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On Quality and Standards in Research Training

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In October 2011 the Australian Government released *Defining Quality*, a consultation paper focussing on quality aspects around research training. The paper addresses the quality of the physical and intellectual environment, the flexibility and 'fit' of the scheme and its broader fitness for purpose in supporting research education. A second paper, due for release in June 2012, is set to address technical aspects of the scheme, including options for how results from the Federal Government's research quality measurement exercise, the Excellence in Research for Australia Initiative (ERA), may influence funding allocations under the RTS scheme. While addressing different issues, the two papers are related. Funding formulae are typically associated with measures of performance, and those in turn are taken as measures of quality. Conceptions of what constitutes quality are therefore likely to inform the indicator mix which will eventually determine the distribution of federally funded places and possibly also scholarships from 2013. Before jumping to conclusions regarding the prospect that ERA may determine the allocation of federally funded research higher degree places or scholarships, it is important to be clear on three very important points:

1. Firstly that quality and performance are not the same;
2. Secondly that ERA currently measures neither when it comes to research training;
3. Thirdly there are existing dimensions and characteristics associated with a quality research training environment (as outlined in Appendix I); and
4. Finally, the possibility of identifying an activity or characteristic as either a threshold or a performance standard does not in itself mean that it should become one.

The *Defining Quality* consultation paper is the first part of a two-stage consultation process informing review of the Federal Government's scheme for funding research education: the Research Training Scheme (RTS) (DIISR, 2011a). The RTS is the national tuition scheme for domestic places in research masters and PhD study, which alongside the Australian Postgraduate Award scheme is the principal support program for research education in Australia (DIISR, 2011c). Review of the RTS comes as part of the Federal Government's *Research Workforce Strategy* (DIISR, 2011b). The *Defining Quality* consultation paper is well prepared and development of the *Strategy* has been an example of best practice in public policy development. However, this initiative is due to intersect with two other Federal Government initiatives: the Excellence in Research for Australia Initiative (ERA) and the formation of the new Tertiary Education Quality and Standards Agency (TEQSA) (ARC, 2011; Australian Government, 2011b). This intersection will have important implications for the definition and measurement of quality and standards in research training in Australia, and for prospects for continued innovation and improvement in this area in the future.

The purpose of this paper is to highlight some important considerations in the intersection between the RTS, ERA and the implementation of the proposed Standards Framework under the new Tertiary Education Quality and Standards Agency (TEQSA). It also aims to inform discussion on the definition and measurement of aspects of a quality research education environment more broadly.

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Quality and performance are not the same

Quality and performance are not the same. This is demonstrated in the framework around which TEQSA has been formed. TEQSA's *Standards Framework* describes both threshold and performance standards. Threshold standards describe the conditions providers are required to meet in order to offer courses and enrol students, while performance standards describe dimensions along which institutional performance may be compared. The kinds of things evaluated by each are qualitatively different, and these are measured in different ways. The aim of the DIISR consultation paper is to identify how quality in research training may be measured and encouraged. Indicators developed through this exercise will form part of TEQSA's standards for research, which are grouped with *teaching and learning* and *information* domains as performance standards (Tertiary Education Quality and Standards Agency Act, 2011).

Among sources of confusion and anxiety in this area is that the existing standards framework adopted for TEQSA is poorly conceived. It sensibly distinguishes five broad domains of activity and two types of standard, but then arbitrarily separates domains of activity by the ways in which quality may be demonstrated in each – namely, into *threshold* and *performance* domains. While the domains identified are sensible, distinguishing between them in this way is misleading.

Take information standards for example. Higher education providers in receipt of Commonwealth funding have specific reporting requirements under the Higher Education Support Act (Higher Education Support Act 2003, 2011). These are clearly *threshold* requirements. It may be possible to somehow develop a measure of performance for provider reporting and transparency, but this seems to make less sense. Either you meet the threshold reporting requirements or you don't. There seems little additional benefit in scaling measures of *performance* on how well you do that. If information standards are intended to reflect *threshold* or *performance* measures for other domains of activity (such as teaching and learning) their requirements should be specified within each domain separately (and it would be a good idea to do so).

One simple way of addressing this is to redraw the standards map to better reflect the activities of each domain. This would allow a more realistic reflection of the function of threshold and performance standards. Employing a distinction between threshold and performance standards within domains of activity, it is easy to see how potential measures of quality and performance could conceivably play different roles, supported by a clear set of transparency and reporting requirements within each domain.

Taking research training as an example, while some areas of activity are amenable to performance measures, most of those instrumental in meeting the kind of aims outlined in the Federal Government's *Research Workforce Strategy* are clearly threshold requirements (DIISR, 2011b). The DIISR consultation paper itself is clear that at least some of the indicators developed might be applied as *minimum standards* for receipt of research training funding (DIISR, 2011a). Just to be clear: *minimum standards* and 'threshold standards' *are the same thing*. Perverting these into performance measures to fit a framework that is yet to be refined is a flawed approach. While quality may entail both threshold and performance standards, quality and performance are *not* the same thing, and so should not be conflated in this manner.

Indicators for quality in research education

What are the indicators of quality in research education? It is generally agreed that supervision, resources, administrative and support services, a collegial environment and opportunities for advanced skills development are the principal 'ingredients' for a quality research training environment (QAA, 2004; The Council of Deans and Directors of Graduate Studies in Australia, 2008; CHE, 2010; Palmer, 2010a; Palmer, 2010b; Booth & Frappell, 2011; GCA, 2011; Group of Eight Deans of Graduate Studies, 2011; Luca, 2011). The *Defining Quality* consultation paper provides a valuable opportunity to 'put some meat on the bones' of some of these dimensions.

Anticipating the subsequent paper and how some of these dimensions may be reflected in indicators for quality: some types of activity may be amenable to measurement by *performance* indicators, while others are more clearly *threshold* requirements, above which the measurement of performance (and the use of reward funding) is of questionable value. These in turn may be reflected in indicators for either inputs, processes, outputs or outcomes (Linke, 1992). These could employ criteria that are externally referenced to a specific requirement, or that provide a scaled means of comparison either within or between institutions. In some cases, it may also be possible to reflect variation over time, where available information allows longitudinal comparison. These are summarised in the table included as Appendix I, along with examples of dimensions, aspects and characteristics they might be employed to reflect. Broad dimensions and aspects from Appendix I are summarised in Table 1 below.

Table 1 Potential dimensions and aspects of a quality research training environment

Dimension	Aspect
Infrastructure and resources for research	Infrastructure, equipment, facilities and resources provided to support research, appropriate to enabling successful and timely completion.
Supervision and examination	Quality in supervision, and of the examination process.
Collegiality and intellectual climate	An open, collegial and productive learning environment, with support for doing and learning about research.
Skills and professional development	Opportunities for personal and professional development, including the development of skills and professional capabilities.
Administrative, student support and QA policies, programs and strategies	Administrative and student support services and programs. Policies, programs and strategies to promote and assure quality and to manage risk.

Collegiality for example could reasonably be reflected in both threshold and performance characteristics, with 'quality' reflected in performance measures like the *Intellectual Climate* subscale of the Postgraduate Research Experience Questionnaire (PREQ) (GCA, 2011). Quality in supervision on the other hand may be more readily reflected in threshold indicators for the kinds of programs and strategies employed to support good supervisory practice, with student evaluations of the quality of their experience of research supervision as performance measures for their effectiveness. Similarly in the case of infrastructure and resources, both threshold and performance measures could be employed to reflect both 'input' characteristics (such as policies outlining minimum resource standards) and 'outputs' (student evaluations of the accessibility and availability of those resources, for example) in the provision of infrastructure and resources for research.

Threshold indicators for inputs and processes are a more direct measure of quality than the prospect that performance might be reflected in measures like student evaluations alone. While outcome measures are important, they can be a very vague reflection of the standard

of what's actually being offered to students. The importance of both *threshold* and *performance* indicators in providing a more comprehensive reflection of the quality of the research training environment highlights the importance of strategies like quality audits as a means of monitoring and supporting continuous improvement in addition to the use of scaled measures of performance. An over-reliance on outcomes measures of quality at the expense of input or threshold indicators therefore can risk becoming more an exercise in obfuscation than one of transparency.

The summary included as Appendix I is intended to demonstrate the potential dimensionality of characteristics salient and useful in supporting a quality research training environment, and the types of indicators that may be used to reflect them, rather than represent an exhaustive list of those characteristics per se.

ERA as a measure of quality in research and research training

It has been proposed that funding for research training in Australia be informed by results from the Australian Government's *Excellence in Research for Australia* (ERA) Initiative (Senators the Hon Kim Carr and Chris Evans, 2010). However, does it make sense to use a performance measure for the research output of academic staff as either a threshold or performance indicator for the quality of the research training environment for students? ERA was developed as a measure for quality in research; it tells us nothing directly about the quality of the research training environment. In this sense ERA reflects neither quality nor performance in research training. However, there are grounds for employing ERA as an indirect measure for some aspects of the research training environment, where quality and scale in the academic publishing activity of university staff can be demonstrated to have a positive influence on the research training environment for students.

ERA currently measures the publishing activity of university staff above a certain level of activity. On these grounds, ERA is a good framework for 'research quality', where the quality of the research activity of academic staff is understood to be reflected in their refereed publications in preferred journals. If this is the case then ERA is already performing a valuable function in lending some transparency to the usual institutional hype regarding the quality and scale of their research activities. This transparency is certainly useful for prospective research students. What ERA doesn't measure however is the publishing activity of research students themselves. This is odd, really, given the suggestion that ERA is somehow also a measure of quality in research training.

The *Defining Quality* consultation paper acknowledges that ERA reflects the quality and scale of publishing activity in a given discipline above an assessment threshold, below which there may still be 'pockets of excellence' (DIISR, 2011a). The paper notes that ERA 2010 had a low volume threshold on citation analysis of 50 indexed publications over a six year period for each field of research. Where thresholds were not met, data submitted was not assessed, and institutions were not considered research active in those areas. Two key questions to be addressed here are:

- Do the *threshold* requirements for quality in research training look the same as the threshold requirements for ERA assessment; and
- Does poor *performance* on ERA reflect poorly on the research training environment?

'Scale' may feature among dimensions of a quality research training environment, but is really only one of many (and in many disciplines, a fairly inconsequential one). Scale *may* be important in what might be described as 'capital intensive' research, or where team-based

research plays a central role in the research enterprise. In other discipline areas however, from a student perspective, 'critical mass' may be as simple as two or more colleagues knowing what they are on about in their research. Supporters of the use of ERA in determining RTS funding would cite 'critical mass' in research activity as being among the desirable characteristics of preferred destinations for research higher degree students. Even if this is the case it is certainly not the only one, and for those students or those disciplines where it is a salient factor students themselves will vote with their feet where ERA results are made publicly available and accessible (perhaps via the MyUniversity website) (ARC, 2011; Australian Government, 2011c).

So does it make sense to employ any measure of scale as a *threshold* requirement? There are grounds for suggesting that evidence of at least some research activity should be a threshold requirement in order to be able to enrol research higher degree students. This requirement already exists in the National Protocols for Higher Education Approval Processes (MCEETYA, 2007), and will continue as clause 3 of TEQSA's Provider Category Standards for universities (TEQSA, 2011). To employ ERA as a threshold measure for this however seems too demanding on institutions with small academic departments, even at the broad (two digit) field of research level.

As a *performance* measure however there may be some grounds for considering ERA results alongside other measures for a quality research training program. Scale in publishing activity already accounts for 10% of the current RTS performance index, alongside research degree completions (50%) and research income (40%) (Other Grants Guidelines (Research), 2010). There are grounds for suggesting that ERA replace publications data from the Higher Education Research Data Collection in the RTS performance index, potentially bringing measures of both quality and scale to the publication component of the index. This could make sense as a performance measure in place of a measure of scale alone. As a performance measure ERA could potentially replace the existing publications component plus something in the order of 15% of the research income proportion of the index. This might end up not being such a bad thing for institutions that are still building their capacity to compete in the external research income stakes.

It is important to note however that an ERA component of an RTS performance index would still only reflect quality and scale in the publishing activity of academic staff (and potentially also of research students, were ERA improved to collect information on those publications also). While useful, ERA does not provide a reliable reflection of either quality or performance in research training. This is simply not what it was designed to do.

Possibility and normativity in regulation and standards

Among challenges in moving to a standards-based approach to regulation and quality assurance is that possibility can be taken to imply normativity – that is – just being able to identify and measure a particular activity is taken to imply that it should feature among standards for a particular area. This conflates what you *could* do with what you *should* do.

Simply identifying something that could be established as a standard does not automatically mean that it would be a good thing to do. Good practice strategies for example sit awkwardly in this kind of standards-based approach. While offering a free laptop to each commencing research higher degree student is identifiable as an example of good practice (Palmer, 2010a, pp.26-27), it seems excessive to employ this as a threshold standard for all institutions enrolling research students. It may or may not make sense to establish some or all of the activities outlined in Appendix I as either threshold or performance standards, but

in identifying potential dimensions, aspects and characteristics of a quality research training environment, it is important not to conflate what *could* be done with what *ought* to be done. 'Standardisation' in this sense also limits institutions' ability to distinguish themselves from one another in attracting prospective research students. The Federal Government should therefore consider only identifying a core set of threshold requirements, above which institutions should be free to negotiate as part of the existing Compacts process (Australian Government, 2011a). Institutions should be able to distinguish themselves through a range of strategies based on their strengths and their strategic mission, over and above an agreed minimum (which could be revised to support improvements in system-level standards over time).

There is a risk that a negative regulatory mindset might displace a culture of innovation and improvement in the move toward a standards-based approach to regulation and quality assurance. Institutions should be allowed to compete on quality rather than be bound by regulation. There is a danger that a negative regulatory mindset would serve to value making new rules for things over actually doing things. For example, if ERA is a robust and defensible exercise in measuring quality in the research output of university staff at scale it should stand in its own right, or at least perform its function as an indicator of performance for that which it was designed to measure. If it is doing its job properly and its findings are made accessible, it will serve an important function in informing the decision-making of prospective research students. Overregulation using ERA as a threshold measure, or as a dominant influence in the funding mechanisms for research student places or scholarships or both (at the expense of measures like research student completions) will do more to create perverse incentives than it will to support improvements in the quality of the research education experience in Australia. If quality and scale in the refereed publications of academic staff are actually important aspects of the research training environment, research students themselves will vote with their feet. The possibility that ERA *could* be employed as part of a standards framework in a variety of ways doesn't automatically mean that it *should* in every case.

TEQSA's Standards Framework needs to be refined to provide for both threshold and performance measures within each domain. This would certainly alleviate some confusion and anxiety around its implementation. This distinction should apply for research standards in particular, and is critical in the case of research training. In this way, there is at least some chance that these standards can in fact serve the aims of transparency, of measuring quality and of encouraging the quality improvement and quality enhancement activities of universities. A degree of caution is needed in establishing dimensions, aspects and characteristics of a quality research training environment as 'standards'. There is a risk that a negative regulatory mindset will end up being more costly in terms of time, resources, productivity and scope for innovation in support of quality in research education. Allocating public funds in support of research education based on transparent and defensible indicators for quality is a good thing to do. It is clearly in the national interest. What research education in Australia needs are defensible minimum standards for the provision of research training, performance measures (if used) without too many perverse incentives, and continuation of the culture of innovation and improvement we have seen develop over the last 15 years. At risk is the opportunity to build on existing strengths and for some genuine reforms.

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Appendix I: On Quality and Standards in Research Training - Potential Dimensions, Aspects, Characteristics and Measures

Key: T - threshold P - performance | I - input/process O - output/outcome | C - criterion referenced S - scaled/comparative L - longitudina

*regardless of status as a potential standard, performance measure or threshold requirement.

Dimension	Aspect	Characteristic	Activity type*	Indicator Type*	Criterion type*	Measure	Criterion
Infrastructure and resources for research	Infrastructure, equipment, facilities and resources provided to support research, appropriate to enabling successful and timely completion.						
	Each institution should have a readily-accessible policy on resources for research doctoral candidates (DDoGS).	Adoption of minimum resource standards policy	T	I	C	Audit	Policy is in place
		Accessibility of minimum resource standards policy	P	I	C	Audit	Policy is accessible
		Enforceability of minimum resource standards policy	P	I	C	Audit	Policy is enforceable
		Implementation of minimum resource standards policy	P	I	C	Audit	Policy is appropriately implemented with good compliance
	Secure desk and study space (DQ).	Secure desk and study space specified in minimum resource standards policy	T	I	C	Audit	Secure desk and study space specified in minimum resource standards policy
		Reported accessibility of a suitable working space	P	O	S	Infrastructure Subscale PREQ03	Comparative
	Physical resources and access to research facilities including research infrastructure, laboratory or other facilities required across a range of disciplines (DQ).	Access to necessary facilities and equipment specified in minimum resources policy	T	I	C	Audit	Access to necessary facilities and equipment specified in minimum resources policy
		Reported access to necessary equipment	P	O	S	Infrastructure Subscale PREQ12	Comparative
	Information technology (IT), including computer access, technical support, specialist software and the facility to securely store large amounts of data (DQ).	Access to computing facilities specified in minimum resource standards policy	T	I	C	Audit	Access to computing facilities is specified in minimum resource standards policy
		Access to necessary specialist software specified in minimum resource standards policy	T	I	C	Audit	Access to necessary specialist software specified in minimum resource standards policy
		Access to secure data storage facilities specified in minimum resource standards policy	T	I	C	Audit	Access to secure data storage facilities specified in minimum resource standards policy
		Reported access to computing facilities and services	P	O	S	Infrastructure Subscale PREQ18	Comparative
		Access to technical support specified in minimum resource standards policy	T	I	C	Audit	Access to technical support is specified in minimum resource standards policy
		Reported access to technical support	P	O	S	Infrastructure Subscale PREQ08	Comparative
	Financial support for fieldwork, international exposure, conference attendance etc. (DQ).	Financial support for fieldwork, conference attendance etc. specified in minimum resource standards policy	T	I	C	Audit	Financial support for fieldwork, conference attendance etc. is specified in minimum resource standards policy
		Appropriate financial support for research activities	P	O	S	Infrastructure Subscale PREQ27	Comparative
Supervision and examination	Quality in supervision, and of the examination process.						
	Appointment of a principal supervisor, assisted by a colleague or colleagues (such as an advisory team or supervisory panel) who may have different roles in the supervision process (DDoGS).	Supervision policy	T	I	C	Audit	Supervision policy is in place
		Reported availability of supervision	P	O	S	Supervision Subscale PREQ01	Comparative
		Supervisory panel tracking system	T	I	C	Audit	Supervisory panel tracking system in place
	Availability and responsiveness in supervision (including through principal and co-supervisor arrangements)(DQ).	Co-supervision policy	T	I	C	Audit	Co-supervision policy is in place
		External supervisory arrangements	T	I	C	Audit	Strategies in place to support external supervisory arrangements
	Quality of supervision (DQ).	Supervisory prerequisites policy	T	I	C	Audit	Supervisor prerequisites policy in place
		Supervisor register	T	I	C	Audit	Supervisor register in place
		Supervisor register publicly available	T	I	C	Audit	Supervisor register is publicly available
		Supervisor development program(s)	T	I	C	Audit	Supervisor development program(s) in place
		Supervision not put a risk by excessive volume and range of responsibilities	T	I	C	Audit	Appropriate workload recognition provisions in place
		Staff evaluation of supervisor development program	P	I	S	Staff evaluation survey	Comparative
		Supervision: feedback on progress reported as helpful	P	O	S	Supervision Subscale PREQ21	Comparative
		Supervision: student evaluation of guidance in topic selection and refinement	P	O	S	Supervision Subscale PREQ17	Comparative
		Supervision: student evaluation of guidance on literature search	P	O	S	Supervision Subscale PREQ24	Comparative
		Supervision: additional information relevant to topic	P	O	S	Supervision Subscale PREQ13	Comparative
		Supervision: efforts to understand difficulties faced	P	O	S	Supervision Subscale PREQ07	Comparative
	Thesis examination process (DQ).	Examination procedures	T	I	C	Audit	Examination procedures in place
		Transparent criteria and procedures for thesis examination	T	I	C	Audit	Criteria and procedures for thesis examination are transparent and made available to students
		Examination: Timeliness in thesis examination	P	O	S	Examination Subscale PREQ25	Comparative
		Examination: fairness of thesis examination process	P	O	S	Examination Subscale PREQ02	Comparative
		Examination: satisfaction with thesis examination process	P	O	S	Examination Subscale PREQ15	Comparative
		Examination outcome	P	O	S	(unclear how this could usefully be measured)	Comparative

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*regardless of status as a potential standard, performance measure or threshold requirement.

Dimension	Aspect	Characteristic	Activity type*	Indicator Type*	Criterion type*	Measure	Criterion
Collegiality and intellectual climate	Candidates should have an open, collegial and productive learning environment (DDoGS), providing support for doing and learning about research (QAA).						
	Depth and breadth of the scholarly environment (DQ).	Quality of research undertaken in by academic staff	P	I	S	ERA	Comparative
		Scale of research undertaken by academic staff	P	I	S	ERA	Comparative
		Entry standards and criteria	P	I	S	Admissions data	Comparative
	Opportunities for social contact with other postgraduate students (PREQ).	Opportunities to engage with an independent association of postgraduates	T	I	C	Audit	Independent association of postgraduates in place
		Reported opportunities for social contact with other postgraduate students	P	O	S	Intellectual Climate Subscale PREQ05	Comparative
	Intellectual climate (PREQ).	Sense of being part of the academic department's community	P	O	S	Intellectual Climate Subscale PREQ09	Comparative
		Opportunities for engaging in broader research culture	P	O	S	Intellectual Climate Subscale PREQ16	Comparative
		Research ambience	P	O	S	Intellectual Climate Subscale PREQ23	Comparative
Skills and professional development	Opportunities for personal and professional development, including the development of skills and professional capabilities.						
	Support through the program for the development of broader skills, including generic or 'employability' skills (DQ).	Development of problem-solving skills	P	O	S	Skills Subscale PREQ06	Comparative
		Development of ability to present ideas	P	O	S	Skills Subscale PREQ10	Comparative
		Enhancement of analytic skills	P	O	S	Skills Subscale PREQ14	Comparative
		Development of independent planning abilities	P	O	S	Skills Subscale PREQ20	Comparative
		Confidence in tackling unfamiliar problems	P	O	S	Skills Subscale PREQ26	Comparative
	Development of academic and research skills (QAA).	Adherence to qualification standards	T	I	C	Audit	Qualification standards are adhered to
		Adherence to academic standards	P	O	C	Peer review of examination outcomes	Qualification standards are adhered to
		Research skills demonstrated in preparation of a dissertation or thesis	T	O	C	Thesis examination	Thesis passed by examiners
		Comparative academic outcomes commencement/post graduation	P	O	L	Admissions data / Longitudinal survey	Comparative
	Support through the program for the development of deep, subject specific knowledge (DQ).	Subject specific knowledge demonstrated through preparation of a dissertation or thesis	T	O	C	Thesis examination	Thesis passed by examiners
	A generic skills program tailored to the candidate's individual needs and/or the needs of their cohort group (DDoGS).	Good seminar program(s) provided for postgraduate students	P	O	S	Intellectual Climate Subscale PREQ22	Comparative
	Professional development opportunities.	External and industry co-supervision opportunities	T	I	C	Audit	Industry co-supervision opportunities provided
		External and industry engagement opportunities	P	O	S	Student survey	Comparative
		Employment destinations 5-7 years post graduation	P	O	S	Destination survey	Comparative
		Comparative employment outcomes commencement/post graduation	P	O	L	Admissions data / Longitudinal survey	Comparative
	International engagement opportunities.	Programs and funding for international research opportunities	T	I	C	Audit	Programs and funding for international research opportunities in place
		International research opportunities	P	O	S	Student survey	Comparative
		International engagement 5-7 years post graduation	P	O	S	Destination survey	Comparative
Policies, programs and strategies	Administrative and student support services and programs. Policies, programs and strategies to promote and assure quality and to manage risk.						
	Scholarships	Availability of research student scholarships	P	I	S	Ratio of value of total scholarships funded by the institution to their total RHD load	Comparative
	Induction, pre-induction and provision of important information and advice on an ongoing basis: Candidates should have access to a coordinated program of activity to integrate them into their university and faculty, school and/or department (DDoGS).	Quality and availability of pre-induction information	P	O	S	Student survey	Comparative
		Quality and availability of orientation and induction programs	P	O	S	Student survey	Comparative
		Quality and availability of ongoing information	P	O	S	Student survey	Comparative
		Candidate awareness of relevant IP policy prior to commencement	P	O	S	Student survey	Comparative
		Quality and availability of information about the academic and social environment	P	O	S	Student survey	Comparative
		Access to independent legal advice on IP matters (paid for by the university through a third party such as the postgraduate students' association) (DDoGS)	T	I	C	Audit	Students have access to free, independent legal advice on IP matters
		Code of practice outlining the rights and responsibilities of candidates, supervisors and the university (DDoGS)	T	I	C	Audit	Code of practice is in place and is made available to students
		Entitlements and responsibilities of students and supervisors defined and communicated clearly	T	I	C	Audit	Entitlements and responsibilities of students clearly defined and communicated
		clear understanding of the standard of work expected	P	O	S	Clear Goals Subscale PREQ04	Comparative
		clear understanding of the required standard for the thesis	P	O	S	Clear Goals Subscale PREQ11	Comparative

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*regardless of status as a potential standard, performance measure or threshold requirement.

Dimension	Aspect	Characteristic	Activity type*	Indicator Type*	Criterion type*	Measure	Criterion
Administrative, student support and QA		clear understanding of the requirements of thesis examination	P	O	S	Clear Goals Subscale PREQ19	Comparative
	Access to independent support & advice (DQ).	Postgraduate association able to offer independent advocacy and advice on a professional and confidential basis	T	I	C	Audit	Postgraduate association is able to offer independent advocacy and advice on a professional and confidential basis
	Appeal and dispute resolution processes.	Mechanisms to collect, review and respond to feedback	T	I	C	Audit	Mechanisms to collect, review and respond to feedback are in place
	Transparent policies and procedures.	Transparent admission criteria, procedures and processes	T	I	C	Audit	Admission criteria, procedures and processes are transparent and available to current and prospective students
		Transparent intellectual property policies and procedures	T	I	C	Audit	Transparent intellectual property policies and procedures are in place
	Transparent monitoring of the progress of each candidate via a structured process with significant milestones, and regular monitoring/reporting of progress throughout candidature, including prior to submission for examination (DDoGS).	Clearly defined mechanisms for monitoring and supporting student progress	T	I	C	Audit	Clearly defined mechanisms for monitoring and supporting student progress are in place
		Guidance to supervisors and students on monitoring progress and providing appropriate records	T	I	C	Audit	Guidance is made available to supervisors and students on monitoring progress and providing appropriate records
	Other outputs and outcomes	Overall satisfaction with the quality of the research higher degree experience	P	O	S	Overall satisfaction PREQ28	Comparative
		Completion rate	P	O	S	HEIMS	Comparative
		Attrition rate	P	O	S	HEIMS	Comparative
		Graduate contribution to knowledge through research outputs, including (but not limited to) theses, publications, exhibitions, grants and patents.	P	O	S	ERA?	Comparative