious career choice mainly because I did not know any jobs that would satisfy my interest with food.

When I discovered that Food technology as a career existed in year 12, I began working towards the pre-requisites for the degree. In year 13 I was offered the opportunity by my biology teacher to be part of a CREST team to enter the challenge, and throughout the challenge I confirmed that I was seriously interested in this career choice.

Through the challenge I learnt the process of creating an idea from paper to reality. It was a long, and at times, a little overwhelming and challenging but ultimately extremely satisfying. I also learnt the importance of planning and time management.

The best part of the challenge for me was making the product. I am a practical person and I like to see my creations come to life. I found that creating the product in the kitchen was the main reason why I chose Food Technology as a career.

Doing the CREST Challenge was a very steep learning curve. Juggling school work, my extracurricular activities and the challenge was hard.

Another enjoyable part of the challenge was the exhibition night. It was rewarding being able to explain our ideas and product to the judges.”

Another first year food technology student is **Annie Yang**, who also did the Challenge last year, when she was at **Westlake Girls High**. Annie says doing the Challenge helped her decide to study food tech at Massey.

“The CREST experience gave me an insight of what food technologists do. I was also able get into contact with many other people involved in the food industry; through talking to these people I was able to get different perspectives on what they do. I found that being a food technologist and studying food technology at Massey was the one that interested me the most.

During the Challenge, I learned the different aspects involved in making one product. Many surveys, research, trials and tastings were conducted and attention to detail was very important. Communication with the team, stakeholders, mentor, and the Challenge co-ordinator was also crucial to ensure our product development would run smoothly and met deadlines.

The best thing about doing the Challenge was the build up to the presentation day. There was a lot of preparation involved, for instance the printing of our poster and making 40 Gozlemes the day before, as well as little things like transporting a microwave and determining how to set up our presentation table for our judges. It was also very exciting to meet our judges and see what other groups developed.”

It is reassuring to get feedback from our customers, the students and their teachers, that the Challenge is a worthwhile inclusion in what is already a very busy school year. The food industry which supports the Challenge teams will be happy to hear that this support is valued, and is making a difference in students' career choices.

Jenny Dee FNZIFST
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