THE NEED FOR THE DEVELOPMENT OF EMERGING POSTGRADUATE SUPERVISORS

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Abstract

The demand for more doctoral education puts pressure on universities to increase the number of academics with doctoral degrees who can supervise the next generation of researchers. The Higher Education Qualifications Sub-Framework (HEQSF, 2013) indicates that being able to supervise is one of the outcomes of attaining a doctorate. Still, this study found this to be rarely the case. The study participants often took on the supervision role before they felt that their capacity had been sufficiently developed. Although emerging supervisors have been supervised during their doctoral journey, their new role may still be daunting.

This study aims to provide evidence for institutions and academic developers to develop and support emerging supervisors. The qualitative study employs critical realism as an underlabourer and uses Margaret Archer's (1995) social realist framework to account for the interplay between structure, culture, and agency. Semi-structured interviews were conducted with 54 participants from 20 South African institutions. The key finding is that supervisors were thrown into the deep end and relied on trial and error. They also had to supervise from experience while faced with high teaching workloads.

Keywords: Postgraduate, Supervision Development, Higher Education, Structure, Culture

1. INTRODUCTION

There is pressure worldwide to increase the number of doctoral graduates to compete in the knowledge economy. This is equally true of South Africa. According to the Council of Higher Education (CHE, 2004, p. 124), "South Africa has the best developed and capacitated national research and innovation sector on the African continent, although its standing in the wider international research array has weakened". Badat (2010) reminds us that higher education's purpose is knowledge production, knowledge dissemination and community engagement. The exponential expansion of Higher Education and the growing demand for skilled researchers outside academia have made doctoral education a crucial part of national development plans (Molla & Cuthbert, 2016).

In South Africa, where this study was undertaken, there is broad consensus “that not enough high-quality PhDs are being produced concerning the country's developmental needs” (ASSAf, 2010:15). The demand for doctoral education comes with a belief that doctoral education can contribute to the nation’s development. This complex conceptualisation of doctoral education has led to the form of economy that we have as a country, that is, an economy driven by knowledge. It calls for attention to the developmental needs of post-apartheid South Africa. It attends to the growing higher education sector's need for academics to hold doctorates, which means the pressure on the system is profound. The South African higher education landscape has been presented with high numbers of postgraduate students, which has led to emerging supervisors being expected to take on the supervision role immediately upon graduation. This role requires a rich interrogation of how emerging and experienced supervisors enact postgraduate pedagogy.

2. SUPERVISION AS PEDAGOGY

While there is an assumption that research expertise is needed to supervise candidates, there is less concern about the pedagogy of postgraduate supervision. However, in the literature, supervision is "a pedagogical activity that calls for pedagogical expertise, in addition to research-related expertise" (Vehviläinen & Löfström, 2016: 509). Adequate research on supervision is at the centre of successful postgraduate education, yet, it is often under-theorised in the literature (Green & Lee, 1995). Connell and Manathunga (2012) assert that doctoral supervision is a specialised form of advanced teaching. The pedagogy of supervision needs to be understood as one part of the teaching-research nexus (Lee, 2009). If supervision is seen as a form of pedagogy, supervisors will likely be influenced by their teaching ideas.

Upon graduating, many lecturers become supervisors 'by default' (Bitzer & Albertyn, 2011; Lee, 2009) and therefore, draw on the way they were supervised, perhaps perpetuating problems and inequalities. Habib and Morrow (2007) opine that researchers are unlikely to be at their peak immediately after being awarded their PhD, despite supervision competence being a stipulated outcome of the doctoral graduate (HEQSF, 2013).

Manathunga and Goozée (2007) note that the idea that supervisors can be effective from the start, simply by having been supervised, rests in part on the idea of the 'always/already' student who comes to the doctorate fully prepared for the undertaking. This student, in this misconception, is autonomous and able to engage at the expected levels (Johnson, Lee & Green, 2000). He/she is already knowledgeable, and the supervisor's work is to nurture that inherent talent by modelling appropriate research practices. With such misconceptions, it is not surprising that supervisors are expected to be 'always/already' prepared to supervise.

There has been a call for supervision development in the broader global and national context. The report on the South African review of the doctorate CHE (2022: 41) stipulates that "there is a need for additional supervisory capacity across the national system, and programmes for training supervisors are in place in most universities". The recent League of European Research Universities (LERU, 2023) report also outlines practices that enable 'productive supervision', with numerous examples from member institutions. The research I have undertaken offers a rich picture of the kinds of supervision development that are deemed most valuable by participants.

3. STUDY CONTEXT

The South African higher education sector was previously fragmented, narrow, elite, and uneven and had to go through mergers and incorporations to address past inequalities. These processes resulted in South Africa having eleven traditional universities, six universities of technology, and six comprehensive universities, with three new comprehensives later added to the sector. Traditional universities primarily offer general and professional qualifications in the form of degrees. Technikons previously offered vocational training, and lecturers in those institutions were not expected to conduct research or have postgraduate qualifications, which became problematic when these institutions introduced postgraduate studies (Gumbi & McKenna, 2014; Isike, 2018). The newly formed comprehensive universities offer a mixture of diplomas and degrees.

The current study took place within this complex public higher education sector. Of note is that some institutions have enjoyed a long history of offering postgraduate studies, a rich research culture and a high percentage of academics with doctorates. In comparison, others previously focused entirely on extensive undergraduate courses and are now expected to upgrade staff qualifications and offer postgraduate education. These shifts were driven by the 2004 funding formula (Ministry of Education [MoE], 2004), which significantly rewards postgraduate studies, and the National Development Plan (NDP), which calls for 5 000 doctoral graduates by 2030 (NDP, 2013). This study sought to identify how academics across this complex sector were being supported to take on the pedagogy of doctoral supervision.

4. METHODOLOGY

This article draws on a more extensive study of the mechanisms that condition doctoral supervision development in public universities across South Africa. Bhaskar's critical realism requires the identification of conditioning mechanisms that enable or constrain the phenomenon under study, in this case, supervision development across these institutional types. To understand the supervision development opportunities afforded to emerging supervisors, I needed another explanatory theory to help me make sense of the mass of data to identify some of the causal mechanisms at play. I used Margaret Archer's social realism as the analytical framework to account for the interplay between structure, culture, and agency in the emergence of supervision development opportunities in South African universities.

Archer's (1995, 2000) analytical dualism as an analytical framework to separate the 'parts' from the 'people' to understand their interplay. The 'parts' refer to structure and culture, while the 'people' refer to agency. Structure entails the identification of how rules and resources are allocated in society. Culture entails the realm of ideas and values in society. At the same time, agency is conditioned by the structural

and cultural mechanisms in which individuals find themselves, which can both enable or constrain their actions. Agency further entails how individuals can act according to their personal projects.

Archer warns against conflating the domains of the 'people' and the 'parts' and calls doing so the "fallacy of conflation" (2000:6). She distinguishes between upward, downward, and central conflation, which she believes are problematic in social research. This article pays more attention to what Archer terms "upward conflation", in which the powers of the 'people' are held to orchestrate those of the 'parts' (2000:4). In the context of this study, upward conflation would entail understanding successful postgraduate education to emerge entirely from the supervisor's pedagogical practices and the candidate's intellect.

In other words, upward conflation suggests that individual people have agency; that is, they have the power to ensure the success or failure of postgraduate education. This notion is problematic, as I have argued elsewhere (Motshoane & McKenna, 2014). We understand that any education phenomenon within a context that compromises structures, cultures, and other agents will have conditioning effects on what happens in the supervision pedagogy.

Ethical clearance was obtained from the institution of study and nineteen other institutions. Four universities were excluded because they did not offer postgraduate qualifications at the time of data collection, while the other two refused access to data generation.

Participants provided informed consent to participate. They were then contacted and assured that no data would be attached to any person or institution. Inclusion criteria regarding the experience level were stipulated in the invitation, indicating that participants needed to have been supervised at the postgraduate level for two or more years. I generated the data through semi-structured interviews with 54 participants across institutional types and disciplines. The interviews were conducted face-to-face, telephonically and online, depending on the distance between the participants and me. The critical realist emphasis on the importance of identifying multiple mechanisms required that I obtain data from a spread of participants to achieve reliability in the findings (Crinson, 2007).

I transcribed the first twenty interviews, which allowed me to engage with the data and become familiar with it. Due to time constraints, I then outsourced the transcribing of the remaining thirty-four interviews, with the transcriber signing a confidentiality agreement. My analysis of the data went through the five phases listed in Figure 1.

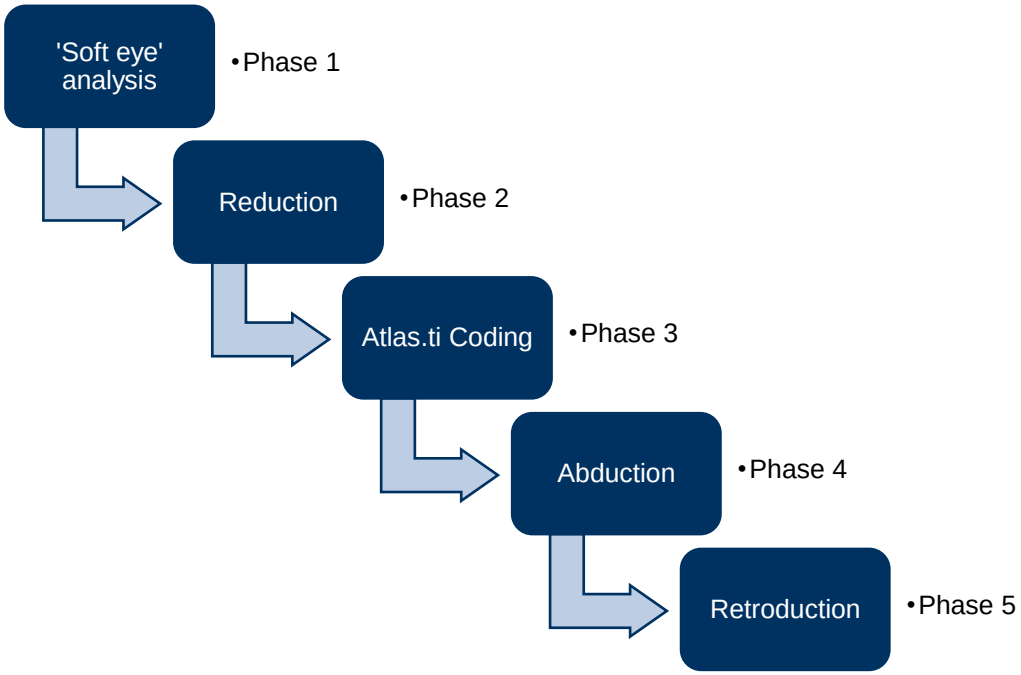

Figure 1: A representation of the five phases of data analysis

In a realist study, it is understood that participants' experiences may differ, which became evident in the data. Therefore, my responsibility as the researcher was to identify some mechanisms from which such experiences emerged (Danermark *et al.*, 2002). I read the data repeatedly, identified meaningful experiences (Miles, Huberman, & Saldaña, 2014), and ensured I did not lose the data's wholeness (Cousin, 2009). As I did the soft-eye analysis, I reduced unnecessary repetitions from the data. To manage the amount of data generated required the use of software (Atlas.ti). Data were coded using the 'code family' feature in Atlas.ti to group codes into categories, drawing on Archer's (1995) concept of analytical dualism. The framework enabled me to understand how structure and culture impacted agency. I further used retroduction, which involves moving from empirical data, for example, a description of experiences provided by participants, to positing the conditions which could have led to their emergence (Danermark *et al.*, 2002).

Each data quote is referenced according to the type of institution and their randomly allocated participant number; for example, Trad5 indicates a participant from a traditional university, CU5 is a participant from a comprehensive university, and UT5 is a participant from a university of technology.

5. FINDINGS AND DISCUSSIONS

In South Africa, like anywhere else, the criteria to become a doctoral supervisor relies on having a doctoral qualification. It was clear across the data that there was generally an expectation that emerging supervisors were already able to supervise. A problematic notion was that graduating at the doctoral level entailed crossing the boundary into supervision competence (Motshoane & McKenna, 2021). The findings reflect the literature (for example, González-Ocampo & Castelló, 2019) since in many universities in this study, emerging supervisors were deemed competent by having been supervised. Additionally, data indicating a lack of support indicated that such participants were uncertain of what was expected. There were several calls in the data for development opportunities and collegial support.

Supervisor responses to professional development varied across the data. A large portion of the data highlighted a need for more supervision development opportunities across all institutional types. Surprisingly, some participants within a single institution indicated that no supervision development opportunities were available, while others said there were. Overall, the data suggested a need for structured supervision development opportunities to be institutionalised and recognised. The three themes that emerged from the data related to supervision development were: supervising through trial and error, supervising from personal experience, and the challenge of high workloads.

5.1. Through trial and error

Without explicit development, many supervisors indicated that they learned what was required through 'trial and error', a repeated phrase in the data.

> *There was no one to supervise, and suddenly I got appointed as a supervisor, so it was a hit-and-miss and a trial-and-error process at the beginning* (UT4).

> *However, like learning to be a supervisor, a lot of my own has been very much trial and error. It has been like being given students and figuring it out as I go along.* (Trad25).

The literature suggests that it is not unusual for supervisors to "learn on the job" (Halse, 2011; Hemmati, 2021; Taylor, Kiley & Holley, 2020), but it also suggests that this is not ideal. The general view was that supervisors were left to their own devices to determine what approaches to supervision pedagogy worked best.

In contrast to concerns about being 'thrown in the deep end', several participants indicated that they welcomed the opportunity to learn alongside their students as they took on the supervision role:

> *Supervision is a learning experience. Therefore, for me, it is about facilitating learning, and it is about journeying with the students and learning with the student and learning from student*s (UT6).

However, it is essential to note that data related to 'learning alongside the student' was regarding learning with the student about the study phenomena or the methodology rather than learning *how* to

supervise. It is essential to distinguish between data that spoke to the benefits of learning alongside the student and the challenges of learning to supervise while practising supervision. Feelings of being "*thrown into the deep end*" and figuring out how to supervise by '*trial and error'* were not expressed positively as learning opportunities. Instead, they elicited feelings of uncertainty and fear of harming the students. Nonetheless, some data showed that supervisors did eventually gain pedagogical expertise through their 'on-the-job' learning while supervising:

> *I have become a better supervisor. With every student I supervised, I came up with things I could have done better and gained more experience* (Trad9).

Indeed, being adaptable according to the student's needs and the research project's demands is often seen as an ideal approach to supervision (Lee, 2008b). It was clear from the data that many emerging supervisors felt that working out through trial and error how to interact with students was not fair to those students.

> *Supervisors need to be more confident in themselves. They find it scary and need reassurance, and what I say to them is that there is no lousy supervisor, but supervisors have different strengths, and you need to know what you are strong at and where you are weak* (Trad25).

A few reflected with some concern on the cost borne by the first students they supervised as they were 'working in the dark':

> *We do not have any support... I mean, even trying to figure out the processes like what is the process of a student submitting, what is the process of a student registering, even those things, every time I must figure it out for myself* (Trad9).

Emerging supervisors were anxious since, without formal or informal deliberations about supervision, they had limited opportunities to assess how well they were doing until a student had completed their studies and the thesis went for examination.

> *You have done it with your first students. Now you go to the second student, and they still need to be fixed. It would help if you changed how, you knew and dealt with your students or looked at your strategies. You know, a terrible habit* (CU5).

These supervisors felt that relying on the '*trial-and-error'* process was ineffective in their development. Concerns about the model of simply relying on 'learning by doing' (Brentel, 2021) are frequent in the literature.

Being thrown in the deep end can, in part, be seen as evidence of 'upward conflation', which is unfair to emerging supervisors and their students. There is an assumption that if left to themselves, the supervisors would be able to engage in the pedagogy needed for postgraduate success. Moreover, it is assumed that the supervisor is 'always/already' in possession of the content knowledge, the pedagogical knowledge and the institutional expectations to supervise.

5.2. Supervising from personal experience

Most emerging supervisors have few or no pedagogic models to draw on other than their own experiences of being supervised (Bøgelund, 2015). In happy cases, the novice supervisor tried to emulate the positive pedagogic experiences they had enjoyed, but the data was also filled with examples of supervisors reflecting on their bad experiences of being supervised. These experiences did not help support emerging supervisors to engage with their students.

> *Neither of my supervisors from my doctorate was involved. I often thought they needed to read what I sent them* (CU2).

> *When I do supervision, I bring that experience of being ignored, treated as stupid, marginalised, and spoken down to so that when I supervise my students, I do not want them to experience that* (Trad11).

It was clear from the data that several supervisors had good supervision intentions but clung to the familiar (Denicolo, 2017). Thus, emerging supervisors felt that relying on their own experiences limited their possibilities of becoming the kind of supervisor they wished to be.

> *… not making the same mistakes my supervisors made when I was a student.* (Trad12).
>
> *I did not have an excellent PhD supervisor – I learned from him how not to supervise. (Trad30).*
>
> *If you had [terrible] supervision, you become that kind of supervisor; if you had adequate supervision, you tend to be a good supervisor* (CU10).

The dominant means of establishing one's approach to supervision is replete with challenges (Backhouse, 2010; Dietz, Jansen & Wadee, 2006). Teaching expertise at the undergraduate level is often also seen as common sense, not needing development (Moyo, 2018). There is an assumption that if you qualify in a field, you can teach in that area at a university. However, the common-sense understandings we bring to teaching often need to be more accurate to improve student success (Boughey & McKenna, 2021).

At the postgraduate level, the assumption is that the research expertise and knowledge that the supervisor attained with their PhD is enough to enable them to supervise. Hence, emerging supervisors had to use their own experiences as candidates as a benchmark for their understanding of what a supervisor should or should not do, and this was shown to be highly problematic for the participants.

Furthermore, as Archer (2003) indicates, we do not have complete power to act as we may wish – our agency is conditioned by the structures and cultures within which we find ourselves. The assumption that supervisors can learn from their own experiences of being supervised does not consider that novice supervisors must make their way through a world not of their own making (Archer, 2003).

In the last section, results are presented on one of the issues in the context repeatedly raised by participants, namely workloads.

5.3. High teaching and supervision workloads

Teaching and supervision loads were significant issues that emerged throughout the data. The expectations that academics would be able to supervise 'by default' emerged at least partly because of massive increases in the numbers of postgraduate students, making a more careful induction a challenge.

> *I am alone since the other lecturers are young academics who need more experience* (CU3).
>
> *There is increasing pressure to widen participation, particularly at the postgraduate level, so we have high targets for the numbers at the postgraduate level we must register every year* (Trad14).

The word 'targets' in the above quote indicates the directives many academics face from their institutions. Moreover, many new academics reported needing more time to devote to postgraduate supervision because undergraduate classes are large, which implies increased marking loads, and yet they are expected to produce research.

The workload issue was seen to condition how supervision is conducted and to impact the attendance of developmental activities. Workload allocations and performance management were described as highly problematic.

> *It is a system that is broken, it is a system that needs a complete overhaul, and it is a system that sometimes you suffer in silence because you must get the work done* (Trad16).

There was a sense that the workload systems often needed to acknowledge the time that supervision pedagogy took. In some cases, there were reports that the focus on undergraduate teaching meant that the workload allocations needed to have considered postgraduate pedagogy.

> *I had to run the whole faculty's research and did my typical day-to-day job in my department* (UT2).

> *I took on two PhDs, and now I am thinking, why did I do that? It was stupid because now I have a hell of much work to do, and so the capacity problem, to some extent, was created by the workload model* (Trad25).

The extent to which postgraduate supervision was recognised as part of the workload also varied by institution, with academics from Comprehensive Universities and UoTs being primarily concerned about this.

> *I teach a block called research methodology for [redacted] students and two short courses for postgraduate students, masters, and doctoral degree students. Then I teach one theory course for 3rd-year students, and then I must publish articles, do research, and supervise postgrad students* (UT4).

> *So, I teach three times as many classes as I had at [my previous university, a Traditional University]* (UT1).

In traditional universities, there was a more explicit acknowledgement that postgraduate supervision is a pedagogy requiring teaching time allocation. The following participant raised this point concerning other institutional types:

> *We are a research institute, so research is our first job and teaching our second one, unlike in [UoTs] where 70% is teaching and 30% so the reverse here* (Trad3).

Heavy teaching loads were experienced across universities but particularly in UoTs because of the nature of the courses, which include significant practical courses.

> *We have [hefty] teaching loads, which I did not have at the [traditional university], maybe because of our strong emphasis on the vocational aspect* (UT21).

Furthermore, many of the participants from UoTs indicated that they were either completing their doctoral qualifications or had just graduated and were trying to publish their research. Some noted that they did not take advantage of those supervision development opportunities on offer because of their focus on their research.

> *I was busy studying, so I paid little attention to short courses with supervision* (UT2).

Those working at UoTs were more likely to be new to research and supervision, to have the least amount of research capacity in their departments, and to have the heaviest teaching workloads. Nevertheless, while some of the data suggested a stronger focus on research and postgraduate education in traditional universities, many academics at such institutions also cited heavy teaching loads as a constraint. They suggested that there needed to be more time to attend supervision development opportunities.

> *I also have an equally high teaching workload* (Trad14).

There were several claims in the data that emerging supervisors experienced the brunt of heavy teaching loads because undergraduate teaching is mainly given to young academics.

> *They have heavy teaching loads and are also trying to publish [from] their PhD* (Trad7).

Several emerging supervisors also described considerable pressure to supervise while still busy with their studies. While many experienced this as an unrealistic expectation, the following participant felt that it gave her an edge:

> *I have learnt by supervising students, but I also think that as a student myself, it is easier for me to understand the difficulties that the students go through, and I find things that work and things that do not work in my research that I can share with my students* (Trad9).

Across the data, concerns were expressed that teaching workloads were such that time for reflection and personal development was scarce (CREST, 2018).

> *I took on a whole bunch of students, too many. It was 13 students I did not know any better at the time. I was surprised to find out how difficult it would be and how long it would take* (Trad9).

> *It is because they are being overstretched and overburdened with too many things, and then they get told they must supervise more and more and more doctorates and masters* (CU2).

According to Mouton (2011), the actual ratio of supervisors to students in South Africa is in the region of 1:7. Notably, he argues that it is unrealistic for supervisors to supervise so many students effectively. This view was also reflected in the data:

> *The university policy says the ratio of the supervisor to the students should be 1:6, but in my faculty, it is 1:15* (Trad5).

> *I spend ... the Dean hates it when I say this, but I spend 75% of my time working doing [supervision]* (UT4).

> *The students that you supervise because the others are doing a Master's, others are doing a PhD, and we also have undergraduate students that must do research* (Trad10).

There were data to suggest that such loads are unsustainable. A few participants spoke about work-life balance challenges and the stress of supporting students over and above total workloads.

> *I am currently supervising eight masters and five doctoral students. I had to see my new student even though it was a university holiday, I had to come, or else there would be no time this week* (CU13).

According to Mouton (2011), South Africa's ability to improve its global competitive edge depends on the quality of its postgraduate students. Heavy workloads have enormous implications for the quality of supervision. A survey conducted by Mouton, Boshoff and James (2015) reported that many supervisors needed more time to attend to their students and sometimes needed to supervise students outside their primary area of expertise. This view was mirrored by the following participant:

> *It was not that [supervisors] were lazy; they were too busy. They took on too many things, and when I had to give them the stuff to read. As I said, I sometimes got the impression that they [my supervisors] did not even read it when they gave me feedback* (CU2).

It was clear that many universities had tightly managed workload policies that pressured academics to achieve 'targets', while others had workload policies that insufficiently acknowledged postgraduate supervision. One supervisor commented that "*doctoral education was never intended to be massified*" (CU2). The problem of massification is that institutions are pressured to produce more postgraduates for the knowledge economy and for the country to compete globally (ASSAf, 2010).

Several supervisors discussed the pressure to meet institutional targets and fulfil workload requirements. The national funding formula assumes a two-year master's and a three-year doctorate. Universities are rewarded for completion in such time frames, with the subsidy decreasing each year the student spends in the system. Many universities use these expectations in workload allocations despite most doctoral students studying part-time. This accounts for the average time to completion is over three cohorts (2003, 2004 and 2005), with only 35% completing after five years and 41% after six years (Cloete, Mouton & Sheppard, 2015a).

> *Finish this degree in three years, so the students taking four years or five years, you still do the work with them, but they are not seen as part of your workload in terms of supervision* (Trad16).

It was clear from the data that the massive demand for increased postgraduate student numbers and enhanced postgraduate supervision is being felt as an unsustainable workload expectation, especially for emerging supervisors.

6. CONCLUSION

The lack of support was the central theme of the data across institutional types. As indicated in the introduction, the Higher Education Qualifications Sub-Framework (HEQSF) indicates that being able to supervise is one of the outcomes of attaining a doctorate. However, the current study found this to be rarely the case. Instead, novice supervisors feel 'thrown in the deep end'. Without suitable opportunities for development and support, these supervisors relied on their own experiences of being supervised, positive or negative. However, heavy workloads and a lack of acknowledgement of supervision sometimes meant little time for reflection and 'learning on the job', and some development opportunities were not taken up for lack of time.

Supervision development requires more than simply 'upskilling' individual supervisors. Using Archer's analytical dualism, I argue that if the problem of poor throughput and retention, and the demand for more supervision, is responded to simply through training of the individual supervisor, it is likely to fail because this is a case of upwards conflation. It assumes that the success of postgraduate education rests entirely in the hands of the supervisor and that the supervisor has sufficient institutional power to act as they see fit.

What is needed is strategic institution-wide planning about how to nurture novice supervisors, enhance the postgraduate environment, and support postgraduate candidates. This will require a multipronged approach that might include ongoing supervision development opportunities, spaces for collaborative supervision models, and careful reflection on how institutional structures such as workloads recognise and value postgraduate pedagogy.

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