

Appendix 01



Case-study
profiles

01. Micro-credentials to certify the achievements of Big Picture Education Australia graduates

Organisation

Big Picture Education Australia (BPEA), in association with the University of Melbourne

Aspiration

Big Picture Education Australia's key goal is to address the lack of relevance and engagement that many young people are experiencing in education; to help students from all walks of life to experience learning that is free from the constraints of timetables, subject offerings and pre-determined curriculum; to connect with opportunities to explore their interests in the wider world outside the classroom; to nurture aspiration; to accrue practical experience and social capital; and to make successful transitions to post-school life.

BPEA is part of an international network that originated in the United States in 1997 and now has members in the United Kingdom, New Zealand, Canada, Italy, The Netherlands and Israel. Building on 20 years of research and experience in Australia and overseas (<https://www.bigpicture.org.au/research-projects>), the BPEA design for secondary schooling has re-designed the 'grammar' of schooling, from pedagogy, curriculum and organisational culture, through to assessment and now graduation credentials.

In Australia, BPEA does not run schools, but works with education systems to implement its design, either on a whole-school basis or as an academy within a mainstream school for students from Years 8 to 12. The design offers a set of 12 Distinguishers that describe the values, structures, relationships and learning practices that define a Big Picture campus.

All students develop their own learning plans with guidance from their advisor and family that allows them to experience learning that is intrinsically motivating. Research has shown that passion-based learning and increased student autonomy can increase engagement, motivation and perseverance, while also developing positive qualities, including independence, self-regulation and confidence. Interest comes first; projects are then developed around this interest and the learning is mapped to five learning goals and to the national curriculum.

Students belong to small, supportive learning communities known as an Advisory, with a single teacher and 17 students. While each student is unique, they are not alone. They work both as a group and individually, on social-action and personal-interest projects. They also pursue internships in the community with an expert mentor who can introduce them to the latest thinking and technology in a field of interest.

BPEA's approach is strengths-based and uses capability-based assessment via portfolio and exhibition to allow students to demonstrate what they can do and how they have changed over time. Students are also formally encouraged to reflect on their learning regularly and to plan where to go next. The emphasis on inclusion is also apparent within the BPEA design; each student feels 'known' and respected, thus enhancing student wellbeing. BPEA schools have a track record of generating high-performing learners who display 21st-century competencies, such as teamwork, problem-solving, commitment to social justice and lifelong learning.

There is growing recognition of the BPEA approach, with over 14 universities around Australia participating in its Graduation Portfolio program. As part of this program, BPEA students can apply for undergraduate entry in fields of deep interest on the basis of the evidence in their Graduation Portfolios that they present to a university panel. Vocational training providers and employers are also accepting BPEA graduates based on a testimonial of competence provided by their BPEA school, backed with evidence from their Graduation Portfolio and Exhibition.

As interest and participation in the BPEA approach grows, the BPEA Board and school leaders have recognised that their challenge is to scale their efforts. Their aspiration is to formalise their certification system, to provide a widely recognised and trusted warrant of each learner's achievements.

In partnership with the Assessment Research Centre (ARC), BPEA is designing a Certificate, or Learner Profile, to provide a representation of the accomplishments of each learner, built from micro-credentials linked to evidence, referenced to external standards and in a form that is easily understood by tertiary education providers, employers and the learners themselves.

What is being assessed?

The BPEA design is centred around five Big Picture Learning Goals that underpin its education philosophy: Empirical Reasoning, Social Reasoning, Quantitative Reasoning, Communication and Personal Qualities. A core set of six micro-credentials relating to complex capabilities are in development. The five Learning Goals are each conceptualised as a complex capability and a sixth capability, Knowing How to Learn, has been included.

Draft learning progressions for three competencies – Empirical Reasoning, Social Reasoning and Knowing How to Learn – have been designed and are undergoing psychometric testing. The progressions are developmental, each typified by a series of behavioural indicators that can be performed at four or five levels of proficiency.

Who is being assessed?

Big Picture students in Years 9 to 12 will be assessed regularly. The assessment schedules may be personalised for each student, coinciding with significant learning episodes. Assessments will be guided by the learning progressions for the six micro-credentials, drawing on learners' Graduation Portfolios and Exhibitions as evidence of levels of performance.

Stakeholders

The primary stakeholders for this initiative are universities, training providers and prospective employers. The micro-credentials will be also of interest to parents, carers and extended family, who will be able to track learning progress on each micro-credential over the course of secondary schooling.

Standards referenced

The learning progression levels within each micro-credential will be referenced to common standards linked to the Australian Core Skills Framework (ACSF) and the Australian Qualifications Framework (AQF).

This will provide a 'currency' that enables the scope and nature of the micro-credentials to be understood in terms that are familiar to stakeholders.

How is it being assessed?

A key feature of the BPEA design is that students compile evidence of their learning in a Graduation Portfolio. The evidence focuses on authentic learning in context. A framework for the development of the Portfolio is provided to students and includes elements such as a Senior Thesis based on an independent project, an Internship Project, an Autobiography, products and feedback from a series of exhibitions, a Social Action Project and a Post-School Plan.

Typically, the Graduation Portfolio is developed over three years (Years 10–12), during which students regularly present and defend their work at 'checkpoint' exhibitions before a panel that may include their Advisory teacher, mentors, the principal, a family member and peers. The panel members provide feedback and evaluate the student's progress using the learning progressions for the six micro-credentials. Prior to graduation, the students present their curated Graduation Portfolio and hold a final Graduation Exhibition, where their accomplishments are evaluated rigorously by a panel that may include teachers, the principal, an academic, a trainer and an employer from the student's area of interest.

Final judgment on the level a student has reached on a micro-credential progression depends on an accumulation of assessments and evidence drawn from a range of sources integral to the student's learning, moderated by a range of assessors. To ensure the comparability, reliability and validity of the assessments, a suite of training resources, procedural manuals and exemplars are being developed. These materials will also support the accuracy of calibration to the external standards.

Nature of the micro-credential

At graduation, each student will receive a Big Picture Learner Profile, which will provide a rich representation of their development in the capabilities. The Learner Profile will represent the student's final level of achievement against each of the micro-credentials, linked to evidence from their Portfolio and referenced to external standards reflecting the AQF and ACSF. The Learner Profile may also include other relevant achievements of the student, some of which may be represented in credentials that have been certified by other reputable bodies.

The Learner Profile will be presented in digital form, enabling each micro-credential to be linked to evidence drawn from the student's Portfolio. To support the interpretations of stakeholders, metadata will be included, providing information on the capabilities developed, linkages to the external standards and how, when, where and by whom assessments were conducted.

BPEA will be the issuer of the Learner Profile. The University of Melbourne, through the ARC, will calibrate and warrant the assessments made against the six micro-credentials, to ensure the quality and trustworthiness of the Learner Profile.

Technology support

In the design and management of the assessment and certification processes, ARC's RUBY digital assessment platform will support the work of teachers, school leaders, assessors and stakeholders.

The platform will support BPEA in:

- » the management of the set of micro-credentials, with associated progressions, behavioural criteria, exemplars and metadata
- » the management of student assessment data linked to the learning progressions, collected over time, from a range of assessors, using multiple sources of evidence and generated in a variety of learning contexts
- » moderation and processes to ensure the comparability of assessors' judgments

- » linking assessments to an evidentiary base captured in a student's digital Portfolio
- » drawing assessment information together into a Learner Profile, including generating metadata to support the interpretations of stakeholders
- » issuance of the Big Picture Learner Profile
- » regular maintenance and review of the certification system to ensure the credentials remain useful and trusted.

Micro-credential applications

The BPEA micro-credentials reflect the unique design, values and purpose of the BPEA approach to education. Although complex, these make visible, through learning progressions, the competencies that students are developing at school. The micro-credentials will provide a consistent, standards-based assessment framework that can be applied across the highly personalised learning programs of each Big Picture student. The design and the assessment model support the student's capacity to transfer these complex competencies across a range of domains and contexts through the completion of diverse tasks.

State of play

It is anticipated that the first round of Big Picture Learner Profiles will be issued to graduates in December 2020.

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02. Redesigning assessment specifications for the Graduate Diploma of Chartered Accounting

Organisation

Chartered Accountants Australia and New Zealand (CA ANZ)

Aspiration

A major challenge for 21st-century education in accounting is to ensure the continuing relevance of accountants in a workforce where many of the traditional functions of their profession have become automated. To add value to their workplaces, accountants are seeing the need to redefine their roles. In addition to being skilled in traditional accounting processes, they need to be proficient critical thinkers, problem-solvers, innovators, communicators and collaborators. Moreover, to meet present-day norms, their engagement with colleagues, clients and communities needs to be socially responsible and constantly adaptive to change. Perhaps the most valuable asset they can acquire, given the rate of social and technological change in the 21st-century, is a capacity for lifelong learning. Unpredictable developments, even those in the relatively near future, are likely to impact on their profession in ways that will require agile approaches to the acquisition of new knowledge and skills.

In response to these challenges, Chartered Accountants Australia and New Zealand (CA ANZ) are redesigning their Graduate Diploma program to incorporate a range of generic or professional skills and an emphasis on lifelong learning (CA X Program High-Level Design draft, 2019). This is a significant development that involves rethinking the CA program experience from the ground up as CA ANZ aims to provide greater relevance and value for its members and the community by responding to these changing market needs and technological trends. From a candidate perspective, this will involve undertaking case work with a real-world focus, through authentic situational challenges and simulations that effectively integrate generic or professional skills as part of the education program.

What will be assessed?

CA ANZ describes generic or professional skills as graduate attributes. Graduate attributes are characteristics that represent

the knowledge, skills and dispositions that graduates have and that they will continuously develop and demonstrate throughout and beyond their program of study. These attributes are not simply taught but developed through meaningful experiences and reflection. The new CA X program incorporates eight key graduate attributes:

1. Ethics and integrity
2. Critical thinking and judgment
3. Adaptive mindset
4. Accounting technical expertise
5. Communication
6. Collaboration and relationships
7. Problem-solving and decision-making
8. Digital and data acumen.

Who will be assessed?

The assessments will apply to candidates who enroll in the planned reimagined Graduate Diploma of Chartered Accounting, currently under development.

Stakeholders

The primary stakeholders of this initiative are CA ANZ students and members, accounting firms and businesses and organisations seeking to employ chartered accountants.

Standards referenced

The planned Graduate Diploma of Chartered Accounting is under development as a Level 8 qualification on the Australian Qualifications Framework (AQF). CA ANZ is a registered Higher Education provider and as such is required to comply with the Tertiary Education Quality and Standards Agency Act (TEQSA Act) and associated legislation, including the Higher Education Standards Framework (Threshold Standards) 2015. The Threshold Standards set out the requirements that a higher education provider must meet in order to be registered by TEQSA and operate in Australia. One of the requirements is that a provider must specify the learning outcomes of each course of study and that these learning outcomes encompass discipline-related and generic outcomes, including

generic skills and their application in the context of the field or discipline. CA ANZ is also a member of the Global Accounting Alliance (GAA). Therefore, the planned CA program must align with the GAA principles framework, which specifies requirements of a professional education program, including, for instance, assessment requirements and practical experience opportunities.

How will it be assessed?

A range of tasks, such as presentations, written reflections/reports and workplace simulations will be included to assess candidates' graduate attributes.

As part of the redesign process, the Assessment Research Centre (ARC) collaborated with CA ANZ to develop assessment specifications that describe:

- » the kinds of assessment that could be used to assess core technical knowledge and transferable generic or professional skills
- » how the assessments could be delivered (e.g. in person, online, at time points within each program module, etc)
- » the weightings to be allocated to different assessments
- » how the assessments would be marked (e.g. automated, marked by facilitator or assessor)
- » how academic integrity can be ensured.

State of play

The specifications for assessments were finalised in August 2019. The CA ANZ team is applying the specifications to the design of assessments for its planned Graduate Diploma.

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03. Micro-credentialing of Enterprise Skills in Gippsland, Victoria

Organisation

The Latrobe Valley Authority (LVA),
Victoria, Australia

Aspiration

Families, workers and businesses in the Latrobe Valley region (Victoria, Australia) have been experiencing work-related disruptions and challenges from the restructuring of long-standing local industries, due in part to the forces of globalisation, increased automation, low levels of educational attainment and other socio-economic factors, such as poor population health. The region has a population of approximately 73,000, 18.6 per cent of whom are over 64 years of age, which is slightly higher than the Victorian average of 15.6 per cent. Unemployment for those aged 15 years and over is running at 9.7 per cent, compared to a national average of 6.9 per cent.⁴⁰

The LVA has identified opportunities for growth in a number of industries, most notably health and community services, food and fibre, advanced manufacturing, construction, tourism and new energy production.

Through review of research on soft skills and employability skills as well as industry consultations with businesses and education providers, the LVA has identified that the 'enterprise skills' of jobseekers and the current workforce are misaligned with the expectations of employers, both now and for the future workforce.

Enterprise skills are not technical; rather, these require behaviours, values and attitudes that support successful participation in the workforce and help to stimulate social and economic development. These skills are transferable across a range of industries and professions and apply to multiple roles and occupations.

The LVA has been seeking to establish its own micro-credentials in enterprise skills for workers and graduates from any level of education, who are in transition between jobs and who need skills not recognised specifically in mainstream credentials.

What is being assessed?

The first step in the process was to conduct detailed consultations with employers and other stakeholders in the community, to identify transferable skills considered to be most important for successful participation in the workforce. The enterprise skills being assessed in the Phase 1 LVA trial project include the following:

1. Enterprise Collaborative Problem Solving, defined as how people work together to solve problems in order to reach common goals.
2. Enterprise Communication, defined as how people deliver and receive information so that intended messages are understood.

Who is being assessed?

This micro-credentialing initiative is anticipated to appeal to several groups of potential candidates. These include, for instance:

- » senior secondary students undertaking enterprise skills or related subjects in local secondary schools
- » TAFE students
- » active jobseekers, including the unemployed and under-employed
- » employees wishing to obtain credentials for skills they currently possess, for further career development purposes (eg. applying for a promotion).

Stakeholders

The primary stakeholders of this initiative are local industries, businesses and education providers. Key stakeholders who have been involved in the Phase 1 trial include:

- » Energy Australia
- » Engie Australia
- » Gippsland Water
- » Latrobe Regional Hospital
- » Drouin and Traralgon Secondary Colleges
- » Berry Street
- » Interchange Gippsland

- » Australian Paper
- » Best Match Recruitment
- » TAFE Gippsland
- » Flavorite Hydroponics
- » Warragul Community House
- » ArcBlue Consulting
- » State Government, Victoria
- » Federation University Australia
- » Broadening Horizons Gippsland
- » Gippsland Tech School.

Standards referenced

The progressions to be used as part of the assessment framework were co-designed with various stakeholders and are unique to the Gippsland context. These progressions – to be mapped to the Australian Core Skills for Work (ACSF) framework – are designed to meet the needs of current and emergent growth industries in the region.

How is it being assessed?

The enterprise skills are assessed through a range of assessment methods, namely 360-degree surveys, online quizzes and an evidence portfolio. Each method provides opportunities for candidates to demonstrate their competence to practically apply those skills. The trialing of these methods and associated tools will enable the validity and reliability of the overall assessment to be ascertained.

Nature of the micro-credential

Candidates who successfully complete the micro-credentialing process will receive an Enterprise Skills Profile. This Profile will illustrate their level of competence in each enterprise skill, mapped against the ACSF.

The LVA will be the issuer of the micro-credential. The University of Melbourne, through its Assessment Research Centre (ARC), will calibrate and warrant the assessments, to ensure that these have currency and are fit for purpose.

04. Assessment of Leadership Competence, Saudi Arabia

The micro-credential is expected to be endorsed by employers in Gippsland, who will use the credential as an indicator of the potential, suitability and capability of job candidates. Some employers are also proposing to use the profile as part of their HR profiles for staff.

Technology support

The micro-credential trial candidates registered online via a webpage specifically created for the trial. The associated assessments were delivered through the ARC-RUBY assessment platform, enabling the candidates and their 360-degree raters to complete these online.

Micro-credential applications

The micro-credential being developed covers treatment of transferability across learning areas, domains, disciplines and contexts.

State of play

During 2020, trialing and development will continue, with a focus on strengthening the skills progressions, exploring other important transition skills and expanding the repertoire of assessment methods to include performance-based assessments. Implications for further consideration include issues of currency, comparability, moderation and cross-institution recognition.

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Organisation

Ministry of Education (MoE),
Kingdom of Saudi Arabia (KSA)

Aspiration

In 2018–19, the Ministry of Education (MoE) in the Kingdom of Saudi Arabia (KSA) embarked on an extensive educational reform program, called *Kefayat* (Competencies), to equip schools and teachers with the capabilities needed to change their pedagogical emphasis, improve educational outcomes and equip every student with the competencies they will need to realise KSA's Vision 2030 goals.

The MoE's overarching goal with *Kefayat* was to change learning from a focus on content-based, subject-oriented, knowledge accumulation to an emphasis on developing competencies suitable for a post-industrial, knowledge society. These competencies included, for example, collaboration, problem-solving, creativity and critical thinking.

Consultants from the University of Melbourne (UoM), including those affiliated with the Assessment Research Centre (ARC), were tasked with providing professional development support to educators at different levels of the education system. *Kefayat* involved four consecutive trainee intakes: Tier 0 Champions, Tier 1 Coordinators, Tier 2 School Teams, and Tier 3 Schools.

This case-study profile focuses on the Tier 0 Champions, who were developed and supported by the consultants to lead the implementation of competency-based education (CBE) in KSA. The Tier 0 Champions were each assessed so that individualised feedback could be provided on the development of their CBE leadership capabilities.

What was assessed?

This aspect of the *Kefayat* project assessed the capabilities of Tier 0 Champions to lead CBE implementation in KSA. The assessment focused on identification and recognition of leadership qualities unique to CBE, including knowledge of CBE principles, modelling of aligned pedagogical approaches and cooperative teamwork strategies. The ability to articulate knowledge, describe experiences and provide supporting evidence to support claims was an important element of the assessment requirements.

Who was assessed?

The Tier 0 Champions were selected from a diverse group of educators, including principals, supervisors and classroom teachers. They were selected on the basis of their standing within the profession, interest and engagement with CBE and their ability to communicate in English.

Stakeholders

The key stakeholders in this project included:

- » the MoE of KSA
- » educators at different levels of the education system in KSA
- » students involved by association in *Kefayat*, i.e., their teachers were participants in the program
- » parents and carers involved by association in *Kefayat*.

Standards referenced

A progression was designed by the UoM consultants, in collaboration with MoE *Kefayat* personnel, to enable formative assessment of Tier 0 Champions' CBE leadership competence. This Leading CBE progression comprises four levels, each of which clarifies the expected level of competence.

Progression for Leading CBE

Level 4:

At this level, participants evaluate their own practice in a transparent manner and model a culture of challenge. They focus on developing the capacity of their team members' CBE understanding and practice while empowering them to make decisions about program implementation.

Level 3:

At this level, participants can justify their pedagogical approach using CBE principles. They help their team members to reflect on performance through open-ended questioning and feedback. They organise their team to promote collaboration and make team members accountable.

Level 2:

At this level, participants communicate deep understanding of CBE and connect it to Vision 2030. They allocate leadership responsibilities, decision making and tasks to team members based on an individual's skill set. They draw on evidence of their learning and discuss practices to enable professional development of themselves and others.

Level 1:

At this level, participants have strong knowledge of CBE. They describe its principles and can explain challenges with its implementation in the KSA. They use evidence to set their own learning goals and to provide feedback on the performance of others.

How was it assessed?

The assessment was conducted via an interview with two UoM consultants. The interview was designed to elicit evidence from each Tier 0 Champion demonstrating their respective levels of competence in Leading CBE. The assessment process involved the following steps.

1. The 30-to-40-minute interview took the form of a discussion led by the Tier 0 Champion, with the consultants providing prompts as necessary to help the Champion identify his/her Zone of Actual Development (ZAD) on the Leading CBE progression, using evidence.
2. Following the interview, the consultants discussed and arrived at a consensus judgment of the Champion's competence against the Leading CBE progression.
3. A report was issued for each Champion indicating their level of competence on the Leading CBE progression.

Nature of the micro-credential

Each Tier 0 Champion who completed the interview cycle received the report as well as additional formative feedback suggesting next steps in developing CBE leadership competence.

Technology support

The ARC-RUBY platform was used to facilitate assessment and reporting of the Tier 0 Champions' CBE leadership competence. The platform generated a summary of leadership competence and a progress profile for each of the Champions as well as an amalgamated report on all program participants.

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05. Assessing and reporting learning progress of Students with Additional Learning Needs (SWANs)

Organisation

The SWANs assessment tools were developed through a partnership between the University of Melbourne and the Victorian Department of Education and Training (DET), supported by two Australian Research Council Linkage grants. Both parties continue to collaborate, to support use of the assessment instruments in Victorian schools.

ABLES (Abilities Based Learning and Education Support) and Levels A to D of Towards Victorian Curriculum for students with disabilities and additional needs were built in conjunction with the development of SWANs. ABLES links the SWANs assessments to the Victorian Curriculum and are mapped to Levels A to D of Towards Foundation. The ABLES tools also provide supplementary resources to support teachers (e.g. professional learning modules, ABLES experts). For Victorian government schools, the SWANs instruments are embedded within the ABLES resources.

Where requested, the DET has given permission for other parties to use the ABLES curriculum resources to support their use of the SWANs assessment instruments. In Western Australia and (forthcoming) in South Australia, the instruments are mapped to the state-based, or Australian Curriculum, following the ABLES model. When packaged with this mapping, the instruments are called ABLEWA or ABLESA. In each of these versions, the SWANs assessment tools are maintained with full integrity, with the University of Melbourne hosting the online assessment and reporting tools for schools nominated by the system as well as providing system-level reporting.

The following is a list of Australian education systems, in addition to DET in Victoria, that have adopted the suite of instruments or are considering them, for implementation in their jurisdictions:

- » Western Australian School Curriculum and Standards Authority (ABLES)
- » South Australian Department of Education and Child Development (ABLES)
- » ACT Education Directorate (ABLES)
- » Northern Territory Department of Education (ABLES)

- » Queensland Curriculum and Assessment Authority (evaluation in progress) (ABLES)
- » New South Wales Department of Education (evaluation of suitability for NSW government schools is in planning stages) (SWANs)

Additionally, individual schools across Australia and New Zealand have implemented the SWANs tools, in cases where system support is unavailable or not applicable.

Aspiration

The SWANs project aimed to provide a resource of assessment, reporting and instruction for teachers of students with additional learning needs. This was in response to teachers citing lack of knowledge, time and resources to teach such students.

Existing curricula typically begin at a level that students with additional learning needs may have not yet achieved. For instance, the Victorian Curriculum begins at Foundation Level, targeting expectations of a child developing typically at approximately five years of age. However, many students with additional learning needs are yet to attain this level of learning. The SWANs suite of tools aimed to expand the targeted levels by developing a resource that would describe levels not present in the mainstream curriculum. In this manner, teachers could describe what students with additional learning needs are able to do, rather than what they cannot.

As a basis for instruction, the SWANs project developed assessments based on a learning progression. The assessments aimed to describe students' levels of learning and provide information about what they needed to learn next in order to progress. An environmental scan of other assessment systems revealed that assessments designed for students with additional learning needs were typically diagnostic. Moreover, these assessments were targeted at clinical specialists, such as psychologists, rather than teachers and their teaching.

By contrast, the SWANs and ABLES suite of tools are intended for use by teachers to support their classroom practices.

The aim is to provide a system of assessment and reporting, supported by instructional assistance, focusing on the foundational skills required by students to learn and access the Australian Curriculum.

What is being assessed?

The SWANs project developed assessments in foundational skills. The assessments cover eight domains of learning, targeting skills considered essential for accessing the general curriculum. The domains are:

1. Early literacy skills – using symbols to make and interpret meaning
2. Functional communication skills
3. Social skills and emotional understanding
4. Learning skills – attention, memory, organisation and executive functioning
5. Early numeracy skills
6. Thinking skills – understanding, imagination and reflection
7. Digital literacy
8. Movement problem-solving.

Who is being assessed?

The SWANs assessment tools target school-aged students (five to 20 years), who exhibit learning difficulties in any one or more of the assessed skills, with or without a formal diagnosis. It is up to the teacher to make judgments about which assessments are relevant for use with a particular student.

Stakeholders

The primary stakeholders of SWANs and ABLES are:

- » students with additional learning needs
- » their parents and carers
- » therapists and other personnel who support the students in their learning and schooling aspirations.

Curriculum and standards referenced

The SWANs component of the project carried out in partnership with the Victorian DET developed the underlying assessments based on learning progressions in each of the eight domains of learning. This includes the learning progression as well as the instructional strategies mapped to each level of learning. The ABLES component took the learning progressions and mapped these to the Victorian Curriculum (Levels A to D). This work was carried out in conjunction with the development of Towards Foundation by the Victorian Curriculum and Assessment Authority.

How is it being assessed?

Each of the SWANs assessments were developed as part of a PhD research project. The assessments underwent rigorous theoretical review and a series of workshops with subject-matter experts to develop a hypothetical, criterion-referenced framework. This was the basis for developing a set of assessment rubrics. The rubrics were then written as items in an online multiple-choice questionnaire. Each item went through a large-scale field trial with at least 500 students assessed. Assessment data from the trial was used to develop empirically derived progressions. These progressions were compared with the hypothetical framework and reviewed again by a panel prior to finalisation.

The results of the trial demonstrated that the assessments are highly reliable (both separation reliability and internal consistency). The resulting assessments are administered online and reports are generated based on calibration results and determined cut scores for each level of learning. The cut scores were set based on the empirical estimations of item difficulty and judgments made by subject-matter experts about distinct, qualitative transitions in skill from one level to another.

Nature of reporting

Several reports can be generated based on the assessment data. These include a learning readiness report, a profile report, a class report and a school report. The reports are targeted for teacher use to inform instructional planning and the school report is useful for informing school-wide implementation of strategies.

The learning readiness report includes a nutshell statement as well as an extended statement of the level within which a student is working. The nutshell statement summarises the main theme or quality of the level. The extended statement provides further detail of the level within which a student is working. In ABLES, links to the curriculum and curriculum descriptions are included. In the final part of the report for both SWANs and ABLES, instructional strategies are provided that are matched to the level of learning, to help progress a student from that level to the next.

The profile report presents a picture of one student's achievement across the domains of learning and across different time periods. The class report presents student achievement in one domain of learning, across different time periods, for one class or group. The school report clarifies growth over two years in one domain of learning, for all students assessed in one school.

Technology support

Presently, SWANs is housed in the University of Melbourne's Assessment Research Centre Online Testing System (ARCOTS).

State of play

In 2020, the SWANs instruments will be migrated to a new platform with the intent of upgrading the suite's technological capabilities. Improvement work is ongoing with the SWANs and ABLES resources.

Through feedback from stakeholders and monitoring of the system, continual adjustments are being carried out to ensure that these resources remain user-friendly. In addition, ongoing validation work is being undertaken to check reliability and generalisability over time.

In addition, plans are being developed to extend the various uses of SWANs, while maintaining its integrity and focus on being a tool for teachers. For example, it is serving as a basis for developing high-quality developmental assessment tools, for students of all abilities, in areas of learning typically deemed hard to assess.

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06. Assessing and micro-credentialing employability skills

Organisation

Beenleigh State High School,
Queensland, Australia

Beenleigh is a co-educational, Years 7–12 government secondary school in Queensland, located around 30km south of Brisbane city. According to 2018 figures from *MySchool*, the school enrolled 1621 students (838 boys, 783 girls). Of these, 1237 were high-school students, as the school has a Centre for Continuing Secondary Education attached to it. Overall, there were 211 staff (133 teaching staff). The school has an ICSEA (Index of Community Socio-Educational Advantage) value of 935, with 1000 being the average.

Aspiration

Beenleigh is part of the University of Melbourne Network of Schools (UMNOS), a network of over 100 schools from across Australia. UMNOS provides an opportunity for Australian schools to collaborate with the University's researchers and other schools around a shared commitment to improving student learning using evidence-based practices. Notwithstanding, each UMNOS member school commits to a program of school improvement unique to its specific vision and context. In 2020, key UMNOS focus areas include: assessing, teaching and digital micro-credentialing of complex competencies and general capabilities, such as communication, critical and creative thinking, social and emotional learning, entrepreneurship and ethical understanding; mastering formative assessment, reporting and developmental learning progressions; pedagogy for student voice and agency; improving student outcomes in reading and writing; and improving student outcomes in Mathematics.

Through UMNOS, Beenleigh has been working with the ARC at the University of Melbourne to construct a bespoke approach to assessing and micro-credentialing the development of students' complex competencies, specifically those related to work-readiness. This initiative commenced after the school identified a need to assess and micro-credential the employability skills of its secondary school leavers.

Beenleigh commenced implementation of its employability skills micro-credential in 2019. The school had begun to introduce the micro-credential opportunity in 2018 but was unable to develop a suitable rubric for assessment. By the end of 2020, the school is aspiring towards a state-wide pilot of this credential. Such a pilot is expected to be influential in drawing attention to the importance of recognising competencies essential for success in life and work, beyond traditional academic achievements and certifications.

What is being assessed?

Beenleigh commenced by conducting detailed consultations with the school community and community stakeholders, to identify the kinds of transferable employability skills considered essential for successful participation in the workforce. The school used a number of publications in the development of the micro-credential, including the Australian Curriculum general capabilities, the OECD's *Future of Education and Skills 2030* and QCAA's *21st-century Skills and the Employability Framework*. The employability skills being assessed by Beenleigh include the following.

1. Initiative and creativity, defined as comprising two indicative behaviours that can be performed at four levels of increasing complexity: i) generates ideas; ii) takes action.
2. Problem-solving, defined as comprising two indicative behaviours that can be performed at four levels of increasing complexity: i) uses strategies; ii) reflects on solutions.
3. Collaboration and teamwork, defined as comprising two indicative behaviours that can be performed at four levels of increasing complexity: i) collaborates with team members; ii) negotiates with team members.
4. Self-management, defined as comprising four indicative behaviours that can be performed at four levels of increasing complexity: i) set goals; ii) perseveres; iii) regulates emotions; iv) acts ethically.

Each of the four levels of increasing complexity map to a level statement. Collectively, the level statements form a learning progression. Further, each level statement corresponds to the level of micro-credential to be awarded, namely, Bronze, Silver, Gold or Platinum. An extract from the assessment framework, for the Bronze and Silver levels, is provided on page 44 as an illustration.

Who is being assessed?

This micro-credentialing initiative is intended initially for Beenleigh students. The school intends to make this credential available to other students in Queensland.

Stakeholders

Other than Beenleigh students and staff, the primary stakeholders of this initiative are parents, employers (such as local industries and businesses), education authorities and other education providers.

Curriculum and standards referenced

The assessment framework was co-developed with stakeholders. Though it is unique to the Beenleigh context, the framework is expected to have a level of transferability to other contexts, given that it references the Australian Curriculum general capabilities (specifically Critical and Creative Thinking and Personal and Social Capability) and ARC's Collaborative Problem Solving progression and rubrics, used widely in Australia and internationally.

How is it being assessed?

Beenleigh's employability skills are assessed through teacher, self and peer observations, guided by the assessment framework. The progression in the framework is hypothesised and further empirical work is required to validate and refine this progression.

The school has trialed the hypothesised progressions over two rounds: in Round 1, 165 students from Years 10–12 were involved; in Round 2, 104 students were involved. Some moderate improvements to clarity and precision of wording were made to the progression after each round.

As the assessments are based on observations, fairness, dependability, trustworthiness, subjectivity and bias are potential issues. The use of multiple assessors and observations of performances from a range of contexts is in part intended to address some of these issues.

Nature of the micro-credential

Students who successfully complete the assessment process will receive an Employability Skills micro-credential (badge) at Bronze, Silver, Gold or Platinum level. This credential will indicate their overall level of competence in the employability skills specified earlier. Beenleigh will be the issuer of the micro-credential. The school is also implementing and issuing other credentials within their ecosystem. These include Semper Altiora Credentials – Semper

Altiora is the school motto – that recognise student achievement or participation in the areas of Leadership, Community Involvement and Extra-Curricular, as well as Specialist Activity and Industry Badges that recognise specific industry-based skills in which students develop competence.

Technology support

Assessments are completed manually at present, using printed assessment frameworks, with potential for using technology in the future to simplify and expedite assessment and reporting processes. Technology will aid also with the micro-credential’s transferability across contexts.

Micro-credential applications

The micro-credential is specific to Beenleigh, but the assessment framework is sufficiently transferable across learning areas, domains, disciplines and contexts. The school is also recognising both student attendance and achievement within the credential.

State of play

Over two rounds of trials and refinement, the micro-credential has demonstrated adequate rigour for internal use. For broader rollout and recognition, issues of warrantability will need to be addressed in partnership with assessment experts and relevant education authorities. These include further work around instrument design, validation, comparability, moderation and cross-institution endorsements and recognition.

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INITIATIVE & CREATIVITY		PROBLEM SOLVING		COLLABORATION & TEAMWORK		SELF MANAGEMENT			BEENLEIGH HIGH SCHOOL SEMPER ALTIORA	
1.1 Generates ideas	1.2 Takes action	2.1 Uses strategies	2.2 Reflects on solutions	3.1 Collaborates with team members	3.2 Negotiates with team members	4.1 Set Goals	4.2 Perseveres	4.3 Regulates emotions		4.4 Acts ethically
1.1.1 Applies existing ideas to a new situation	1.2.1 Participates in available activities	2.1.1 Develops practical solutions	2.2.1 Demonstrates flexibility when choosing solutions	3.1.1 Contributes to team outcomes	3.2.1 Identifies that there are diverse perspectives	4.1.1 Sets achievable goals	4.2.1 Follows steps towards prescribed outcome	4.3.1 Recognises the influence of emotions on behaviour, learning and relationships	4.4.1 Identifies ethical responsibilities	BRONZE The student adapts to new situations practically with teams to solve problems. They set goals and persevere to achieve them. They are considered in their responses.
1.1.2 Investigates known ideas to produce a new perspective	1.2.2 Works independently and is self-reliant	2.1.2 Applies strategies to solve problems	2.2.2 Explains thinking behind selected solution	3.1.2 Fulfills defined role as part of a team	3.2.2 Distinguishes diverse perspectives through team interactions	4.1.2 Matches goals to learning needs	4.2.2 Devises strategies/plans to co-ordinate the achievement of challenging tasks	4.3.2 Manages and moderates emotional responses when expressing opinion, beliefs, values, questions and choices	4.4.2 Identifies and acts on behaviours that exemplify ethical values	SILVER The student is able to work independently and applies a range of strategies to solve problems as part of a team with varied perspectives. They develop needs based goals and reflect on their actions emotionally and ethically.

07. Victorian Aspiring Principal Assessment (VAPA)

Organisation

Bastow Institute of Educational Leadership, Victoria, Australia

Aspiration

The Victorian Aspiring Principal Assessment (VAPA) is a competency-based assessment initiated to support the development of principals for schools in Victoria, Australia. The brief for the assessment specified the need for it to be inclusive, equitable and encouraging for aspirants. In addition, the assessment should be context free, accessible to aspirants possessing different types and levels of experience, as well as capture varying levels of capability so that any educator in any school in Victoria could undertake and benefit from it.

The Department of Education and Training Victoria (DET) aims to promote excellence in leadership in schools, recognising quality school leadership as a key factor in lifting student outcomes. Yet, prior to VAPA, no assessment for aspiring principals existed.

The purpose of VAPA is to determine the current competencies of aspiring principals and subsequently determine their developmental needs for principalship. The assessment framework aims to represent a sample of expected behaviours in the five professional practice areas specified by the Australian Professional Standard for Principals. Identification of these behaviours was a key challenge, given that the behaviours needed to satisfy the expectations of all stakeholders.

What is being assessed?

Project collaborators determined that VAPA would be limited to skills and knowledge, with a separate measure for emotional intelligence. The skills and knowledge derived from the Australian Professional Standard for Principals have been categorised into:

1. Leading Teaching and Learning
2. Developing Self and Others
3. Leading Improvement, Innovation and Change
4. Leading the Management of the School
5. Engaging and Working with the Community.

Who is being assessed?

VAPA is available to all educators in Victorian schools. As of February 2020, the assessment is optional; those who undertake the assessment receive a report and feedback but no formal credential.

Stakeholders

The key stakeholders who will benefit from VAPA include:

- » DET
- » Catholic Education Melbourne
- » Independent Schools Council of Australia
- » Aspiring principals.

Standards referenced

The VAPA framework is referenced against the Australian Professional Standard for Principals. It was developed in collaboration with relevant stakeholders, including members from:

- » DET
- » Catholic Education Melbourne
- » Australian Institute for Teaching and School Leadership (AITSL)
- » Experienced principals, both current and retired
- » Australian Education Union (AEU)
- » Australian Principals Federation (APF)
- » Department of Education and Training, Australian Government
- » Principals' Association of Specialist Schools (PASS)
- » Victorian Aspirant Principal Assessment (VAPA) Process
- » Victorian Association of State Secondary Principals (VASSP)
- » Victorian Principals Association (VPA).

How is it being assessed?

The assessment uses a range of methods to collect evidence to be evaluated against the VAPA Framework. The methods are a 360-degree Assessment, a Self-Assessment, a Portfolio and an Interview. The VAPA Framework comprises performance indicators and criteria describing levels of quality or complexity for each indicator.

Each assessment method assesses a selection of performance indicators. A lead assessor uses all the evidence collected to make an overall judgment on the aspiring principal's capability against the VAPA Framework.

The 360-degree Assessment gathers evidence of how well an aspiring principal typically applies their leadership knowledge and skills in their daily work, from the perspectives of those who work closely with them. The Portfolio is an opportunity for an aspiring principal to provide artefacts of their practice. The Interview provides an opportunity for assessors to clarify information from the 360-degree Assessment and the Portfolio.

Nature of the micro-credential and applications

VAPA has been designed to support potential credit transfer for nationally recognised qualifications within the Australian Qualifications Framework (AQF) and the establishment of related micro-credentials, if Bastow chooses to do so.

Technology support

Bastow currently collects data for VAPA through a customised online portal.

State of play

Bastow, in partnership with the Assessment Research Centre (ARC), has run a pilot and trial of VAPA. It is currently undergoing further consultations to obtain face validity with stakeholders. A plan is underway to undertake a validation study of VAPA that includes predictive validity.

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