

Gen Green 4 Australia: A national study of demand for and supply of skills for sustainability

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Paper: At the end of the United Nations Decade of Education for Sustainable Development it is timely to reflect upon progress in the formation and utilisation of skills for sustainability within the Australian economy. The Australian response to the Decade of Education for Sustainable Development has culminated in the implementation of the national Green Skills Agreement over the last four years. Not long after the Council of Australian Governments endorsed the Agreement in December 2009, the Productivity Commission released its report on factors affecting the current and future demand for the Vocational Education and Training (VET) workforce. Gen Green 4 Australia is a research study framed by these two influences and seeks to understand the national demand for skills for sustainability.

The demand being studied in this research is that expressed by the primary consumers of Australian VET services, students who engage in VET studies. As these students base their decisions on long-term views about future labour markets, their views provide a useful and grounded complement to the picture of labour market demand provided by employers, industry groups and economists. This is the first study of its kind, describing non-economic demand for skills for sustainability. This kind of individual demand for education is known in the literature as social demand for education. It reflects the decision of an individual as their revealed preference among the available school and work alternatives.

Gen Green 4 Australia especially gives a voice to the apprentices and trainees who make up 3.9% of the Australian workforce, drawing on their unique experience of skills for sustainability at the grass roots of the Australian economy. This cohort is made up mostly of young people, but there is also a substantial contribution from mature-aged workers. Participants in the study represent a wide range of occupational classifications, from hairdressing to horticulture, from bricklaying to business administration. The research is focused on skills for sustainability as apprentices and trainees learn these skills in classes and in the workplace. Importantly though they also learn them at home, from family and from friends. The research takes as its sustainability paradigm the triple bottom-line business agenda expressed by the Global Reporting Initiative (GRI). This approach provides social and economic points of comparison for the environmental or 'green skills' interpretation of skills for sustainability initially adopted in Australia.

The Gen Green 4 Australia research employs two survey instruments. One of the surveys explores Australian apprentices and trainees' experiences of sustainability values, behaviours and sources of learning, providing concrete examples while also soliciting detailed, qualitative responses to explore the reasons behind unsatisfied demand. The other survey in many ways mirrors the one used with students, as it explores Australian VET teachers' experiences of these same sustainability values, behaviours and teachings, again providing concrete examples and soliciting detailed, qualitative responses to explore barriers to supply.

Gen Green 4 Australia has found that commitment to environmental values, acknowledged practice of environmentally sustainable behaviours and learning of green skills in class and at work continues to lag behind the experience of socially and economically sustainable skills. However, supply accords with the social demand for sustainability skills currently expressed by VET students,

informed by their experiences in the workplace. In the context of climate policies, the relatively low level of VET student demand for and supply of skills relating to energy efficiency and managing social and environmental supply chain impacts, either at work or in class, is a matter of some concern. This need is now increasingly being flagged in public discourse and business media.

Of some interest is the importance of community-based learning and other informal learning opportunities, particularly for the development of environmental skills. It appears that community awareness and education programs are currently more effective at embedding green skills in our economy than either work experience or teaching in class. Of concern is teachers' nomination of the industry Training Packages as the main barrier to improved provision of green skills through the VET system, although this was a small minority of teachers. In any case, the findings of Gen Green 4 Australia suggest that further action is required to embed green skills into the VET system, especially in the areas of energy efficiency and supply chains.

Teachers and students' high level of interest in social sustainability and the importance of workplaces and classrooms as sources of learning social and economic skills, especially for women, are notable findings. This emphasises the important role that the VET system plays in building community cohesion and economic literacy. These findings underscore the importance of ensuring that social sustainability is properly considered in analysis informing VET policy.

The gender differences in values and behaviours and the indications of gender and age differences in learning skills for sustainability revealed by this research have important implications for the design of future skills for sustainability programs. These results suggest that future programs could be made more effective by being age and gender-targeted, in addition to the occupational targeting that happens through embedding skills for sustainability in the national training packages. More specifically, it suggests that an emphasis on values-centred approaches may be more effective with women, as well as with delivery of skills for sustainability to under-18s and over-25-year-olds. However, technical impact mitigation and hazard reduction approaches may be more effective in making the behaviour of 19 to 24-year-old male apprentices more sustainable.

Building on previous research, Gen Green 4 Australia indicates that at the end of the international Decade of Education for Sustainability the social demand for skills for sustainability in Australia exhibits many of the essential characteristics of Education for Sustainable Development identified by UNESCO in 2005. It further indicates that the supply of skills for sustainability, both through the Australian VET system and through informal learning opportunities closely meets this demand, underpinning national efforts to build the capacity of the Australian workforce to support a sustainable economy. The research identifies possible features of the next generation of skills for sustainability policy and flags a need to better understand the relationship between the economic demand for skills for sustainability expressed by employers and the social demand expressed by VET participants.