

TAU INSTITUTIONAL PROJECT REPORT G. THONDHLANA

PROJECT TITLE: Beyond numbers: encouraging peer to peer learning for epistemic access among postgraduate students at Rhodes University, South Africa

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AIMS

Supervision of postgraduate students remains a key activity in high education institutions, but discussions on its fitness for purposes is gaining traction given transformation imperatives. To their credit, universities are increasingly more responsive to transformation goals via diversifying the student body and being responsive to the diverse students' learning needs but arguably the focus has been more on undergraduate than postgraduate students. In South African higher education, an increasingly diverse student body means the integration and success of postgraduate students should be a key curriculum development and transformation goal to avoid student alienation from learning (Mann, 2001; Tabensky and Matthews, 2015). Developing students' intellectual capacity, analytical capacity and capacity for written expression are central to knowledge construction among postgraduate students yet there is limited understanding of programmes aimed at supporting these skills beyond one-on-one supervisor-student support. Therefore, concerning epistemic access and knowledge construction, universities can be alienating spaces which hamper exchange of ideas, knowledge and expertise, and in turn an equitable, responsive and ethical pedagogical approach to student learning. This does not resonate with transformative strategies needed to support postgraduate student learning and support in South African HEIs.

This project draws on the perceptions and experiences of peer-to-peer learning for epistemic support among diverse environmental science postgraduate students at Rhodes University, including what they learn from each other, value of collaborative and critical pedagogy practices. Supervision models vary but supporting the exchange of ideas, knowledge and expertise among students can support students with the ability to construct knowledge within complex disciplinary settings. This research project provides insights into the ways in which the environmental science curriculum could be expansively viewed as responsive to postgraduate students' learning needs. Insights from the study can be used to inform building of critical pedagogy practices and communities of practices in the form of postgraduate seminar or research groups as a basis for making postgraduate participation a key learning strategy in South African HEIs.

PROCESSES/METHODS

The first step in the study was to gather baseline data through personal interviews with environmental science postgraduate students, supervisors and and a practitioner from the Centre for Postgraduate Studies (CPGS). The baseline data included current supervision

practices, student experiences and perceptions of peer-to-peer learning in the department and elsewhere in the university. Baseline information was used to develop interventions (critical pedagogic practices) for supporting postgraduate students' intellectual capabilities including analytical and academic writing skills. Support was in the form of an organised seminar where the following issues were presented and discussed through available video materials: why we reference in academia (unintentional plagiarism), the purpose of abstracts and academic writing using a journal entry. This initiative created a conducive environment for postgraduate collaborative learning through establishing a sense of communities of research practice and development of research rich environments that allowed students to share ideas, knowledge and experiences. The learning environment mentioned was informed by Social-cultural theory of learning (Vygotsky, 1978) and principles that stress the importance of learning from more knowledgeable others such as peers (Nordentoft et al. 2013). The interventions or framework and guidelines for the development of research rich environments was developed based on baseline data, and further consultations with teaching and learning experts. However, there was limited input from researchers and supervisors due to other commitments.

The baseline study revealed useful information for crafting interventions from the expert's perspective including; learning as a practice is socially and culturally embedded; teaching, including postgraduate supervision is about enabling participation in knowledge production; and learning is about becoming a participant in a knowledge community. Thus, the key questions are: how do we mediate learning in postgraduate supervision practices? What tools can we use to mediate students' entry into the knowledge community? How can we structure our curriculum for students to engage successfully in the discipline by learning the culture of a particular discipline or read the discipline? Students can learn how to do the practice over time. In other words, social practices emerge over time and are underpinned by the values, norms, and beliefs of the social group and are often implicit. The design principles that informed the interventions included; it is hard to work as an individual to produce knowledge, abilities to access knowledge is easy in a group setting, knowledge production is not individual-based but we all contribute to knowledge that predates us, and knowledge can be produced through engendering critical pedagogic practices via learning how to read journals, reading clubs, seminars, disagreeing and collaborations.

ACHIEVEMENT AND CHALLENGES

The baseline study revealed important findings critical for the development of research rich environments. First, when asked about their general experiences in the department, postgraduate students generally felt 'at home' citing seminar clubs and Friday teas that bring postgraduate students and staff together, and general support rendered to students as helping them to settle in. A few students who felt alienated attributed this to the nature of their projects which did not fit the dominant research niche of the department and registering mid-year, which meant integration was generally difficult especially during the COVID-19 hard lockdown period. Second, regarding supervision and learning experiences, the students felt this was mainly a one-one-one model between the

supervisor and the student citing but reported positive experiences. Positive experiences were attributed to the 'supervisor always checking up on them' and responsiveness to their needs. Third, all the students valued but did not participate in any peer-to-peer learning activities that are known to support intellectual capacity and critical pedagogic practices such as plagiarism, referencing, developing arguments, knowledge claims, journaling and critical review of articles in the department, with the exception of few who had participated in these activities through the Centre for Postgraduate Studies (CPGS). All the students highlighted that experiences were limited to getting settled in the department and rudimentary aspects of learning such as proposal development and structure, ethics application processes and access to formatting checklists.

Following interventions, student participants were asked about their experiences and views of peer-to-peer learning, including whether they liked the session to be a regular offering, what was useful about the session, whether they talked to each other about their research work and views on collaboration in knowledge access. All the participants felt that such organised sessions should be regularly held in the department with the frequency ranging from twice per month to once every semester. Participants stated that the session created a conducive environment because 'peers can sometimes make condescending remarks which can erode the confidence to open up to peers about one's academic struggles. When asked what was very useful from the organised seminar in the context of epistemic access and support, the students reported that that it was eye opening and the peer-to-peer interactions allowed growth of confidence as illustrated in the following statements:

What stood out for me was the process of finding relevant articles and what to look for in the abstract to save time.

Learning about the links between plagiarism and referencing and knowledge creation was key.

The referencing videos were very useful. The tips of journaling and identifying relevant articles was something that I had not considered in my studies.

I found the information on how to research for articles so intriguing. Initially I used to access google scholar through google search engine and not the library website, thereby missing out on important papers.

Concerning collaboration, the participants felt collaboration was key in their learning because peers can spot gaps in one's study, it helped learn from each other especially getting views and values from different disciplines (disciplinary knowledge), it allowed them to share ideas and different understanding of the same concept. Others said that the opportunity to share their project with peers allowed them to (1) learn that their ideas about their own project were still haphazard, (2) appreciate the difficulty in articulating their projects and (3) gain more confidence about their project among peers. Overall students' experiences of the interventions suggest collaborative pedagogic practices and

critical engagement peer inquiry groups can support access to knowledge and the ability to produce knowledge by ushering postgraduate students into an alien academic space.

THE NEXT STEPS

Going forward, we argue that supporting postgraduate students in higher education in the context of diversity should transcend numbers but consider supporting research rich environments to meaningfully usher students into the academy. An augmented supervision model that support peer-to-peer learning developed in consultation with teaching and learning experts and supervisors and university managers can offer a conducive learning environments for postgraduate students. In this model, supervisors are still key but can be supported with other collaborative activities such as such as writing journals, abstract development, developing knowledge claims and referencing are shared and debated to make explicit the pathway to supporting knowledge construction. This augmented and collaborative supervision approach provides an alternative to oppressive structural constrains embedded into the one-to-one supervision models and has resonances with notions of social justice using a transformation perspective. However, given the institutionalised nature of academic practices, the key challenge going forward lies in establishing institutional arrangements for supporting the participation of students in knowledge access and generation. The first step will be to establish important collaborations with individuals or institutes in the university who can have a say in policy changes at the institutional level (CPGS and CHERTL). Leveraging responsiveness to new or disruptive approaches such as the proposed supervision model would require mobilising like minded people at smaller scale, measuring its impacts and effectiveness and sharing the successes with the wider university community.

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