

Learning Through Teaching in the Local Community: Work-Integrated Learning Projects for Undergraduate Students.

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Research Domains

Academic practice, work, careers and cultures (AP)

Abstract

Higher education institutions play a vital role in promoting social mobility and enhancing graduate employability through community engagement. This study evaluates a work-integrated learning (WIL) initiative implemented within the School of Biological Sciences at a UK research-intensive university. Final-year undergraduates designed and delivered science lessons to pupils at a disadvantaged secondary school, aiming to raise educational aspirations while gaining teaching experience. Using a mixed-methods approach, we assessed students' perceived development of transferable skills, career ambitions, and the broader impact of the experience. Surveys revealed increased confidence in communication, teamwork, problem-solving and self-management. While most career aspirations remained consistent pre- and post-project, some students demonstrated increased focus and ambition. Qualitative responses highlighted the value of real-world teaching experience and the influence of the project on students' worldviews. The initiative supports the potential of WIL to benefit both students and the wider community and could be employed within any subject.

Full paper

Introduction and aims:

Higher education institutions (HEIs) have a well-established responsibility to enhance societal development (Farnell, 2020). Implementing initiatives that target secondary school students from lower socio-economic backgrounds can significantly increase educational aspirations, college readiness and enrolment rates (Ní Chorcora, 2023).

Numbers of university graduates entering teacher training remains below pre-pandemic levels (Department for Education, 2024) highlighting the need for HEIs to encourage and support graduates to transition into the teaching profession. Universities play a crucial role in preparing students for the workplace. Work-integrated learning (WIL), the practice of combining academic study with practical work experience (Cooper et al. 2010), is thought to be instrumental for graduate job readiness and improves the process of transferring skills from university to the workplace (Denise, 2015).

We introduced a WIL initiative option for final year biosciences undergraduate students at a UK research-intensive university. Students designed and taught a lesson at a local secondary school, whilst sharing their experience of university to encourage pupils to consider higher education (HE). We evaluated the learning experience of these students by exploring their perception of transferable skills gained over the project and how their long-term aims with regards to their career aspirations were subsequently impacted.

Methods:

We introduced a teaching-focused project for final year students, which enabled student pairs to develop and teach a practical lesson of their choice for secondary school students. Students were also tasked with pursuing a pedagogic line of enquiry into their intervention and were provided with the necessary training to complete these activities.

The lessons were delivered in a local coeducational non-selective foundational secondary school, located in Gloucestershire, UK. The proportion of disadvantaged pupils in the school is higher than average, and the school falls within the participation of local areas (POLAR) classification Quintile 1, the lowest classification for the proportion of young people who enter higher education (Office for Students, 2025).

To evaluate the learning experience students completed pre- and post-project surveys, using codenames to match answers. Surveys comprised of questions which collected both quantitative and qualitative data. Students reported on their self-efficacies (Bandura, 1995) of different skillsets: communication, working with others, problem solving, self-management, and personal development. Open-text answers addressed student plans after graduation and their ideal career. The post-project survey also addressed the most valuable aspect of the project and whether the topic of their lesson had influenced their world outlook at all. We used an interpretivist mixed methods approach (McChesney & Aldridge, 2019). Quantitative data was evaluated using box and whisker plots, and

qualitative data were evaluated using thematic analysis with a largely inductive and latent approach (Braun and Clarke, 2012, 2024).

Results:

Students reported an improvement in confidence in the areas of communication, working with others, problem solving and self-management after completing their project, although no change in their perception of personal development.

Whilst students' interest in particular employment fields largely didn't change pre- and post-project we found that some students became more focussed in their career aims. For example, one student described the "environmental sector" as their ideal job in the pre-survey and this changed to "relating climate change with public communication" post-survey.

Students found the project valuable in many ways; gaining transferable skills, particularly an increased confidence in communication, public speaking and teamwork, and experience in teaching and research were highlighted as core benefits of the project. There was evidence that the project changed the student's worldview, some relating to the topic they chose to teach, e.g. their commitment to combatting climate change, and a newfound appreciation of how important education and the learning process is, for others and themselves: *"I may even use the areas we've explored to help me think about how I learn"*.

Discussion:

Results revealed a perceived gain in most transferable skills. As Freudenberg et al. (2011) also found, the WIL experience improved student's self-efficacy, notably an increased confidence in communication, teamwork, problem-solving and self-management, with the recognition these could be applied to future careers. The WIL experience likely contributed to refining student career plans. Responses highlighted the influence of the project on students' worldviews and the value of real-world teaching experience. To further explore this intervention, evaluating the experience of the school pupils and their perceptions of HE would be the next step. Younger et al. (2019) argues that more robust evaluations of UK-based widening participation interventions is required and this initiative supports the potential of teaching-focused WIL to benefit both students and the wider community and would be applicable to any subject.