

From Access to Success: Re-thinking the model of doctoral education in South African Universities

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Introduction

- In practically every subject of study, doctoral enrolments in South Africa have increased during the previous ten years.
- Reaching the target of 100 PhD graduates per million per year by 2030 is one of South Africa's goals. The nation's ambitious endeavour to increase doctorate throughput.
- The conversation needs to be around how we improve doctoral education success.
- To do this we need to understand beyond demographics who are our doctoral students.



WHO ARE OUR DOCTORAL STUDENTS

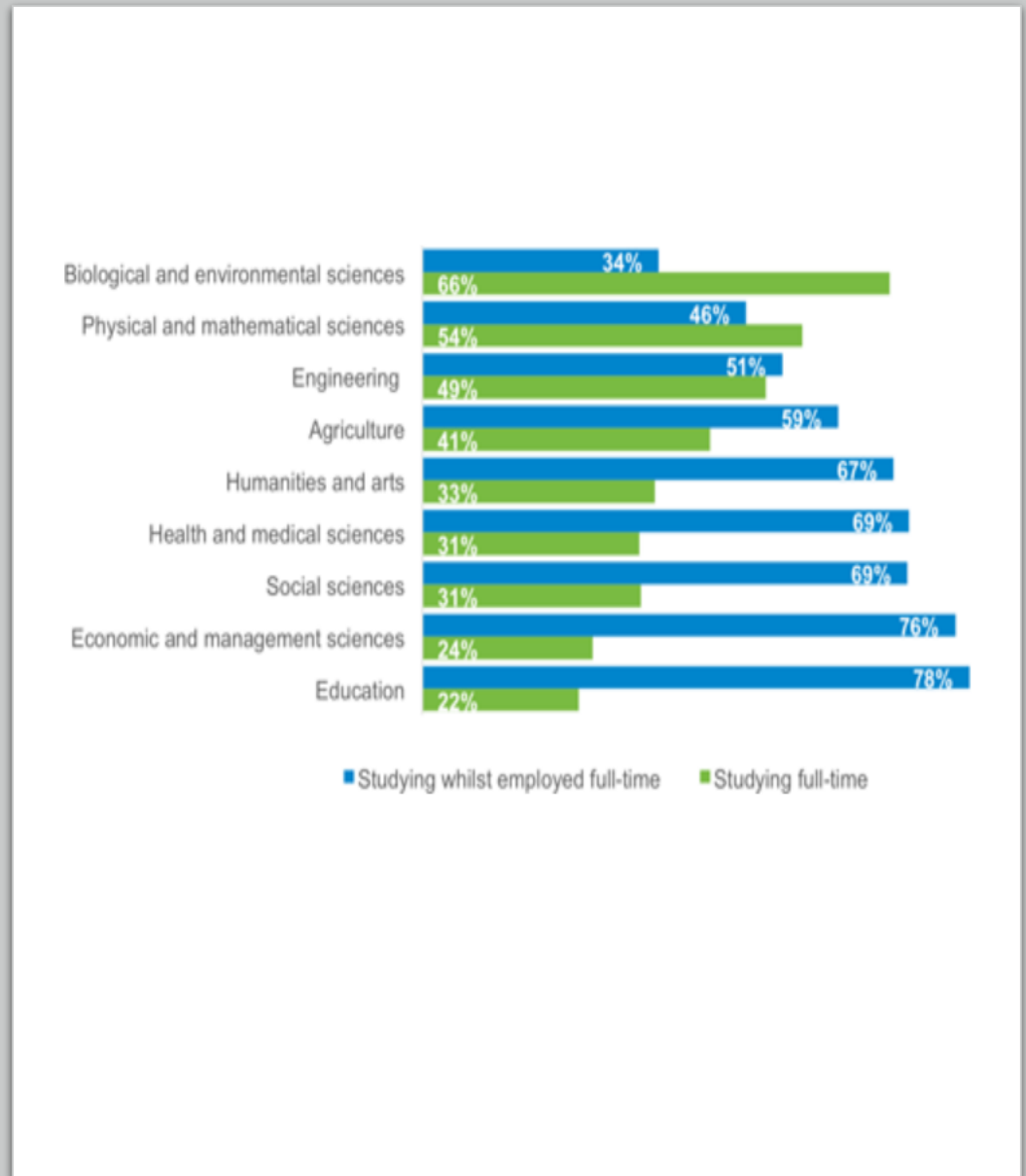


- SciSTIP hosted by Stellenbosch University undertook the first national tracer study of doctoral graduates in South Africa with the aim of:
- *tracing the mobility, career paths* and other attributes of a representative sample of PhD graduates from South African universities across a range of sectors and disciplines.
- The study was completed in 2021 and focused on graduates in the period 2000-18.
- The study surveyed N=6400 participants



Employment status of doctoral graduates during their doctoral studies

- Majority (61%) of doctoral students in South Africa study part-time.
- 40% of all doctoral students study full-time, the majority of whom are in the natural and life sciences.
- However, the definition of 'part-time' in the context of academic studies for doctoral students is open to interpretation.



Literature: Global & Local

- The literature has directed considerable attention to examining doctoral education. For example, studies investigate problems encountered throughout the doctoral process (Plumlee and Reckers 2014), **the role of the supervisor** (Beattie and Smith 2012; Bell-Ellison and Dedrick 2008; Rose 2005), **issues with new academic staff joining faculty following doctoral studies** (Newell, Langsam, and Kreuze 1996), **new models of doctoral education** (Trapnell et al. 2009) and the problem of **untimely doctoral completion and attrition** (Booth and Satchell 1995; Neumann and Rodwell 2009; Stock, Finegan, and Siegfried 2006, 2009; Wright and Cochrane 2000).
- Missing from the literature is an agreed theoretical framework for the evaluation of a comprehensive range of factors deemed to affect doctoral student performance. Ward and Brennan (2020) made a valuable contribution to this gap by suggesting a framework for gaining insights on doctoral education based on the theory of fit.

Student-doctoral fit framework

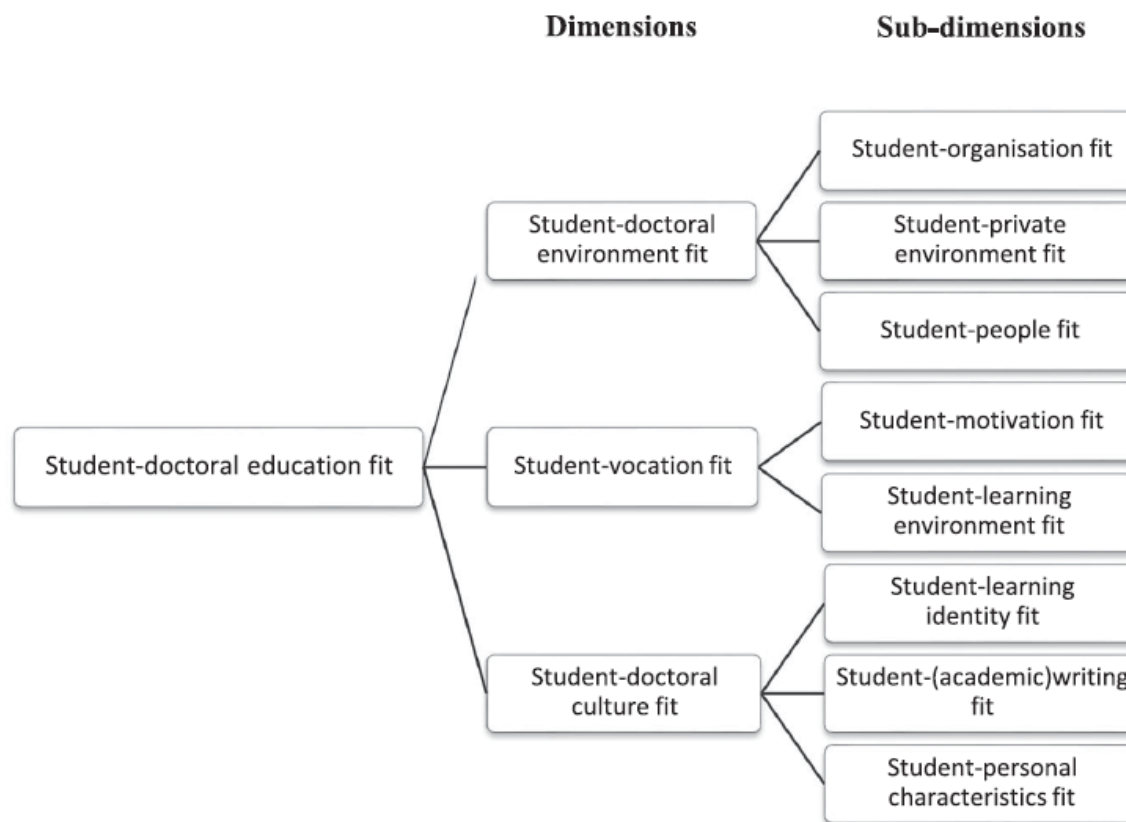


Figure 1. Student-doctoral education fit analytical framework.

A Note on Methods

- Phenomenology approach to get in-depth understanding of experiences of doctoral students. As such they are powerful for understanding subjective experience, gaining insights into people's motivations .
- 15 doctoral students, will be chosen through purposive sampling, who are all registered at different universities and work as PhD trainees in the selected research organization.
- Semi-structured interviews will be employed questions were developed in line with the framework, coded in line with the framework and also analysed in line with the framework.
- The study employed a hybrid data analysis approach: deductive thematic analysis process benchmarking against framework, secondly inductive which will allow themes to arise directly from the data.

Misfit factors: framework

Table 1. SDEF^a analytical model mapping the SDEF^a framework (Figure 1) to fit/misfit factors.

Fit-theory dimensions	Fit-theory sub-dimensions	No.	Misfit factors	
Student-doctoral environment fit (P1.1)	Student-organisation fit (P1.1a)	1.	Lack of quiet accommodation in the university	
		2.	Lack of equipment (PC, laptop, printer, etc.)	
	Student-private environment fit (P1.1b)	3.	Lack of funding/funding ended	
		4.	Opportunities to earn funds elsewhere	
		5.	Teaching hours/External workload excessive	
		6.	Family commitments (dependents)	
	Student-people fit (P1.1c)	7.	Other commitments (sport, hobbies, etc.)	
		8.	Ill-health/Mental health	
	Student-vocation fit (P1.2)	Student-motivation fit (P1.2a)	9.	Insufficient support from supervisor
			10.	Insufficient support from employer
Student-learning environment fit (P1.2b)		11.	Insufficient support from partner/family	
		12.	Lack of interest in research in general	
		13.	Lack of interest in the topic	
		14.	Perceived value of doctoral qualification diminished	
Student-doctoral culture fit (P1.3)	Student-learning identity fit (P1.3a)	15.	Difficulties obtaining the data required	
		16.	Doctoral course scheduling (content/timing/location)	
		17.	Insufficient research training	
	Student-(academic)writing fit (P1.3b) Student-personal characteristics Fit (P1.3c)	18.	Pressure to publish the research	
		19.	Difficulties with working independently	
		20.	Difficulties with the isolation of working alone	
		21.	Project size: The task is immense	
22.	Project management greater than expected			
23.	Difficulties with (academic)writing			
24.	Loss of status since enrolling			
25.	Dislike of receiving criticism about work			
26.	Difficulties with time management			
27.	Deteriorating confidence since enrolling			

Student Doctoral environment fit

- Funding
- Family commitments
- “Lack of support from supervisor/ approaches to supervision
- “Mental health

Student Vocation Fit

- Interest in topic/subject area:
- Perceived value of doctoral qualification
- Sufficient research training
- Institutional admin ethics process

Student doctoral culture fit

- Academic writing
- Working independently:
- Isolation (lack of cohort, joint supervision)
- Time management (work/school)
- Confidence

Emerging Themes: Inductive

- Pathways:

Finding Employment after graduating

- Covid implication on research:

Methodology affected, moving data collection online, losing the connections built face to face (people recognize a face than an email domain)

- Academic Work places becoming a possible enabler for success in doctoral education

Training, mentoring & academic support emanating from work environment more than institution, that benefits from the doctoral output.

Recommendations

- **Student doctoral culture needs attention: Move from traditional supervision to cohort supervision.**
 - This helps deal with isolation,
 - increases discipline knowledge when students are involved in interdisciplinary research.
 - Variety of inputs
- **The need for structured curriculum:**
 - This deals with research methodology issues
 - Academic writing skills
 - Time management (work & school nexus)
 - Isolation.
- **Time required for ethical clearance:**



Conclusion

- What partnerships/relationships can be formed with institutional supervisors and work supervisors?
- How can we better support part-time students without penalizing them? (in terms of accessing funding & Institutional support)
- How can we better structure doctoral programs to reflect reality of the student entering the system?

Thank you

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