Experiential Learning Vignette 5: An Integrated Learning Environment
This vignette is derived from an interview with Prof Beverley Gibbs Director of the Dyson Institute of Engineering and Technology. It forms part of a [Collaborative Enhancement Project](#) funded by the QAA.

Background

The Dyson Institute has recently been granted degree awarding powers after years of working in partnership with WMG at the University of Warwick on a Degree Apprenticeship (DA) programme. As they graduate their final cohort of Warwick DAs they find themselves at an inflection point, and with the affordances (and challenges) of a fully integrated work and educational system.

Affordances

Probably the biggest affordance of having The Dyson Institute embedded within the organization is having a shared purpose and common understanding and terminology. When a University and Organization partner for a DA there is always a slightly fractal nature to the relationship – with the best will in the world there are issues of alignment between curriculum delivery and workplace experience with multiple agendas at play. At Dyson as Prof Gibbs says: 'it's up to all of us to make it work'. This relationship allows for a closer and more planned integration of the different elements of the programme (see first panel). A key role for the academic team and work teams at Dyson Institute is to work together (through process and programme design) to manage these interfaces in order to ensure that apprentices are able to gain maximum benefit from all of their experiences.

The sheer physical availability of academic and support staff is an important aspect of the programme, as they sit in an open plan office where students can access them at any time during the working day. There is no waiting for a tutor based miles away to respond to an email, and concerns can be raised and resolved quickly and informally.

One challenge for many DAs is around the multiple identities they have to migrate between during their apprenticeship. Dyson have been proactive in reducing the stresses this can create (see second panel).

Spiralling into Control

The Dyson Institute visualise 'triple helix' of academic programme; work experience; and professional and personal development.
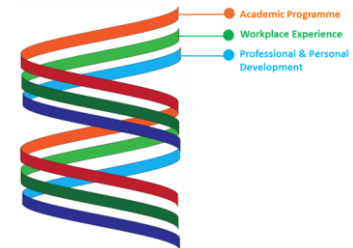
The three strands work synergistically together in a way that many Degree Apprenticeship providers might envy.

There are some factors which make this possible at Dyson in a way that may be difficult for other providers to imitate.

1. *Immersion in culture:* all 3 strands are situated within Dyson's language, challenges and structures so there is no disconnect, and apprentices can absorb the industry dynamics. This responsibility is shared across the whole organization, not just within the academic team.
2. *Tight coupling:* Dyson make great efforts to ensure that placements match with academic learning outcomes so as to create a connected experience.
3. *An R&D Environment:* The apprentices are surrounded by people who are thinking about the future which allows them more leeway with less focus on immediate delivery.

Challenges

It is true of DA programmes in general that the workloads are considerably higher than for undergraduate degree programmes. This is perhaps even more true in a high intensity environment like Dyson. Prof Gibbs notes 'this is a very demanding programme which puts the students in the spotlight the whole time'. This creates the opportunity for students to 'fail in a different way'; there is no opportunity to take advantage of the anonymity of large traditional degree courses and tune out for a period of time in order to recover.

These challenges have led to a very strong focus on resilience within the programme, which is largely delivered through three key aspects:

• The personal and professional development strand (including things like personality typing in relation to how to work with others, communication, and how to develop personal resilience).

• Training of staff on how to support students

• A dedicated team of Workplace Engineers who are all ex-Dyson employees to reinforce the common language and mindset (3 engineers and 1 commercial) whose job is to manage the boundary between the workplace and the student. They run allocations to teams and build relationships across Dyson to ensure capacity and support. The ratio is 1 to 35 overall, but as students are in a home team by years 3 and for there is less workload and the effective ratio is probably half that in years 1 and 2.

Final Thoughts

Dyson want to blur the boundaries of the triple helix still further. And one of the most important things in making this level of integration work is to build the right team. For this they need academics with facilitation skills who understand the context of engineering as a profession and can guide the students to their own sense-making, but although they need that in their team - not every individual academic has to have those exact strengths. They also need the cognitive diversity that more 'traditional' lecturers provide, bringing more engineering science, methodological rigour, and bigger picture thinking to the process.

As Professor Gibbs points out: 'We can't ever forget that we are at the higher education end of things...and that's the spine of the process...I think we do our students a disservice if we don't expect them to operate with that breadth of thinking'.