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FOREWORD

Work-Based Learning has become a vital strategy in preparing graduates for the demands of a rapidly changing world of work. In an era defined by the challenges of the industrial revolution, the rise of the digital economy and the pursuit of sustainability and values-based development, higher education must go beyond the transmission of knowledge to embrace approaches that develop competencies, adaptability and professional values in authentic contexts.

This guideline represents a significant step in strengthening the partnership between higher education providers and Technical and Vocational Education and Training providers and industry partners, ensuring that students are given meaningful opportunities to learn through real workplace experiences. By aligning Work-Based Learning with the Malaysian Qualifications Framework and the quality assurance standards of the Malaysian Qualifications Agency (MQA), it provides a coherent structure for the design, delivery and assessment of Work-Based Learning programmes.

MQA strongly encourages all institutions to embrace Work-Based Learning not only as a pedagogical approach but also as a strategic collaboration with industry and community stakeholders. Such collaboration ensures that graduates are not only knowledgeable but also skilled, resilient and equipped with the values and competencies necessary to thrive in diverse professional settings.

It is my sincere hope that this guideline will serve as a practical resource and inspiration for universities, colleges and industry partners in implementing Work-Based Learning. Together, we can ensure that Malaysia continues to produce future-ready graduates who will contribute to national development and global competitiveness.

DATO' PROF. DR. MOHAMMAD SHATAR BIN SABRAN (DIMP, DPMP)

Chief Executive Officer

Malaysian Qualifications Agency (MQA)

2026

USER'S GUIDE

The content is structured around the seven areas of quality assurance as defined in COPPA and COPTPA, namely: (1) Programme Development and Delivery, (2) Assessment of Student Learning, (3) Student Selection and Support Services, (4) Academic Staff, (5) Educational Resources, (6) Programme Management and (7) Programme Monitoring, Review and Continual Quality Improvement. Each section begins with the guiding principle, followed by explanatory notes, suggested practices and, where relevant, examples from WBL contexts.

The style of writing is deliberately balanced between advisory and prescriptive:

- a. Statements using “must” or “shall” indicate minimum requirements aligned with MQA standards.
- b. Statements using “should” or “encouraged to” indicate recommended good practices and flexibility of application.
- c. Examples and case illustrations are provided in boxes or tables for easy reference, while appendices contain supplementary tools such as templates, checklists and sample matrices.

Users are encouraged to adapt the recommendations in this guideline according to the level of study, discipline and workplace context, while ensuring that the core principles of quality, relevance and inclusivity are maintained. The guidelines should be read together with related MQA documents, namely:

- a. Code of Practice for Programme Accreditation (COPPA)
- b. Code of Practice for Technical and Vocational Education and Training Programme Accreditation (COPTPA)
- c. Guidelines to Good Practices on Assessment of Student Learning
- d. Guidelines to Good Practices on Programme Development and Delivery
- e. Guidelines for Industrial Verification of Curriculum

The guidelines are numbered in a continuous manner for easy reference. Boxes are used to highlight important concepts while not distracting from the main text. By distinguishing between mandatory standards and advisory guidelines, this document encourages flexibility, contextual adaptation and innovation in Work-Based Learning delivery, ultimately enriching student learning and professional preparedness.

GLOSSARY

- | | |
|--|---|
| 1. Accreditation of Prior Experiential Learning (APEL) | A systematic process that involves the identification, documentation and assessment of prior experiential learning to determine the extent to which an individual has achieved the desired learning outcomes, for access to a programme of study and/or award of credits. |
| 2. Apprenticeship | A long-term system where an apprentice enters into a contract with an employer to work and train under skilled mentors for a specified trade (minimum 6 months, maximum 24 months) while completing assessments for certification. |
| 3. Competency | The quality of being adequately qualified, physically and intellectually, to perform a specific professional task. |
| 4. Competency-Based Assessment | A process for collecting evidence on a person's performance and knowledge against occupational or industry competency standards. |
| 5. Continual Quality Improvement | An ongoing process to ensure that programme delivery, assessment and partnerships are refined over time based on feedback from all stakeholders. |
| 6. Course Learning Outcomes | Statements that describe what learners are expected to know and be able to perform by the end of a specific course. |
| 7. Effective Learning Time | The portion of time spent in the workplace or institution that contributes directly to achieving learning outcomes, excluding routine administrative or repetitive tasks. |
| 8. Higher Education Provider (HEP) | A corporate body, association or group of persons that provides higher education, including universities, colleges and TVET institutions. |
| 9. Industry Coach/Mentor | A workplace practitioner appointed to provide direct technical mentorship, task oversight and performance evaluation for students. |
| 10. Malaysian Qualifications Framework (MQF) | An instrument that classifies qualifications based on a set of criteria that are agreed at the national level and benchmarked against international best practices. |
| 11. Notional Learning Time | The estimated time an average student needs to spend on all learning activities to achieve a set of learning outcomes; usually, 40 hours is equivalent to 1 credit. |
| 12. Retrospective WBL (R-WBL) | A structured model that validates a professional's longitudinal mastery gained through past work experience to transform it into formalised academic credit. |

- | | |
|-------------------------------|---|
| 13. Student Learning Time | The total time a student is expected to spend on all learning activities, used as the basis for calculating credit hours in line with MQF guidelines. |
| 14. Work-Based Learning (WBL) | A learning approach that integrates academic study with authentic workplace experience for which credit is awarded, through negotiated work placements. |

ABBREVIATIONS

APEL	Accreditation of Prior Experiential Learning
COPPA	Code of Practice for Programme Accreditation
COPTPA	Code of Practice for TVET Programme Accreditation
HEP	Higher Education Provider
MQA	Malaysian Qualifications Agency
MQF	Malaysian Qualifications Framework
R-WBL	Retrospective Work-Based Learning
TVET	Technical and Vocational Education and Training
WBL	Work-Based Learning

INTRODUCTION

Definition

Work-Based Learning (WBL) is a learning approach that integrates academic study with authentic workplace experiences, enabling students to acquire knowledge, skills and values through real tasks under the supervision of industry mentors. It is explicitly aligned with Programme Learning Outcomes and the Malaysian Qualifications Framework (MQF), ensuring that the workplace becomes an extension of the classroom where theory and practice are continuously connected. The operational definition for the context of this guideline is as follows:

*“WBL is a learning approach
that **integrates** academic study with **authentic workplace experiences**
for which **credit is awarded**
through **work placements** to the whole or part of a course or programme
negotiated with industry.”*

In the context of WBL, authentic workplace experience means that the workplace experience is **real, curriculum-aligned and provides genuine educational value**. It specifically implies three key characteristics:

- a. **Curriculum Relevance:** The experience must be directly linked to the programme’s intended Learning Outcomes and core competencies, ensuring that work activities contribute to academic mastery.
- b. **Effective Learning Time:** It focuses on Effective Learning Time, which excludes non-work activities, tasks unrelated to the curriculum and overly repetitive tasks that no longer offer additional learning value.
- c. **Structured Progression:** The experience supports a clear progression of complexity from observation to guided practice and eventually to independent task execution.

History

The roots of WBL can be traced to apprenticeship systems of medieval Europe, where knowledge and craft were transferred from master to apprentice. Over time, structured forms of cooperative education and professional practicum in medicine, nursing and teacher education became widely established. In Malaysia, WBL has gained traction through Technical and Vocational Education and Training (TVET) reforms, the introduction of the MQF in 2007 (revised in 2017 and 2024), and the growing need for graduates who are not only academically qualified but also industry-ready. The Malaysia Higher Education Blueprint 2015–2025 emphasised the development of quality TVET graduates through WBL and apprenticeship initiatives. Subsequently, the Malaysia Higher Education Blueprint 2026–2035 continues to focus on collaboration between higher education providers (HEPs) and industry in curriculum

development and in creating structured and impactful work-based and experiential learning opportunities.

Motivation

The motivation for WBL is grounded in the need to bridge the gap between theory and practice in higher education. Employers consistently highlight the importance of producing graduates who can demonstrate not only technical knowledge but also problem-solving abilities, adaptability, communication skills and professional values in complex workplace environments. By embedding structured learning within real work contexts, WBL enhances graduate employability, nurtures professional identity and strengthens collaboration between academia and industry. Its significance lies in preparing graduates to meet the expectations of both the labour market and society at large.

Beyond academic enrichment, industry participation in WBL is a strategic investment that yields a positive benefit-cost analysis. By engaging in structured induction and mentorship, industry partners mitigate the high costs of traditional recruitment and onboarding friction. WBL serves as an extended probationary period where students provide immediate labour value that often exceeds the cost of training. Furthermore, the long-term return on investment is realised through the creation of a ready-to-hire talent pipeline, significantly reducing future turnover rates and the time to productivity for new employees. This structured approach transforms WBL from a philanthropic gesture into a core mechanism for operational efficiency and risk mitigation.

WBL Models

There are multiple models of WBL, including apprenticeships, cooperative education, clinical placements, project-based learning, industrial training and mentorship through job shadowing. Each type varies in terms of duration, structure and intensity but shares the same principle of situating learning within authentic work environments. The degree of structure is based on planning (clearly defined goals, schedules, task-to-curriculum mapping), supervision (strength of dual supervision: academic + workplace), assessment (formal methods and tools) and standardisation (following regulations or accreditation criteria).

The guidelines in this document are specifically designed for **programme-level WBL models**; therefore, course-level models are not strictly bound by them, as detailed in **Table 1**.

Table 1: Course-level WBL models

No.	Model	Definition	Level of Structure
1.	Work Experience	Brief exposure where students observe/assist in a workplace without formal academic requirements or assessment.	Less Structured
2.	Field Placement	Students are placed in relevant environments (e.g., school, non-governmental organisation, hospital) to gain practical insight, usually with basic reporting.	Less Structured

No.	Model	Definition	Level of Structure
3.	Service Learning	Students apply classroom knowledge to community projects, reflecting on their experience while contributing socially.	Moderately Structured
4.	Applied Research	Students undertake a project tied to industry/community problems, producing practical solutions.	Moderately Structured
5.	Practicum*	A structured placement where students perform professional tasks (e.g., teaching, social work, counselling) with formal assessment.	Moderately Structured
6.	Industrial Training*	A full-time industry work placement where students complete tasks and are formally assessed (logbooks/reports).	Moderately Structured
7.	Clinical (Pre-Practicum)	Students provide real services in a safe, controlled environment under licensed professional supervision.	Moderately Structured

*Internship is a broad umbrella term which includes Practicum in some professional/regulated fields and Industrial Training in technical/corporate fields.

In contrast to course-level models, the guidelines in this document are specifically designed for programme-level WBL models, as outlined in **Table 2**.

Table 2: Programme-level WBL models

No.	Model	Definition	Level of Structure
1.	Cooperative Study (Co-op)	A structured model where students alternate between study and full-time work, earning credit. E.g., 2u2i programme (2 years university, 2 years industry).	Highly Structured
2.	Apprenticeship	A long-term system where apprentices enter into a contract with an employer to work and train under skilled mentors while completing assessments for certification.	Highly Structured

❏ Box 1: Cooperative education and apprenticeship programme

Aspect	Cooperative Education (<i>Learn then Earn</i>)	Apprenticeship (<i>Earn and Learn</i>)
Curriculum	Industry-driven	
Participant	Students	Apprentices**
Primary Purpose	To provide exposure to industry experience alongside academic study	To produce a skilled worker through systematic, competency-based training
Workplace Duration	20%–50% industry	Long duration, subject to apprenticeship contract with industry
Status	Student (HEP-registered)	Employee (apprentice contract)
Pay	Allowance/stipend is encouraged	Wage ($\geq$ minimum) is compulsory
Assessment	Academic + employer evaluation, and competency-based is recommended	Academic + employer evaluation, and competency-based is mandatory
Outcome	Degree/diploma/certification credit + work experience	Degree/diploma/certification credit + completion of apprenticeship certification (of a certain trade or profession)
Example	2u2i/3u1i, etc.	Apprenticeship programme

**Employment Act 265 – Apprentice is a person who enters into an apprenticeship contract which means a written contract entered into by a person with an employer who undertakes to employ the person and train or have him trained systematically for a trade for a specified period which shall be for a minimum period of six months and a maximum period of twenty-four months in the course of which the apprentice is bound to work in the employer's service.

Note: The recruitment and engagement of international participants within WBL frameworks are governed by a commitment to full regulatory alignment, requiring mandatory adherence to the prevailing visa policies and immigration statutes of Malaysia to ensure the legal standing and continuity of the student's educational and industrial placement.

WBL Framework

The WBL Framework in **Figure 1** illustrates a structured collaboration between employers and HEPs across three major phases (planning, operation and control) with continuous monitoring, review and improvement. During the planning phase, both parties plan for task-outcome-delivery mapping, assessment as/for/of learning, student selection or apprentice recruitment, tutor/coach training and selection, financial resources and facilities, WBL management and agreements, and monitoring, review and Continual Quality Improvement processes to ensure alignment between academic and industry needs.

In the operation phase, apprentices undergo on-the-job training supervised by immediate supervisors or coaches while simultaneously engaging in academic courses by lecturers or tutors, ensuring integration between workplace practice and academic learning.

The control phase focuses on assessing work performance, programme performance and academic performance, providing a feedback loop for maintaining quality and relevance. The evaluation and improvement mechanism continuously informs and refines all phases,

ensuring that apprenticeship programmes remain sustainable, industry-responsive and compliant with the MQF.

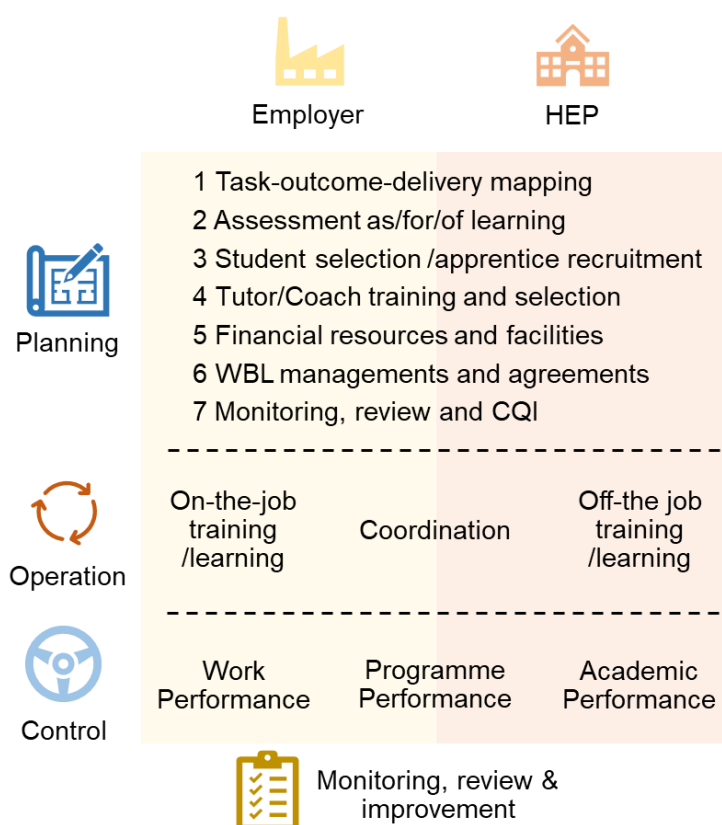


Figure 1: WBL framework

The Learning Organisation in WBL

A learning organisation is an organisation that is structured to adapt, grow and transform itself through the collective intelligence of its members. In the WBL context, a workplace as a learning organisation embraces feedback, reflection and knowledge sharing among all stakeholders. Central to this transformation is the framework introduced by Peter Senge (1990), as shown in **Figure 2**, who defines a learning organisation as one where people continually expand their capacity to create the results they truly desire. A workplace that adopts Senge's five disciplines, as depicted below, will be an effective WBL player.

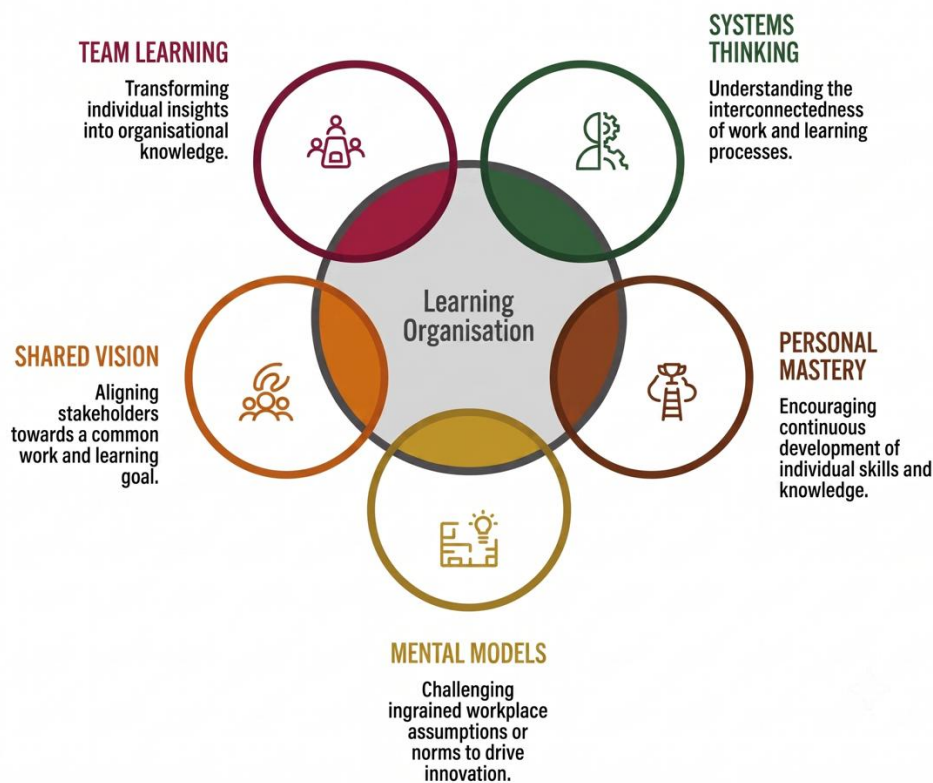


Figure 2: Foundations of a learning organisation by Peter Senge (1990)

Applying Peter Senge's five disciplines to WBL transforms the programme from a mere mechanical placement into a dynamic ecosystem of growth. Systems Thinking serves as the foundation, allowing HEPs and industry partners to see WBL not as isolated tasks but as an interconnected process where academic theory and industrial practice continuously inform one another. When stakeholders embrace Shared Vision, they align academic standards with industrial productivity, ensuring that the students' learning goals are synonymous with the organisation's operational objectives.

At the individual and group levels, Personal Mastery drives students and industry coaches to commit to lifelong skill refinement, while challenging existing Mental Models encourages them to pursue high-value and innovative problem-solving. Finally, Team Learning ensures that the insights gained by a student in the workplace are systematically captured and shared with faculty and peers. This collaborative reflection bridges the gap between individual experience and institutional knowledge, ensuring that the WBL implementation remains resilient, adaptive and market-responsive.

Flexible Learning Pathways in the WBL model

In alignment with MQF and UNESCO's vision for flexible learning pathways, Retrospective Work-Based Learning (R-WBL) offers a structured alternative to standard Accreditation of Prior Experiential Learning (APEL) by validating a professional's longitudinal mastery through a career-integrated approach. While standard APEL assessments involve only the HEP and the candidate, R-WBL uses three-way involvement between the HEP, the employer and the

candidate to turn work experience into official academic credit. This method enhances academic–industry synergy and ensures that professional growth is assessed as a continuous narrative rather than a singular point-in-time event.

The most suitable industrial partners for R-WBL are those that operate as learning organisations. These organisations possess the internal infrastructure and cultural maturity required to co-validate professional mastery alongside academic institutions. The core differences between APEL and R-WBL are outlined in **Table 3**.

Table 3. APEL vs. R-WBL

No.	Feature	APEL (A, C, Q, M)	R-WBL
1.	Primary Goal	Recognition of prior learning for entry or credit exemption	Validation of long-term professional mastery for degree completion
2.	Evaluation Model	Bilateral: Assessment between the candidate and the HEP	Tripartite: Collaborative evaluation between the candidate, the HEP and the employer
3.	Nature of Assessment	Point-in-Time: Focused on specific evidence/tests at the time of application	Longitudinal Narrative: Assesses growth and mastery over a sustained career period
4.	Industry Synergy	Moderate (Industry experience is the input)	High (Industry is a partner in the validation process)
5.	MQF Alignment	Traditional credit transfer/access route	Career-integrated pathway for "work-ready" professionals
6.	MQF and UNESCO Vision on Flexible Learning Pathways	Flexible entry/re-entry points	Strengthening links between formal and non-formal structures

R-WBL shifts the focus from prospective planning to the validation of past work experience through competency-based education, which prioritises “competency achieved” over mere “hours spent”. While this output-based model emphasises mastery, estimating the work time remains essential to establish a baseline for credit awards and prevent “credit inflation”. This estimation ensures a candidate has had sufficient “concrete experience” to undergo a full experiential learning cycle, with the work time serving as a proxy for professional exposure.

While R-WBL excels at formalising existing expertise, it lacks the concurrent academic supervision found in traditional WBL models. To bridge this gap and maintain high academic standards, the framework mandates a rigorous validation of mastery through the following protocols:

- a. **Mapping Between Work and Curriculum:** The use of a formal template to map workplace tasks directly to curriculum standards ensures fairness and consistency across all evaluations.

- b. **Stringent Gap Analysis:** A strict protocol requiring at least an **80% mapping match** between the candidate's experience and the programme learning outcomes.
- c. **Formal Validation:** Candidates must provide proof of mastery through a **viva voce** examination and formal **employer attestation** to verify professional claims.
- d. **Independent Oversight:** Quality is further safeguarded by moderation from independent academics.
- e. **Recent Evidence Requirements:** Evidence must be current and relevant to the specific field of study and the technology currently utilised in industry.

These measures effectively mitigate risks such as credit inflation, subjectivity and potential conflicts of interest.

As shown in **Figure 3**, upon programme enrolment, R-WBL students will undergo the verification of their work experience. The remaining gap can be delivered through various approaches, including WBL methods, micro-credentials or conventional approaches. The registration as a student, the verification of R-WBL and the completion of remaining courses can be considered as the residency fulfilment of the student.

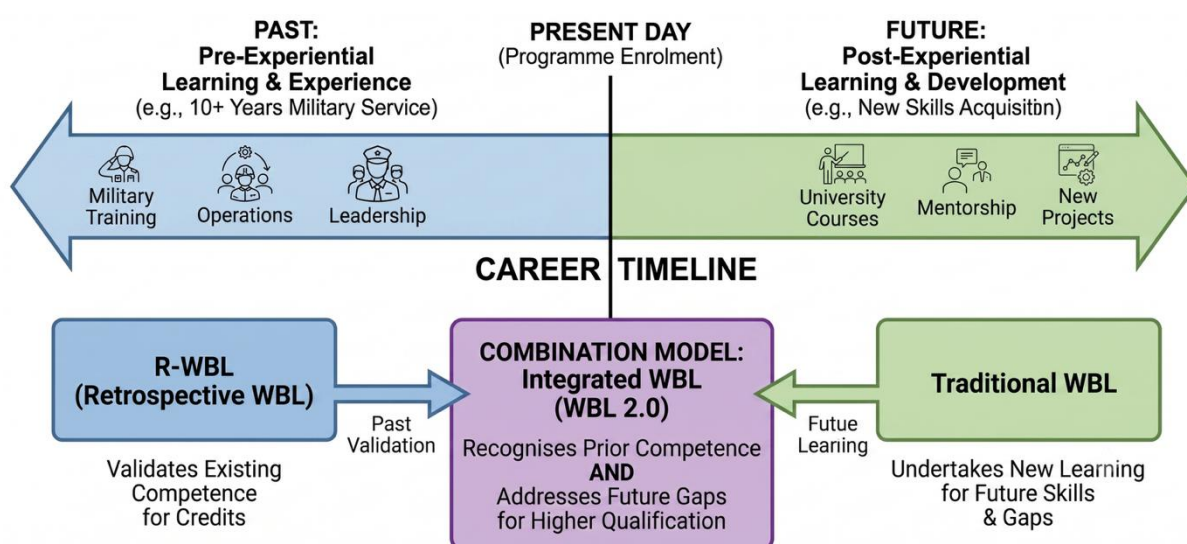


Figure 3: WBL timeline: distinguishing retrospective, concurrent and combination models using an example of implementation in military service

Critical Success Factors of WBL

Challenges persist in ensuring effective WBL implementation. Common challenges include aligning workplace tasks with Course Learning Outcomes (CLOs) and MQF descriptors, designing valid and fair assessment processes, maintaining consistency across diverse industries, securing sustained industry commitment and preparing students adequately for workplace expectations. To address these challenges, several critical success factors are emphasised.

First, WBL programmes require clear learning outcomes, where every **workplace task is deliberately mapped to Course Learning Outcomes** and MQF descriptors to ensure that

students achieve the intended competencies at the right qualification level. Second, **strong industry partnerships** are essential; committed mentors, relevant tasks and clearly defined roles between HEPs and industry prevent WBL from being reduced to routine or menial work. Third, a **structured assessment framework** is needed, combining varied methods such as portfolios, mentor evaluations and reflective journals, all supported by transparent rubrics to guarantee validity, reliability and fairness.

Fourth, **effective supervision and mentoring** are established, balancing academic oversight with industry coaching to provide holistic support for students' professional growth. Fifth, WBL courses have **adequate duration and credits**, calculated using Student Learning Time in line with MQF guidelines, ensuring that students have sufficient exposure to progress from observation to independent task execution. Sixth, **student preparation** is vital; orientation, workplace etiquette and baseline technical knowledge equip learners to engage meaningfully with industry environments. Finally, **Continual Quality Improvement processes are embedded**, with feedback loops involving students, industry mentors and academic staff to refine WBL delivery, assessment and partnerships over time.

Taken together, these success factors ensure that WBL is more than just exposure to the workplace. When carefully designed and implemented, WBL becomes a transformative educational strategy that enhances employability, builds professional identity and ensures that graduates are future-ready, resilient and capable of contributing meaningfully to industry and society. The key critical success factors for overcoming implementation challenges are summarized in **Figure 4**.

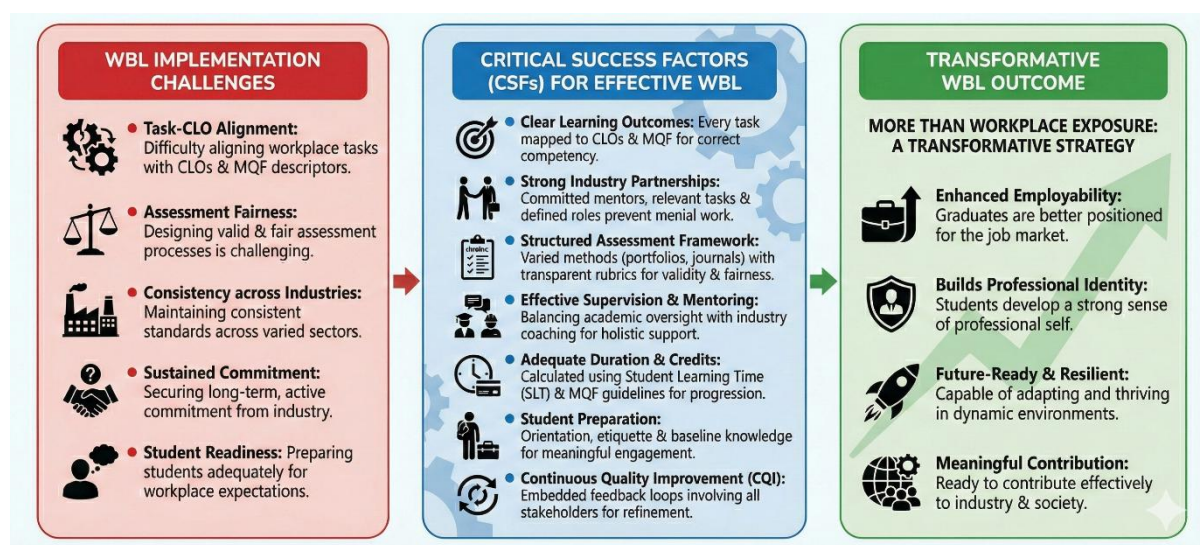


Figure 4: Critical success factors to address implementation challenges

Outlines

Building on these factors, the subsequent sections of this guideline are organised around the seven quality assurance areas of the MQF, namely: Area 1: Programme Development and Delivery; Area 2: Assessment of Student Learning; Area 3: Student Selection and Support Services; Area 4: Academic Staff; Area 5: Educational Resources; Area 6: Programme Management; and Area 7: Programme Monitoring, Review and Continual Quality

Improvement. These areas provide a comprehensive framework that translates the success factors into actionable guidelines and practices, ensuring that WBL programmes are consistently designed, implemented, assessed and improved in line with national and international quality benchmarks.

AREA 1: PROGRAMME DEVELOPMENT AND DELIVERY

1. Alignment with MQF Learning Outcomes

HEPs and industry partners should collaboratively align the WBL programme and course outcomes with the MQF clusters, specifically those pertaining to functional work skills. This alignment ensures that learning outcomes strictly adhere to national accreditation standards while maintaining high workplace relevance, thereby enhancing graduates' employability and immediate industry readiness.

The alignment includes Education for Sustainable Development competencies and Values-based Education requirements, while addressing the three pillars of employability:

- a. **Industry Compliance:** Mastery of competencies relative to professional standards.
- b. **Employer Relevance:** Acquisition of skills specific to the nature of the role.
- c. **Professionalism:** Demonstration of the ethical attitudes and responsible attributes expected in a professional environment.

Standards: COPPA 1.1.4; COPTPA 1.2.4

2. Credit Allocation

HEPs must adhere to the following credit thresholds for WBL classification:

- a. **Programme Level:** A minimum of **20% of total credits** should be delivered via WBL to qualify as a “structured WBL programme” or, in terms of mode of offering, as “industry mode”. The minimum credit should focus on building the essential competencies of the related profession.
- b. **Course Level:** While 100% WBL delivery is permissible, courses using mixed methods are suggested to maintain a **30% WBL component** within the specific course content. These benchmarks are established to guarantee that workplace learning is substantial, quality-assured and compliant with MQF standards.

Standards: COPPA 1.2; COPTPA 1.3

3. Curriculum Scheduling

HEPs and industry partners should collaboratively determine the most effective WBL scheduling approach during the initial programme planning phase to ensure alignment between academic requirements and workplace operations. The selection of a scheduling approach should be documented and justified based on the specific Course Learning Outcomes and the nature of the industrial sector.

Sustained Period Scheduling (Block Release): This approach involves a structured period of full-time workplace immersion where students are released from the HEP for

a consecutive block of time. This approach is recommended for disciplines requiring high-intensity skill mastery, allowing students to progress from observation to independent task execution without academic interruption.

Intermittent Integrated Scheduling (Day Release): This approach involves a recurring weekly cycle where specific days or hours are dedicated to workplace practice concurrently with academic study. This approach is recommended for courses where the immediate synchronisation of theoretical knowledge and professional application is vital for the learning journey.

Table 4 compares the block release and day release approaches. A WBL programme may select either or both approaches.

Standards: COPPA 1.3.2; COPTPA 1.4.2

Table 4: Block release and day release scheduling approaches

Approach	Purpose	Definition in WBL Context
Block Release	Sustained Period Scheduling	Concentrated, full-time workplace immersion for a specific number of consecutive weeks or months (e.g., 4 months)
Day Release	Intermittent Integrated Scheduling	A recurring weekly cycle where specific days or hours are dedicated to the workplace (e.g., 3 days of work, 2 days of study)

4. Curriculum and Workplace Alignment

HEPs and industry partners must synchronise learning outcomes, delivery mechanisms and assessment methods with authentic workplace tasks and competencies. This alignment ensures that work activities effectively scaffold the learning process and satisfy industrial requirements.

The approach to WBL must account for varying organisational structures:

Highly Structured Environments: In sectors like manufacturing, health care and finance, where procedures are standardised and roles are well defined, students should be assigned specific, measurable tasks that map directly to Course Learning Outcomes. Assessment in these settings is benchmarked against established industry protocols (e.g., clinical check-up procedures or technical calibration).

Dynamic and Adaptive Environments: In less structured sectors, such as creative media or start-ups, where roles are fluid and project-based, alignment should focus on processes, high-level outcomes and reflective learning. In these contexts, assessment evaluates a student's capacity for creativity, problem-solving and adaptability rather than the performance of rigid, repeatable tasks.

Further readings: Guidelines for Industry Verification of Curriculum, MQA

Box 2: Alignment between task, competency, Course Learning Outcomes, assessment and delivery strategies

Responsibility: lecturer, industry coach, WBL committee

Steps:

1. Brainstorm suitable tasks at the workplace for WBL based on the scope and level of study. There can be many tasks listed.
2. Determine competencies and the related knowledge, skills and attitudes needed to complete the task.
3. Check the knowledge requirement against the breadth and depth of the programme's body of knowledge.
4. Align competencies to the learning outcomes of matching courses.
5. Plan and develop suitable assessment criteria, methods and tools to match capabilities, opportunities and available resources.
6. Plan and develop suitable delivery/teaching and learning strategies to match capabilities, opportunities and available resources.
7. Document the task–competency–learning outcomes–assessment mapping.
8. Brief students on the mapping prior to WBL activities.

Example of task–competency–learning outcomes–assessment mapping:

Task <i>What are the suitable tasks?</i>	Competency <i>What are the required knowledge, skills and attitudes?</i>	Aligned Course Learning Outcomes (CLOs) <i>A task can be aligned to multiple courses</i>
<i>E.g., inspect finished furniture for surface defects (scratches, chips, varnish issues)</i>	K: Quality control standards and tolerance limits S: Visual inspection, defect classification, reporting A: Diligence, attention to detail, professional integrity	Quality Control CLO2: Apply inspection techniques Quality Control CLO3: Demonstrate ethics in reporting Manufacturing CLO2: Identify common production defects
Planned Assessment <i>Check the output, process and worker behaviour</i>	Delivery/Teaching and Learning Strategy <i>What are the strategies used to ensure effective delivery?</i>	
Observation checklist Evaluation rubric Reflective journal E-portfolio evidence	- Demonstration: Coach shows defect classification using real products. - Guided Practice: Students perform an inspection under supervision. - Peer Learning: Compare inspection logs among student groups. - Reflective Practice: Write a reflection journal linked to the Kolb cycle. - Feedback: Lecturer and industry coach review accuracy and ethics.	

5. Programme Development Process

HEPs are recommended to adopt “industry verification of curriculum” as part of the appropriate process to develop the curriculum.

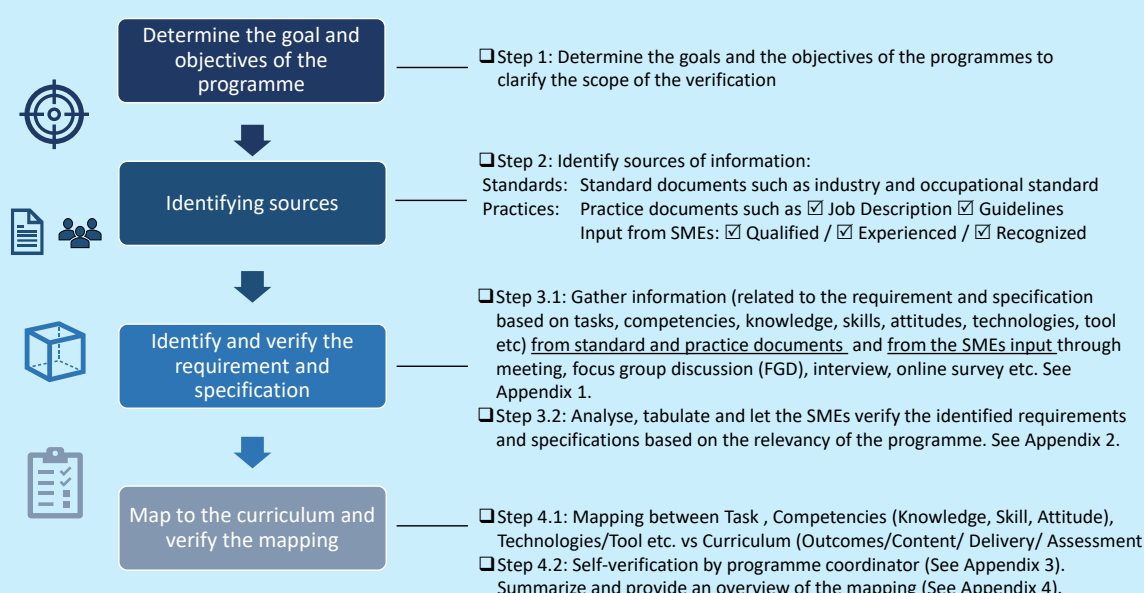
When designing curriculum for WBL programmes/courses, the curriculum should adhere to the following requirements:

- a. National and institutional policies
- b. Specific programme standards and/or professional body requirements
- c. Programme Learning Outcomes and Course Learning Outcomes
- d. Types of WBL approaches (e.g., day release, block release) and models (e.g., cooperative study)
- e. WBL assessment methods

Further readings: Guidelines for Industry Verification of Curriculum, MQA
Standards: COPPA 1.2.2; COPTPA 1.3.5

Box 3: Industry verification of curriculum

Process as suggested in the Guidelines for Industry Verification of Curriculum, MQA:



6. Consideration of Occupational/Industry Standard or Practice

HEPs and industry partners are encouraged to ensure that WBL courses fulfil relevant occupational and industry standards or practices. This alignment guarantees that student work activities accurately reflect real-world expectations, professional requirements and the current state of industry practice.

Further readings: Guidelines for Industry Verification of Curriculum, MQA
Standards: COPPA 1.2.4; COPTPA 1.3.1, 1.3.2

Box 4: Consideration of relevant occupational/industry standards or practices

Example analysis and curriculum mapping based on the mapping suggested in the Guidelines for Industry Verification of Curriculum, MQA:

Requirement and specifications from SIRIM Industry Standard: Industry 4.0 Criteria – Guidelines for adoption by organisations.

Thrust	Focus area	Minimum adoption criteria	Adoption criteria task (objective)
Automation	Data collection and processing	Processed data	- Install local sensors at critical equipment/process - Storage of data locally or in cloud - Data collected via sensors, stored, managed, and processed. Real time or near real time data

List of requirement and specification items based on standard/practice of related occupation/industry:

Item	Task/activities	Competencies (knowledge/skills/attitude)	Tools/Technology
13	Automating data collection and processing Work activities: - Identify critical equipment/process for sensor installation in IR4.0 - Collect and process data via sensors, store locally/in-cloud, in real time	Automation - data collection and processing (Knowledge: Critical equipment/process, sensor characteristics and work principles, etc Skills: Installation, Programming)	Sensors, cloud storage, real-time processor, programming language

Mapping of standard/practice to curriculum:

Item	Course	Lesson outcomes/Course learning outcomes			Delivery (refer tools/tech)	Assessment (refer specification)
		Verb	Noun	Qualifier (specification)		
13	Advance Manufacturing	Identify	equipment /process	critical for Ind 4.0 purpose sensor installation	Problem based learning sessions	Project and assignment
13	Measurement & Instrumentation	Collect & process	data	via sensors, store locally/in-cloud, and in real time	Hands-on practical sessions	Practical demonstration

7. Collaborative Curriculum Design and Governance

HEPs are required to engage qualified and industry-recognised advisors in the curriculum design and planning phases. This engagement fosters shared ownership and ensures that learning outcomes remain relevant to sector-specific requirements.

It is strongly recommended that HEPs adopt a **consortium-led** WBL model, particularly for apprenticeship programmes. This collaborative framework involves **industry-led consortia partnering with educational institutions** to jointly initiate, develop and govern programmes. This approach ensures that on-the-job and off-the-job learning experiences are seamlessly integrated, aligning with evolving industry standards and supporting national workforce development priorities.

Standards: COPPA 1.2.3; COPTPA 1.3.6

8. Determination of Credits and Duration

HEPs should ensure that the duration and credit allocation of WBL courses are sufficient to allow students to achieve the intended learning outcomes through meaningful workplace engagement. The workload and recognition of WBL courses should maintain equivalency with traditional courses of similar credit value, where the Student Learning Time for a credit course is equivalent to 40 notional hours:

$$\text{Effective Learning Time (ELT)} = \text{Student Learning Time (SLT)}$$

Effective Learning Time is a percentage of work time.

In WBL, students spend their work time learning new theory, receiving industry guidance and undergoing assessment.

$$\text{Work Time} = \text{Theory} + \text{Industry Guidance} + \text{Assessment}$$

Only a percentage of the work time, n , is effective for learning:

$$\text{ELT} = \text{Work Time} \times n$$

The amount of work time needed so that $\text{ELT} = \text{SLT}$:

$$\text{Work Time} = \text{SLT} \div n$$

Effective Learning Time excludes activities during the work time that do not contribute to learning, such as non-work activities (NW), work unrelated to curriculum (NC) and activities with no learning value (NV), such as overly repetitive tasks with no additional learning, as follows:

$$\text{ELT} = \text{Work Time} - \text{NW} - \text{NC} - \text{NV}$$

In WBL, NW, NC and NV can be minimised through structured planning, supervision, assessment and standardisation. It can be estimated that the Effective Learning Time of less structured, moderately structured and highly structured WBL models is 20%, 50% and 80% of work time, respectively, as shown in **Figure 5**. These values are estimates, and HEPs may propose different percentages with supporting evidence of task and curriculum mapping reflected in the work schedule.

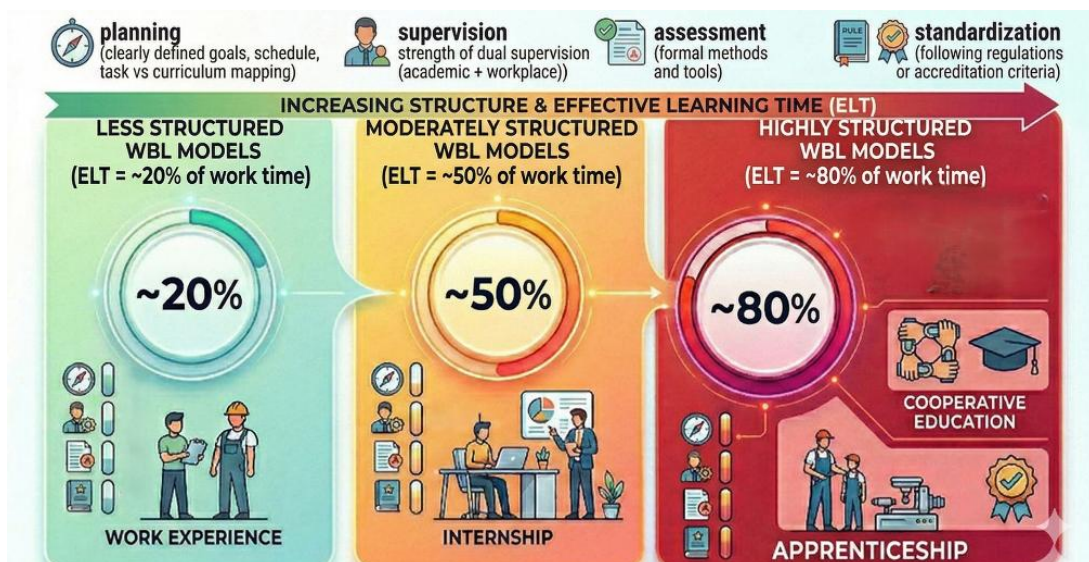


Figure 5: Increasing structure and Effective Learning Time in WBL models

❏ Box 5: Estimating work time needed for equivalent Student Learning Time

Example 1: A 12-credit ($SLT = 12 \times 40 = 480$ h) internship course with $ELT = 50\%$ of work time (i.e., $n = 50\%$) requires: $Work\ Time = SLT \div n = 480 \div 50\% = 960$ h = ~24 weeks*

Example 2: A 12-credit ($SLT = 12 \times 40 = 480$ h) cooperative study course with $ELT = 80\%$ of work time (i.e., $n = 80\%$) requires: $Work\ Time = SLT \div n = 480 \div 80\% = 600$ h = ~15 weeks*

Example 3: An 18-credit ($SLT = 18 \times 40 = 720$ h) apprenticeship course with $ELT = 80\%$ of work time (i.e., $n = 80\%$) requires: $Work\ Time = SLT \div n = 720 \div 80\% = 900$ h = ~22.5 weeks*

Example 4: A 90-credit ($SLT = 90 \times 40 = 3600$ h) R-WBL programme with $ELT = 20\%$ of work time (i.e., $n = 20\%$) requires: $Work\ Time = SLT \div n = 3600 \div 20\% = 18,000$ h = ~450 weeks* = ~9.375 years^

*Note: ELT – Effective Learning Time; SLT – Student Learning Time; * – 40-hour work week; ^ – 48-week work year*

Effective Learning Time Distribution

Theory is learned during work (on-the-job) and outside of work (off-the-job) in the form of dependent learning (DL) and independent learning, which may be guided (ILG) or non-guided (ILNG). Industrial guidance (IG) involves students performing work and reflection under the instruction, supervision and feedback of an industry mentor or coach. Assessment (A) time includes the time for assessment of learning for grading, assessment for learning, including feedback by a tutor or coach; and assessment as learning, including self-reflection by students. As a suggestion, HEPs can set their own estimates of distribution of activities, such as 10% (DL), 20% (IG), 30% (ILG), 20% (ILNG) and 20% (A).

Standards: COPPA 1.3.2; COPTPA 1.3.3, 1.4.2

❑ Box 6: Example of planning for the distribution of students' Effective Learning Time for a course

Effective Learning Time = e.g., 80% of work time ($n = 80\%$)

Credit hours of a course = e.g., 4 credits (SLT = 4 credits X 40 notional hours = 160 h)

Work Time = $SLT \div n = 160 \div 80\% = 200$ hours

Examples of delivery methods suggested by the HEP:

DL – Face-to-face lectures (physical or online)

IG – On-the-job coaching, shadowing experts and hands-on technical training

ILG – Logbook reflection, portfolio compilation and specific project research

ILNG – Self-study, library research and final exam/viva preparation

Examples of assessment methods to match delivery:

Assessment includes formative and summative assessments and alternative assessments, such as:

DL – In-class quizzes, mid-term and final examinations

IG – Industry coach evaluation and skill competency checklists

ILG – Updating reflective journals, portfolios and case study reports

ILNG – Responding to feedback and preparation for examinations or other assessments

	Dependent Learning (DL)	Industrial Guidance (IG)	Independent Learning – Guided (ILG)	Independent Learning – Non-Guided (ILNG)	Assessment (A)
Weightage (%)	10	20	30	20	20
Work time, 200 (h)	20	40	60	40	40

Note: SLT – Student Learning Time; DL – Dependent Learning; IG – Industrial Guidance; ILG – Guided Independent Learning; ILNG – Non-Guided Independent Learning; A – Assessment

9. Diversified Pedagogical Delivery

HEPs and industry partners are encouraged to adopt a multi-modal approach to WBL. This involves integrating experiential learning, structured mentorship and collaborative tasks with reflective practices and blended academic support. This holistic delivery model ensures that WBL remains engaging and aligned with both academic and industrial requirements.

Recognising that there is no singular “standardised” delivery method, the framework provides HEPs and industry partners with the flexibility to co-design curricula that best fulfil the Programme Learning Outcomes. In determining the most appropriate instructional mix, stakeholders should evaluate the nature of the content, student learning preferences and the availability of facilities at both the HEP and the workplace.

Standards: COPPA 1.3.5; COPTPA 1.4.5

10. Instructional Strategy in Programme Delivery

HEPs and industry partners comprising leadership, coordinators, academic staff and workplace coaches should collaboratively design instructional strategies that ensure the achievement of Programme Learning Outcomes and Course Learning Outcomes.

This collegial approach ensures that WBL delivery is coherent, academically rigorous and operationally supported. By leveraging the specific strengths of each role, the framework ensures strategic alignment through leadership, logistical efficiency via coordinators, pedagogical depth from tutors and practical mentorship through workplace coaches.

Lecturers are responsible for integrating blended learning methodologies that reinforce workplace experiences with theoretical foundations, ensuring that these are accessible and responsive to the students' professional schedule. By synchronising instructional delivery with real-world application, lecturers facilitate a coherent learning journey that meets both academic standards and industrial needs.

Industry mentors should provide structured mentorship and coaching through systematic feedback, technical guidance and periodic performance reviews. This role is fundamental in supporting learners as they work towards the attainment of specified learning outcomes. Effective coaching and mentorship facilitate the students' professional development by providing personalised industry insights and fostering successful integration into the organisational culture, ensuring that experiential learning is both reflective and goal-oriented.

Standards: COPPA 1.3.1; COPTPA 1.4.1, 1.4.7

❏ Box 7: Industry coaching and mentoring roles

Industrial mentoring and coaching spark short-term and long-term growth.

Coaching (short term): Modelling and regular feedback on specific skills, knowledge and behaviours, leading to competent personnel.

Mentoring (long term): Role modelling and regular advice to develop maturity, character and worldview, broadening the mentee's perspective and horizons.



11. Provision of a Conducive Learning Environment

Industry partners must provide a safe, accessible and supportive environment that facilitates both academic and workplace learning. This includes the formal allocation of structured learning time and mandatory rest periods to ensure student well-being and sustained cognitive focus. A conducive environment encompasses the physical, psychological and organisational conditions necessary for active participation and meaningful knowledge transfer.

In the WBL context, this mandate requires ensuring workplace safety, providing access to industry-standard tools and offering structured mentoring. Furthermore, the definition of “workplace” extends to remote work settings, provided the industry partner ensures a supportive culture and high-quality remote mentoring. WBL supervision must be conducted either by HEP academic staff or by a qualified industry coach jointly appointed by the HEP and workplace management.

Standards: COPPA 1.3.4; COPTPA 1.4.4

AREA 2: ASSESSMENT OF STUDENT LEARNING

12. Constructive Alignment and MQF Level Integrity

HEPs and industry partners must synchronise assessment principles, methods and practices with the Programme Learning Outcomes, **MQF level descriptors** and authentic workplace competencies. This alignment ensures that assessments are meaningful, authentic and reflective of both academic rigour and industrial requirements.

It is critical to maintain the integrity of the qualification level; for instance, a bachelor's degree (MQF Level 6) must not inadvertently assess students at a diploma level (MQF Level 4). This occurs when workplace tasks are restricted to routine operations or basic recall, failing to engage the **higher-order thinking skills** such as autonomy, knowledge integration and complex problem-solving, which are required by the descriptors. Such misalignment compromises the validity of the assessment and fails to satisfy the intended Course Learning Outcomes and Programme Learning Outcomes.

Standards: COPPA 2.1.1; COPTPA 2.1.1

Box 8: Assessment principles, methods and practices

Assessment is a systematic process of collecting, analysing and interpreting evidence of student learning through various methods and tools.

Aspect	Explanation	WBL Context	Examples
Principles	Valid, reliable, fair, transparent, aligned to Course Learning Outcomes and MQF level descriptors	Assessment reflects real tasks, with clear rubrics for students and mentors	Nursing competency exam with rubrics on patient care skills
Methods	Ways to gather evidence of learning	Observation, logbooks, reflective journals, portfolios, etc.	Mechatronics students assessed by on-site performance, supervisor evaluation and e-portfolio
Practices	Steps to ensure consistent assessment	Clear roles (HEP, industry, students), curation, feedback, moderation, records	Weekly journals checked by academics, verified by mentors, moderated by faculty

13. Diversification of Assessment Methods and Tools

HEPs and industry partners must deploy a multifaceted range of assessment instruments and methodologies to evaluate learning outcomes and professional competencies. These tools must be rigorously aligned with Course Learning Outcomes, MQF level descriptors and the specific complexity of workplace tasks to ensure academic validity and industrial relevance.

The use of varied assessment tools is essential to capture the full spectrum of a student's development in a WBL environment. Unlike traditional classroom settings, WBL requires a balance between summative assessments (to measure final achievement) and formative assessments (to provide ongoing feedback that supports continuous improvement).

By utilising diverse methods such as reflective journals, 360-degree feedback, workplace observations and project portfolios, stakeholders can ensure the following:

- Authenticity:** Assessments mirror real-world professional challenges rather than just theoretical recall.
- Cognitive Depth:** The tools used are sensitive enough to distinguish between different MQF levels, ensuring a bachelor's degree (MQF Level 6) student is assessed on synthesis and evaluation rather than just basic application.
- Continuous Growth:** Regular feedback loops allow students to identify competency gaps in real time and adjust their learning strategies accordingly.
- Holistic Evaluation:** Both technical skills and "soft" professional attributes (ethics, communication and teamwork) are measured through appropriate, context-specific evidence.

Standards: COPPA 2.2.1; COPTPA 2.2.2

❏ Box 9: Assessment purpose, methods and tools

Methods: How we assess (approach) – observation, test, portfolio, etc.

Tools: With what we assess (instrument) – rubric, checklist, exam paper, logbook, etc.

	Purpose	WBL context	Methods
Formative	Assessment as Learning	Student reflection to promote self-awareness and learning	- Reflective journal - Self-assessment - Portfolio
	Assessment for Learning	Coach feedback to guide and improve learning during the WBL process	- Observation and feedback - Weekly reviews
Summative	Assessment of Learning	Coach and lecturer evaluation of learning achievement	- Final report - Oral presentation - Industry evaluation - Portfolio

Box 10: Example of assessment as learning

Students should engage in systematic reflective learning practices by maintaining structured logs or journals of their workplace experiences. This practice serves to cultivate self-awareness and critical reflection, facilitating a continuous improvement mindset. Within the experiential learning framework, reflection acts as the essential link between theoretical knowledge and practical application, allowing students to critically evaluate their performance and strategically plan for future skill enhancement.

Below is an example of critical reflection using the Situation, Task, Action, Result, Reflection (STARR) framework.

Part 1: The Critical Incident (The “Work”)

Situation: Briefly describe a specific work event.

Task: What was my specific responsibility in that moment?

Action: What steps did I take? (Focus on the decision-making process).

Result: What was the outcome? Use data if possible.

Part 2: The Academic Alignment (The “Learning”)

Reflection:

Theoretical Link – How does this action relate to academic theories? (e.g., “The work activity aligns with theory X.”)

Self-Critique – Looking back, what would I do differently?

Further readings: Driscoll, J. (2007). Practising professional development in health care: A user’s guide to reflective practice

14. Implementation of Competency-Based Assessment

HEPs and industry partners are recommended to adopt a competency-based assessment framework within WBL courses, specifically evaluating work outputs, process execution and professional behaviours. This approach ensures that assessments are intrinsically aligned with workplace realities, providing a practical and intuitive evaluation structure for industry coaches.

Competency-based assessment shifts the focus from theoretical testing to the demonstration of mastery in a real-world context. By evaluating what a student produces (output), the methodology they apply (process) and their professional conduct (behaviour), the assessment directly mirrors established industry performance appraisal systems.

This synergy offers several strategic advantages:

- a. **Industrial Intuition:** It leverages the **existing evaluation practices used by supervisors to manage regular employees at the workplace**, reducing the administrative burden on industry coaches and improving the reliability of their feedback.
- b. **Authentic Validity:** Assessments are grounded in actual professional tasks, ensuring that successful results truly reflect a student’s readiness for the workforce.

- c. **Behavioural Integration:** It allows for the formal measurement of “soft” attributes—such as ethics, reliability and teamwork—which are often difficult to capture in traditional academic settings but are critical for MQF compliance.
- d. **Fairness and Transparency:** By focusing on observable evidence and standardised work processes, competency-based assessment provides a clear, objective and fair basis for grading that both the HEP and the industry partner can support.

An industry coach often supervises and assesses several students from various HEPs. To reduce the burden on industry coaches, existing evaluation practices at the workplace can be mapped to the HEP's desired academic attainment, avoiding the need to have a unique rubric dedicated to students coming from different institutions.

Further readings: Guidelines to Good Practices on Assessment of Student Learning Standards: COPPA 2.2.1; COPTPA 2.3.1–2.3.4

Box 11: Example of competency-based assessment using a rubric

Criteria	Proficient	Developing	Beginning
Process	Student performs the task within the stipulated time using the correct procedure.	Student performs the task using the correct procedure, but not within the stipulated time.	Student performs the task neither within the stipulated time nor using the correct procedure.
Output	The final output meets ALL requirements and specifications.	The final output meets ONLY the MAIN requirements and specifications.	The final output meets SOME of the MAIN requirements and specifications.
Behaviour	Student demonstrates professionalism consistently: follows safety rules, communicates effectively, collaborates with peers and shows responsibility.	Student demonstrates professionalism partially: follows safety rules, but communicates or collaborates inconsistently.	Student shows poor professionalism: neglects safety, communicates poorly or lacks responsibility.

Box 12: Example of competency-based assessment using a competency checklist for workplace activities

Work Activity/Task	Competency Elements (K-S-A)	Competent? (✓)/(X)	Comments/Evidence
Follows workplace safety procedures (e.g., personal protective equipment, Standard Operating Procedures)	Knowledge of safety rules, correct use of personal protective equipment, responsible attitude	✓	Signed safety compliance checklist; photo evidence of correct personal protective equipment use
Performs assigned technical task (e.g., machine setup, patient check, quality control inspection)	Applies technical knowledge, demonstrates skill, completes task accurately	✓	Completed machine setup log; quality control defect report with supervisor verification
Completes work within the given timeframe	Time management, efficiency, responsibility	X	Time-tracking sheet showing delay; production report noting task overrun
Communicates clearly with supervisor and colleagues	Verbal/written communication, teamwork	✓	Copy of shift briefing notes; peer feedback form
Records work activities in a logbook or system	Accuracy in documentation, attention to detail, diligence	X	Incomplete logbook entry; discrepancy between recorded and actual tasks
Demonstrates problem-solving when facing difficulties	Analytical thinking, adaptability, initiative	✓	Case note describing problem encountered and student's proposed solution
Shows professionalism in conduct (punctuality, respect, ethics)	Positive attitude, integrity, reliability	✓	Attendance record; Human Resources note confirming punctuality and professional conduct

AREA 3: STUDENT SELECTION AND SUPPORT SERVICES

15. Collaborative Student Selection and Placement

HEPs and industry partners are recommended to establish standardised criteria and transparent processes for student selection, prioritising a candidate's capacity to both learn effectively and perform tasks within a professional environment. This joint approach ensures that the selection remains objective, transparent and aligned with the operational realities of the workplace.

Identifying students with the aptitude for both academic inquiry and practical application is critical for maintaining the quality of the WBL experience and ensuring long-term industry satisfaction. By defining clear criteria (such as technical readiness, communication skills and behavioural attributes) and a structured selection process, the partnership mitigates bias and ensures that student placements are fair and merit-based.

In robust apprenticeship models, employers take an active role in the recruitment phase, often through:

- a. **Direct Interviews:** Allowing the industry partner to assess cultural fit and professional motivation firsthand.
- b. **Technical Aptitude Assessments:** Establishing specific entry requirements that reflect the specialised nature of the workplace.
- c. **Workplace Readiness Checks:** Prioritising candidates who demonstrate the resilience and adaptability needed for the field.

This shared governance in selection ensures that students are not merely academically qualified but are also strategically suited to the operational and cultural environment of the industry. Such precision in placement reduces turnover risk, enhances the achievement of learning outcomes and reinforces the trust and shared ownership between the HEP and the industry partner.

Standards: COPPA 3.1.2; COPTPA 3.1.10

16. Provision of Developmental and Remedial Support

HEPs and industry partners are encouraged to establish a comprehensive support system that offers both developmental and remedial assistance to address academic learning, technical tasks and workplace professional requirements. This dual-support framework ensures that learners maintain high standards of productivity while effectively achieving their educational objectives.

In the WBL environment, students transition from passive learners to active contributors, assuming significantly greater responsibility for their own educational progress. Because WBL involves the execution of authentic work, any deficiency in preparation or skill can

have a direct negative impact on both the students' learning outcomes and the operational efficiency of the host organisation.

A robust support strategy should include:

- a. **Developmental Support:** Proactive coaching aimed at enhancing independent learning, critical thinking and advanced workplace readiness for all students.
- b. **Remedial Support:** Targeted interventions for students identified with specific gaps in knowledge, technical skills or professional behaviours.
- c. **Equitable Opportunity:** Ensuring that diverse learners are provided with the necessary scaffolding to meet rigorous programme expectations and perform effectively in a high-stakes environment.
- d. **Risk Mitigation:** Addressing skill gaps early to prevent errors that could compromise workplace safety or organisational standards.

By integrating these support mechanisms, the partnership fosters personal resilience in students and ensures they can fully benefit from the experiential learning process without compromising industrial productivity.

Standards: COPPA 3.1.5; COPTPA 3.1.13

Box 13: Appropriate developmental and remedial support

- Prepare students with required professional and work skills (such as workplace communication, ethics and etiquette, problem-solving and critical thinking, teamwork and leadership, safety and compliance, digital literacy and adaptability to the workplace).
- Prepare students on how to learn independently at the workplace (such as based on Kolb's experiential learning cycle or Zimmerman's self-regulated learning).
- Provide remedial academic support (such as workplace-linked tutorials by academics after workplace tasks to clarify theory gaps).
- Provide well-being and support systems (such as mentoring, counselling and remedial plans for underperforming students).

17. Holistic Support Services and Compensation

HEPs and industry partners must ensure students have equitable access to comprehensive support services, including physical, social, financial, recreational and online facilities, alongside professional academic and non-academic counselling and health services. For students engaged under a formal apprenticeship contract, compensation must strictly adhere to the Employment Act 1955 (Act 265) and the Minimum Wage Order (2022) to ensure legal compliance and the protection of the learner's livelihood.

A sustainable WBL environment necessitates a robust social safety net that protects the student's physical, mental and financial well-being. By providing a structured support system, the partnership fosters personal resilience and allows the learner to maintain focus on achieving their learning outcomes.

Key pillars of this support framework include:

- a. **Legal and Financial Compliance:** Apprentices under contract must receive wages that meet or exceed the standards set by the Minimum Wage Order (2022) and operate within the protections of the Employment Act 1955 (Act 265).
- b. **Holistic Wellness Infrastructure:** Students require access to on-site and online facilities that support not only their technical tasks but also their social and recreational needs to prevent burnout.
- c. **Psychological and Academic Counselling:** Professional guidance must be available to help students navigate the dual pressures of workplace integration and academic rigour.
- d. **Health and Emergency Services:** Adequate insurance and health service protocols must be established to manage emergency situations at the workplace effectively.

Standards: COPPA 3.3.1; COPTPA 3.2.1

18. Student Induction and Orientation

HEPs and industry partners should implement a structured induction programme for all students, with specialised orientation protocols for out-of-state students, international students, students with special needs, students in gender-non-traditional roles and students with diverse religious and cultural backgrounds. This process is designed to ensure a seamless transition into both the academic and professional environments, promoting equity and inclusivity while equipping students with the confidence and self-directed learning strategies necessary for success in WBL.

The induction process serves as the foundational bridge between a student's prior academic experience and the multifaceted demands of the workplace. A high-quality induction consists of three critical layers:

- a. **Academic Orientation:** Familiarising students with academic regulations, Programme Learning Outcomes, Course Learning Outcomes and methodologies of reflective practice, such as e-portfolios.
- b. **Workplace Orientation:** Ensuring students understand organisational culture, Standard Operating Procedures, occupational safety and reporting hierarchies to facilitate rapid professional integration.
- c. **Pedagogical Readiness:** Introducing students to frameworks such as Kolb's Experiential Learning Cycle to help them transform workplace actions into meaningful learning through reflection.

To promote equity and inclusivity, the programme must offer targeted support:

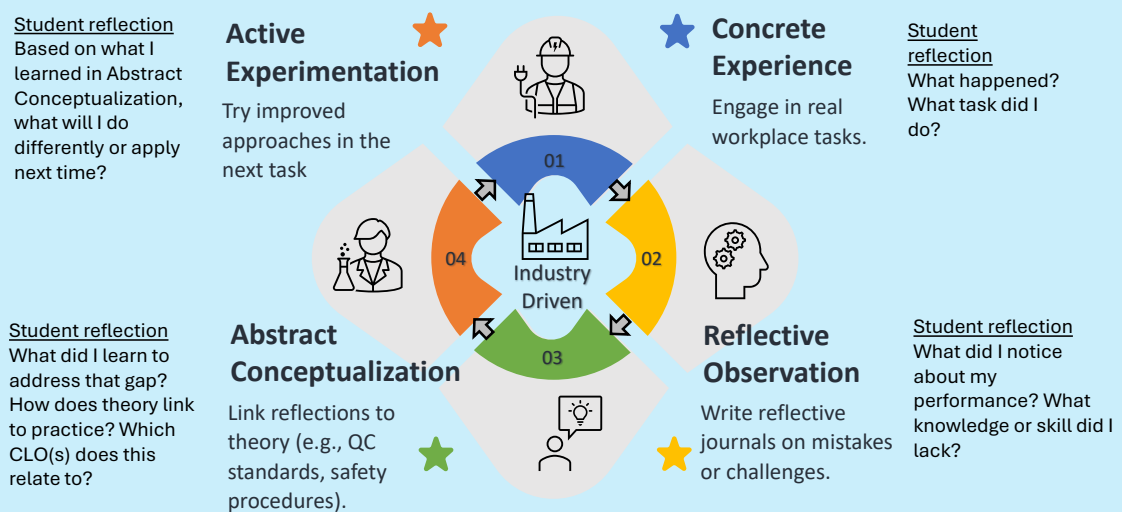
- a. **International and Out-of-State Students:** Providing guidance on local customs, language support and accommodation to mitigate culture shock and logistical challenges.
- b. **Students with Special Needs:** Implementing accessibility measures, including assistive technologies and ergonomic task adaptations, to ensure a fair learning environment.

- c. **Students in Gender-Non-Traditional-Occupational Roles:** Providing specialised mentorship and task mapping for students entering professions where their gender is underrepresented, such as heavy construction or oil and gas remote work for female students, or wellness and beauty therapy intimate work for male students. This involves identifying and mitigating “awkward” or sensitive scenarios to ensure student safety and professional growth.
- d. **Students with Diverse Religious and Cultural Backgrounds:** Facilitating reasonable accommodations for religious observances and cultural practices that may differ from workplace norms. This involves proactively establishing flexible scheduling for mandatory prayer times (e.g., extending lunch breaks for Friday prayers for Muslim students), ensuring access to suitable quiet spaces for devotion, addressing dietary requirements in provided meals (e.g., halal or vegetarian) and navigating dress code policies respectfully while maintaining safety standards.

Standards: COPPA 3.3.3; COPTPA 3.2.3

❏ Box 14: Kolb's Experiential Learning Cycle and an example of a student's reflective journal

During induction, it is recommended that students be introduced to independent learning methods, such as writing reflective journals, which serve both as a form of assessment as learning and as documented evidence of their progression from guided to independent learning.



Further readings:

Kolb, D. A. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.
 Driscoll, J. (2007). *Practising professional development in health care: A user's guide to reflective practice* (2nd ed.). Bailliere Tindall Elsevier.

AREA 4: STAFF

19. Strategic Manpower Planning

HEPs, in collaboration with industry partners, should develop and implement a comprehensive manpower plan for all academic, instructional and workplace personnel involved in WBL. This plan should ensure that the recruitment, onboarding and training and deployment of manpower are consistent with institutional policies, programme requirements and industrial expectations.

Effective manpower planning in WBL requires a dual-track approach that synchronises the efforts of both academic and industrial workforces. The primary objective is to ensure that a sufficient number of competent, well-coordinated staff, including tutors, coordinators, industry coaches and supervisors, are available to deliver and enhance the programme in line with quality assurance standards.

A robust manpower plan should address the following critical areas:

- a. **Resource Identification:** Assessing the specific human capital needs required to support both the theoretical and practical components of the curriculum.
- b. **Role Definition and Training:** Ensuring that academic staff (coordinators, tutors) and industry staff (coaches, supervisors) have a shared understanding of their specific roles and receive pedagogical training to support experiential learning.
- c. **Commitment and Governance:** Formalising the commitment of personnel to student success through clearly defined reporting hierarchies and communication protocols.
- d. **Quality Assurance Alignment:** Linking workforce planning directly to programme outcomes to provide consistent supervision and maintain the academic rigour of the workplace experience.

Standards: COPPA 4.1.1–4.14; COPTPA 4.1.1–4.1.4, 4.1.8, 4.1.14

Box 15: Manpower planning

Role	Definition	Key Functions	Requirements
Programme Leader	Strategic leader appointed to oversee WBL at the departmental or programme level	• Oversee strategic alignment with MQF and regulatory standards • Manage programme-level documentation and compliance audits • Direct training initiatives for academic staff and industry partners	• Must have a comprehensive understanding of curriculum, WBL administration, regulatory standards and institutional policies
Academic Staff or Tutor	Subject-matter experts responsible for pedagogical delivery and theoretical integration	• Bridge theoretical knowledge with workplace application via reflective learning • Conduct rigorous academic evaluations and monitor student logbooks • Collaborate with industry coaches to refine curriculum based on field data	• Must demonstrate verified subject-matter expertise and the pedagogical ability to link theory with practice • Must have a reasonable workload to be effective in providing quality tutoring
WBL Coordinator (Institutional)	Centralised administrators managing cross-institutional WBL operations and industry relations	• Formalise legal partnerships (Memorandum of Understanding, Memorandum of Agreement, Letter of Intent) and manage institutional reporting • Mediate workplace issues and monitor student welfare and safety • Synchronise scheduling and maintain centralised student WBL dossiers	• Must have a comprehensive understanding of WBL administration, regulatory standards and institutional policies
Industry Coordinator	Employer-appointed liaison officers managing the operational interface with the HEP	• Coordinate logistics, workplace scheduling and administrative communication • Map workplace tasks to specific Course Learning Outcomes • Act as the primary internal point of contact for HEP coordinators	• Must have a comprehensive understanding of WBL administration, regulatory standards and institutional policies
Industry Coach or Mentor	Workplace practitioners appointed to provide direct technical mentorship and evaluation	• Facilitate daily experiential learning and provide technical task oversight • Enforce occupational safety and health and professional conduct standards • Perform joint assessments with HEP tutors to provide a holistic competency review	• Possess significant workplace experience and proven supervisory capabilities to mentor and coach students in a professional setting • Must have a reasonable workload to be effective in providing quality coaching

AREA 5: EDUCATIONAL RESOURCES

20. Strategic Provision of Integrated Educational Resources

HEPs and industry partners should collaboratively provide sufficient, relevant and modern resources, including physical infrastructure, advanced information and communication technology systems, industry expertise and financial support, to ensure the effective delivery, monitoring and continuous improvement of WBL programmes. This joint commitment ensures that the learning environment is adequately supported by comprehensive assets from both sectors, enabling students to master intended competencies in a setting that mirrors real-world professional standards.

Educational resources in a WBL context must transcend the traditional classroom to encompass the full operational capacity of the workplace, creating a seamless learning ecosystem through the synchronisation of academic and industrial infrastructure. To maintain the integrity of this ecosystem, the partnership must perform gap analysis during the planning phase to align workplace facilities with learning outcomes, during the implementation phase to address real-time resource discrepancies, and during the review phase to evaluate the effectiveness of the infrastructure in achieving the intended professional competencies.

Key pillars of this integrated resource framework include:

- a. **Infrastructure Parity:** Ensuring students have access to modern tools, workplace facilities and specialised training equipment that reflect current industry benchmarks.
- b. **Digital and Research Connectivity:** Providing robust information and communication technology systems and research support to facilitate data-driven learning and remote academic engagement.
- c. **Expertise as a Resource:** Leveraging the specialised knowledge of both academic tutors and industry experts to provide high-level guidance and mentorship.
- d. **Financial and Monitoring Mechanisms:** Establishing adequate financial support and administrative resources to facilitate delivery, assessment, rigorous monitoring and Continual Quality Improvement.

Standards: COPPA 5.1.1, 5.1.3; COPTPA 5.1.1, 5.1.4

21. Legal Compliance and Occupational Safety Standards

HEPs and industry partners must ensure that all educational resources, training facilities and workplace operations strictly comply with national laws, occupational safety regulations and professional body guidelines. This mandatory adherence safeguards the rights and well-being of students and staff while ensuring that WBL is conducted in a safe, ethical and legally sound environment.

Regulatory compliance in a WBL context is a shared responsibility that spans both institutional and industrial domains. Maintaining these standards is critical to protecting stakeholders and upholding the integrity of the programme.

Key areas of compliance include:

- a. **Occupational Safety and Health Act:** Ensuring all workplace settings meet national safety benchmarks to prevent accidents and health hazards.
- b. **Personal Protective Equipment:** Mandating the correct provision and use of safety gear as required by specific industrial tasks.
- c. **Professional Body and Programme Standards:** Aligning workplace facilities and equipment with the technical requirements set by regulatory and accrediting bodies.
- d. **Ethical and Legal Soundness:** Adhering to national legal requirements to build trust between academia and industry while mitigating institutional risk.

Standards: COPPA 5.1.1; COPTPA 5.1.3

AREA 6: PROGRAMME MANAGEMENT

22. WBL Governance and Oversight

HEPs and industry partners must establish a formal WBL Committee to govern the strategic planning, operational implementation and quality assurance of all WBL programmes. This committee serves as the primary collaborative platform for academia and industry to ensure that programme delivery remains consistent with institutional standards and professional requirements.

A dedicated governance committee is essential for bridging the gap between academic theory and industrial practice. By formalising this partnership, the committee provides a structured environment to manage the complexity of the WBL ecosystem.

The core functions of the WBL Committee include:

- a. **Strategic Planning and Alignment:** Ensuring that the curriculum and workplace tasks are synchronised with Programme Learning Outcomes and industry needs.
- b. **Operational Coordination:** Streamlining logistics, scheduling and resource allocation between the HEP and the industry partner.
- c. **Performance Monitoring:** Overseeing the progress of learners and the effectiveness of industry coaches to maintain academic rigour.
- d. **Continual Quality Improvement:** Regularly reviewing programme data and stakeholder feedback to implement enhancements and maintain accreditation standards.

By facilitating direct communication between academic leaders and industry coordinators, the committee mitigates risks, resolves conflicts and ensures that the student's learning journey is both supported and ethically sound.

Standards: COPPA 6.1.1–6.1.4; COPTPA 6.1.1–6.1.2

❏ Box 16: Example of terms of reference for WBL Committee

The committee can be at the programme, department, faculty or institution level.

Members:

1. Programme Leader
2. WBL Coordinator
3. Industry WBL Coordinator (preferably from different types and companies involved)
4. Any relevant stakeholder

Scope of Functions:

1. Coordinate the planning and execution of WBL courses
2. Approve WBL training plans, including task scopes, task alignment with learning outcomes, assessment and timelines
3. Organise training and briefing sessions for academic supervisors, industry mentors and students prior to placement
4. Systematically review alignment between assessment and learning outcomes to ensure effectiveness
5. Monitor, review and conduct Continual Quality Improvement of the programme

Meetings:

1. Convene at least twice per year
2. Quorum: At least 50% of members, with representation from both academia and industry
3. Decisions shall be recorded and reported to the institutional academic board

Authority:

The committee operates under the mandate of the institutional Senate or Academic Board (HEP) or equivalent body, with delegated authority to oversee WBL programme implementation in partnership with industry.

23. WBL Academic and Industry Record

HEPs and industry partners must establish robust policies governing the entire lifecycle of WBL records, including their creation, retention, security and confidential disposal. These protocols ensure that all documentation concerning students, staff and industry partners is managed ethically and systematically, maintaining full compliance with legal requirements, professional standards and individual privacy protections.

Effective record-keeping in a WBL context requires a structured approach that spans from initial enrolment to long-term archiving:

- a. **Lifecycle Management:** Ensuring systematic maintenance and preservation of student records from admission through graduation, allowing for accurate verification of competencies.
- b. **Confidentiality Protocols:** Strictly upholding industry non-disclosure agreements and confidentiality clauses while protecting the personal data of all participants, in accordance with the Personal Data Protection Act.
- c. **Secure Disposal:** Implementing verified methods for the permanent and safe disposal of records once the mandatory retention period has expired to prevent data leaks.

- d. **Continuous Quality Enhancement:** Regularly auditing and upgrading record security systems to mitigate risks from evolving digital threats and ensure the physical safety of archived documents.

Standards: COPPA 6.4.1–6.4.4; COPTPA 6.4.1–6.4.3

24. Stakeholder Commitment and Formalised Agreements

HEPs, industry partners and students must formalise their commitment to implement the WBL programme through legally or institutionally recognised agreements. The success and long-term sustainability of WBL depend on the active commitment of all stakeholders, including HEPs, industry partners and students. Formalised agreements ensure accountability and clarity of roles.

These agreements can be in the form of Memorandum of Agreement, Memorandum of Understanding, Letters of Intent, Letters of Placement/Acceptance and Letters of Offer/Acceptance. Programme-level WBL models, such as cooperative study or apprenticeship programmes, require a wider range of agreements.

Standards: COPPA 6.1.1, 6.1.5; COPTPA 6.1.1, 6.1.4

❏ Box 17: Types of commitment and agreements

The establishment of commitment and binding agreements should be based on the WBL programme requirements, such as the Employment Act 1955 (Act 265) for apprenticeship programmes and the requirements stated in the WBL guidelines.

For example, according to the Employment Act 1955 (Act 265), an apprenticeship is defined by a specific legal structure which must be reflected in the agreement:

- **Written Contract:** The relationship must be governed by a formal written contract between the employer and the apprentice.
- **Systematic Training:** The employer must undertake to employ the person and train them systematically for a specific trade.
- **Duration:** The contract must be for a minimum of six (6) months and a maximum of twenty-four (24) months.

Example of Commitment and Formalised Agreements:

Type	Primary Focus	Best Used For
Memorandum of Agreement	Rights, liabilities, financials, operations	Apprenticeship, long-term partnerships, cooperative education models, risk management
Memorandum of Understanding*	General intent, framework of cooperation	Establishing new relationships and broad collaboration
Letter of Intent*	Expression of interest	Initiating contact, temporary arrangement before formal signing
Letter of Placement/Acceptance	Clarifying the purpose, roles and responsibilities of the industry coach, as well as the terms of reference, including protection of the rights of the party involved	Correspondence between the HEP and the company for the placement of WBL students
Letter of Offer /Acceptance	Roles and responsibilities of students	Correspondence between the company and the students; the HEP may act as a witness

*With a letter of placement/acceptance

Box 18: Quick guide: WBL programme agreement requirements

The following guide summarises the essential terms and conditions of the WBL agreement, a binding tripartite contract between the company, the student/apprentice and the HEP. This agreement is designed to align with the MQF to ensure the student/apprentice achieves specific Course Learning Outcomes through systematic training. It also adheres to the Employment Act 1955 (Act 265), regulating critical aspects such as minimum wage, working hours and mandatory statutory contributions.

Quick Guide: WBL Agreement Requirements

Category	Key Requirements and Compliance
Duration	For apprenticeship programmes, the apprenticeship must last for a minimum of six (6) months and a maximum of twenty-four (24) months, in accordance with the Employment Act 1955 (Act 265).
Parties	Between the company and the student/apprentice; between the company and the HEP.
Working Hours	The total combined hours for work, training and structured academic study must not exceed 45 hours per week, unless otherwise provided for under the Employment Act 1955 (Act 265).
Rest Days	The student/apprentice is entitled to at least one (1) full rest day per week; shift work must also adhere to these limits.
Financials	For apprentices, the company must pay a monthly wage that adheres to the Minimum Wage Order (2022). The apprentice is also entitled to mandatory contributions (e.g., Employees Provident Fund/Social Security Organisation) under prevailing labour laws. Students under non-apprenticeship programmes are recommended to receive an allowance or stipend based on their contribution to the work.
Mentorship	The company agrees to appoint a qualified industry coach/mentor to provide mentorship, technical guidance and performance assessment.
Assessment	Assessment is competency-based and jointly conducted by the HEP's tutor and the industry coach. The apprentice must maintain a reflective journal/logbook to document learning experiences.
Termination	Termination requires a specified number of weeks' written notice. In cases of absenteeism, misconduct or performance failure, the company must notify the HEP's WBL Coordinator immediately.
Intellectual Properties (if required)	The WBL agreement must clearly define the ownership, protection and licensing of background and foreground intellectual property to ensure that industry trade secrets are secured while allowing students and HEPs the necessary rights for academic assessment and career portfolios.

25. Absenteeism

HEP tutors and coordinators should be responsible for accounting for student attendance at both the institution and the WBL workplace. The programme must incorporate formal, written procedures to manage absenteeism, ensuring that all stakeholders, including students, coaches and coordinators, maintain a transparent and accountable reporting system.

To maintain professional standards and satisfy regulatory requirements, the WBL attendance framework must include the following structured procedures:

- a. **Enrolment Agreement:** Students are required to sign a formal agreement at the time of enrolment, acknowledging their commitment to the programme's attendance expectations.
- b. **Certified Work Reports:** Students should submit regular attendance and work reports, which are formally certified by the employer or industry partner to verify hours worked.
- c. **Emergency Notifications:** In the event of illness or an emergency, students are required to inform both their WBL coach and the HEP tutor or coordinator immediately.
- d. **Unexcused Absence Reporting:** The WBL coach is responsible for notifying the tutor or coordinator if a student is absent without prior notice or a valid excuse.
- e. **Formal Approval Process:** Absence is deemed "approved" only when prior authorisation has been obtained from the designated tutor, coordinator or industry coach.

26. Student Transfer

Students should not be transferred to another company without "good cause" once they have been placed at a WBL workplace. The stability of a WBL placement is essential for achieving long-term learning outcomes; therefore, student transfers between organisations should be treated as a measure of last resort.

Transfers should be made only after the situation becomes unresolvable by other means. A transfer may be deemed necessary and approved under the following specific circumstances:

- a. **Performance Misalignment:** If the student is consistently unable to meet the specific WBL requirements or learning outcomes at the current workplace.
- b. **Health and Safety Risks:** If a safety or health issue arises that compromises the well-being of the student.
- c. **Irreconcilable Conflicts:** If there is a serious interpersonal conflict between the student and the WBL coach that prevents effective mentorship and learning.

27. Dismissal

HEPs and industry partners should adhere to a strict "notification and refereeing protocol" regarding student dismissal. While the industry partner retains the right to terminate a placement for good cause, they must notify the HEP prior to dismissal (except in cases of gross misconduct and criminal activity) to allow for mediation. A clear distinction must be drawn between dismissal from the workplace (an employment action) and failure of the course (an academic action).

The goal is to balance the industry's operational standards with the university's responsibility to support the learner, ensuring that workplace conflicts are resolved constructively rather than punitively whenever possible.

Dismissal is a last resort. To rectify potential disputes, the following mechanisms must be integrated into the WBL agreement:

- a. **The Prior Notification Rule:** The industry coach must notify the HEP's WBL Coordinator immediately upon identifying serious performance issues or misconduct, before taking action to dismiss. This notification triggers the "referee process" to determine whether the issue can be resolved without dismissal.
- b. **The Referee Process (Mediation):** The WBL Coordinator serves as the "referee" to balance the needs of the student, the employer and the institution.

Further readings: Employment Act 1955 (Act 265)

28. Awarding Documents and Industry Certification

HEPs are highly recommended to ensure that the academic transcript and the Malaysian Qualification Statement explicitly reflect the WBL nature of the programme. For apprenticeship programmes, industry partners or relevant industry consortium bodies are also encouraged to provide industry or apprenticeship certification to formalise the recognition of specific functional work skills and technical mastery achieved during the industrial placement. The documentation should articulate the industry-integrated credits, the nature of the workplace assessment and the specific competencies achieved during the industrial placement.

The inclusion of the Malaysian Qualification Statement ensures transparency and recognition of the qualification, providing future employers and accreditors with a clear understanding that the graduate's competencies were acquired and assessed in an authentic workplace environment, distinct from traditional classroom instruction.

The Malaysian Qualification Statement serves as a testament to the graduate's "industry readiness". To fully capture the value of the WBL experience, the statement should include:

- a. **Mode of Delivery:** Clearly labelling relevant courses or the entire programme as industry mode.
- b. **Competency Listing:** Beyond standard course codes, the statement should highlight specific functional work skills and industry standards mastered during the placement (e.g., "competent in industry quality control standards").
- c. **Industry Reference:** Where possible, the transcript may include an endorsement or reference to the industry partner(s) involved, verifying that the skills satisfy current occupational standards.
- d. **Alignment with the MQF:** Explicitly mapping the WBL experiences to the MQF Clusters of Learning, specifically the functional and values-based attributes.

29. WBL Work and Study Hours

HEPs and industry partners must establish a weekly work–study schedule that does not exceed limits set by labour law, inclusive of shifts, study and reflection. Adherence to the allocated hours ensures the student's workload complies with national labour laws,

safety regulations and learning standards, thereby preventing burnout and ensuring the student retains sufficient cognitive capacity for academic reflection and safety compliance.

The schedule should be constructed based on the following principles:

- a. **The 45-Hour Cap:** A full week must not exceed 45 hours (excluding breaks and paid overtime). This standard aligns with the Employment Act 1955 (Act 265) for regular workers and is extended to student-apprentices to ensure fairness and legal compliance.
- b. **Composition of Hours:** The total hours are calculated as: workplace training hours + academic learning hours. Example: 40 hours of workplace tasks and learning + 5 hours of structured academic or tutorial input.
- c. **Industry Applicability:** This guideline applies to both standard office-hour industries (e.g., engineering, information and communication technology) and shift-based industries (e.g., hospitality, health care, aviation).
- d. **Shift Scheduling:** Students are permitted to perform night or weekend shifts, provided the total weekly hours remain within the 45-hour limit.
- e. **Mandatory Rest:** Regardless of the industry type, at least one (1) full rest day per week is compulsory.
- f. **Protected Study Time:** The student/apprentice is not a part-time learner. For students in shift-based rotations, academic time must be vigorously protected. This can be achieved through proper task–curriculum alignment, asynchronous learning modules, scheduled weekend tutorials or compensatory academic sessions to ensure they do not miss critical theoretical input.

Under the Employment Act 1955 (Act 265), an employee shall not be required under their contract of service to work for **more than forty-five hours in one week**. However, there are a few exceptions and specific conditions regarding this limit:

- a. **Varied Daily Hours:** If an agreement between the employer and employee results in less than eight hours of work on certain days, the employee may work more than eight hours on other days. Even in such cases, the employee shall not be required to work more than nine hours in a single day or more than forty-five hours in one week.
- b. **Shift Work:** An employee engaged in shift work may be required to work more than forty-five hours in a single week. However, the average number of hours worked over any three-week period (or a longer period approved by the Director General of Labour under the Employment Act 1955) must not exceed forty-five hours per week.
- c. **Special Circumstances and Emergencies:** The Director General of Labour under the Employment Act 1955 may grant written permission for an employer to require employees to work beyond this limit under special circumstances. Additionally, employers may require employees to exceed standard working hours in emergencies, such as accidents, urgent machinery repairs, unforeseen interruptions of work, or work essential to the life of the community or the defence and security of Malaysia.

Further readings: Employment Act 1955 (Act 265)

AREA 7: PROGRAMME MONITORING, REVIEW AND CONTINUAL QUALITY IMPROVEMENT

30. Programme Monitoring

HEPs and industry partners must implement a comprehensive monitoring framework that evaluates curriculum design, assessment validity, learning environments and staff competency on a timely basis. This holistic approach ensures that student progress and industry advisory input are utilised to maintain the programme's academic integrity and professional relevance.

Monitoring in a WBL context serves as a critical mechanism for aligning theoretical knowledge with practical workplace application:

- a. **Holistic Evaluation:** Oversight must extend beyond student grades to include the adequacy of resources, the safety of the learning environment and the ongoing competency of industry coaches.
- b. **Risk Mitigation:** Frequent monitoring allows for the early identification of gaps in student progress or workplace supervision, enabling immediate corrective actions before programme outcomes are compromised.
- c. **Simplified Feedback Process:** Regular input from industry ensures that the curriculum evolves alongside technological and market shifts. The mechanism should be simplified to ensure validity and sustainable practice.
- d. **Evidence-Based Enhancement:** Data collected through these monitoring processes provides the necessary evidence for Continual Quality Improvement, ensuring the long-term sustainability and credibility of the WBL partnership.

Standards: COPPA 7.1.1; COPTPA 7.1.1

31. Review and Industry Engagement

HEPs and industry partners must conduct periodic joint reviews of WBL programmes to evaluate their pedagogical effectiveness and industrial relevance. These reviews must synthesise systematic feedback from industry stakeholders, students, alumni and academic staff to drive meaningful programme and course enhancements. This collaborative oversight strengthens the academic-industry nexus by ensuring WBL initiatives remain agile and responsive to market demands, guaranteeing that graduates possess the competencies required to thrive in contemporary professional environments.

Regular joint reviews serve as a structured platform for deep industry integration into the academic lifecycle:

- a. **Active Co-Design:** Industry partners contribute directly to curriculum development, the refinement of assessment rubrics and the evaluation of workplace learning outcomes.

- b. **Holistic Feedback Integration:** Programmes are benchmarked against multi-perspective data, including graduate performance metrics and alumni career progression, to identify areas for improvement.
- c. **Actionable Transformation:** Review findings must be documented and analysed to trigger tangible updates in teaching methodologies, workplace supervision protocols and resource allocation.
- d. **Employability Optimisation:** By ensuring curriculum alignment with evolving workforce demands, these reviews directly enhance the marketability and professional readiness of students.

Standards: COPPA 7.1.1; COPTPA 7.1.1

32. Continual Quality Improvement

HEPs and industry partners must implement a continuous improvement framework to verify that learning outcomes, performance targets and student competencies are consistently met. This systematic loop ensures that course delivery undergoes constant refinement to strengthen the integration between academic theory and workplace application.

The improvement of WBL courses follows a structured improvement cycle:

- a. **Feedback Integration (Act):** Utilise performance data and stakeholder feedback to initiate timely interventions in teaching methodologies, assessment rubrics and workplace supervision.
- b. **Outcome Benchmarking (Plan):** Regularly update course content and industry tasks to mirror current professional standards, ensuring that workplace training remains a robust pedagogical activity.
- c. **Evidence-Based Refinement:** Document all findings to provide a longitudinal evidence base for programme-level reviews and institutional accreditation.
- d. **Closing the Loop:** Ensure that the results of previous reviews are actively used to adjust current course delivery, effectively bridging the gap between identified weaknesses and future curriculum strengths.

Standards: COPPA 7.1.1; COPTPA 7.1.1, 7.1.4, 7.1.10

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APPENDIX: COMPLIANCE CHECKLIST

Item	Guideline Requirement	COPPA Standard	COPTPA Standard	Suggested Supporting Evidence
1.	Alignment with MQF Learning Outcomes	1.1.4	1.2.4	Matrix of Programme Learning Outcomes mapped to MQF functional clusters, Education for Sustainable Development competencies and Values-based Education requirements.
2.	Credit Allocation	1.2	1.3	Programme structure showing a minimum of 20% of total credits allocated to WBL courses that focus on building the essential competencies of the related profession; course outlines showing a 30% WBL component.
3.	Curriculum Scheduling	1.3.2	1.4.2	Day release schedule within the teaching plan for the semester; block release schedule within the curriculum structure.
4.	Curriculum and Workplace Alignment	1.1.3	1.2.3	Task-competency-Course Learning Outcomes mapping.
5.	Programme Development Process	1.2.2	1.3.5	Institutional processes and reports related to Industry Verification of Curriculum.
6.	Occupational and Industry Standards	1.2.4	1.3.1, 1.3.2	Analysis of industry standards or practices mapped to the curriculum.
7.	Collaborative Design and Governance	1.2.3	1.3.6	Minutes of industry and HEP WBL meetings; governance structure; letters of appointment; terms of reference.
8.	Determination of Credits and Duration	1.3.2	1.3.3, 1.4.2	Student Learning Time/Effective Learning Time calculation sheets; Summary of Course Information (for WBL/industry mode).
9.	Diversified Pedagogical Delivery	1.3.5	1.4.5	Multi-modal teaching plans; evidence of blended academic support.
10.	Instructional Strategy	1.3.1	1.4.1, 1.4.7	Tutor and coach collaboration meetings output on instructional strategies
11.	Conducive Learning Environment	1.3.4	1.4.4	Workplace safety audit; site visit reports; access to online learning facilities; appointment letters for industry coaches.
12.	Constructive Alignment and Integrity	2.1.1	2.1.1	Assessment rubrics mapped to MQF Level Descriptors (e.g., Level 4 or Level 6 complexity).

Item	Guideline Requirement	COPPA Standard	COPTPA Standard	Suggested Supporting Evidence
13.	Diversification of Assessments	2.2.1	2.2.2	Portfolios; 360-degree feedback tools; reflective journals and others.
14.	Competency-Based Assessment	2.2.1	2.3.1–2.3.4	Competency checklists; output, process and behaviour evaluation rubrics.
15.	Collaborative Student Selection and Placement	3.1.2	3.1.10	Selection criteria; interview rubrics; technical aptitude test records.
16.	Provision of Developmental and Remedial Support	3.1.5	3.1.13	Remedial lesson plans; records of academic and technical coaching sessions.
17.	Holistic Support Services and Compensation	3.3.1	3.2.1	Payroll records for apprentices (minimum wage compliance); insurance and counselling access records.
18.	Student Induction and Orientation	3.3.3	3.2.3	Induction attendance records; orientation module covering academic orientation, workplace orientation and pedagogical readiness.
19.	Strategic Manpower Planning	4.1.1–4.1.4	4.1.1–4.1.8, 4.1.14	Staff manpower plans; terms of reference for programme leaders, tutors and coaches.
20.	Integrated Educational Resources	5.1.1, 5.1.3	5.1.1, 5.1.4	Resource inventory for both HEPs and industry partners (information and communication technology, laboratories, specialised tools).
21.	Legal and Safety Compliance	5.1.1	5.1.3	Occupational Safety and Health Act certification; personal protective equipment distribution logs; professional body approval.
22.	WBL Governance and Oversight	6.1.1–6.1.4	6.1.1–6.1.2	WBL Committee terms of reference and minutes of meetings (minimum twice per year).
23.	WBL Academic and Industry Records	6.4.1–6.4.4	6.4.1–6.4.3	Record management policy (retention and security); evidence of non-disclosure agreements.
24.	Stakeholders Commitment and Formalised Agreements	6.1.1, 6.1.5	6.1.1, 6.1.4	Memorandum of Agreement, Memorandum of Understanding, Letters of Intent, Letters of Placement/Acceptance and Letters of Offer/Acceptance
25.	Absenteeism Management	N/A	N/A	Attendance tracking logs certified by industry coaches; absence reporting forms.

Item	Guideline Requirement	COPPA Standard	COPTPA Standard	Suggested Supporting Evidence
26.	Student Transfer Protocols	N/A	N/A	Formal criteria and procedures for transfer due to performance or safety concerns.
27.	Dismissal and Mediation	N/A	N/A	Notification and refereeing protocol records; mediation minutes.
28.	Awarding Documents and Industry Certification	N/A	N/A	Malaysia Qualification Statement with description of industry mode; certification with competency listings ;letter of testimony
29.	WBL Work and Study Hours	N/A	N/A	Weekly schedules showing 45-hour cap; rest day tracking records.
30.	Programme Monitoring	7.1.1	7.1.1	Monitoring reports covering resources, safety and coach competency.
31.	Review and Industry Engagement	7.1.1	7.1.1	Multi-stakeholder review reports (students, alumni and industry partners).
32.	Continual Quality Improvement	7.1.1	7.1.1	“Closing the Loop” documentation and outcome benchmarking records.

LIST OF PANEL MEMBERS

NO.	PANEL MEMBERS	ORGANISATION
1.	Associate Professor Ts. Dr. Muhammad Fahmi bin Miskon (Chairman)	Universiti Teknikal Malaysia Melaka
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Agensi Kelayakan Malaysia
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