SINGAPORE[1]

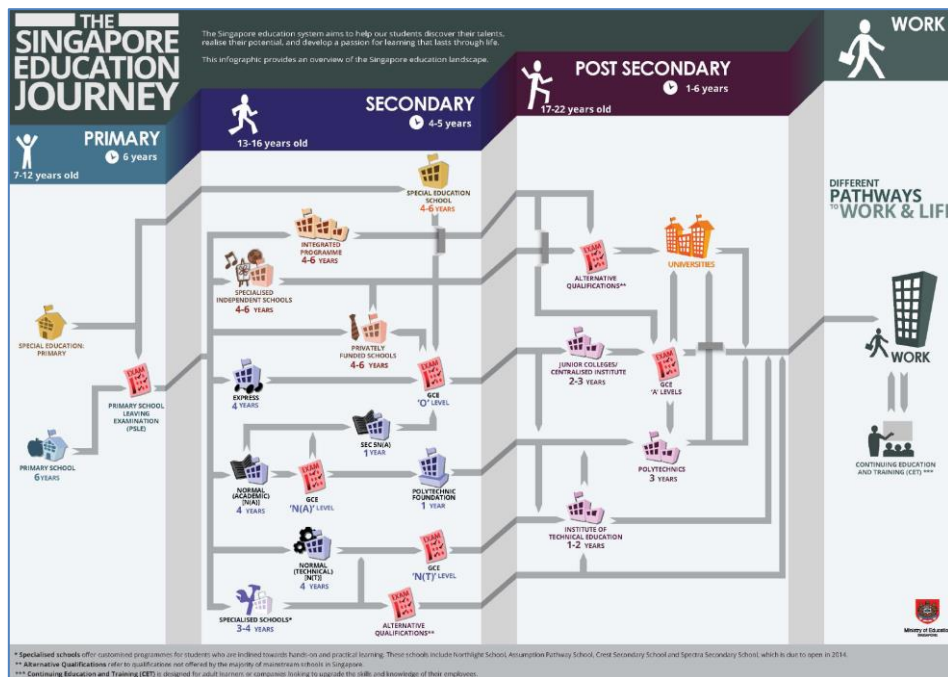## 1. Overview

The Singapore education system under the Ministry of Education (MOE) aims to help students discover their own talents, make the best of these talents, realize their full potential, and develop a passion for learning that lasts throughout life. The education system covers pre-school, primary, secondary, post-secondary and university level education. The Desired Outcomes of Education (DOE) are that the person schooled in the Singapore Education system is:

- a confident person who has a strong sense of right and wrong, is adaptable and resilient, knows him or herself, is discerning in judgment, thinks independently and critically, and communicates effectively;
- a self-directed learner who takes responsibility for his/her own learning, who questions, reflects and perseveres in the pursuit of learning;
- an active contributor who is able to work effectively in teams, exercises initiative, takes calculated risks, is innovative and strives for excellence; and
- a concerned citizen who is rooted to Singapore, has a strong civic consciousness, is informed, and takes an active role in bettering the lives of those around him/her.

The MOE also delivers continuing education and training (CET) through the Institute of Technical Education (ITE), and polytechnics.

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[1] This overview is based on the Singapore Report on Standards and Qualifications (2015) prepared by Mr. Thomas Yeo (Managing Director, CET Global Pte Ltd) with support from the World Bank. The Report and its overview are based on information collected from the survey developed for the East Asia Summit Vocational Education and Training Quality Assurance Framework Project managed by Australia Commonwealth Government in 2012.

Each of the formal education institutions (5 autonomous universities, 5 polytechnics and ITE) has an Act that spells out the establishment and functions of the institutions etc., including the powers to award qualifications. (Source: http://www.moe.gov.sg/)

For the private education sector, the Council for Private Education (CPE) oversees and regulates private education institutions (PEIs), under the Private Education Act. In addition to its role as the sectoral regulator of PEIs, the CPE facilitates capability development efforts to uplift standards in the local private education industry. The Enhanced Registration Framework (ERF), as set out under the Private Education Act and the Private Education Regulations, spells out the mandatory registration requirements and legislative obligations which all private education institutions, operating in and from Singapore, must meet. The ERF broadly encompasses the following:

- Registration
- Corporate Governance
- Quality of Provisions
- Enhanced Information Transparency

(Source: http://www.cpe.gov.sg)

The Singapore Workforce Skills Qualifications (WSQ) is a national credentialing system, based on national standards developed by the Singapore Workforce Development Agency (WDA) in collaboration with various industries comprising industry sectoral frameworks, which serve to:

- Professionalise the industry, particularly where recognition of Continuing Education and Training (CET) qualifications are lacking; and
- Improve labour mobility - allowing companies in growing industries to easily recruit workers with the necessary skills whilst improving opportunities for workers to enter these industries.

WSQ trains, develops, assesses and recognizes individuals for the key competencies that companies look for in potential employees. It is designed to be a practical, accessible and affordable launching pad for individuals to take charge of their own careers and advancement. It is also a powerful business tool for employers to access and maintain a skilled workforce as it enhances their competitive edge and advances their business.

The Singapore Workforce Development Agency Act spells out the establishment and functions of the WDA etc., including the power to award qualifications. WDA is also supported by the Skills Development Levy Act that requires employers to pay a skills development levy and the establishment of the Skills Development Fund (SDF) to use the money collected from the levy for purposes of promotion, development and upgrading of skills and expertise of persons preparing to join the workforce, persons in the workforce and persons rejoining the workforce, the retraining of retrenched persons, and the provision of financial assistance by grants and loans. (Source: http://www.wda.gov.sg)

2. National Qualifications Framework

2.0 Framework overview

The WSQ is a sectorial skills qualifications framework for the continuing education and training of the workforce. Roughly 34 industry frameworks have been developed to date. Each WSQ framework is created in consultation with industry stakeholders. The WSQ frameworks address workforce skills in two aspects:

1. Foundational and cross-industry skills - Comprise a range of skills, knowledge and attributes that help every individual improve his/her employability. These skills enable workers to better adapt to new job demands and a changing work environment. Foundational skills are portable across all industries.
2. Industry specific and occupation specific competencies - Cover skills that equip individuals with the know-how to perform specific jobs well.

Industry players, training institutions and unions work together in the Industry Skills and Training Councils (ISTC) to identify the skills required in the industry and to develop the industry-specific WSQ. The ISTC also reviews learning outcomes in relation to labor market needs to ensure the framework remains current and relevant.

2.1 Framework purpose

The main policy objectives of the WSQ system are:
- At the national level, to meet the needs of existing and emerging sectors by ensuring that all workers are equipped with relevant and portable competencies that support lifelong employability.
- At the sectoral/industry level, to strengthen the expertise of industries, professionalize their workforce and enhance the productivity of their workers.
- At the individual worker level, to support the training needs and aspirations of all workers through WSQ programmes that lead to industry recognized qualifications.

The WSQ frameworks address workforce skills in two aspects:
1. Foundational and cross-industry skills - Comprise a range of skills, knowledge and attributes that help every individual improve his/her employability. These skills enable workers to better adapt to new job demands and a changing work environment. Foundational skills are portable across all industries.
2. Industry-specific and occupation-specific competencies - Cover skills that equip individuals with the know-how to perform specific jobs well.

WSQ frameworks can benefit employers in the following ways:
- Benchmark best practices
- Guide development of job descriptions
- Improve performance management systems and training programmes
- Establish employees' career paths
- Guide training needs analysis

- Facilitate recruitment of competent staff equipped with required occupational and industry capabilities
- Strengthen in-house training capabilities

2.2 Framework architecture

The WSQ system has 6 levels of qualifications:
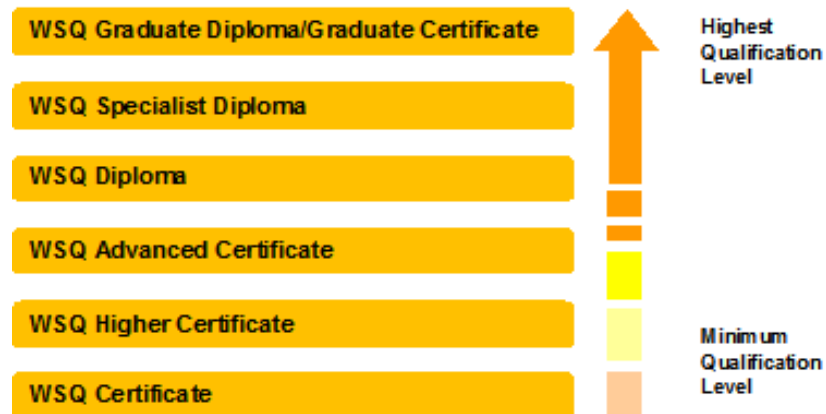
Each WSQ level and qualification has its level descriptors described in learning outcomes determined by:

- The level of knowledge and skills involved,
- The level the knowledge and skills are applied to,
- The level of accountability, independence, self organisation or organisation of others that is required to solve problems or complete tasks, and
- The occupational levels and range and depth of the knowledge and skills required by the jobs that the qualifications relate to.

Three fundamental principles guide the design of all WSQ qualifications:

- Relevance - qualifications are designed based on the industry and occupational needs and are endorsed by industry.
- Flexibility – qualifications can comprise core units that industry identified as mandatory and/or elective or specialisation units to meet the occupational and candidates' needs.
- Consistency – qualifications are designed in alignment to the WSQ qualifications levels and should comply with the design rules and parameters established by WDA.

The WSQ credits system describes the credits of a competency unit is an indication of the relative magnitude of the learning effort expressed as Recommended Learning Hours (RLH). The RLH is defined as the number of hours which a typical trainee is expected to undergo, on average, in order to accomplish the specified learning outcomes of a competency unit, regardless of the methods of training and assessment adopted (i.e. directed learning). The WSQ credits system adopts a currency of 1 credit = 10 RLH; 1 credit is the lowest denomination. The credits of a qualification are the sum of credits of the requisite competency units leading to the qualification.

Individuals have the option to pursue either a modular WSQ training programme or a full qualification attainment. This is to meet targeted occupational, business and industry needs as well as the needs of the candidates.

2.3 Framework governance

The design, development and implementation of the WSQ frameworks are facilitated by WDA, in consultation with the industry. Industry players, training institutions and unions work together in the Industry Skills and Training Councils (ISTC) to identify the skills required in the industry and to develop the industry-specific WSQ. The ISTC also reviews the learning outcomes to ensure the framework remains current and relevant.

There is no legislation governing the design, development and implementation of WSQ frameworks, however some industries adopted the WSQ frameworks to support their industry legislative requirements, e.g. the Occupational Hygiene Professionals WSQ was jointly developed by the Singapore Workforce Development Agency (WDA), the Ministry of Manpower (MOM) and the Workplace Safety and Health Council (WSH) to support the National Workplace Health Framework (WH), which assists stakeholders in taking proactive measures to improve their management of WH hazards and raise WH standards; and to train and develop competent and motivated Occupational Hygiene (OH) Professionals who can assist employers, occupiers, and other stakeholders in the anticipation, recognition, evaluation, and control of WH risks at the workplace.

2.4 Framework processes

WDA establishes a set of rules and parameters governing the design of qualifications, such as measure of the volume of learning required, made up of core competency units, elective competency units and any other relevant competency units, named and coded in a way which is distinct and does not cause confusion with other qualifications etc.

Credit transfer and/or recognition of prior learning between WSQ and non-WSQ qualifications, and between education sectors is established at institution and/or qualification level only. For example:
- Mutual Recognition Arrangement between Institute of Technical Education (ITE) and WSQ (since 2008): Individuals with ITE and/or WSQ qualifications would be able to access and pursue skills upgrading under either system with credit exemption.
- Recognition of WSQ Qualifications for admission into part-time Polytechnic Diploma programmes: Selected WSQ qualifications and Workplace Literacy and Numeracy (WPLN) qualifications can be used for admission into part-time polytechnic Diploma programmes.

Evaluating the complexity and quantity (volume) of a non-WSQ qualification for credit recognition or articulation into WSQ qualification is undertaken by WDA, where the broad parameters for evaluation are:
- There is significant market demand for credit recognition or articulation.
- Qualifications are from established and credible institutions.
- Qualifications are required for the broadening and deepening of skills within a sector.

2.5 Framework links

Establishment of the linkages between WSQ and other education system are driven by needs of the industry.
1. Mutual Recognition Arrangement between Institute of Technical Education (ITE) and WSQ (since 2008)
   a. Individuals with ITE and/or WSQ qualifications would be able to access and pursue skills upgrading under either system with credit exemption.
2. Recognition of WSQ Qualifications for admission into part-time Polytechnic Diploma programmes.
3. WSQ-aligned Industrial Attachment (IA) for polytechnics students.

4. Articulation Arrangement for WSQ Certifications to Higher Learning Systems
   a. WSQ certifications and qualifications will be considered for entry.
   b. Individuals who are successfully admitted into these institutes can also receive credit/module exemptions.

Assessing and recognizing qualifications from other economies is not actively or proactively undertaken by WDA. Focus of WDA is to upskill the local workforce. The various Ministries and government agencies in Singapore have their own evaluation criteria for determining how to assess and recognize overseas qualifications for their own policy requirements.

3. Quality assurance mechanisms

3.1 Accreditation (Approval) of qualifications

Approval

Only organizations / institutions that have legislative Acts are empowered to award qualifications. Each of the polytechnics, ITE, IHLs and WDA do not accredit qualifications. They award qualifications within the powers of their respective Acts. For WSQ qualifications, WDA approves training organization to be their Approved Training Organization (ATO) first, before they are allowed to deliver the WSQ training.

Assessment

The Singapore Examinations and Assessment Board (SEAB) was established on 1 April 2004 as a statutory board, to develop and conduct national examinations in Singapore, and to provide other examination and assessment services and products, locally as well as overseas. SEAB collaborates with MOE on all national examinations from Primary School Leaving Exam, GCE(N), (O) and (A) level Exams. Students who passed these exams will be issued the corresponding certificate by the Ministry of Education.
Each of the polytechnics, ITE, IHLs and WDA has their own examination / assessment requirements. Students / learners who passed these exams / assessments will be issued the corresponding certificate by the respective institutions.

Relationship to standards

Only WDA and ITE use competency standards in their curriculum design and development. The competency standards list the skills, knowledge and attitudes needed to perform a job task and describe the acceptable levels of performance. WDA competency standards are developed and validated by industry for their uses. WSQ Approved Training Organisations (ATOs) use the competency standards in design, development, training and assessment of WSQ training programmes, whereas ITE competency standards are developed for and validated by industry, but only used within the ITE setting.

WDA 's notion of competence is the acquisition of skills, knowledge and attitudes to perform a task effectively according to acceptable levels of performance.

WSQ comprises three skills sets to equip workers and increase their competitiveness.

Occupational Competencies
Specific skills required to perform a specific job in the industry

Industry Competencies
Industry-specific capabilities

Foundational Competencies
Range of know-how and attributes that are portable across occupations and industries

Foundational skills comprise a range of skills, knowledge and attributes that help every individual improve his/her employability. These skills enable workers to better adapt to new job demands and a changing work environment. Foundational skills are portable across all industries. Industry and occupation skills cover skills that equip individuals with the know-how to perform specific jobs well in the industry.

There are 34 Singapore Workforce Skills Qualifications (WSQ) frameworks. [http://www.wda.gov.sg/content/wdawebsite/L101-ForIndividuals/L201-012WSQforIndividuals.html]

Employability skills, generic skills or capability type competencies are taught and/or assessed separately.

For each WSQ framework, an Industry Skills and Training Council drives the development and validation of skills standards, assessment strategies and training curriculum for the industry. Each council is represented by key industry partners, including employers, industry associations, training organisations and unions.

WDA oversees the quality of WSQ competency frameworks, competency maps, standards, courses, and assessment plans. There are guidelines and templates for the development of these standards. The competency standards are maintained at the portal 'SkillsConnect'. https://www.skillsconnect.gov.sg/web/guest/home

Do these standards inform:

	No	Yes. Please Explain.
Program design		These are developed based on competency standards.
Learning program		
Work-based learning program		
Educational standards (refer to definitions)	x	
Assessment standards (refer to definitions)		These are developed based on competency standards.

Validation standards (refer to definitions)	x	
Certification standards (refer to definitions)		These are developed based on competency standards.
Curriculum or Curriculum Standards (refer to definitions)	x	
Qualifications		These are developed based on competency standards.
Licensing requirements		

OR are your standards informed by:

	No	Yes. Please Explain.
Program design		Competency standards are derived from Occupational and Functional Analysis, and also include other information as listed from the left.
Learning program		
Work-based learning program		
Educational standards (refer to definitions).		
Assessment standards (refer to definitions).		
Validation standards (refer to definitions).		
Certification standards (refer to definitions).		
Curriculum or Curriculum Standards (refer to definitions).		
Qualifications		
Licensing requirements		

WSQ ATOs design and develop the WSQ training programmes based on the competency standards. Only when there is a critical need for ensuring consistency in quality and speed to implementing the training, will WDA develop national curriculum for industry use. All WSQ courseware require WDA's accreditation before implementation.

Benefits to Users of WSQ:

Individuals	Employers	Training Providers
Career path planning and assistance for entry into a new industry	Benchmark best practices	Articulate clear training outcomes
Skills upgrading and career advancement through clear progression pathways	Improve and develop job descriptions	Develop and deliver training programmes to meet industry needs
Present more clearly defined skills sets to potential employers via new qualifications and certifications	Improve performance management systems and training programmes	Receive endorsement on quality training programmes
Obtain portable credentials for existing skills	Establish clearly defined career paths for employees	Gain capability development from WDA
Assess and benchmark individual capabilities against industry-established work standards	Guide training needs analysis	
Support and promote best practices in the workplace	Facilitate recruiting competent staff who are equipped with industry-specific capabilities and job-specific requirements	

	Strengthen in-house training capabilities	

Who uses the standards and for what purpose?

Stakeholder	Explain how used and for what purpose
Individual	For self-evaluation so as to ascertain if he / she is ready for a particular job and for identification of own development needs. Receive subsidised quality training and development. Obtain nationally recognised credentials.
Education and training providers	For development and implementation of CET interventions. To design training and assessment programmes that best develop trainees' abilities according to skills sets stated in competency standards and to help trainees progress according to different levels of competency. Receive national endorsement in training delivery and assessment.
Employers	For recruitment, selection, development, performance management and talent management. An employer can use competency standards to decide and design tools that will place, develop and promote staff for maximum performance to achieve business needs. Assured of quality training of staff by providers.
Industry peak bodies	
Government departments	For management and planning of industry manpower requirements. To determine skills level of key occupational groups with the aims of improving the quality and productivity of particular industry. Some agencies use the competency standards to facilitate the legislation and licensing of skilled occupations. Examples include NEA, SIRD, STB, MOM.
Approval bodies (accreditation or registration)	For awarding of qualifications and certifications. WDA is the awarding body of WSQ, utilises the competency standards to design, quality assure and award qualifications and certifications.
Curriculum bodies	For awarding of qualifications and certifications. WDA is the awarding body of WSQ, utilises the competency standards to design, quality assure and award qualifications and certifications.

3.2 Registration (Approval) of education and training providers/awarding bodies

Any training organisation that wishes to offer WSQ courses must meet the organization accreditation criteria established by the Singapore Workforce Development Agency (WDA). Upon approval as a WSQ ATO, ATO can proceed to submit a course to WDA for accreditation before implementation. Every ATO is expected to maintain and upkeep the standard of delivery in training and assessment. WDA will periodically validate the WSQ internal quality assurance system and capability of ATO under the Continuous Improvement Review (CIR) audits.

The requirements and criteria for organization and course accreditation, and CIR can be found at (http://www.wda.gov.sg/content/wdawebsite/L225-ForTrainingProviders/L325A-001TP-ATO.html).

A summary of details are found in the section below.

For private education institutions, they are subjected to the Private Education Act (PE Act, overseen by the Council of Private Education. The PE Act specifies the registration and renewal requirements for private education institutions.

https://www.cpe.gov.sg/

https://www.cpe.gov.sg/for-peis/enhanced-registration-framework-erf/registration-requirements

3.3 Training providers

Quality assurance of WSQ training providers and courseware covers three stages:

1. Organisation Accreditation
   a. Legal entity
   b. Defined roles and responsibilities
   c. Sound financial health
   d. Sufficient line-up of adult educators
   e. Adequate facilities and equipment
   f. Systems and capabilities in place to support fulfilment of the roles and responsibilities of an ATO
   g. 2-year business plan
   h. Any other requirements from specific industry sectors

2. Course Accreditation
   a. Course Design and Development; Assessment Design; Adult Educator (AE) requirements; Facilities and Equipment;

3. License Renewal
   a. Course quality assurance system
   b. Plan-Do-Check-Act (PDCA) System
   c. Outcome evaluation system
   d. Adult educator management system
   e. WSQ related administrative system
   f. Viability of organisation
   g. Free from breach of terms and conditions
   h. System-evidence-outcome (SEO) approach in the evaluation of the criteria

WSQ training providers are audited on an 18-month cycle. An audit report will be produced for the training providers only. Those who do not meet the renewal requirements may be suspended from operations or terminated.

WDA maintains a list of WSQ training providers on its website. http://www.wda.gov.sg/content/wdawebsite/L101-ForIndividuals/L220A-004CETFullList.html

For private education institutions, please refer to the URL: https://www.cpe.gov.sg/for-peis/enhanced-registration-framework-erf/registration-requirements

3.4 Educator requirements

Quality assurance for WSQ adult educators

Pedagogy Qualifications Requirements for WSQ Adult Educators:

Role of Adult Educators	For Public Training Providers	For In-company Training Organisations
WSQ Trainer and/or Assessor	WSQ Advanced Certificate in Training and Assessment (ACTA)	WSQ Workplace Trainer Programme (WTP)
WSQ Curriculum / Course Developer	WSQ Diploma in Adult and Continuing Education (DACE)	WSQ Advanced Certificate in Training and Assessment (ACTA)

In addition, Adult Educators should possess relevant industry/vocational qualifications and/or formal academic qualifications, and work experience. Specific details on the Adult Educators requirements for each WSQ Qualifications are specified in the Curriculum, Training and Assessment Guide (CTAG), and ATOs are required to ensure that the Adult Educators meet these. WDA will also conduct checks on the Adult Educators before they can be deployed to conduct training.

For private education institutions, please refer to the URL:
https://www.cpe.gov.sg/for-peis/enhanced-registration-framework-erf/registration-requirements

3.5 Transnational/cross border education

What strategies do you have in place to address transitional/cross border education?
- Do you allow your providers to deliver in other nations? *No.*
- How do you assess and recognise incoming providers? *Not applicable.*
- Are your qualifications recognised in other countries? *This depends on G2G arrangement, but largely WDA do not proactively arrange for qualifications recognition by other countries.*
- Do your quality standards/requirements apply to transnational delivery? If not how is the quality of training and assessment conducted offshore managed? *Not applicable.*
- How do you recognise overseas qualifications in your country? *This is on a case-to-case basis, but largely, the overseas qualifications should be awarded by a nationally recognised public/government awarding bodies, and/or reputable professional/international organisations.*

3.6 Quality indicators/data

What type of data do you collect for monitoring the quality of your education and training system?

Data	Higher Education	TVET	Schools
Student Background Characteristics (e.g. in terms of ethnicity, age, gender, disabilities, prior qualifications)	Yes	Yes	Yes
Type and range of pathways into your programs, including uptake rates	Yes	Yes	Yes
Patterns of student enrolments.	Yes	Yes	Yes
Recognition of prior learning/credit transfer arrangements and outcomes	Yes	Yes	No.
Relationship between program offerings and labour market demands	Yes	Yes	Yes
Proportion of funds invested in:			
• Supporting student learning, including those with disabilities • Staff professional development/in-service training	Yes	Yes	Yes
Process for program design, accreditation and review	Yes	Yes	Yes
Qualifications, experience and expertise of teaching staff	Yes	Yes	Yes
Stakeholder satisfaction (e.g. employers, students) with the delivery and outcomes of the course	Yes	Yes	Yes
Retention and completion rates and patterns	Yes	Yes	Yes
Graduate destinations	Yes	Yes	Yes
Other: *specify*			

4. Barriers and obstacles

Singapore recently embarked on a new journey known as 'SkillsFuture.' SkillsFuture is a national movement to provide Singaporeans with opportunities to develop to their fullest potential throughout life, regardless of their starting points. Through this movement, the skills, passion and contributions of every individual will drive Singapore's next phase of development towards an advanced economy and inclusive society. It is envisaged that no matter where the person is in life – schooling years, early career, mid-career or silver years – he/she will find a variety of resources to help him/her attain mastery of skills. Skills mastery is more than having the right paper qualifications and being good at what the person currently does; it is a mindset of continually striving towards greater excellence through knowledge, application and experience. With the help of the SkillsFuture Council, education and training providers, employers, and unions – the person can own a better future with skills mastery and lifelong learning.

5. Additional comments

Include any other comments.

6. Additional information

Provide names (and role and organization) of person involved in the development of this overview.

Name	Role	Organisation
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