

Guide for University-Industry Integration

Queensland Health
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Guide for University - Industry Integration

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1. Intent

The Guide for University-Industry Integration (The Guide) is based on principles developed following testing of the University – Industry Integration Framework (The Framework) developed by Theobald, K., McCarthy, A., Henderson, A., Coyer, F., Shaban, R., Fox, R., & Thomson, B. (2019). As such, this provides a framework that can be used by nursing and midwifery academic and industry colleagues to consider new ways of working from a co-design perspective to formulate learning initiatives/opportunities based on a culture of shared decisions, relevance and agility established at the beginning of a joint venture.

The presence of existing nursing and midwifery university-industry partnerships is acknowledged, and the intent of the Guide is not to replace these partnerships but to offer principles, and practices that may assist each party to engage differently, thereby enhancing collaborations.

It is recognised that considerable variance exists in the formation, interaction, equity, and outputs between university and industry partnerships. In the spirit afforded in this guide, ways to enhance collaboration are highlighted, to provide best practices to mutually share in development of course design, delivery, and evaluation.

Within Queensland, the higher education and health care industry generally invest significant but separate resources into respective postgraduate nursing curricula and programs of professional development. This education ranges from purely practical to intensely theoretical, and from short continuing professional development modules to programs and units of learning developed to the Australian Qualifications Framework (AQF) Levels 8 and 9. This current approach often results in the duplication of curricula development, delivery and resource investment in health and higher education sectors (Dzau, et al., 2013).

Although industry and the Higher Education Sector (HES) bring complementary knowledge and skills to nursing curriculum development, each is driven by different organisational imperatives, resulting in divergent goals and approaches for curricula and different metrics to capture the value of educational outputs (Dzau, et al., 2013; Theobald, et al., 2019; Theobald, et al., 2021).

Devising principles to foster enhanced formal integration between university and industry in nursing and midwifery should enable the delivery of focused, compelling, collaborative, unified and mutually accountable programs of postgraduate learning (Dzau, et al., 2013; Ovseiko et al., 2014).

Moreover, integrated co-design approaches encompassing resource sharing, product development, mutual assumptions and agreed terms of commitment will reduce duplication, enhance collaboration, and enable more judicious use of scarce resources whilst addressing service and community needs in building nursing and midwifery workforce capability (Theobald, et al., 2021).

In developing this Guide the applicability of the tenets and standards of the *Framework for Lifelong Learning for Nurses and Midwives - Queensland Health* (Queensland Health, 2018) have also been considered by both university and industry authors.

2. Applicability

This Guide offers key stakeholders the opportunity to explore the nature of engagement and provides principles to consider when establishing co-design integrated partnerships with the HES. Applicability of the guide includes but is not limited to:

The Office of the Chief Nursing and Midwifery Officer Queensland who networks with the HES, Executive Directors Nursing/Midwifery (EDNM) and Nursing/Midwifery Directors, Education across the State to support collective engagement in forging, strengthening, and sustaining university-industry partnerships by promoting innovation; change in mindset; fostering resource sharing; and mitigation of variance in standards and capacity.

The EDNM of an HHS who liaises with executive members, HES providers, and industry nursing/midwifery education service leads to foster Lifelong Learning engagement; sponsor nursing/midwifery education initiatives; set objectives and performance targets; build and foster partnerships/relationships; accept jurisdiction for standards, risk mitigation and workforce capability.

Nursing/Midwifery Directors or Assistant Nursing/Midwifery Directors - Education who assume accountability for education and

professional vision; expert strategic and operational education leadership in applying Lifelong Learning standards fostering translation of knowledge to practice and scholarly endeavours; effectively collaborating with the EDNM, Directors of Nursing/Midwifery, Nursing/Midwifery Directors, Assistant Nursing/Midwifery Directors, interprofessional colleagues, internal and external partners (e.g. HES) to enhance integration activities, lead, and evaluate education initiatives to achieve expected outcomes.

Nursing/Midwifery Educators who through effective industry role application and engagement with HES colleagues can contribute to integration initiatives such as curriculum design, supporting nursing and midwifery teaching and learning via co-design activities and improve translation of knowledge to practice, capability and capacity building.

University/higher education providers who wish to engage in meaningful partnerships with industry to achieve enhanced appreciation of supportive processes, imperatives, and approaches to lifelong learning for the nursing and midwifery profession.

Relevant nursing and midwifery colleagues of various classification who collaborate in mutual university - industry initiatives; distributed leadership; augmented networking and robust engagement in co-design projects, have opportunity to influence educational offerings that scaffold learning to increase nursing/midwifery capability within context of practice.

3. Glossary

To clarify terms, a Glossary is provided (Appendix 1) to foster shared language, appreciation of requirements, and application of the principles contained within the Guide (Quinn and Hughes, 2013).

4. Assumptions

University and industry key stakeholders will:

- Plan to engage more effectively to achieve sustainable and mutually agreeable integration.
- Determine context specific agreed terms of engagement prior to applying integration principles.
- Identify responsible staff who will effectively lead and participate in all mutually beneficial co-design, support, supervision, and

reporting initiatives.

- Use The Framework (Appendix 2) or a similar documented structure as the basis for initiating the integration principles of this guide prior to application.
- Consider how application of the principles in this Guide (aligned to The Framework [Appendix 2] or similar pre-existing structure) will capture the importance of work-integrated learning to prepare colleagues for practice.

5. Context

The context of this Guide relates to how health industry and university entities arrange and progress partnerships where integration of related nursing and midwifery teaching and learning is desired. This best occurs through a shared governance model that supports curricula, and other activities to achieve mutual goals and benefit.

The approach proffered could be used widely by both industry nursing/midwifery education and university academics to guide co-design of education opportunities where integrated teaching and learning is desired (e.g. Post Graduate Courses, Continuing Professional Development, Transition Support Programs (TSPs), and Accelerated Specialisation Programs).

6. University- Industry Integration Framework

A co-designed transferable framework of processes to enhance industry-academic professional learning/curriculum development was an output of a competitive Australian Office of Learning and Teaching (OLT) Seed research grant undertaken by Theobald et al., (2019). The Framework is provided in appendix 2 and is cognisant of the regulatory imperatives of stakeholders; outlines good practice principles, types of professional learning; and articulates the terms of partner engagement, including the enactment of distributed leadership (Papadopoulos et al., 2005). The original, unique Framework developed in partnership with key nursing industry and university stakeholders, provides a contemporary blueprint to support co-design education and service initiatives.

Research undertaken in 2021 tested the translation of the five guiding principles and processes of The Framework (Appendix 2) and

university and industry ability to apply and evaluate these in practice Theobald et al., (2019). This trial specifically assessed the ability to develop mutually agreed collaborative processes, including curriculum content, program delivery, and evaluation to address the needs of a group of trial participants, industry, and university in delivery of a postgraduate program of learning.

The University – Industry *processes* section of the Framework (Appendix 2) was the focus to determine veracity of articulated approaches. Due consideration of the *structures* and *outcomes* sections occurred, it was acknowledged unless there was synergy between all three sections that generalisation and transferability of principles would be challenging.

While not without challenges, the 2021 research results clearly indicated that the majority of participants strongly perceived their involvement in the project contributed to enhanced collaboration between industry and university partners and building staff capacity. Strong satisfaction with the online product and associated resources developed to support the educational program, was also reported by participants.

Some uncertainty regarding the ability to replicate this program was expressed. Hence the need to develop a guideline that can be applied to effectively support implementation and sustainability of university-industry integrated activities and partnerships.

It is also acknowledged that this research occurred during a global pandemic. Accordingly, the impact of the pandemic response, workforce workloads and responses to emergent activity surges, the timing of the collaboration and other core activity priorities took precedent.

Limitations of the approach were thoroughly considered, and these have been reframed as principles to enable university and industry application.

7. Integration Principles

To achieve effective integration and sustainability the following principles should be applied in conjunction with the tenets of The Framework (Appendix 2) or a similar resource.

Overarching principle

Acknowledge and enact reciprocity in the partnership to foster the exchange of the educational initiative for mutual benefit.

The guiding principles of postgraduate curriculum transformation (Theobald et al, 2019) informed the development of the following tenets.

7.1 Envisage

- Establish a mutual desire to enter a co-design partnership (university-industry education service initiatives).
- Define stakeholder agenda, and shared values to set direction.
- Determine and acknowledge realistic commitment required.
- Thorough exploration of barriers and enablers for each stakeholder group.

Operational strategies to support the application of the guiding principles in 7.1 include but are not limited to:

- Value the contributions of all involved (including program participants) by:
 - Collaborating as equal partners with equal responsibility.
 - Considering the impact of timing, processes, and milestones on each party.
 - Defining commitment, which is used to create inclusive, effective working relationships.
- Facilitate mutual engagement to:
 - Enact change.
 - Enhance participation in robust discussion.
 - Acknowledge competing priorities or conflicts of interest.
- Define and establish mutual respect and trust while using differences to advantage.

7.2 Partner

- Establish effective executive sponsorship supported by key stakeholders at each organisation.
- Determine the overarching shared governance structure, processes, and outcomes.
- Stipulate reporting lines and responsibilities for each stakeholder to ensure resources and delivery platforms are available. up-to-date, and accurate.
- Identify optimal timing and work collaboratively when undertaking mapping, action plans, achievement of milestones, and outcomes.
- Clarify the purpose of the educational initiative in the context of industry expectations and learning outcomes (AQF and volume of learning).

Operational strategies to support the application of the guiding principles in 7.2 include but are not limited to:

- Demonstrate flexibility and implement iterative changes to maintain the focus on intent.
 - Aim for synergy and agility to respond as necessary to maintain momentum.
 - Contextualise teaching approaches considering learning styles and structured learning activities.
 - Consider educational delivery modes that are most appropriate to the content being delivered and the target audience.
- Continue to review ongoing support, development, and standardisation of learning approaches.
- Establish seamless enrolment processes and determine access to the education delivery strategies.
 - Provide clear instructions and support to the participant to enable effective access and use of the relevant e-learning platform
- Interdisciplinary and cross-specialisation teaching is encouraged where appropriate and available.
- Involve professional colleges, organisations, and other learning networks where appropriate.

7.3 Construct

- Ascertain the fiscal, physical and human resources required to achieve goal/s
- Include the right people at the right time to mitigate barriers and focus on enablers.
- Determine opportunistic development of stakeholders to build capacity and capability.
- Scaffold the program of learning from information transmission to concept acquisition (knowledge), to concept development (skills), to concept change (application).
- Define clear program structure and participant motivations and expectations
- Ensure that the program aligns with National Standards, Australian Tertiary Education Quality Standards Agency (TEQSA), university and Industry policies and requirements.
- Ascertain mutual agreement on performance expectations, teaching and learning approaches, assessment processes.

Operational strategies to support the application of the guiding principles in 7.3 include but are not limited to:

- Determine that clinical assessments and processes are consistent with the Nursing and Midwifery Board of Australia Framework on assessing standards for practice for registered nurses, enrolled nurses and midwives (2015) (e.g. clinical assessments are performance-based and undertaken in the practice context by assessors who are appropriately clinically and academically prepared)
 - Jointly determine assessment processes appropriate to the context.
- Maximise benefits of team processes and engagement.
 - Provide curriculum development and delivery opportunities jointly.
- Demonstrate flexibility in clinical competency assessment is fundamental (e.g., viva, observation, simulation, performance via telehealth etc.) and is considered in respect to what is available in context.
- Ensure that academic integrity, expectation, and literacy are maintained throughout the process.
- Ensure access to plagiarism detection software.
- Implement standard processes to ensure accurate calibration of markers and robust and transparent moderation processes across the academic and industry contexts.
- Employ dilemma-based (i.e., problem-based) learning grounded in real practice problem. Consider incorporation of industry safety issues and imperatives.

7.4 Achieve Capability

- Foster mentoring between partners.
- Offer those involved professional development and support to meet academic requirements.
- Agree on the role or position responsible for the review, update, and reporting of the quality and sustainability of the educational product.
- Role clarity and shared contribution must occur and be reviewed to maintain focus and action.

Operational strategies to support the application of the guiding principles in 7.4 include but are not limited to:

- Develop regular evaluation processes to ensure a quality product is maintained.
- Determine the nature of contribution and reciprocity of each partner.
- Stipulate reporting lines and responsibilities for each stakeholder to ensure resources and delivery platforms are available, up-to-date, and accurate.

8. Sustainability

Sustaining effective university industry co-designed product hinges on adherence to the guiding principles underpinning envisage, partner, construct and achieve capability, as offered in this Guide or a similar resource.

Given noted variance in integration processes the following factors are provided to assist in successfully maintaining effective engagement and realisation of expected outcomes. These factors include but are not limited to:

- Engagement of sponsors and stakeholder groups is the key to success.
- Processes need to be the focus rather than person dependency.
- Shared values and outcomes require clear articulation and review.
- Appropriate infrastructure is required to support ongoing evaluation and review of programs.
- Plans, key performance indicators/targets are reviewed annually to reframe expectations and direction.
- Financial viability of the partnership, and endeavours of all stakeholders requires monitoring and annual review.
- Frequent and inclusive strategic communication must occur.
- Authenticity of expert engagement in product

development is required.

- The product/s need to meet university - industry needs.
- Products need to meet target group needs.
- Benefits for each stakeholder are identified.
- Recognition, and reward is provided for authentic contribution.

9. Conclusion

As identified in the introduction this University-Industry Integration Guide draws on principles and recommendations developed by Theobald, et al., in 2019, and was enacted in recent research undertaken in 2021, through testing an education trial using the University – Industry Integration Framework (The Framework). Considered was university and industry partners ability to apply the collaborative processes with a small cohort of trial participants (clinicians) and evaluate the outcomes in the health care context.

Research findings demonstrate successful implementation of an educational trial, which was achieved by application of The Framework (Appendix 2) and extension of original guiding principles (Theobald, et al., 2019). This Guide provides a framework to support others to realise similar success in engaging in an integrated university and industry partnership.

It is anticipated if the integration principles within this Guide are applied from a position of reciprocity, mutual respect and trust that effective university – industry intergration is achievable, sustainable and mutually beneficial.

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11. Appendices

Appendix 1 Glossary

Term	Definition
AQF	The Australian Qualifications Framework (AQF) is the policy for regulated qualifications in the Australian education and training system. The AQF was first introduced in 1995 to underpin the national system of qualifications in Australia, encompassing higher education, vocational education, and training (VET), and schools. (Australian Qualifications Framework Council (2013) Retrieved from https://www.aqf.edu.au/what-is-the-aqf)
Award	The achievement (e.g., certificate, diploma, degree, graduate certificate, graduate diploma, master's degree, professional doctorate, or Doctor of Philosophy) – conferred upon successful completion of the requirements for that specified program (Queensland University of Technology, 2013 Retrieved from https://cms.qut.edu.au/__data/assets/pdf_file/0006/333294/Courses-and-awards-protocols.pdf)
Career	A process of development of the employee along a path of experience and jobs in one or more facility/services (McIlveen et. al., 2009)
Co-design	Co-design is meaningful end-user engagement in design and includes instances of engagement that occur across all stages of the process and ranges in intensity from relatively passive to highly active and involved. (Slattery et al., 2020).
Context	Context refers to the environment in which nursing/midwifery is practiced. It includes the: patient/client characteristics and complexity of care required; model of care, type of service or health facility and physical setting; amount of clinical support and/or supervision that is available; resources that are available, including the staff skill mix and level of access to other health care professionals (NMBA, 2019a)
Continuing Professional Development (CPD)	CPD (often interchanged with the terms Lifelong Learning or Continuing Professional Education) is viewed as a long-term process that includes opportunities and experiences systematically planned to promote growth and development in the profession (NMBA, 2016; Fahey and Monaghan, 2005; Ganser, 2000; Morgan et al., 2008)
Higher Education Standards Framework	Standards are intended to be useful to higher education providers as a framework for internal monitoring of the quality of their higher education activities. The standards: <ul style="list-style-type: none"> • <i>set out the requirements that a higher education provider must meet – and continue to meet – in order to be registered by TEQSA to operate in Australia as a provider of higher education. The Standards provide the basis for the regulation of registered higher education providers</i> • <i>ensure that the barrier to entry into the higher education sector is set sufficiently high to underpin and protect the quality and reputation of the sector as a whole</i> • <i>establish a baseline for operational quality and integrity from which all providers can continue to build excellence and diversity</i> • <i>serve other broader purposes including the provision of:</i> <ul style="list-style-type: none"> ○ <i>an articulation of the expectations for provision of higher education in Australia as:</i> <ul style="list-style-type: none"> ▪ <i>a guide to the quality of educational experiences that students should expect</i> ▪ <i>a reference for international comparisons</i> ▪ <i>a reference for other interested parties</i>

	<ul style="list-style-type: none"> • <i>a model framework which higher education providers can apply themselves for the internal monitoring, quality assurance and quality improvement of their higher education activities.</i> <p>(Australian Government Tertiary Education Quality and Education Agency (TEQSA), 2015).</p>
Industry Nursing/ Midwifery Education	Nursing/Midwifery Education consists of the theoretical learning and practical training provided to nurses/midwives with the purpose to prepare them for their duties, advance practice through specialisation, and respond to changing demands on the profession (Kalinski, 2014; Longe & Narins. 2017)
Transition Support Programs (TSPs), Immersion (e.g., SWIM) and/ Accelerated Specialisation Programs	TSPs, Immersion (e.g., SWIM) and/or Accelerated Specialisation Programs are contemporary, post registration, clinically focused, continuing professional development programs. These programs developed for specific cohorts assist the newly graduated or transferred nurse/midwife to acquire further general and specialty knowledge and skills in a logical, sequenced supported approach to effectively transition to work expectations (Queensland Health. (2018) Framework for Lifelong Learning for Nurses and Midwives - Queensland Health.)
Workforce Capability	Workforce Capability refers to the ability or a service/organisation to accomplish its work processes through knowledge, skills, abilities, and competencies of its people. It also refers to an individual or group's ability to innovate; be adaptable, be open to change and contribute to finding solutions. NB Queensland Health offers a Strategic health workforce planning Framework to support Queensland Health organisations in their planning. The framework comprises a guide, a toolkit, and a set of fact sheets. It is intended to assist health service organisations to plan and position their workforces to achieve their strategic and service objectives. (Queensland Health, 2020; Stemple, & van der Vyer, 2014)
Workforce Capacity	The skills, knowledge and behaviours which staff need to work in integrated care to deliver high quality effective care for patients. It involves planning associated with workforce to ensure that the organisation has the right numbers of staff with the right skills, knowledge, and abilities to meet current and future service demand. Key elements include: <ul style="list-style-type: none"> • Well-distributed capable and qualified workforce. • Organisational capacity to support culturally competent services and ongoing improvement efforts. • Health care safety net for hospital admissions of vulnerable populations. <p>(Agency for Health Care Research. Retrieved from https://www.ahrq.gov/research/findings/nhqrdr/chartbooks/access/elements4.html Accessed May 30 2021; Akehurst, Giles, & Stronge, 2017).</p>

Appendix 2 University-Industry Integration Framework (Theobald, et al., 2019)

