



Graduate attributes – what does the research tell us?

Professor Andrea Bialocerkowski



Acknowledgement of Country

Griffith University acknowledges the people who are the traditional custodians of the land and pays respect to the Elders, past and present, and extends that respect to all Aboriginal and Torres Strait Islander peoples.

Graduate attributes

“The qualities, skills and understanding a university community agrees its students should develop during their time at the institution. These attributes include but go beyond the disciplinary expertise or technical knowledge that has traditionally formed the core of most university courses. They are qualities that also prepare graduates as agents of social good in an unknown future” (Bowden et al 2000)



Knowledgeable
and skilled, with
critical judgement



Effective
communicators
and collaborators



Innovative,
creative and
entrepreneurial



Socially
responsible and
engaged in their
communities



Culturally capable
when working
with First
Australians



Effective in
culturally diverse
and international
environments

Shift in attribute type over time



Graduate attributes for 2020 and beyond: recommendations for Australian higher education providers

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Abbreviation	Category	2011 Universities (n=38) Rank (%)	2015 Universities (n=41) Rank (%)
Communication	Written & oral communication	1 (89)	2 (95)
Critical thinking	Critical & analytical (creative & reflective) thinking	=2 (87)	3 (93)
Global citizenship	Ethical & inclusive engagement with communities, cultures & nations	=2 (87)	1 (100)
Teamwork	Learning & working collaboratively	4 (82)	4 (90)
Independence	Learning & working independently	5 (76)	7 (83)
Problem-solving	Problem-solving (including generating ideas & innovative solutions)	6 (74)	=5 (85)
Information literacy	Information literacy, often associated with technology	7 (71)	= 5 (85)

Shift in attribute type over time

Abbreviation	Category	2011 Universities (<i>n</i> =38) Rank (%)	2015 Universities (<i>n</i> =41) Rank (%)	2022 Universities (<i>n</i> =41) Rank (%)
Communication	Written & oral communication	1 (89)	2 (95)	3 (76)
Critical thinking	Critical & analytical (creative & reflective) thinking	=2 (87)	3 (93)	2 (78)
Global Citizenship	Ethical & inclusive engagement with communities, cultures & nations	=2 (87)	1 (100)	1 (88)
Teamwork	Learning & working collaboratively	4 (82)	4 (90)	4 (61)
Independence	Learning & working independently	5 (76)	7 (83)	7 (34)
Problem-solving	Problem-solving (including generating ideas & innovative solutions)	6 (74)	=5 (85)	5 (51)
Information literacy	Information literacy, often associated with technology	7 (71)	= 5 (85)	6 (44)

Emerging attributes

Attribute	2011 universities (n=38)	2015 universities (n=41)	2022 universities (n=41)
Self-reliance & confidence	26%	7%	12%
Leadership	21%	22%	27%
Scholarly integrity	10%	25%	49%
Numeracy	10%	5%	0%
Interdisciplinarity	0%	22%	20%
Lifelong learning			49%
Sustainability/social responsibility			37%
Entrepreneurial			27%
First Peoples cultural capability			27%

Interpret with caution

Interchange
<https://doi.org/10.1007/s10780-022-09457-5>

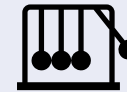


The Role of Graduate Attributes in Higher Education. A Review of the Issues Associated with Graduate Attributes and the case for their Measurement

Dominic Mahon¹

- A mix of skills & values
- Unknown
 - Development processes
 - Level of developed attribute
- Difficult to conceptualise & quantify

Clinical reasoning is defined as....



Examine rigour, accuracy, uncertainty, Examine predictive powers of a model



Examine an argument, assumptions, social context & awareness of ethical issues



Understand evidence-based medicine, awareness of ethical issues, reflection of professional role, questioning of wisdom

(Jones 2009)

Do students achieve these attributes?



Contains 6 x item areas



To what extent has your <course> developed your:

- a) critical thinking skills?
- b) ability to solve complex problems?
- c) ability to work with others?
- d) confidence to learn independently?
- e) spoken communication skills?
- f) written communication skills?
- g) knowledge of the field(s) you are studying
- h) development of work-related knowledge and skills?

SES results over time (%)

Item	2015	2019	2020	2021
Critical & analytical thinking	70	71	69	70
Ability to solve complex problems	61	62	61	61
Ability to work effectively with others	63	64	56	59
Confidence to learn independently	73	74	72	72
Written communication skills	63	64	63	64
Spoken communication skills	53	56	49	52
Knowledge of field of study	79	77	76	76
Work-related knowledge & skills	63	63	60	62







What are the opinions of employers?



Contains 5 x item areas

- 01** Foundational skills
e.g. communication,
numeracy 
- 02** Adaptive skills & attributes
e.g. innovative ideas,
autonomy 
- 03** Teamwork skills 
- 04** Technical skills
e.g. effective use of
technology, meets ethical
standards 
- 05** Employability skills
e.g. work under pressure,
flexibility in workplace 

ESS results over time (%)

	2016	2019	2020	2021	Change
Foundation	92.0	92.7	93.7	93.5	
Adaptive	88.4	89.3	90.1	90.3	
Collaboration	84.6	87.8	88.1	89.3	
Technical	92.2	92.7	93.8	93.7	
Employability	83.8	85.4	86.6	86.6	
Overall satisfaction	84.3	84.0	84.7	85.3	

- Ability to work under pressure
- Capacity to be flexible in the workplace
- Ability to meet deadlines
- Understanding the nature of your organisation
- Demonstrating leadership skills
- Demonstrating management skills
- Taking responsibility for personal PD
- Demonstrating initiative

ESS results compared to Health (%)

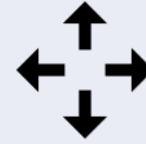
	2016	2019	2020	2021	Health
Foundation	92.0	92.7	93.7	93.5	93.6
Adaptive	88.4	89.3	90.1	90.3	89.1
Collaboration	84.6	87.8	88.1	89.3	88.6
Technical	92.2	92.7	93.8	93.7	95.0
Employability	83.8	85.4	86.6	86.6	84.7
Overall satisfaction	84.3	84.0	84.7	85.3	89.2

ESS items



Employability skills

- Ability to work under pressure
- Capacity to be flexible in the workplace
- Ability to meet deadlines
- Understanding the nature of your business or organisation
- Demonstrating leadership skills
- Demonstrating management skills
- Taking responsibility for personal professional development
- Demonstrating initiative in the workplace



Adaptive skills & attributes

- Broad background knowledge
- Ability to develop innovative ideas
- Ability to identify new opportunities
- Ability to adapt knowledge to different contexts
- Ability to apply skills in different contexts
- Capacity to work independently
- Ability to solve problems
- Ability to integrate knowledge
- Ability to think independently about problems



Collaboration skills

- ❖ Working well in a team
- ❖ Getting on well with others in the workplace
- ❖ Working collaboratively with colleagues to complete tasks
- ❖ Understanding different points of view
- ❖ Ability to interact with co-workers from different or multi-cultural backgrounds

In summary



Graduate attributes are supposed to be acquired during tertiary studies



The skills & attributes have evolved over time



The SES does not contain most graduate attributes



The ability to work with others & verbal communication skills declined on the SES



The satisfaction of employers has increased but employability skills are rated the lowest

Graduate work readiness

Malau-Aduli et al. *BMC Medical Education* (2022) 22:89
<https://doi.org/10.1186/s12909-022-03120-4>

BMC Medical Education

RESEARCH

Open Access

Readiness to enter the workforce: perceptions of health professions students at a regional Australian university




Bunmi S. Malau-Aduli^{*}, Karina Jones, Faith Alele, Mary D. Adu, Aaron Drovandi, Gillian Knott, Louise Young and Clara Jo

PHYSIOTHERAPY THEORY AND PRACTICE
2022, VOL. 38, NO. 1, 101–111
<https://doi.org/10.1080/09593985.2020.1744206>



The transition from physiotherapy student to new graduate: are they prepared?

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Gaps in work readiness of graduate health professionals and impact on early practice: Possibilities for future interprofessional learning

M. Merga



Concerns

- Managing a full caseload
- Managing a complex caseload, e.g., high risk pts
- Clinical administration skills
- Conflict management
- Increased independence and responsibility
- Systems-related capabilities, e.g., knowledge of health systems & clinical governance



Work readiness scale

**Work readiness in graduate recruitment and selection:
A review of current assessment methods**

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Work readiness category	Category themes
Social Intelligence	<ul style="list-style-type: none"> Ability to communicate with a range of people Teamwork Manage interpersonal conflict Seek support
Organisational acumen	<ul style="list-style-type: none"> Ward knowledge Knowledge of hospital policy & procedures Maturity Professional development
Work competence	<ul style="list-style-type: none"> Clinical skills Technical knowledge Experience Confidentiality Responsibility
Personal characteristics	<ul style="list-style-type: none"> Resilience Flexibility Stress management

Validated for medical & nursing graduates (Walker 2013),
medicine, pharmacy and dentistry students (Aznal et al 2019)

Published: 20 September 2021

Not too little, not too much: supervisor perceptions of work-readiness of speech-language pathology graduates

[S. L. Attrill](#) ✉ [S. McAllister](#) & [C. Brebner](#)

Advances in Health Sciences Education 27, 87–106 (2022) | [Cite this article](#)

363 Accesses | 6 Altmetric | [Metrics](#)

2020

The Allied Health Work Readiness Study: Identifying Personal Characteristics Signalling Work Readiness in Allied Health Students

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Supervisor opinions

Student, supervisor & AH director opinions

Independence: The need to be independent but not too independent

Attitude: Positive approach to work, practices ethically, organisation skills & professionalism

Teamwork: Ability to work in a team, effective communication

Learning: Sound prior learning & ongoing PD

Professionalism
Basic organisational skills
Insight & awareness
Resilience

Communication skills & adapting communication to others

Commitment to lifelong learning



So.....

- Knowledge, skills & attributes for transition to practice are not comprehensively contained in University graduate attributes, SES & ESS
- Work readiness must consider geography and context

Review

Developing work readiness in graduate nurses undertaking transition practice programs: An integrative review

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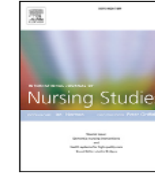
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Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

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Practice readiness of new graduate nurses and factors influencing practice readiness: A scoping review of reviews

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THANK YOU