



Factors affecting Doctoral progress: a report on the perspectives of Higher Degree by Research (HDR) candidates and their advisors

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Executive Summary

This report presents the findings of a study into the perspectives of current HDR candidates and advisors at James Cook University about factors influencing doctoral progress. This study was conducted to investigate the enablers and barriers to timely progression as one indicator of 'quality' research education experiences. The findings indicate that while candidates and advisors do privilege aspects of the research process differently, there is some consensus about the most significant factors, those being the financial and social resources of the candidate and the regular engagement of supervisors.

Supervision was the most significant factor affecting doctoral progress outside of personal/financial circumstances. The most significant recommendations to improve supervision was regular meetings, timely feedback and ensuring advisors have adequate time to dedicate to supervision by reviewing workload and supervision allocations.

Financial support was a significant factor, particularly for candidates over 4 years' full time equivalency (FTE). While many of the financial barriers and enablers are external, completion/writing scholarships and employment opportunities were recommended to support candidates.

Community building and the strengthening of networks were also suggested by all participants groups. Enrolment structures, inductions and events that strengthen networks will provide collective staff support and peer support for candidates. Community building activities serve both to foster the intellectual climate and the social and emotional environment for candidates. Such activities, including cohort building, seminars, informal social gatherings, research group meetings or online forums are seen as supporting candidate progress in formal and informal/normative ways. The survey data strongly endorses further initiatives and resources to support collaborative, inclusive scholarly communities for HDR candidates.

In terms of institutional supports and skill development, there were suggestions to improve access to workshops, support for a collective development model (cohort model targeting workshops at particular cohorts). This is consistent with the focus group research carried out. Advisors called for more emphasis on ongoing writing workshops and supports and had conflicting perspectives on the importance of publication.

Administration of the research education process was something that candidates wanted to be 'flexible'. Advisor recommendations were mixed in terms of enforcing milestones versus having flexibility. The emphasis on project design in advisor responses indicates the need for this to be scrutinised and the new admission process and structures around confirmation of candidature might further support this.

Facilities were not significant factors in enabling progress but are part of overall satisfaction. There were some calls for infrastructure and technical support.

Other references were made to candidate circumstances and resources in terms of the time commitments, motivations and social emotional resources needed to undertake a long-term project. Part time students are more at risk of not progressing in a timely manner and perhaps the expectations, policies and supports for these students need closer review.

Background

The Australian Government is increasingly requiring universities provide evidence of the quality of research education and plans to audit this evidence through TEQSA, and the Compacts Process. Although time to thesis submission is a measure of the efficiency of a research higher degree program it is often also seen as a legitimate index of the quality of that process.

The Department of Innovation, Industry, Science and Research [DIISR] (2011, p. 13) in *Defining Quality for Research Training in Australia* state that:

The original policy intent for including HDR completions in the RTS funding formula was to reduce completion times when these were becoming unsustainable, and to reduce attrition. Completions are a proxy measure because it is assumed that if students are completing their HDRs within the required timeframe they are doing so by receiving high quality research training supervision. Whilst the inclusion of completions in the RTS formula has been effective in reducing completion times, there have been some concerns that in some cases higher completion rates might have been achieved at the cost of quality.

Patterns of participation in research training have changed over the ten years since the Research Training Scheme was introduced. The Council of Australian Deans and Directors of Graduate Studies (CADDoGS, 2007) released a *Framework for Best Practise in Doctoral Research Education in Australia* and in it stated, “each candidate should be provided with the appropriate resources and facilities to enable the successful and timely completion of the degree” (p. 29). Many universities are introducing incentives and disincentives to encourage timely completions. A list of documented incentives and disincentives drawn from the literature and JCU current practice is included in the Appendix.

The factors influencing progression (and in turn quality) can be categorized under: 1) student qualities and personal situation, 2) supervisory and scholarly environment, and 3) research facilities and resources. These three broad groups of factors are interrelated. It must be noted too that the nature of the research, the structure of the research program and the scholarly community are broad factors that influence (in often uncontrollable ways) completion times while more targeted strategies include particular financial, professional development and structural supports. Research which foregrounds the perspectives of candidates and advisors is important in framing existing and future institutional measures to promote quality research education and timely completions.

Various studies have examined the role of institutional structures and policies, the role of the supervisor and nature of the research process in affecting completion times. Wao et al. (2011) found that the factors affecting doctoral education are complex and that no one factor explains the candidate experiences. Their study of education doctorate candidates found that “Academic integration factors, particularly program structure, seem to be more frequently and intensely cited as having a major influence” and external factors such as family circumstances and life events are also significant (Wao et al., 2011, p. 933). A report released by the Department of Education, Science and Training (DEST, 2004) on the pedagogy of research supervision found that ‘supervisors who are more ‘hands-on’ in their approach to supervision tend to be associated with faster and more completions’.

Wright and Cochrane (2000) in their study of doctoral students in the United Kingdom indicated that for the cohort who submitted in under 4 years: students in the science cluster are more likely to submit successfully (64%) than those in the arts and humanities cluster (51%); students with research council funding support are more likely to submit successfully (66%) than those with other sources of financial support (58%); students who are 21± 26 years of age at entry are more likely to submit successfully (64%) than those who are 27 years of age or older (57%); students with first or upper second class degrees are more likely to submit successfully (67%) than those with other classes of

degree or other qualifications (58%).

Palmer (2009) conducted focus groups with doctoral students about the duration of their study and concluded that there is undue pressure placed on completion times. In The Council of Australian Postgraduate Associations (CAPA) report, Palmer asserted that collegiality and the experience of being part of an academic community were identified as positive aspects of the research student experience, including in relation to the development of career opportunities and prospects for a timely completion. In the completion of research degrees, students noted the importance of various forms of support and flexibility in helping reduce stress during candidature, especially around personal circumstances and time pressures associated with completing a research degree. Flexibility to be able to make the most efficient use time and available resources in completing a research degree was endorsed by participants in Palmer's study. Areas of improvement that Palmer identified were:

- Significant resources are consumed by students coping with expectations around unrealistic completion times.
- Greater flexibility needed for students to be able to manage their candidature efficiently and effectively (e.g. for scholarship holders to be able to move between full and part time study).
- Greater flexibility needed in visa conditions for international research students.
- A better "fit" needed between scholarship guidelines and the reality of what it takes to complete a research degree.

The following research aims investigate the perspectives of JCU candidates and advisors, given the specific higher education and institutional context.

Research Aims

Given that completion is seen as a proxy for quality and that there are increasing pressures for 'timely completion', this study aims to investigate the barriers and enablers of progression and successful completion. For this study, time to completion was identified as four years full time or equivalent (FTE) in line with university policies and many other Australian research education providers. In investigating enablers and barriers the study draws on the perspectives of students and advisors about supporting quality research.

The study was guided by the following question:

Which enablers and barriers does comparing the perspectives of the following groups identify?

1. *Current HDR candidates who are less than 4 years FTE and have completed their pre-completion seminar*
2. *Current HDR candidates who are beyond 4 years FTE*
3. *Current advisors*

Comparison with previous JCU research

In a study conducted by Halbert in 2011 all students identified as over 3.5 years full time equivalency (FTE) were invited to complete the 'Barriers to Completion' survey. The survey was aimed at addressing the following research question: What are the factors that have contributed to doctoral candidates taking more than 3.5 years FTE to complete?

The most significant barriers identified by the candidates in the 2011 survey were time management, delays in receiving feedback from their advisory team and personal and work commitments. Time constraints as a result of competing personal or professional commitments were the significant factors affecting progress. In regards to the thesis, time management was considered very significant by over 30% of respondents. This factor was closely followed by perfectionism and then timely help with data. The most significant advisory factor was the delay in the advisory team returning feedback on the thesis (30%). Another significant barrier in the advisory process was considered to be the lack of sufficient assistance from the advisory team (22.5%).

The 2011 survey targeted candidates identified as 'not progressing on time' whereas the recent study also drew on responses from 'timely' students and advisors to offer multiple perspectives and make comparisons. The previous study was primarily quantitative based on Likert scale questions whereas the recent study is more focused on open ended responses about factors affecting progress.

To contextualise the 'timely completion' focus within a broader discussion of quality doctoral experiences, a qualitative study conducted by Halbert in 2013 identified that candidates valued positive and supportive advisory experiences, their enthusiasm for their research and the opportunities they were grateful for such as conferences, networking and fieldwork. The main negative factors included administrative procedures, advisor accessibility and some discipline specific resources and facilities.

The advisory relationship was seen as the biggest factor in candidate satisfaction. Doctoral candidates valued the supportive, personal, flexible and responsive characteristics of 'good' advisors. Positive experiences also included regular communication, enthusiasm, expertise and networking advisors provided. Factors that detracted from advisor support were a lack of communication or access.

Method

The main research tool was an online survey distributed to current HDR candidates and their advisors. The survey asked candidates about their broad demographics (including domestic or international and their work status) mode of study, motivations, supervisory practices and level of satisfaction with their progress. Candidates were asked about their identification with common progression barriers including over commitment, lack of feedback /guidance, isolation and skill development. The main descriptive questions asked respondents to nominate the three most important supports for HDR candidates and what the university could to provide further support. The advisor survey asked respondents to nominate their advisor level and numbers of candidates they have supervised. The remaining questions were similar to the student survey so as to make comparisons.

The survey data was exported from Survey Monkey and analysed thematically to identify the most significant factors and make comparisons across the three participant groups. Participant recommendations were also categorised.

The survey questions are included in the Appendix.

Factors supporting candidate progress were categorised thematically as relating to:

- Financial support
- Institutional support
- Supervisory support
- Peer and candidate qualities.

Advisors also included responses relating to:

- Project Design
- Academic/Research Skills

Suggestions on improving supports can be categorised as relating to:

- Administration and communication,
- Community building (related to the significance of institutional culture, supervision and peers)
- Facilities
- Supervision

Participants

Table 1: Participant demographics.

	Candidates under 4 years FTE	Candidates over 4 years FTE
International	30.95% 26	9.52% 2
Domestic	69.05% 58	90.48% 19
Full-time	75% 63	52.38% 11
Part-time	25% 21	47.62% 10
On campus	77.38% 65	61.90% 13
Off campus (external)	22.62% 19	38.10% 8
Employed full-time	19.28% 16	23.81% 5
Employed part-time	37.35% 31	47.62% 10
Not employed	43.37% 36	28.57% 6

In comparison to the 'on time' cohort, 'over time' candidates have a higher percentage of full time work and a higher percentage of external students. A much higher percentage of domestic students are represented in the overtime respondent. International students are less likely to not finish on time due to the structural requirements around visas, scholarships and the full time nature of their candidacy. Candidates over 4 years FTE are twice as likely to be studying part time compared to candidates less than 4 years FTE.

Table 2: Participant by Faculty.

	Candidates less than 4 years FTE	Candidates more than 4 years FTE	Advisors
Arts, Education & Social Sciences	25% 21	33.3% 7	28.36% 19
Law, Business & Creative Arts	11.90% 10	9.5% 2	13.43% 9
Medicine, Health & Molecular Sciences	28.57% 24	14.3% 3	41.79% 28
Science & Engineering	34.52% 29	42.9% 9	16.42% 11

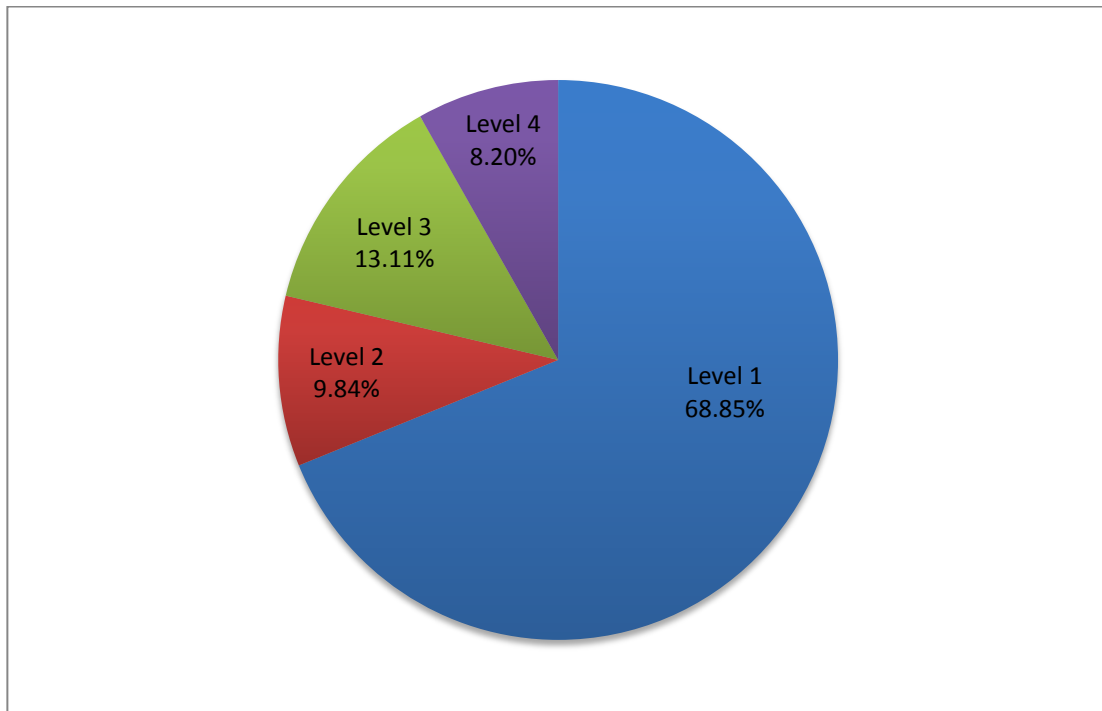


Figure 1: Advisory levels as nominated by advisor participants.

The majority of respondents (69%) were experienced advisors (level 1). On average advisors had supervised 11 candidates, 7 to completion.

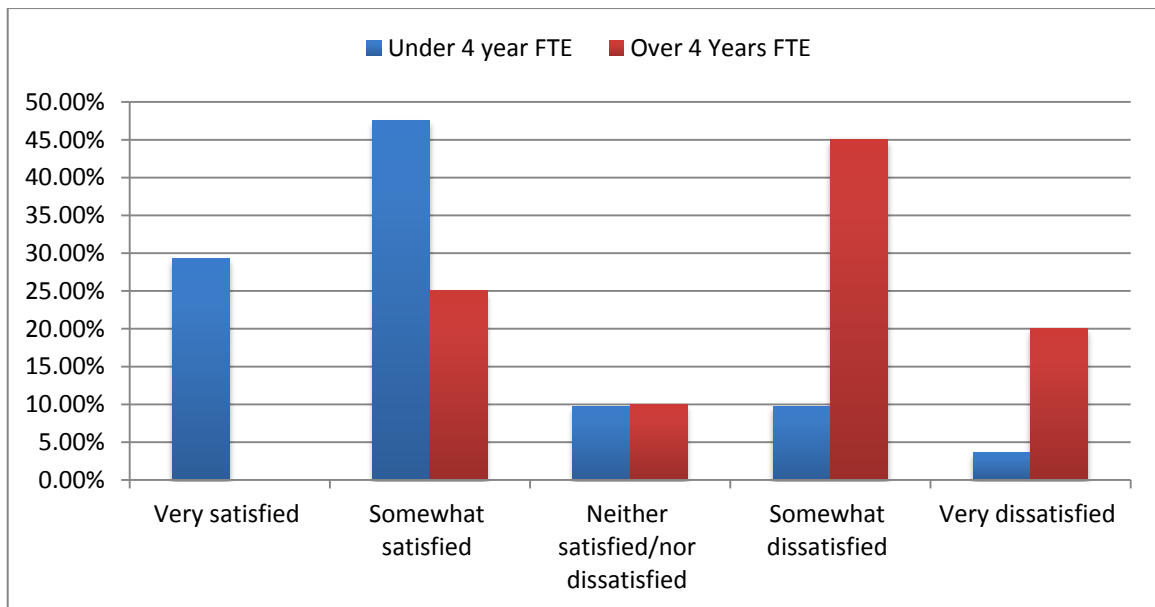


Figure 2: Candidates' degree of satisfaction with HDR progress.

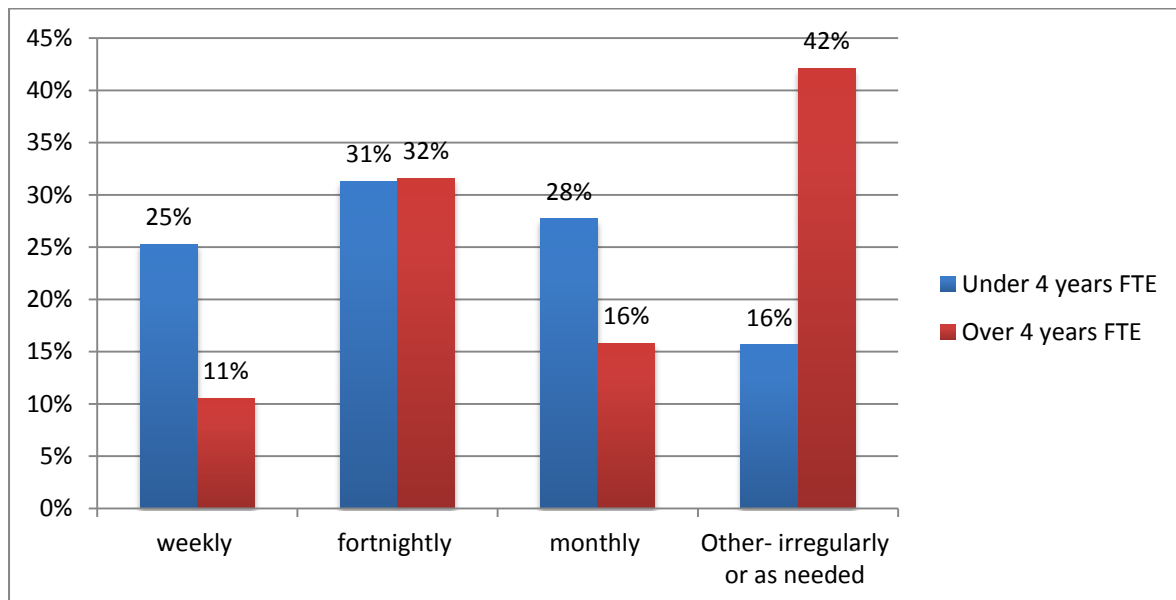


Figure 3: Regularity of advisor meetings for candidates less than 4 years FTE compared to candidates over 4 years FTE

Descriptions nominated as 'other' included:

Once in the last 6 months

Originally it was weekly, then monthly

Every 3 months

Once a year

When the annual report is due

On average, it's probably between fortnightly and monthly, but it's not regular. It might be weekly for a while and then I won't see my supervisor for months.

Every 6-8 weeks

The most significant difference between groups is that 42% of 'over time' candidates do not meet regularly with their advisors, compared only 16% of 'on time' candidates. Given the importance of timely feedback, regular meetings could be a target strategy for this group. The significant differences in supervisory meetings and satisfaction are consistent with the 2012 PREQ data.

Enabling Factors and Supports – Candidates

Candidates were asked “What are the three things you think are most important in terms of supporting HDR candidates during their candidature?”

Table 3: Candidates most significant support factors.

Student group and ranking	Financial	Institutional	Supervisory	Peers	Candidate Qualities
1. Under 4 FTE	13.58%	18.52%	59.26%		
1. Over 4 FTE	42.11%	5.26%	52.63%		
2. Under 4 FTE	8.75%	43.75%	32.50%	3.75%	7.50%
2. Over 4 FTE	5.56%	44.44%	27.78%		22.22%
3. Under 4 FTE	13.16%	40.79%	21.05%	13.16%	3.95% 5.26% (emotional support)
3. Over 4 FTE	11.76%	35.29%	41.18%	11.76%	

Sample of Responses

Financial

Responses related to scholarships, funding of the research project and employment to support the candidate.

Candidate related qualities/factors

Acknowledgement

Flexibility

Achievable goals

Preparing student for how to handle delays, stress, life

Initiative

Normalising of experiences (uncertainty, fear, etc.)

Motivation

Pre-determined research milestones

Clearly defined milestones during candidacy and assistance with understanding what is required to meet those milestones

Having achievable short term goals

Supervision

Supervisor actually having time to have you as a student

Regular and timely guidance and direction from supervisor

Regular meetings

Guidance from supervisory team

Open communication between student and supervisory team

Institutional

Understand the candidate is first a person and secondly a student

Help with time management

Timely IT support

Networking in doctoral cohort

Helping with the [University] admin processes

Flexibility

Understanding with respect to other life pressures (work and family commitments don't stop when study begins)

Desk space and computer access

Help with the 'extra' requirements of the degree

Good communication from the university

Helping with setting up in foreign environment/society

Stress management

A thorough induction into policies, procedures and protocols and the organisational structures of the university

Supporting flexible options-part time study for international students

Access to equipment and people who know how to use it

Figure 4: Word Clouds depicting the most frequent words nominated as supporting factors in candidates progress by candidates under 4 years FTE.

Access Advice Advisory Degree Feedback Funding Good
Communication Management Respect Scholarship Setting Student
Supervision Supervisor Support Team
Understanding University

Access to Resources Admin Advice Advisors Clear Doctoral
Experiences Facilities Finances Funding Milestones Processes
Regular Skills Statistics Students Supervisors
Support Training Workshops Writing

Academic Activities Candidature Conferences Connections Courses Facilities
Feedback GRS Incredibly Helpful Management Money Office Space
Present Program Research Resources Students
Supervisors Support Workshops

Enabling Factors – Advisors

Table 4: Advisors' responses to the most significant enabling factors in candidate progress categorised by theme and ranked 1-3

Ranking	Financial	Supervisory	Project Design	Academic / Research Skills	Prior Training	Peers	Candidate Qualities	Other
1.	18.18%	14.55%	21.82%		3.64%		36.36%	5.45%
2.	7.41%	20.37%	14.81%	5.56%	5.56%		42.59%	3.70%
3.	7.55%	18.87%	21.82%	15.09%		3.77%	26.42%	5.66% Personal Circumstances 11.32%

The most significant enablers identified by advisors were candidate qualities, this was consistently the highest category across the first, second and third factors nominated. The range of candidate qualities related to skills, circumstances and intrinsic qualities/drivers. Candidate skills included

Time management

General capabilities

Ability to work independently

Organisational skills

Circumstances included:

Clarity of resources (both personal and research) prior to admission

Sound physical and mental health in self and in loved ones

No major personal problems, e.g. no marriage breakdowns

Commitment of sufficient time

Support networks

Plenty of time to dedicate to the thesis

Intrinsic qualities:

Self-discipline

Bloody-mindedness

Intellect

Commitment to and passion for the research topic

Motivation to complete on time

Candidate intelligence

Passion

Determination

Self-discipline

Tenacity

Self-confidence

Good work habits

The second most significant enabler nominated was the project design, followed by financial supports and then supervisory support. Supervisory descriptors were consistent with the candidates. Arguably the supervisor takes accountability for the project design. The project design related to: questions, focus, clarity and planning of the project, “a narrow topic, “a roadmap”.

Figure 5: Word Clouds depicting the most frequent words nominated as enabling factors in candidates progress by advisors.

Adequate Financial Admission Appropriate Candidate Clear
Commitment Financial Support Focus Funding Good Time
Management Motivation Passion PhD Project
Quality Research Topic Self Discipline Study Supervision
Supervisor

Ability Able Adequate Feedback Good Work Ethic Management
Prior Project Research Self-confidence Skills Student Study
Supervision Supervisor Support Team Topic

Adequate Supervision Candidate Candidature Dedication English Environment
Family Focus Motivation Problems Project Research
Supervisor Support Topic Writing

Scenarios

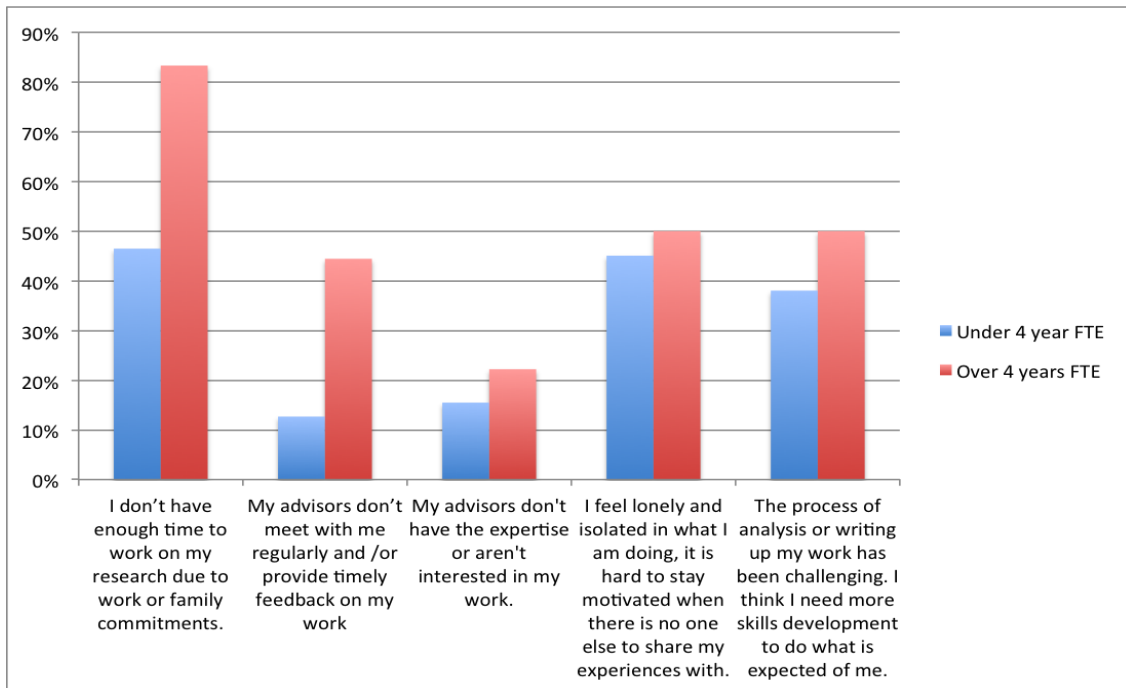


Figure 5: Bar Chart comparing candidates' identification with common barriers to timely completion

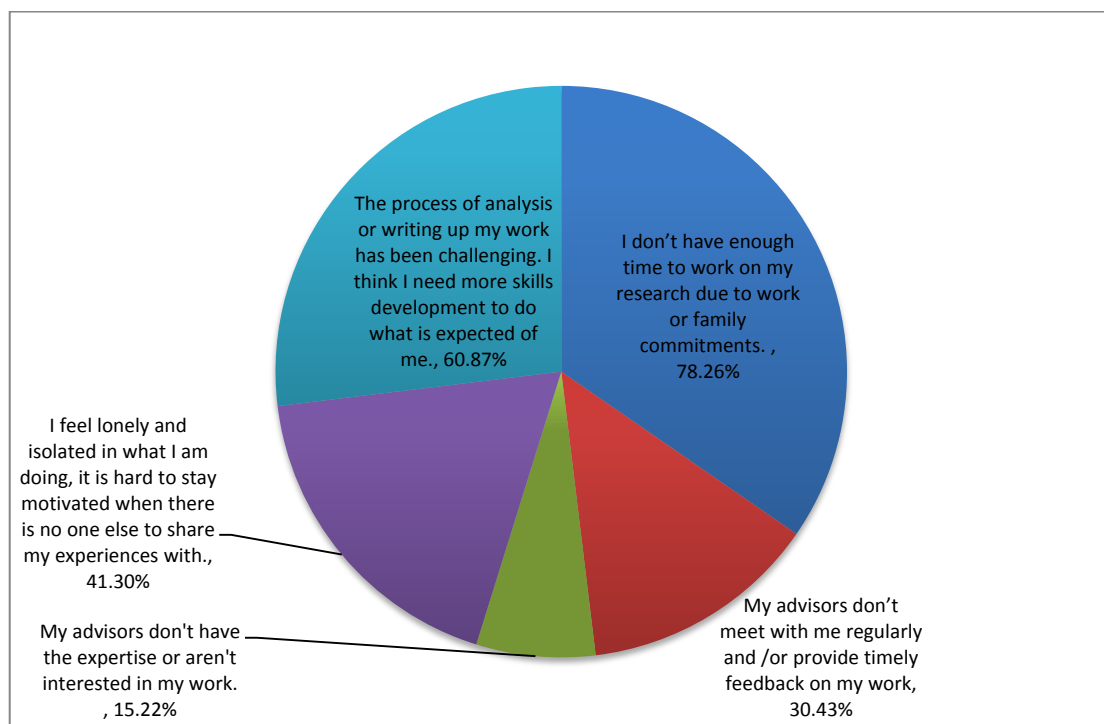


Figure 6: Pie chart representing advisors' identification with common barriers to timely completion.

Actions to Enable Progression

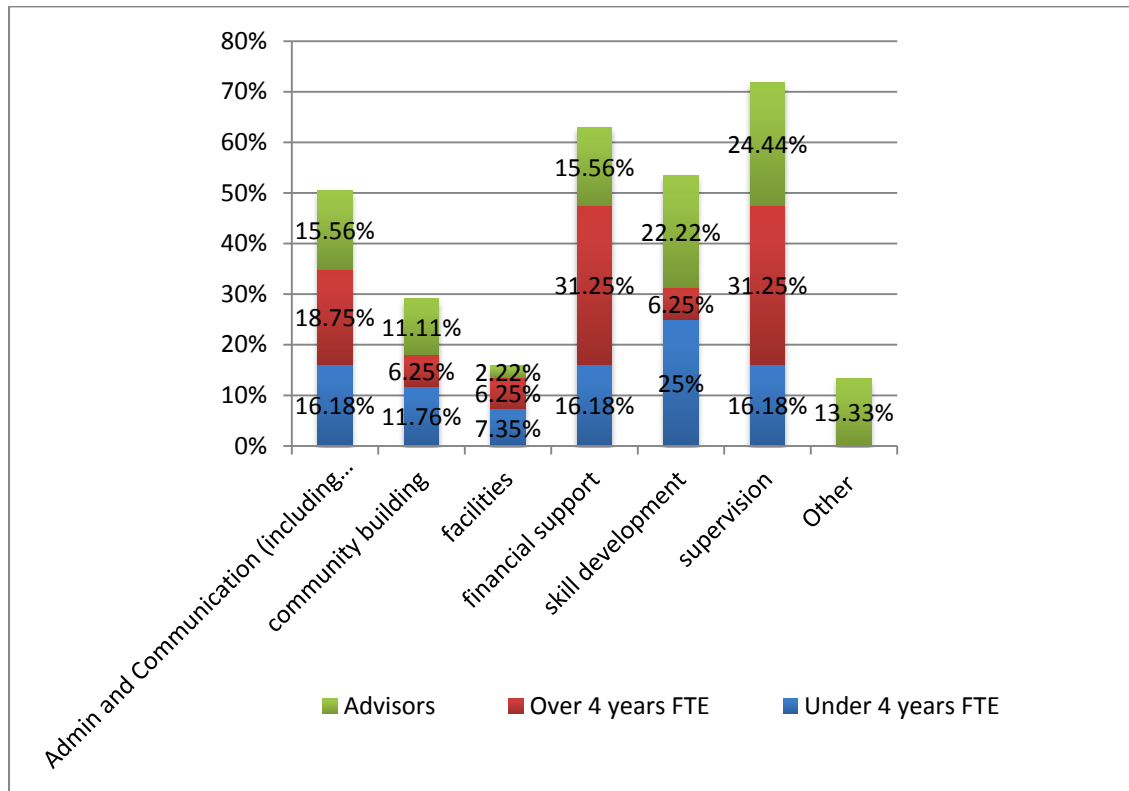


Figure 7: Recommendations to support timely progression

Student Recommendations – Under 4 years FTE

Admin and communication:

GRS website more user friendly

Ensure RSM's are independent and cannot unnecessary impact on progress. Confirmation proposal has been two panels of supervisors and external experts, however, RSM is not willing to sign off.

Number two. I find it extremely difficult with all the admin and it is not clear at times.

Less admin for academic staff!

More information at the start (i.e. handbook of resources and contact info)

On the JCU website and very hard to locate despite using reasonable search terms. Universally responsive IT support would also be good.

Reviewing the current scholarship scoring system. Those that look good on paper aren't necessarily the best for research and vice versa

Faster ethics [approval]??

Access to information for the non-Townsville campuses, e.g. Library resources, which at present require a candidate to spend time away from base in Townsville.

Less red tape and hoops to jump through in general, seem to be far too many superfluous roles in management/admin and far too few people ready to accept responsibility for decisions.

Less bureaucracy/faster response time from admin and supervisors

Community building

Organised peer meetings or seminars hosted by the students. This is an aspect of the school that does not seem to be available. If we had weekly seminars where the students and post docs hosted speakers it would give us a chance to get to know each other and network and form connections. Supervisor lab meeting are not enough.

Foster a greater formal connection between postgraduate students. There is none.

Fostering deeper connections to colleagues at the university

That beyond supervisors, schools and faculties acknowledge and take an interest in their postgrad students – this is almost entirely missing.

Peer support

Networking events

Fostering a collegial environment within/between departments & schools

Generating networks with other HDR students from JCU

Facilities

Provide with facilities and equipment to all the students equally, i.e. computers, office, etc

Better office space

Desk and computer access for all post-grad students, currently it is down to faculties and luck.

In Marine Biology... Office space, will be addressed with new building although individual desk per HDR candidate is highly recommended

Skill Development

Need more persons to help for Academic English Writing in Specific field such as biology

Practical workshops at appropriate times.

Lower expectations and pressures for attending / participating in non thesis-related

More practical courses at the beginning of candidature about writing, structuring research, methodologies, etc.

Courses available after hours.

Time management workshops

Support mature age off campus students. Make HDR classes available by video link or notes. We miss out completely. Remove silly working restrictions. Parents know what we need to do to feed and house our families and study and we need money to do it.

Perhaps the SKIP program should be mandatory for ALL HDR students, not only international students. Why international students and not domestic students?

More access to academic writing sessions for remote external students

Remove or improve delivery of the compulsory workshops. Currently so poorly delivered, they are a waste of everyone's time (the presenters look like they want to be anywhere but there as well).

Provide more comprehensive and inclusive research skills programme for external students. There seems to be very few systems in place to include external students in campus life.

Suggest a more structured approach

Career Development. Individualised candidature program

At my stage in candidature it would be to have an equal focus on supporting students in non-science disciplines during research skills training. Numerous presenters have made the assumption that students are undertaking science-based research. The Indigenous Research Protocols workshop should be a core element of the compulsory induction as it addresses fundamental protocols all researchers should be aware of from the outset.

Access to statistical advice and support

Supervision

Finding the correct supervisor

Too much pressure to finish within 3 years, thus supervisors micromanage student's time and don't allow them to have enough free time to other interests (personal life);

The "best" supervisor

More feedback on completed chapters

Provide supervisors with a training session so that they know how to better deal with conflict, how to better support their students in time of stress

Supervisor training

Prompt feedback

*To enable exit strategies from supervisors who are displaying unfair bullying behaviours
monitoring supervisors and assessing their capabilities*

Pressure on supervisors to help students make progress

Student Recommendations – over 4 years FTE

Sufficient funding to present papers at conferences

Stress and anxiety management

Resources

Targeting completion grants for part time students so they can take time off work to complete

Acknowledgement of research and teaching accomplishments

Provide an income source when goals are met

Provide writing scholarships for the last part of the PhD candidature

More academic employment opportunities

Easier and more access from approachable GRS staff, especially when there are supervision problems.

I am not sure that the University is in a position to improve any of these beyond peer support as the other two rely on money which is limited for all.

Student evaluation of supervisors

Regular contact (e.g. supporting external students to attend courses on campus and meet with supervisors in person)

Personally, I think timely feedback for work being reviewed would have been most useful for me. However, I'm not sure what the university could do to achieve this.

Support for student/supervisor issues

More structured program

Enable faculty to meet the demands of competent supervision

Advisor Recommendations

Admin and communication

Allow for more latitude with submission date

Promote thesis by publication

Cut down red tape and bureaucratic processes

Provide organisational security to staff and students--current loss of academic staff due to retirements and future redundancies is creating a climate of uncertainty and huge loss of morale among staff and alert postgrads

Make it easier for students to exit

Policy of research understanding and skills prior to embarking on a PhD or Masters. Achievements of milestones enforced.

Easier pathways to flag students in difficulty - to support advisers

Financial supports

More scholarships

More structured work opportunities at JCU to ensure that students don't take on too much externally

Scholarship top ups

More scholarships to avert the need for full time paid employment to make end meet for self and family

Provide scholarships that end at 3 years

I always try to add another \$5,000-\$10,000. JCU should do this. Faculties should stop taking HDR completion money from Schools. This would allow Schools to reinvest that money into top-up scholarships (see before) and into project support..

Currently late submitters dominate peer-to-peer mentoring (because they are around longer and assume responsibilities within the lab). Perhaps they could be re-located to a "writing up" school to help them focus on the job under a more goal directed supervision

Supervision

This is far too open ended. One could be to better foster the development of supervisors, who are doing so much with almost zero support from the institution. There should be minimal levels of supervisory support, as is the case with mandatory minimal levels of support for HDR candidates.

Provide sessions with experienced supervisors to cover some of the above; screen supervisors for bad habits

Mentor system, internal support networks, and extra time for staff to be able to assist students- this could be increased in the staff work load.

Having supervision workload fairly calculated - which our Faculty has made excellent progress on. Keep providing these excellent workshops (especially writing) as these are of great help and really do ease the supervisory load.

More authority given to the Dean of HDR to intervene when a PhD student becomes a means to their supervisors' careers

Linking them with supervisors who are genuinely capable and committed

Educate advisors and perhaps sort out a few that cannot support students properly

We need a greater number of supervisors

Qualified mentors/supervisors

Providing more time for supervisors to focus on HDR candidates

Retraining "experienced" supervisory personnel/assisting with aligning students with appropriate supervisors

Community building

I think JCU could better support research students to meet and create networks on campus. JCU could also support students by offering scholarships or helping them apply for external funding. JCU could also better support supervisors to have dedicated time for higher degree research students through the workload model.

Community building expand cohort system; peer mentoring by advanced HDR candidates

More overt recognition of the importance of HDR students to research culture and through that great awareness of their need to stay focussed on their thesis research and not see them as a recourse to fill in gaps in other activities

Create a meaningful location for HDR students to work/collaborate. They need a dedicated space with high quality facilities.

Community building skill development A cohort model provides general academic skills and support outside the supervisor-candidate relationship. The additional support is from academics, but also has a peer support component. This is valuable. The government scholarships for fulltime students are pathetic and grossly inadequate.

Skill development

Ensure ongoing writing skills training, perhaps in groups for support, rather than one-off courses. Ensure financial support available to a diversity of student types.

Follow up workshops in editing skills; motivational skills

Making it clearer earlier in a candidates tenure of the commitment required to complete a PhD on time – PhD students are not forced to start lab/field work earlier enough to allow them to recognize what lies ahead.

Individual case management approach to skills development; scrap universal coursework approach - it won't work.

Skills development courses, especially in statistics; scientific writing workshops (for Australians, like SKIP)

Stop expecting that all HDR students publish papers. Not all want to go down this path. This is an added burden.

More workshops such as the "Secrets of Successful PhD Candidates" by Hugh Kern

Closely monitor student's progress and provide support services, e.g. writing or motivational workshops and counselling

Encourage writing publications by for example providing funds for Open Access Journals or small research funds for publishing during their thesis

Regular group meeting to discuss writing - students bring real examples bot lit review and results/discussion and team work them

More candidate structure/training in research; less sink or swim

Timely and relevant capacity building with students in a cognate discipline.

Facilities

Better infrastructure and technical support from the School

Thematic Discussion

The factors influencing can be categorised under:

Supervisory and scholarly environment

Supervision was the most significant factor identified by both groups of students. In both groups, over 50% of students nominated supervision factors as their first response, approximately another 30% referred to supervision in their second response. Students nominated 'Supervisor', 'Support' and 'Feedback' as the most frequent descriptors for enablers. Advisors mentioned the project design in approximately 20% of responses whereas candidates did not mention this explicitly and perhaps it was subsumed into supervision.

Candidate qualities and personal situation

Financial supports/circumstances and family commitments are significant factors only secondary to the role of the supervisor. For candidates over 4 years FTE, 42% nominated financial factors as the most important factor in supporting their candidature, this reflects that the greater proportion of this group are studying part time. In comparison, only 14% of 'on track' candidates ranked financial support as most significant.

Appreciably, 83% of students over 4 years FTE identified with scenario one in that they do not have enough time to work on research due to other commitments. This is almost double the percentage of those under four years who identified with commitments (46%). Circumstances conducive to the commitments of HDR study are part of the enrolment process as criteria that potential advisors need to ascertain. Advisors also indicated the importance of time commitments and personal circumstances conducive to undertaking a research project.

Over 4 years FTE participants nominated candidate qualities more than those under 4 years FTE. Supporting the candidate in their social and emotional wellbeing is a part of the environmental and institutional resources that can be provided. Both candidates and advisors referred to social and emotional wellbeing and or the skills in managing stress. All groups mentioned some intrinsic factors/characteristics such as motivation, passion, commitment, tenacity and confidence. The most common student quality advisors referred to was work ethic. Advisors referred to intrinsic qualities and characteristics of candidates more than students did. Other candidate qualities could be attributed as particular skills that can be developed and/or supported such as time management, organizational skills

Research facilities and resources

References to physical resources (as opposed to financial resources) were relatively infrequent in responses. There were only three references to IT, offices space and equipment in the students' first responses. Social and emotional resources include institutional support with managing stress and or being flexible and understanding in institutional policies.

Conclusion

Timely completion is a priority across the research education institutions. The enactment of quality research education for timely completion is dependent on:

1. Student qualities and personal situation;
2. Supervisory and scholarly environment; and
3. Institutional supports and resources.

The responses of James Cook University candidates to ranking key supports and scenarios are consistent with other research (Elgar & Klein, 2004; Halse & Malfroy, 2010; Kiley, 2011; Palmer, 2009). This study has identified some common themes across the factors identified by candidates and advisors including: supervisors' engagement, financial barriers, community building and general institutional support.

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Appendix

Appendix 1 – Surveys

Survey Questions – Doctoral Students

1. Are you an:

- a. International student
- b. Domestic student

2. Are you predominantly:

- a. On-campus
- b. Off-campus/External

3. What faculty do you work in? (multiple choice)

4. How long have you been enrolled as a doctoral candidate?

Years: _____ Months: _____

5. How long do you anticipate the doctorate will take you?

Years: _____ Months: _____

6. What is your main motivation for completing doctoral research?

- a. Career Advancement in your current field of employment
- b. Enhancing career prospects
- c. Pursuing a research interest
- d. Gaining new skills
- e. Working in a particular environment
- f. Working with a particular group of people

7. Scholarship and funding sources. Which of these apply to you?

- a. I am not in receipt of any scholarship funding
- b. I receive a Australian Postgraduate Award (APA Scholarship)
- c. I receive funding from another source (other than APA)
 - i. How much do you receive? _____

8. Are you currently:

- a. Employed full time
- b. Employed part time
 - i. Approx hours/week: _____
- c. Not employed

9. How satisfied are you with your progress

- a. Very satisfied
- b. Somewhat satisfied
- c. Neither satisfied/nor dissatisfied

- d. Somewhat dissatisfied
- e. Very dissatisfied

10. How regularly do you meet/have contact with your advisory team?

- a. daily
- b. weekly
- c. monthly
- d. other (specify)

11. What are the three things you think are most important in terms of supporting students during their candidature.

12. Do you think that the University could do more to provide these supports?

13. There are many reasons why students might encounter difficulties in progressing. Please suggest some statements that reflect your experience. There are some examples below:

a. Financial – Work Commitments Scenario

I don't have enough time to work on my research due to work commitments

b. Advisory Scenario

My advisors don't provide me with regular and /or timely feedback on my work.

c. Social emotional – isolation/motivation Scenario

I feel lonely and isolated in what I am doing, it is hard to stay motivated when there seems to be no one else to share my experiences with.

d. Writing skills Scenario

The process of analysis or writing up my work has been challenging. I think I need more skill development to do what is expected of me.

14. Any other suggestions or comments?

Survey Questions – Advisors

1. Supervisor Level (if known):

- i. Approximately how many research students have you supervised? _____
- ii. In which Faculty do you work? What faculty do you work in? (multiple choice)

2. In your opinion what are the three most important factors determining students' timely completion?

3. In your opinion what are the three most significant barriers to students' timely completion?

4. Please read the following scenarios from students and comment on any you identify with or provide statements or scenarios which reflect your advisory experiences (e.g. "Students are... OR "The PhD process....")

a. Financial – work commitments Scenario

I don't have enough time to work on my research due to work commitments

b. Advisory Scenario

My advisors have the expertise but they don't provide me with regular and /or timely feedback on my work.

c. Social emotional – isolation/motivation Scenario

I feel lonely and isolated in what I am doing. It is hard to stay motivated when there seems to be no one else to share my experiences with.

d. Writing skills Scenario

The process of analysis or writing up my work has been challenging. I think I need more skill development to do what is expected of me.

5. What initiatives could JCU undertake to support your student/s?

6. What initiatives could JCU undertake to help support you as an advisor?

Appendix 2 – Additional student feedback (under 4 years FTE)

Are there any other experiences you want to share?

Sometimes as students we spend too much time doing paperwork and University officers take too long to resolve some processes, e.g. ethics approval.

Room, facility and equipment for specimen identification is not well enough, it was use for storage room

It has been difficult to focus on study out of work hours. Particular when day job is sitting at a desk majority of the day

Different issues arise at different times and these were pressing issues that were resolved by changing to an understanding supportive supervisor

Too many mandatory workshops and seminars at the beginning, which a lot were not helpful at that point and delayed my preparation for my confirmation and fieldwork.

Your thesis gets inside your mind and eats at you all the time. Life events happen, but the big, scary three year deadline draws ever closer, as inflexible and imposing as a brick wall. That's not a recipe for good mental health.

As an external student, it is hard to share your work with others.

I feel I needed more advice at the beginning of my candidature as I was very unsure about how to actually go about what I was doing- I thought I knew- but I really didn't. Therefore I feel I have wasted a lot of time. Also there was a period where I had very little contact with my supervisor and found it very hard to get any feedback or advice. This was not beneficial for my progress as I really needed some direction and practical advice/direction.

I spend long hours working on my research, including weekends or staying at uni after hours but apparently this is not enough cause every meeting with my supervisors they ask for more giving the impression I haven't done enough.

I put this on hold for 2013 due to increased work commitments - affordability factors as main earner in household

I'm a single mum who works full time, manages family health issues and studies part-time - there aren't enough hours in the day

I felt uncertain if I was up to par and didn't realise this it normal; it helps to remember that this is a learning experience, and I'm not expected to know exactly how to do everything as I've never done a PhD before

I want to remove a supervisor who has no apparent interest in my field of study and is of no use to my research. I now know who I want to work with but the politics of the university don't make it easy to make that change.

At the beginning of my post grad experience at present, just trying to find my flow and get into a rhythm

Personal family issues interrupt the PhD in terms of: time; pace; mental concentration

Regarding the above: a PhD is supposed to be challenging! Skills are built and strengthened along the way

My scholarship only covers tuition fees, so I constantly spend time thinking about possible ways to make money to pay for my living expenses. And because of that I don't concentrate much on my school work

I am very happy with the facilities at JCU, in particular the high performance computer facilities are fantastic.

Not having deadlines has been challenging!

Many people do not have emotional balance

I think the biggest aspect missing from the JCU HDR students is a peer network. As students a peer group is important and it also opens our eyes to available equipment and knowledge that our supervisors might not know about. It also helps networking skills which are very important for future careers in academia and research

My main supervisor has been wonderful to work with. Without him I would probably have given away the PhD

Feelings of loneliness and isolation may be specific for Singapore-based HDR students. There is no network of HDR students.

Having an adjunct as a primary advisor can be challenging if they are unable to provide the timely feedback required to progress the research

Emotional stress due to lack of financial support or familial obligations.

These first 5 months have been crazy busy for me personally, with a field season, a field school, training cross-campus as well as the continual paperwork, GRS seminars and preparing to meet my confirmation requirements, on top of personal distractions; so I have at times already felt overwhelmed and the high stress levels make me want to just shut down.

When I started, there was too much paperwork regarding fieldwork. Things seem to be getting better in this regard.

Nowhere in that list does it talk about having a balanced life style that includes exercise, hobbies, etc. All of which are important to physical and mental health. I think students are slower to progress because modern students want a great life, not just the expectation that all they will do is work

There are very few other students who I can talk to about aspects of my PhD. The HDR students in my school who are near completion don't really have the time or interest, and the rest are really part-time students who aren't really available. The closest support from a HDR student actually comes from another faculty!

To perhaps go through a more thorough process so that you are aware of the level of experience your supervisor has, not just assume because they are a L1 supervisor that they are equipped for the job

My advisor has too many students and is quite impossible to remember all projects in details (my personal opinion).

The selection at question 14 is the closest, but it is more so that ideas are generated and developed through collegial contact

Yes, things those are out of your control, such as experimental problems, moving lab-TWICE! Slow or no access to required reagents/consumables due to JCU's relative isolation from the rest of Australia, relying on collaborators to conduct requisite experiments in a timely fashion. Collaborators ethics approvals lapsing and waiting time until reapproval of revised submission. Personal health problems like unexpected seizures and the like. The list goes on.

The University/School is driven by money, but it is important to ensure there are facilities for an accepted project and that young/inexperienced supervisors are monitored.

There is WAY too much unnecessary paper work, confusion about who is in charge of what, who does what and how to navigate through the JCU system. We never know if we are to go

to our school, GRS, the International office, the institute. It is a mess. And why are we not able to keep track of our own funding? why can't we use spendvision?

Non-resident students with families and child(ren) usually face huge financial difficulties while being in Australia. These young families need social life; they need to feel that they are not alone and that they deserve to visit home at least yearly. But what they face- complete ignorance from Townsville society, resulting feeling completely isolated plus financial difficulties disabling to travel home and rest at least once a year. This is a huge obstacle for such families. If JCU could provide support in terms of providing free accommodation to such families (in addition to scholarship that will make changes) plus provision of at least 50% discount in daycare (JCU owned daycare centres). That would make such people like me to feel protected and more concentrate on study rather than how to survive.

I have had a number of health issues affecting my productivity and progress

The feeling of being daunted/overwhelmed by the quantity of the results of research that must then be written up.

The University's bureaucratic processes have held me up for more than one year. Ditto, the very slow response from a supervisor. These have almost caused me to leave the program- something that may yet happen..

Nominated principal advisor lacks the life skills or knowledge to adequately supervise at this level. She is riding on the coat-tails of associate advisor who is in reality being the lead advisor; unfortunately he will retire at the end of the year. The HDR candidate is reviewed each year by the same is not applied to the advisory panel.

The expected 3 years to complete (even 3.5 years) is by far not enough to complete a PhD thesis. It does depend on the subject however... I can see that marine ecologists could easily finish on time, but those working with molecular biology techniques not

I came from full time work in the university to one day a week. The workload was horrendous, I was still coordinating subjects. I have had to take long service leave. I have no peers and feel isolated, i was still treated as a member of our work team. this was great as I had colleagues but meant I still had a large workload. I was not encouraged to join the FMHMS cohort group and would have loved that support

Occasionally come across unhelpful "not my job" attitude from staff.

Access to decent analytical equipment and expert knowledge would have been greatly beneficial

In relation to Question 14 - the need for more skills development in writing up work applies to practice-led / performative research. Does JCU run research skills training in this type of research?

I tend to procrastinate.

The university bureaucracy is thwart with peril and is time consuming and unnecessary.

Appendix 3 – Additional student feedback (over 4 years FTE)

Are there any other experiences you want to share?

Anxiety was a major issue for me, resulting in some medication. More awareness of this going in would have helped

Sessional teaching takes up significant time and, as the bottomfeeders but also at the coalface of teaching, many of us are taken for granted and used by some (not all) staff

Money is a good motivator

Timely feedback rarely happens. This can be particularly frustrating.

Over ambitious, overzealous supervisors whose only concern is their own personal ideas about how things should be done

Running out of funding because it took too long to complete. More GRS support to deal with supervision problems. Support with getting academic work after completion.

My scholarship ended abruptly and therefore I have been working in other fields, I do not wish to pursue academia and therefore the motivation has been greatly affected.

The GRS and School have demonstrated an inability to really support the student. There are systemic problems within the University that prevent performance management of supervisors and supervision. The expectations of quality, quantity and timeliness of completions is unrealistic and needs to be managed appropriately through project management and reasonable and achievable expectations of students.

I procrastinate too much and need firmer deadlines to progress.

Students can't make supervisors care about GRS requirements. Also, for the last (at least) 3 years I have effectively been a part time student, however I remained enrolled as full time because the forms were too onerous.

It can be very hard to address issues with your supervisor as they are ultimately the person who can assist you to finish and upsetting them does no good.

Appendix 4 – Incentives and disincentives to completions as evident in the literature

<u>INCENTIVES</u>	<u>DISINCENTIVES</u>
Student directed	
Increased funding to students throughout	
Financial incentives upon completion	
Social support – cohort, counseling, mediation services	Termination of scholarships
Professional development – motivation, internal locus of control, and self-direction	
University – facilities and resources	
Resources – space, equipment	
Thesis completion fellowships	
Thesis support groups	
Thesis-writing workshops	
Resources for scholarly community building- shared spaces, shared conferences, networking opportunities	
University – structural	
Cohort – set times for entry and exit	Use student contracts that fix the duration of PhD studies
Scholarly community	
University – supervisory	
Thesis-supervision workshops	
Regularity/quantity of interaction	
Set supervision guidelines	
Policies setting supervision standards (e.g. student grievance procedures)	
Establish quality standards for PhD supervision	
Induction- clarifying of roles (discrepancy between expectations/roles of students and supervisors to direct the research)	
Induction/enrolment- student and supervisor ‘fit’, trial supervisory periods, pre-enrolment contact and communication processes.	
Financial incentives upon completion for supervisors	

Broader Graduate Research issues – funding, nature of the research (out of scope)	
<p>Revised program/thesis requirements</p> <p>Award thesis completion fellowships to students beyond 4th year of study</p> <p>Establish productivity standards for completion rates and times-to-completion</p> <p>Promote productivity standards by giving more awards to universities that achieve them</p> <p>Extend eligibility period for external awards</p>	