Review of the Draft National Declaration on Educational Goals for Young Australians

A Response by

The Australian Academy of Technological Sciences and Engineering

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The Australian Academy of Technological Sciences and Engineering (ATSE) welcomes the report on the Draft National Declaration on Educational Goals for Young Australians. ATSE considers the draft Declaration as being timely and necessary as Australia confronts the challenges and opportunities presented by the global economy. Further, ATSE supports strongly the proposed Educational Goals and ‘Commitment to Action’, recognising that improving the educational attainment for all young people is central to our nation’s social and economic prosperity and will position our young people to live satisfying, productive and responsible lives. ATSE would welcome the opportunity to collaborate in helping to achieve these educational outcomes.

However, ATSE deplores the omission of Technology from the list of Learning Areas (p. 10) and argues that it must be reinstated as a Learning Area in its own right. ATSE notes the inclusion of some aspects of technology (namely "ICT" and "design and creativity" under "Multidisciplinary perspectives" (p.11) but considers that this is an unsatisfactory approach.

1. Technology Education has both breadth and rigour as an essential component of contemporary curriculum. ATSE's position is that technology is about the synthesis of knowledge, ideas and skills in the solution of identified problems and the development of innovative capabilities. In its focus on synthesis, design and invention, Technology Education embraces creativity across the full spectrum of students' learning. In a real sense, this synthesis places Technology Education as a significant integrating force within schooling. There is much more to Technology Education than "ICT" and "design and creativity", although these are important dimensions of it.

2. Community understanding of the significance of technology is limited and this limitation is itself an impediment to Australia's growth and development. ATSE has pointed out previously that community understanding of the significance of technology is very limited. Further, ATSE argues that this very limitation is a major contributing factor to Australia's relative failure to develop and commercialise its own good ideas and inventions. Students' study of technology in the context of a rigorous and challenging curriculum would go some way towards addressing the currently limited community understanding.

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1 ATSE, founded in 1976, is an independent, non-government organization, consisting of more than 750 eminent Australian Fellows that promotes the development and adoption of existing and new technologies that will improve and sustain our society and economy.
3. In the current global economic, environmental and social context, deep understanding of the significance of technology is even more important to students than it has been in the past. Students' world is increasingly technological. Further, in their everyday lives students are confronted with the effects of both well-considered and ill-considered technological decisions. Students need to develop the capacity to analyse such decisions and their consequences. Without systematic study of technology (e.g. its history, systems, and infrastructure) students will not be equipped to make sense of their increasingly technological world and to engage with it knowledgably and productively.

4. The limitation of technology to "multidisciplinary perspectives" is inappropriate. This point is in part related to the two above, namely the increasingly technological world and the limited community understanding of technology and in part to the increasing demands on teachers to incorporate many additional emphases in their teaching and assessment of students. Firstly, the number of teachers who can effectively engage in with incorporating a technological perspective in their teaching is currently very limited; secondly, it is quite unrealistic, in this context, to expect all teachers to be able to incorporate in the curriculum not only ICT and design and creativity, but also civics and citizenship, environmental sustainability, business and a wide range of generic skills. Thus, while there are multidisciplinary dimensions to the study of technology, the limitation of Technology Education to a "multidisciplinary perspective" is inappropriate. It must remain an area of study in its own right.

5. Australia needs to invest systematically in Technology Education As indicated above, Technology Education is an essential component of any contemporary core curriculum. In this context, the approach should be to invest in the area, rather than to relegate it to a "perspective". ATSE therefore supports strongly an increased investment in both preservice and inservice teacher education, to ensure that both individual students and society as a whole benefit from students' exposure to this area of study.