commentary

# Transversal competencies in the Australian Curriculum

By Leonie McIlvenny

... workers of the future will spend more time on activities that machines are less capable of, such as managing people, applying expertise and communicating with others and less time on predictable physical activities and collecting and processing data.



# **Biography**

Leonie McIlvenny has been an educator for over 35 years. Initially a primary school teacher, then teacher librarian, Leonie has taught in primary and secondary schools in the public and private sectors in Western Australia. During her career, she has been a curriculum consultant, online course developer, library consultant and ICT project manager for the Western Australian Education Department. Leonie was a project officer for the

Teaching Teachers for the Future project at Curtin University and also lectured in digital literacy and inquiry learning for pre-service teachers. Her interest in information and digital literacies and digital badges was the driver behind such projects as **Studyvibe**, the **Research Safari**, **My Digital Passport** and the **UN SDG Digital Passport Challenge**.

#### **Abstract**

The term transversal competencies is gaining traction as a way of describing that hard-to-define cluster of skills, often referred to as 'soft skills' or '21st century skills'. So, what are these skills, where can we find them in the curriculumand why is it important that we teach them? This article discusses the importance of these skills, not only within an educational context but also within the changing world of work. It also highlights the importance and imperative of, and responsibility for, ensuring these skills continue to be strategically and systematically embedded in the Australian Curriculum.

#### Introduction

'Skills have become the global currency of 21st century economies' (UNESCO, 2015). 'The globalisation and internationalisation

of the economy along with the rapid of information development and communication technologies (ICT) are continuously transforming the way in which we live, work, and learn' (Voogt, 2012). According to McKinsey (2017), workers of the future will spend more time on activities that machines are less capable of, such as managing people, applying expertise and communicating with others and less time on predictable physical activities and collecting and processing data. The skills and abilities required will also shift to more social and emotional skills and more advanced cognitive abilities such as logical reasoning and creativity.

Various terminologies are currently used to 'capture, compartmentalise and name' this shifting cluster of competences (Gonski, 2018) including '21st century skills', 'key

competencies', 'soft skills', 'employability skills' and 'entrepreneurial skills'. The term, transversal competencies (TvCs), while not new, is re-emerging as a popular way of describing these broad-based skills, knowledge and understandings.

'Every student needs to be equipped with the skills and knowledge to navigate a rapidly changing world' (Gonski, 2018).

As the recognition that this hybrid skill set is becoming essential (Redecker et al., 2011), so too is the pressure placed on educational institutions to respond accordingly. UNESCO's Transversal Competencies in Education Policy and Practice Report (2015) suggests that education policies and curricula must aim to incorporate a broad range of skills and competencies necessary for learners to successfully navigate the changing global landscape and the curriculum needs to ensure that students develop attributes and skills necessary for a rapidly changing society and workplace (UNESCO, 2015, p.1).

To establish the extent to which school systems are already doing this, UNESCO examined how 10 different countries in the region, including Australia, define and apply 'non-academic' skills in their education policies, practices, and curriculum frameworks (UNESCO, 2015 p.

1) and all but one used an **analytic** approach to the development of TvCs, which was facilitated through a cluster of learning areas or learning experiences, that is, the learning of TvCs runs across, infiltrates and/or underpins all 'vertical subjects' or traditional school subjects.

# TvCs in the Australian Curriculum?

'The Australian Curriculum identifies seven capabilities that play a significant role in equipping young Australians to live and work successfully in the twenty-first century' (ACARA 2017c).

With regard to the Australian context, there is significant evidence to suggest that within the Australian Curriculum the *General Capabilities* provide the main mechanisms and structure for developing TvCs:

1.UNESCO's report on TvCs states that they are referred to as 'general capabilities', which are 'embedded in the content of different learning areas' (2015, p. 21) and that 'the Australian Curriculum implicitly and explicitly includes transversal competencies in every educational activity. To this end, the Australian Curriculum provides detailed information on each capability and how it can be adopted across each subject' (UNESCO, 2015. p. 1) (Table 1).

June 2019 ACCESS

ommentary commentary

- 2.Gonski in the Report of the Review to Achieve Educational Excellence in Australian Schools (2018) uses the term 'general capabilities', as they refer to a 'clear list that has been nationally agreed and established as part of the Australian Curriculum' (Gonski, 2018, p. 74).
- 3. Voogt's (2012) comparative analysis of skills frameworks made a number of recommendations for ensuring transversal or 21st century competencies were included in the Australian Curriculum.

Table 1 identifies how the General Capabilities from the Australian Curriculum support and reflect these recommendations.

Table 2 compares the UNESCO *Transversal Competencies* and the General Capabilities to see where the commonalities lie. While the category name may be slightly different, there is no doubt about the overlap of the various skills and competences. The numbers next to each skill indicate the frequency with which the skill is referred to within the Australian Curriculum.

# Challenges to the integration of TvCs in the Australian Curriculum

There appears no doubt from the evidence provided, that the Australian Curriculum addresses many, if not all of UNESCO's TvCs. Having them articulated in the curriculum and actually implementing them, however, are two very different things.

Table 1

#### AC Response taken form the AC website Recommendations The development of an operational definition for each of the 21st century competences is required to determine "The General Capabilities are presented as learning what should be expected from students at different age continua or sequences that describe the knowledge, levels in terms of knowledge, skills, and attitudes. This skills, behaviours and dispositions that students can operational definition can inform the develop of meant a reasonably be expected to to have developed by the pedagogical continuum for planning and assessing the end of particular years of schooling." (ACARA, 2017c) learning of 21st century competences across age levels and subjects. (Voogt et al. 2011) Connections between core subjects and 21st century "In the learning areas of the Australian Curriculum, general competences should be clearly identified through the capabilities are identified, using icons, where they are introduction of interdisciplinary themes, which reflect developed or applied in the content descriptions. The General Capabilities in the Australian Curriculum contemporary societal issues documents explain how each learning area addresses all the general capabilities."(ACARA 2018) The ICT literacy competencies (i.e. information literacy, ICT capability supports and enhances student learning across ICT skills, and technological literacy) should be all areas of the curriculum. Students develop and apply ICT embedded within and across the other 21st century knowledge, skills and appropriate social and ethical protocols and practices to investigate, create and communicate, as well competences and core subjects as developing their ability to manage and operate ICT to meet their learning needs. The development of national frameworks containing The general capabilities play a significant role in the clear-cut definitions of 21st century competences which Australian Curriculum in equipping young Australians to live include strategies to support and regulate its and work successfully in the twenty-first century. implementation and assessment are needed. Moreover, In the Australian Curriculum, capability encompasses this framework could explicitly describe the emphasis of knowledge, skills, behaviours and dispositions. Students 21st century competences across educational levels confidently, effectively and appropriately in complex and develop capability when they apply knowledge and skills and the multiple contexts associated to their changing circumstances, in their learning at school and in assessment. their lives outside school.

The UNESCO Report identified three major challenges facing educational institutions in their efforts to address Transversal Competencies: Definitional, Operational and Systemic (Table 3).

A major challenge associated with the implementation of 21st century competencies or TvCs concerns their assessment. Gonski (2018, p. 77) suggests that one reason for the lack of support surrounding the general capabilities is that there is no consistent method of assessment, apart from literacy and numeracy. Many scholars also agree that there are few research-based tools or assessment models for use in education settings that facilitate the assessment of 21st century/ transversal competencies. Institutions tend to focus on the measurement of discrete knowledge rather than the more complex competencies of problem solving, critical thinking and communication, which require students to complete complex tasks applied to real-world situations. Moreover, learners need to be given the opportunity to practise and demonstrate these competences across multiple settings and diverse situations (Hipkins *et al.*, 2005) which, in most educational settings, is difficult to achieve

Table 2: Key skills and competencies from the UNESCO Transverse Competencies Framework and General Capabilities from the Australian Curriculum

Note: Brackets indicate how many times the term is cited on the Australian Curriculum

UNESCO TVC	Key Skills and Competencies	Australian Curriculum General Capability
Critical Innovative Thinking	creativity (53), entrepreneurship (55), resourcefulness (3), application skills 1104), reflective thinking (449), decision-making (1282)	Critical and Creative Thinking
Interpersonal Skills	presentation skills (1312), communication skills(1777), leadership (64), organisational skills (1138), teamwork (37), collaboration (155), initiative (90), sociability 1046), collegiality (86),empathy (83), compassion (7)	Personal and Social Capability
Intrapersonal Skills	self-discipline (637), independent learning (1651), flexibility (860), adaptability (19), self-awareness (880), perseverance (3), self-motivation (606), compassion (7), integrity (14), risk-taking (527), self-respect (900), sense of belonging	Personal and Social Capability
Global Citizenship	awareness (2163), tolerance (9), openness (20), respect for diversity (634), intercultural understanding (2611), conflict resolution (99), civic / political participation (190), respect for the environment (950), national identity (1080)	Intercultural Understanding
Media and Information Literacy	accessing information (2667), locating information (2704), communicating ideas (2177), participating in democratic processes (1039), analysing information and media (3468), evaluating information and media content (3011)	ICT Capability Critical and Creative Thinking

June 2019 ACCESS

June 2019 ACCESS

given the current timetable structure and subject-siloed learning that occurs in schools.

PISA (OECD) has developed a test for collaborative problem-solving, (Griffin & Care, 2015), and information and communications technologies skills are addressed by ECDL (ECDL, 2016; Claro et al., 2012; Fraillon et al., 2014); however, there is no current mechanism in place to use these on a wide scale in Australian schools or to address the other hard-to-measure competencies. The challenge, then, involves the development of new assessment procedures and instruments that:

- a) create opportunities to apply these competences in authentic contexts, and
- b) facilitate the collection of evidence across multiples contexts about the learner's application of the competence (Pepper, 2011).

# **Teacher expertise and proficiency**

Another challenge related to the teaching of TvCs is teacher expertise and proficiency. According to the P21 and the EU frameworks, the acquisition of 21st century competences requires specific pedagogic techniques, such as problem-based learning, cooperative learning, experiential learning, and formative assessment as well as a comprehensive application of ICT (cf. Dede, 2000). Gonski supports this by suggesting that teaching and assessing the general capabilities, particularly in an embedded form, is a highly complex task requiring teachers to have a sound understanding of how to teach these capabilities and to interweave their teaching into different learning areas. (2015, p. 40). Therefore, significant changes need to be made in the curriculum, not only to accommodate 21st century competences, but also the new pedagogical practices and assessment procedures required as a result of their inclusion.

Table 3: Challenges to the implementation of Transverse Competencies into the Australian Curriculum

#### Challenges to the implementation of **Transversal Competencies into the Curriculum Definitional** Operational Systemic ·Lack of assessment mechanisms ·Large class size ·Lack of, or a vague definition of ·Insufficient teaching/ learning ·Overloaded curricula transversal competencies in policy documents, such as education plans materials and teaching guides Pressure to achieve academic ·Lack of incentives success and curricula. Insufficient capacity of teachers ·Lack of clarity in scope of Inconsistency with high-stake exams ·Lack of budget (policy-budget ·Lack of understanding among transversal competencies inconsistency) parents and other stakeholders ·Lack of clarity in the desired Additional burden on teachers ·Overall school/ community culture outcomes of the teaching of transversal competencies

# **Solutions**

Around the world, a number of education systems are offering project and problembased 'real-world' learning experiences that go beyond the classroom environment. including working with local businesses or facilitating arts and film projects in local communities. These learning experiences are designed to develop enterprising and career management skills that are portable in the future of work and instil in young people the enthusiasm for ongoing learning that will be critical for the future success (OECD, 2014).

For example, Assessment of Transversal Skills 2020 (ATS2020), a project of the European Union, was designed to provide a comprehensive learning model for the enhancement of student transversal skills within curricula and introduce new approaches and innovative tools for the development and assessment of these skills. The project consortium consisted of 17 partners from 11 EU countries, and involved over 1000 teachers.

The project was designed to develop a validated model for student learning and transversal skills assessment based on:

- Age-suitable transversal competences;
- National curricula;
- Student-centred approaches for learning;
- Scaffolding tools for innovative instruction and assessment:
- Use of ePortfolios as an assessment tool to capture evidence of student achievement of TVCs and innovative teaching/learning approaches; and
- Digital environments and tools to tap technology affordances (for example,

ePortfolio, learning analytics, social networks, assessment rubrics).

The project culminated in a final conference in February 2018. There are extensive materials available for review on their website for those interested in the ATS2020 approach (www.ats2020.eu).

# So, here is a question for you ...

'Why, in a time where there is mounting evidence and pressure to develop these TvCs, are schools removing or not replacing their teacher librarians and resources teachers who are ideally placed to help schools ensure this imperative is addressed?'

## Consider this ...

- Information literacy is one of the five TvCs identified by UNESCO:
- Teacher librarians (TLs) and resource teachers have been delivering inquirybased learning programs for decades;
- Formative assessment is an essential part of any information literacy skills program due to the developmental nature of inquiry learning;
- The very nature of the work of TLs requires a collaborative, integrated approach to curriculum, across different learning areas and contexts;
- TLs have extensive knowledge of the curriculum content across all learning areas:
- Inquiry-based learning lends itself to the development of critical and creative thinking skills, use of digital technologies, collaborative learning and many of the other TvCs; and
- The library's physical and virtual learning environments encourage and nurture independent and collaborative learning.

June 2019 ACCESS

commentary

creative thinking, entrepreneurial skills (through Makerspaces, robotics et cetera) and much more.

The TvCs have been identified as reflecting, in particular the *General Capabilities* from the Australian Curriculum, and many TLs have mapped their library programs to these very skills and competencies. The knowledge and experience TLs bring to the table in this challenge should not be ignored but harnessed and the library program could actually become the platform from which a strategic initiative to address these competencies could be launched. The library program could further be harnessed as an incubator for programs that more strategically address the competencies described in this paper.

# A call to action

As always, these papers do not have a conclusion, but more offer a call to action. Might I suggest the following:

- The school library community develop its own position paper on TvCs and where we as a profession can support or even champion their development. This must begin with a common understanding of what these competencies are and where they sit within the curriculum and the teaching and learning program;
- Identifying those TvCs we have a natural relationship/affinity with;
- The development of a strategy that shows how the library program can and does support the development of TvCs;
- The development of a curated list of support documents, resources, initiatives and programs to assist in this endeavour, for example, ATS, 2020; and
- The development of a plan for how TLs can engage with their school

communities to begin a dialogue in this area.

# A final quote ...

'Inquiry approaches are highly dependent on the knowledge and skills of the teachers engaged in trying to implement them. Teachers need time and a community to support their capacity to organise sustained project work. It takes significant pedagogical sophistication to manage extended projects in classrooms so as to maintain a focus on doing with understanding rather than doing for the sake of doing.' Barron and Darling-Hammond (2010).

I would suggest that as information specialists, TLs are well placed to address these challenges which can be extrapolated to include all of the TvCs discussed in this paper — if not as a leader, then most definitely as a catalyst for change. The question is, who will pick up the gauntlet?

### References

Australian Curriculum, Assessment and Reporting Authority (ACARA) 2018, Australian Curriculum General Capabilities. Available at: https://www.australiancurriculum.edu.au/f-10-curriculum/general-capabilities/Barron, B & Darling-Hammond, L 2010, 'Prospects and challenges for inquiry-based approaches to learning' in H Dumant, D Istance & F Benavides (eds), The nature of Learning: Using Research to Inspire Practice, Education Research and innovation, OECD Publishing, Paris. Available at: http://dx.doi.org/10.1787/9789264086487-en

Choo, S, Sawch, D & Villanueva, A 2012, Educating for twenty-first century global capacities, Studies in Educational Innovation, New York, NY. Available at: http://www.globalsei.org/global-research

Claro, M, Preiss, DD, San Martín, E, Jara, I, Hinostroza, JE, Valenzuela, S et al. 2012, 'Assessment of 21st century ICT skills in Chile: Test design and results from high school level students', *Computers & Education*, vol. 59, no. 3, pp. 1042–1053. Available at: http://dx.doi.org/10.1016/j.compedu.2012.04.004.

Fraillon, J et al. 2014, Preparing for Life in a Digital Age: the IEA International Computer and Information Literacy Study International Report Available at: https://research.acer. edu.au/ict\_literacy/8

Foundation for Young Australians (FYA) 2019, Investing in Young Australians: Fact Sheet. Available at https://www.fya.org.au/wp-content/uploads/2019/01/FYA\_Campaign\_National-FS\_07.pdf

Goodlad, J, Klein, F & Tye, K 1979, 'The domains of curriculum and their study', in JI Goodlad & Associates *et al.* (eds), *Curriculum Inquiry: The study of curriculum practice* McGraw Hill, NY, pp. 3–76.

Gonski, D et al. 2018, Through growth to Achievement: Report of the Review to Achieve Educational excellence in Australian Schools, March 2018, Commonwealth of Australia.

Griffin, P & Care, E (eds) 2015, Assessment and teaching of 21st century skills. Available at: http://link.springer.com/book/10.1007/978-94-017-9395-7

Hipkins, R, Boyd, S & Joyce, C 2005, Documenting learning of the key competencies: What are the issues? A discussion paper, Wellington New Zealand Council for Educational Research.

McIlvenny, L 2018, *Transversal Competencies* (website). Available at: https://transversalcompetencies.weebly.com

McKinsey Global Institute 2017, Skill Shift: Automation and the Future of the Workforce. Available at: www.MGI-Skill-Shift-Automation-and-the-future-of-the-workforce-May-2018.ashx

OECD 2014, Skills beyond school: Synthesis Report, OECD Reviews of Vocational Education and Training, OECD Publishing.

OECD 2012, 'PISA 2012 Results: Creative problem Solving', *Students' skills in tackling real-life problems*, p. 124. Available at: http://www.oecd.org/pisa/keyfindings/pisa-2012-results-volume-v.htm

Pepper, D 2011, 'Assessing Key Competences across the Curriculum — and Europe', European Journal of Education Special Issue: Key Competences in Europe, vol. 46, no. 3, pp. 335–353.

Rand Corporation 2012, *Teaching and Learning 21st century Skills.* Available at: http://asiasociety.org/files/ramd-1012repot.pdf

Voogt, J & Pelgrum, H 2005, 'ICT and curriculum change', Human Technology; an Interdisciplinary Journal on Humans in ICT Environments vol. 1, no. 2, pp. 157–175.

Voogt, J & Roblin, NP 2012, 'A comparative analysis of international frameworks for 21st century competences: Implications for national curriculum policies', *Journal of Curriculum Studies* vol. 44, no. 3, pp. 299–321.

UNESCO 2015, Asia-Pacific Education Research Institutes Network (ERI-Net) regional study on: transversal competencies in education policy and practice (Phase I): regional synthesis report. Available at: https://unesdoc.unesco.org/ark:/48223/pf0000231907

12 June 2019 ACCESS June 2019 ACCESS 13