

Learners

Educators

Associations

Employers



Micro-Credentials and Essential Academic and Career Skills

Measuring Learning Outcomes

Brought to you by:

Edalex

Credent*i*alate

CAE

Agenda

- Welcome and introductions
- Career readiness at QUT - ***Professor Kevin Ashford-Rowe***
- Measuring learning outcomes - ***Doris Zahner, PhD***
- The importance of personalised evidence - ***Dan McFadyen***
- Q&A

Our panel



Professor Kevin Ashford-Rowe

Pro Vice-Chancellor (Digital Learning), Academic Division, Education Portfolio, QUT

Professor Kevin Ashford-Rowe is institutional lead for digital learning at the Queensland University of Technology. He also leads the University's Learning and Teaching Unit. He has been an active participant in the Leading Change Institute since 2012. Kevin has a wealth of experience in strategic leadership, management, development and implementation of innovative and flexible education and training delivery at all levels of curriculum design, development and delivery.



Doris Zahner, PhD

Chief Academic Officer, Council for Aid to Education (CAE)

Dr. Doris Zahner is the Chief Academic Officer at CAE where she provides thought leadership and oversees all research and development studies pertaining to CAE's performance-based assessments. Dr. Zahner holds a PhD in cognitive psychology and an MS in applied statistics from Teachers College, Columbia University. In addition, Dr. Zahner is an adjunct associate professor at Barnard College and Teachers College, Columbia University and New York University.



Dan McFadyen

Managing Director, Edalex

Across the past 20+ years, 3 passions have driven Dan: shaping collaborative teams, evolving services businesses, and enabling innovation in education. Those passions have led him to key roles spanning 3 continents at Blackboard and Pearson as well as several start-ups. In 2016, he co-founded Edalex, developers of the Credentialate, openEQUELLA and openRSD platforms.

Tackling Career Readiness at QUT

- Work integrated learning (WIL)
- Identifying and recognising skills
- Industry alignment, relevant teaching applied research
- Educating for the workplace - University for the real-world
- How is the above playing out currently - and for the jobs of the future?

“Providing real world learning experiences and research solutions across a broad range of fields - with more than 50,000 students studying at our campuses”



**Queensland University
of Technology**

What is Required to Meet Future Need?

- If you had a magic wand - for both QUT and HE institutions - what is required to meet future need?

Frictionless Pathways for Learners in QLD

- Involvement in cross-sector working party aims to provide frictionless pathway for learners across all sectors in Queensland
- Why is this important and how is this progressing?

Solutions for Closing the Gap



About CAE

- A nonprofit whose mission is to **improve student learning outcomes**.
- Part of the **RAND Corporation** until 2005.
- CAE measures the essential success skills of **critical thinking, problem solving and written communication**.
- Over **800,000 students** at over **1,300 institutions** worldwide have been assessed through our performance-based assessments.
- CAE partners with Edalex to deliver **evidence-based microcredentials** of students' essential skills.



Ministry of
Education
and Culture



dhelo Assessment of
Higher Education
Learning Outcomes



UNIVERSIDAD
IBEROAMERICANA
CIUDAD DE MÉXICO



UNIVERSITY
of HAWAII
HILO



THE SITUATION


- **Critical thinking, problem solving, and written communication** are essential to academic and career success.
- Proficiency in these skills is **predictive of positive academic and career outcomes.**
- Yet, essential skills are **rarely explicitly taught or measured** by academic institutions.



- Today's **in-demand and emerging careers require these skills**, even if a traditional 4-year college degree is not required.
- Employers have a **lack of applicants who possess these skills**.



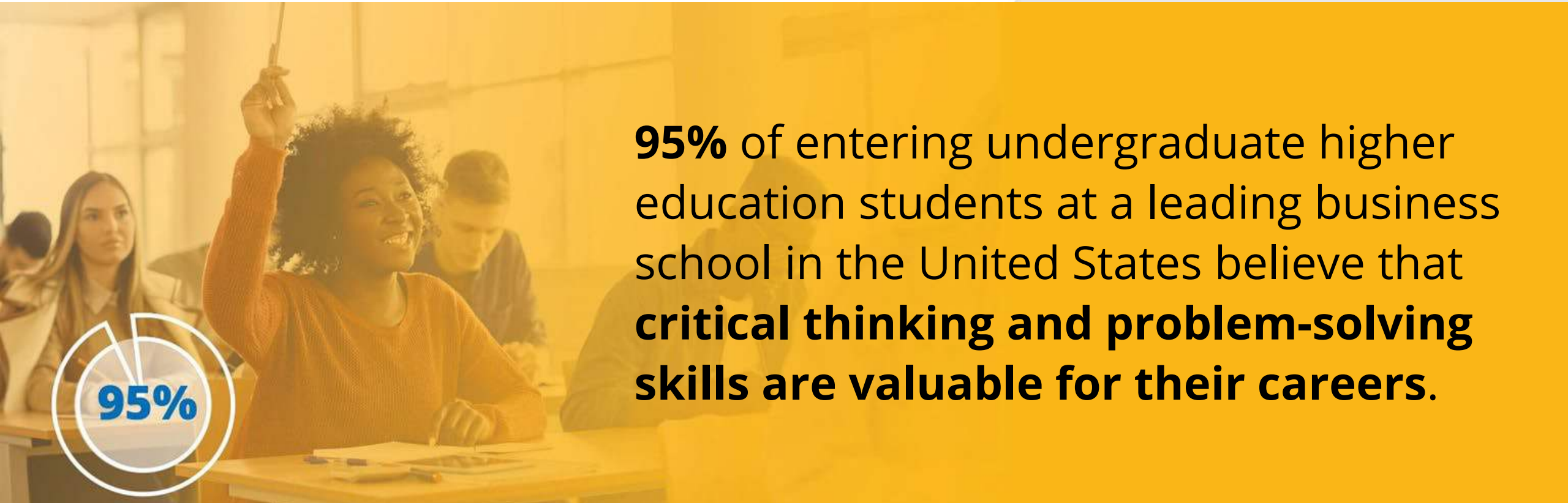
Importance of Essential Academic and Career Skills



Critical thinking and analysis, problem solving, teamwork, and communication through writing and speaking have consistently been ranked by employers as the most important skills over time.



AAC&U, How College Contributes to Workforce Success, 2021



95% of entering undergraduate higher education students at a leading business school in the United States believe that **critical thinking and problem-solving skills are valuable for their careers.**



Survey of 552 students entering a leading U.S. business school at a public university, Fall 2021

But there is a gap in what students and employers want and the current reality...



60% of hiring managers say that recent college graduates **do not have the necessary critical thinking** and problem-solving skills and 44% saying graduates **lack writing proficiency**.

But there is a gap in what students and employers want and the current reality...



60% of U.S. students entering colleges and universities are **not proficient** in critical thinking, problem solving, and written communication.



40% of existing students are **STILL not proficient** in these skills.

Essential Skills Are Predictive of Positive Academic & Career Outcomes

Students who perform better on CAE's higher education assessment are more likely to have:

- **Higher cumulative GPAs** at the end of their senior year (Zahner & Steedle, 2012)
- **Positive post-university outcomes** as measured by employment, salary, and graduate school enrollment (Zahner & James, 2015) as well as employer ratings (Zahner & Lehrfeld, 2018)

The Jobs of Tomorrow Require Skills that Students Need to Build Today



Data Literacy

Critical Reading & Evaluation

Critiquing an Argument

Writing Mechanics

Writing Effectiveness



Improving Academic and Career Skills

Authentic Assessments



Real-World Scenarios

Students are situated in real-world scenarios that require the application of critical thinking, problem-solving, and written communication skills.



Recommend a Solution

Using supplied reference materials, students must organize information, define the problem, address issues, consider and evaluate solutions, and recommend and defend a course of action.



No Single “Right” Answer

Student scores reflect a range of plausible and effective response strategies — a process that, by design, mimics real-world, decision environments.

Performance Task Example

Scenario: You were just hired as a consultant for the Eagle River Transit Authority. Recently, a severe storm hit Bayville and flooded the Blue Line commuter rail tunnel, which connects Bayville to the neighboring city of Carston. The flooding caused severe damage to the tracks and electrical systems, resulting in greatly reduced operations.

Options: The Eagle River Transit Authority is considering the following two plans for repairing the tunnel:

1. Complete shutdown of the Blue Line for three months
2. Partial shutdown of the Blue Line for seven months

Your Task: You are preparing for a meeting to decide on a repair plan. The Eagle River Transit Authority has provided documents for your analysis. Your task is to analyze all the information in the documents and write a memo recommending a repair plan. Use evidence from the documents to support your recommendation.

The composite image displays three documents related to the transit authority's situation. At the top left is a map showing the Blue Line commuter rail tunnel connecting Bayville and Carston, with various icons representing buildings, trees, and a river. To the right is a screenshot of the Eagle River Transit Authority website, which features a navigation menu and a section titled 'Alternative Means of Transportation' with sub-sections for Car, Bus, and Bicycle. Below these is an 'Impact Study' document with a table of data.

Impact Study

This study was commissioned in order to assess the issues facing residents of Bayville as the town considers the possibility of closing the Blue Line subway that connects us to Carston. Resources consulted included Transit Authority data, public polling, financial projections from the Chamber of Commerce, and financial modeling from a municipal consultant.

Populations

The people who will be affected by the potential closure of the Blue Line fall into three broad groups:	Average Number of Riders, per Week	Average One-Way Commute Time, before Hurricane	Average One-Way Bus Commute Time during Blue Line Closure
Weekday commuters from Bayville to Carston (6 a.m. to 8 p.m.)	86,100	29 minutes	62 minutes
Weeknight and weekend commuters from Bayville to Carston	36,400	35 minutes	83 minutes
Visitors from Carston to Bayville	15,767		

Case Study:



TEXAS A&M UNIVERSITY

Mays Business School

Goal: Improve the ability of students to think critically and problem solve, increasing academic success and preparing students to contribute on day one in the workforce.

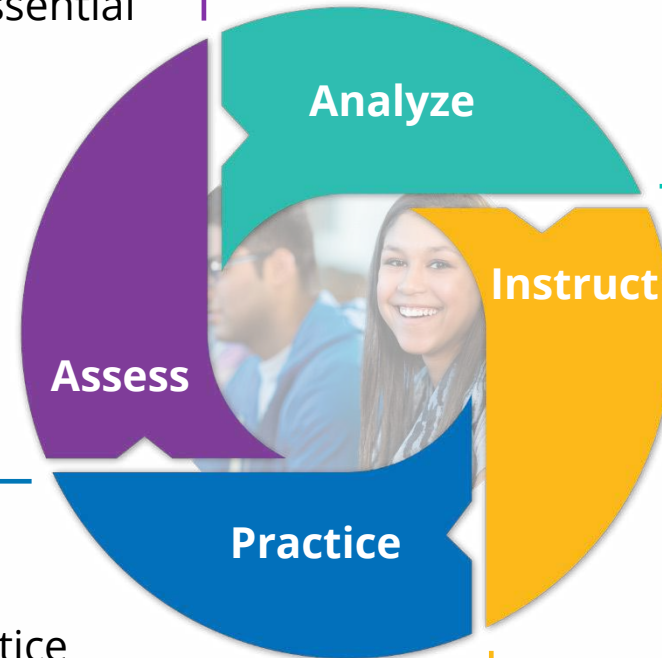
1. Assess incoming students to create a baseline and introduce students to the essential skills.

5. Re-assess exiting students and provide micro-credentials based on their mastery level.

4. Students practice applying each skill and subskill in a performance task over several weeks that aligns with instruction.

2. Review assessment data to determine specific areas to focus on class-wide and to identify students who may need additional support.

3. Provide critical thinking instruction.

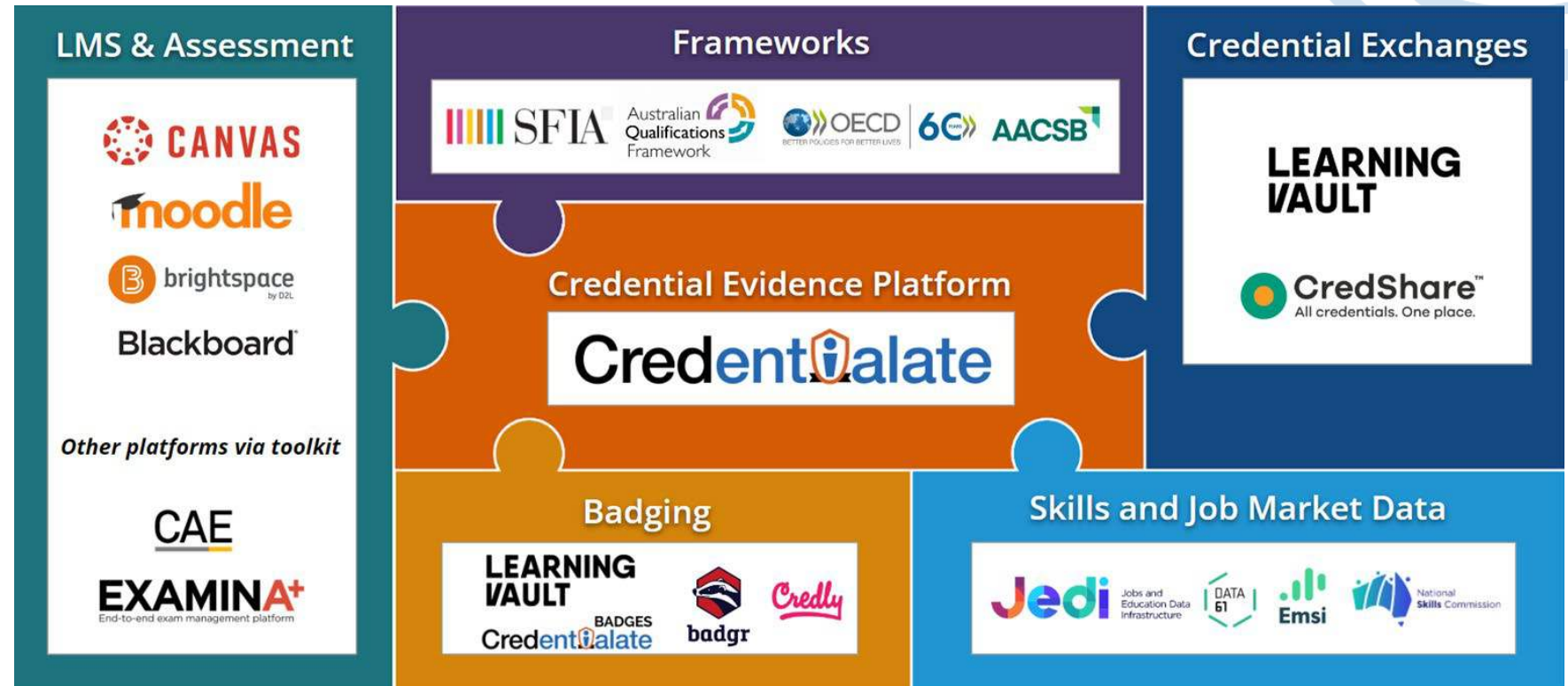


Summary

- Authentic, reliable, and valid assessments of students' **readiness** for higher education and career by helping them **improve** their essential skills.
- Instructional materials to **support skill development**.
- **Professional development** on using performance tasks and how to integrate essential skills instruction into existing curricula.
- **Microcredentials** are awarded for mastery of essential skills to help students **showcase** that they are **prepared for their next step**

Skills Recognition

Skills are the building blocks and translation piece between all stakeholders and sectors in the evolving skills ecosystem



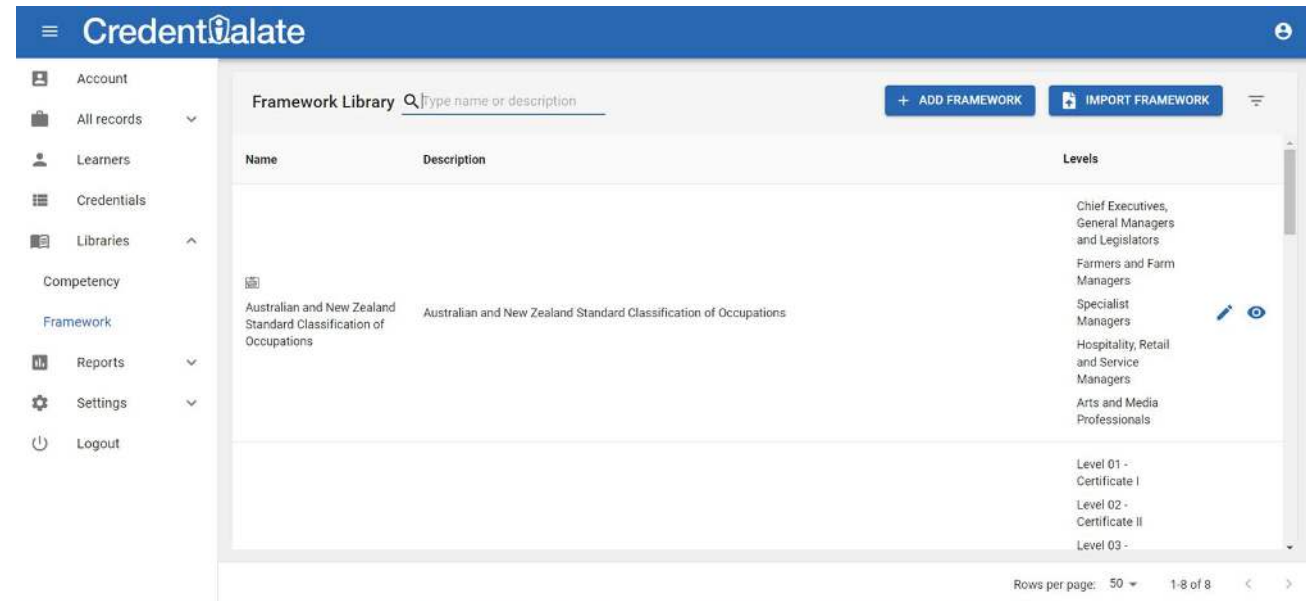
Human & Machine Readable Skills - RSDs

- Rich Skill Descriptors (RSDs)
- A common language in a standard format so that performance data can travel - within and between systems
- Open, global library available at openRSD.com



Importance of Alignment for Meaning

- Industry skills
- Frameworks
- Job and labour market data
- Anchors skills in real-world contexts



The screenshot displays the 'Credent@late' Framework Library interface. It features a sidebar with navigation options: Account, All records, Learners, Credentials, Libraries, Competency, Framework, Reports, Settings, and Logout. The main content area is titled 'Framework Library' and includes a search bar and buttons for '+ ADD FRAMEWORK' and 'IMPORT FRAMEWORK'. A table lists frameworks with columns for Name, Description, and Levels.

Name	Description	Levels
Australian and New Zealand Standard Classification of Occupations	Australian and New Zealand Standard Classification of Occupations	Chief Executives, General Managers and Legislators Farmers and Farm Managers Specialist Managers Hospitality, Retail and Service Managers Arts and Media Professionals Level 01 - Certificate I Level 02 - Certificate II Level 03 -

Rows per page: 50 | 1-8 of 8

Mobility *and* Meaning

- EdTech needs to enable mobility, such as between education and employment systems
- Needs to be achieved at scale for all stakeholders



Personal Evidence Record in CredentiaLate

- Learners can identify and speak to their skills
- Evidence they can use to prove what they know and what they can do

The screenshot displays a CredentiaLate profile for Anthony Citizen. At the top, it states 'Anthony Citizen has been awarded the Business Essentials badge based on the evidence catalogued below.' The badge is titled 'Business Essentials' and is 'Instant Verification Embedded'. It was issued by a 'Test institution' and awarded on '31 May 2022'. A 'VERIFY' button is present next to the badge icon.

The badge is divided into several skill categories with associated scores:

- Team development:** Consistently demonstrates knowledge of the five stages of team development and adjusting. Score: 100%.
- Team roles and interactions:** Consistently demonstrates an understanding of the roles of a team and the importance of communication and collaboration. Score: 90%.
- Power and influence:** Demonstrates knowledge of the roles of power vs influence in leadership roles within teams. Score: 60%.
- Improving team performance:** Demonstrates an understanding of team improvement strategies such as diversification, prioritisation, communication with context and clarification. Score: 80%.
- Decision making:** Demonstrates decision making skills such as defining the problem, encouraging critical thinking, creating milestones, overcoming biases and assumptions, assigning responsibility and turning decisions in action. Score: 60%.

On the right side, there are social media share options for LinkedIn (Share and Profile), Twitter, and Facebook, labeled 'Share Options Embedded'. Below these is a 'Score Key' table:

Score	Name
50% to 85%	Proficient
85% and above	Excellence

The 'Artefacts' section lists 'Business pitch (42 MB)' and 'Business poster (13 MB)'. The 'Alignments' section shows alignment with the 'Digital Literacy Skills Framework', with a link to the framework: <https://www.dese.gov.au/foundation-digital-literacy-skills-framework/>. This section is labeled 'Framework Alignment'.

Learner Agency - Empowering Learners

- Understand their skills and capabilities
- Communicate that within their current or future employers
- Learners can choose what and how they share
- Empower them to recognise skills - from formal and non-formal and informal learning gained throughout their life



Q&A



Thank you! Visit:

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