Quality in postgraduate research: The influence of interconnected elements

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ABSTRACT

Quality in postgraduate research is a socially constructed concept that undergoes regular reinterpretation and adaptation. Debates raise questions concerning the factors that influence the student's achievement of all the attributes associated with the concepts of mastery and doctorateness. Based on illustration from global literature on the topic of postgraduate research, this article argues for an integrated connectedness between a number of elements that, when limited or lacking, can compromise the quality of the research. The elements discussed are: the student, the topic, the supervisor, the institution and, with an increasing emphasis on the transferability of knowledge outputs to interested parties beyond the academy, the community or communities that may reap benefit from the research and who are often the source of basic data on which the research has depended. It proposes that integration of these elements is fundamental to the demonstration of all the expected graduate attributes, including the

dissemination of findings beyond the academy in ways appropriate to the intellectual, personal and public domains of the research output.

Keywords: interconnected elements, student, topic, supervision, institution, community

INTRODUCTION

Recently, postgraduate research has experienced a "sea change" brought about by several global trends influencing higher education institutions' approaches: massification, professionalisation, external quality assurance imperatives, and expectations of socio-economic relevance (Kariyana, Sonn and Marongwe 2017, 5). Increasingly, there is pressure on institutions to deliver graduates who are employable and, concurrently, research outputs that have impact beyond the academy. These trends, and the need to address them simultaneously, means that researchers contend with a "jigsaw puzzle" (Yazdani and Shokooh 2018, 32) with diverse pieces that need to be interlocked sufficiently to be cohesive and coherent. This article explores this jigsaw puzzle of pieces that impact a student's research. It posits five interconnected elements: the student, the research topic, the supervisor, the higher education institution where the student is enrolled, and the socio-cultural and economic context in which the research is conducted, and to which its benefits ought to be directed. In the case of the last-mentioned element, there is also discussion of how a beneficiary community may be conceptualised across disciplinary or cross-disciplinary fields. The main objective of this article is to examine the impact on postgraduate study of the dynamics interacting between the elements identified above.

CONCEPTUAL FRAMEWORK AND METHODOLOGY

The article employs a multi-perspective qualitative paradigm, using a synthetic review of the literature on postgraduate supervision. Purposeful sampling identified the relevant aspects in recent approaches, both global and national. The literature, and a report of a recent national review of South African doctoral studies, were analysed, from which themes and issues were consolidated and developed. The themes and sub-themes include: the student as the centre of the study, the implications of apprenticeship, choice of research topic, the student finding a voice, single- and cross-disciplinary research topics, the student's academic background, research readiness, achieving the fundamental research attributes, the supervisor and supervision, aligning the product of research with the process of researcher development, the role of the institution, research timeframes, these aspects leading to the potential and feasibility of the research having impact on a community with interest in its output. These inter-related themes provide a holistic context for the conducting of postgraduate research.

BACKGROUND

A recent review of South African Doctoral qualifications found that a fully integrated relationship between these elements was often lacking, if not absent. Such limitation can compromise achievement of aspects of the purpose of the Doctorate, namely capacity to perform as "custodian and steward" of a field of study" and capacity "to seek benefit arising out of the research for any community or social group that was the subject of, or participated in, the research" (Council on Higher Education 2022, 87).

Recent literature has raised questions about the efficacy of traditional approaches to postgraduate research, in particular the relationship between its procedures and its outcomes. While the article addresses postgraduate research in general, most of the relevant literature focuses on research at the doctoral level. In most respects, the views are pertinent to all research-related postgraduate studies. Quality in postgraduate research is a socially constructed concept with both intrinsic and extrinsic purposes, aiming to influence the student, the discipline, and, ultimately, social, cultural, and economic values (Wellington 2012, 1492, 1497). The student works across different environments: the discipline, the department, the higher education institution, and the societal context in which the research is conducted (McAlpine, Martek and Hopwood 2009, 98). Institutions are expected to apply graduate attributes that "articulate their [the institutions'] outcomes and demonstrate their usefulness for life beyond the university context" (Stracke and Kumar 2014, 1) to ensure that graduates "can move easily into the real world once they graduate" (ibid., 11).

Part of the sea change has been a gradual shift in focus from research centred within the academy to research with outcomes that have benefits beyond the academy. While there has been a decreased demand (and funding) for the former type of research, there has been, at the same time, an increase in the award of doctoral degrees, together with a review of the associated graduate attributes that take into account an expanded scope of research influence. Bernstein et al. argue that the student needs to develop a skills-set that can be transferred from academic to other professional settings, and from one such setting to another (Bernstein et al 2014, 5), and there is a need for capacity to assess transferable competences, resulting in efficient transfer to local organisations, especially industry (Kariyana et al 2017, 11). Such expansion of graduate attributes profoundly alters how postgraduate programmes are structured (Bernstein et al 2014, 11).

One of the effects of these developments is a complementary shift in focus from the traditional one – namely, the completion of an acceptable dissertation or thesis – to a broader range of manifestations, integrating research output with the development of the researcher. Completion of a Master's-level dissertation does not always imply mastery of a discipline, just

as completion of the doctoral thesis does not always imply the achievement of doctorateness (Yazdani and Shokooh 2018, 32). Awarding research-based postgraduate qualifications without adequate attention given to development of the graduate's emerging stewardship of a discipline may not only compromise the value of the student's journey but also, indirectly, compromise the value of the research-based study itself. Assessment of originality within the bounds of the research work in and for itself, for example, may not be enough to assess a broader capacity for the graduate to originate new ways of thinking and generate new knowledge in other, often unfamiliar, contexts, or in new areas of research. Achievement of an integration of research output with the broad development of the researcher is conditioned by the interconnectedness of the elements referred to above, with the student being central to the study programme.

THE STUDENT

Student as the centre

There are various motives underlying students' desire to enter a postgraduate research programme. The motive may be to prove oneself intellectually, to satisfy intellectual curiosity, to respond to encouragement from lecturers, to work alongside peers, to meet requirements for a specific level of employment, for promotion and pay rise in employment, for a career change, or for a combination of these and other factors. At the stage of application there may be little or no clear vision of the potential benefit of the research beyond the submission of a research product for examination. Whatever the motive, a student often enters a research programme under pressure. The pressure may result from conflicting obligatory demands on time and attention: from family, from work, from financial demands, from communal ties, and some of these pressures can be especially prominent in the case of part-time studies, this being an increasingly preferred mode of postgraduate study. Entry into a programme can have the hallmarks of an apprenticeship, with the apprentice not expected to have such a long-sighted perspective.

Student as apprentice

A student cohort cannot be regarded as sharing common objectives; students are not a homogeneous group (McCulloch et al 2016, 176). Each student has a unique academic and personal identity before entering the programme, with a distinctive undergraduate experience, and these identities "may interfere with learning as it is defined in the new identity" (Baker and Pifer 2011, 6, citing Wortham, 2006). The new role of the postgraduate student, as an apprentice researcher, demands new skills, including advanced communication skills, and new

relationships with academic staff members, altering some previously accepted relationships. The development of the postgraduate student identity can be thought of in three dimensions: "thinking about oneself as…, performing as…, and being thought of as an academic" (McAlpine et al. 2009, 10). The absence of any one of these dimensions can compromise the student's quest for academic recognition, which depends on a combination of self-perception, demonstrated competence, and acknowledgment as a worthy member of a research community.

Conceptualising the supervisor-student relationship as being one of a knowing master and an unknowing apprentice is difficult to avoid. Academics may "implicitly disavow the knowledge and esteem of academic 'outsiders'" (Bastalich 2015, 8). There may be a tendency on the part of the supervisor to adopt such an attitude "by situating students as unknowing, irrational, unprepared, or otherwise incomplete academics" (ibid., 8), without a clear perception of a research role either within or beyond an academic department. Such situating impacts on the student's personal and intellectual identities and well-being.

There is a well-documented consensus regarding the prevalence of mental health issues, particularly among doctoral students (McDowall and Ramos 2024, 1109). Causes of mental health issues include social isolation. Regarding isolation, research has found that during the research period, "interactions with community members were greatly reduced or even non-existent" (Baker and Pifer 2011, 9). This isolation can compromise students' sense of belonging, at a time when they do not yet have a voice to broadcast views and findings.

Finding a voice

Before a sense of belonging manifests, there is the journey of becoming, the initial stages of which can be the hardest. This applies to research at the Master's level, and even more so to doctoral entry. "The challenges that transition to doctoral education present are often underestimated since universities assume that doctoral candidates have already mastered research learning" (Nubia and Simmonds 2021, 745). Becoming a doctoral scholar is a "relational, iterative, and deeply human process", and discovering one's doctoral "voice is at the heart" of it (Fataar, Petersen and Davids 2025). At the beginning of the research journey, that voice is likely to be inarticulate, even muted, because it "typically emerges late…when conceptual frameworks and empirical data finally align" (Fataar et al. 2025). In recent times, the voice has become increasingly dependent on skills for manipulating effectively and ethically a range of digital tools, now including generative artificial intelligence. That voice, once fully developed, has several characteristics: advancing "stewardship" of and "the frontiers of knowledge" in the discipline, disseminating defensible conclusions and solutions "in diverse contexts, familiar and unfamiliar", and "communicating research findings effectively to expert

and non-expert audiences alike" (Council on Higher Education 2018, 89–90). The journey involves several stages, of which one of the most tentative yet consequential is the selection of a research topic that leads to a proposal for a research project. This implies that the student has, from the start, a clear idea of the relationship between personal intellectual interests, the intended research topic, and the potential recipients of its benefits.

Choice of research topic

The rationale for a candidate's choice of research topic may vary. It may result from curiosity aroused during undergraduate studies. It is often influenced by available funding, nudging the candidate towards and into a particular, well-funded research project with predefined research areas; this may compromise autonomy. As is often the case, a candidate might approach a respected lecturer in the hope of supervision, and the topic may then be influenced as much by the lecturer's research interests as by the candidates.

Part-time candidates in employment may be influenced by the employer's explicit or implicit expectations, or by a perceived gap in professional practice. Or the candidate may wish to conduct research in an area in which a colleague or fellow student is researching. There may be pragmatic motives, such as expectations of promotion or salary increase, or of timely (or rapid) completion. Whatever interests or pressures sway the choice, it is crucial that the candidate enjoys a sense of belonging not just within the institution, faculty and department, or within the discipline, or alongside the supervisor, but also that there is genuine ownership of the topic, in and for itself but also for its ultimate real-world value.

It has been argued that, in many cases, completion of the research proposal is largely an administrative procedure that rarely expects candidates to "mount a skilful academic argument" and defend its intellectual purpose (Nubia and Simmonds 2021, 740). In their view, the development of the student's voice should begin from the proposal's initiation. "Instead of approaching the proposal as an end in itself, there should be emphasis on developing doctoral students' scholarly voices through constructing the proposal" (ibid., 742). Personal and administrative pressures to convert promptly the selected topic into a comprehensive proposal can result in an overhasty quest for results. Luse et al state that:

> "When setting out to develop a research project, many doctoral students jump to a solution before they have given the problem adequate thought, or even a well-defined problem at all" (Luse, Mennecke and Townsend 2012, 144).

What may be absent is investment in "the time needed to dig into the background issues related to the problem", and a willingness "to challenge previously held beliefs" (Luse et al 2012, 144).

There are, however, cases where the proposal is overloaded in terms of expectations of intellectual depth, scope or volume. This may occur especially when the proposal ventures beyond the boundaries of traditionally discrete disciplines.

From single- to cross-disciplinary research topics

A gravitation from single- towards cross-disciplinary areas for research, inspired by challenges such as climate change and environmental conservation, can mean that candidates' topics extend beyond the disciplinary boundaries on which the institution and faculty are structured and could, from a narrow disciplinary viewpoint, be more polymorphic and, during the topic selection and proposal development phase, less succinct than a discipline-bound topic. Institutional policies, faculty procedures, and discipline-defined departments need to take such an epistemological transformation into account, as the candidate researchers may, from a worldview perspective, be some steps ahead of the traditional academy in research aspirations and current relevance. On the other hand, there is a danger that the chosen topic may be overambitious, requiring a curtailment of scope.

While there is often an assumption that research must, first and foremost, have social relevance (Baptista 2011, 3579), this assumption raises questions about who decides on the relevance and to whom the relevance applies. Is it necessary for relevance to be immediately apparent and applicable, or might it be accepted that the results of research have as-yet undefined or unpredictable longer-term benefits? It must therefore be acknowledged that social relevance may have very different timescales from one research project to another.

Another aspect relates to the incorrect assumption that a student's research must deliver employment-ready benefits (Brabazon 2018, 58). A problematic view is that "just-in-time skills" may be regarded as more relevant than in-depth disciplinary or inter-disciplinary knowledge (Bitzer 2012, 1184–1185), and the candidate researcher grapples with such divergent views. They may influence not only the subject of research but also the scope, and the choice of topic may well be influenced by the student's academic background.

The student's academic background

There is evidence that predictability of success in postgraduate research, with its usually sharp focus and precise selection of topic, and the benefits of the research are often influenced by the narrowness or breadth of the student's preceding undergraduate programmes (Kurysheva et al 2022, 589): the broader the scope of the programmes, the more difficult the candidate may find developing a topic with sufficient focus to merit postgraduate research. Swanepoel (Swanepoel 2010, 140) suggests that students' Master's topic preferences may be related to their pre-

Master's training, which tends to be more programme-based than discipline-based. It is a great challenge for many candidates to identify a topic that can reasonably be expected to meet all the graduate attributes characteristic of mastery or doctorateness, including the need to demonstrate originality within a sharper disciplinary focus than was the case with undergraduate studies.

Research readiness

A candidate's research readiness and ability to select a suitable research topic cannot be assumed. Candidates are typically admitted to research-intensive programmes because, as undergraduates, "they have been good course-takers" (Lovitts 2005, 138). Sometimes the criterion for admission is simply a final percentage. Thus, the students have not yet interacted in a system comprising a domain with a structured body of knowledge with its precepts and protocols, and a field of experts (ibid., 141). In relation to research-readiness and topic selection, there is a need for "concerted efforts to identify reliable indicators of the candidate's capacity for independent research" (Bernstein et al 2014, 24). Such independence is essential if all the graduate attributes are to be achieved.

The fundamental attributes

For a student during the proposal phase, one of the greatest challenges is to ensure that the research topic is amenable to manifesting originality, innovation and creativity – all three qualities identified in the graduate attributes at the doctoral level (Council on Higher Education 2022, 89–90) and being applicable at a less demanding level for demonstration at the Master's level. The three qualities may be distinct. For example, Baptista et al link originality with both a product and a process of production, innovation to a process of transforming an invention into a practical application, and creativity with the condition of relevance as well as novelty (Baptista et al 2015, 53–55). They suggest that risk is inextricably linked to these aspects, in the form of risk-taking in choosing a topic and an approach (ibid., 57). Risk-taking in the form of ambitious topic selection or methodology can have complications for both student and supervisor, for the reputations of both are at stake.

This concern can endure throughout the research journey. The term "originality" creates intense debate, as it is amenable to manifestation in several categories (Wellington 2012, 1496), and the same may apply to the terms "innovation" and "creativity". For the prospective student, who has not yet conducted an exhaustive literature review or engaged in critical debates on the matter, ambiguity in the terms might arise. For example, the topic proposed might *originate* with the candidate – their own idea – without being original in the sense of advancing

knowledge in the field. For this reason, guidance from a supervisor with expertise in the field becomes critically important as early as possible, ideally even when the research area is being mooted. Such early expert guidance can have considerable influence on the student's eventual ability to disseminate meaningful research findings, but its absence can delay or even endanger completion of the research proposal itself.

THE SUPERVISOR AND SUPERVISION

Much has been written about the vital role of the supervisor(s) in the development of the research and the researcher. The supervisory role is "a space of challenge, frustration, and affirmation, a site where…confidence is built gradually, carefully, and through deliberative epistemic engagement" (Fataar et al 2025). The literature also refers to a relationship "infused with desire, fantasy, unresolved transferences, intimacy and power" (Bastalich 2015, 9). Bastalich proposes that the relationship can be improved by linking the supervisor and student not only by research topic but also by an appropriate style of research management. This may be in terms of the student's preferred supervisory style, but it may also be influenced by a supervisor's assessment of the student's approach to study management. In reconciling student, topic and management style, the intended uniqueness of each case needs to be recognised. Wellington observes that

> "It is important, during supervision, for everyone involved to reflect on the purposes of 'this particular doctorate' and the motivation behind it. Is it primarily to develop the person, in which case the process is uppermost? Or is it about knowledge production, the 'thesis', and the addition of 'original' knowledge? To what extent are the twin demands of 'process' and 'product' in balance?" (Wellington 2012, 1493).

Process and product should not be regarded as dichotomous, but as reciprocal. There are dangers in giving attention exclusively to training *on* research at the expense of training *for* research *(*McCulloch et al. 2016, 176, our italics*),* or in focusing only on research and dismissing the candidate's development (Stracke and Kumar 2014, 12). After all, today's scholar will be tomorrow's postgraduate research leader and supervisor.

Achieving reciprocity between process and product can be difficult. This is so in the case of the most commonly-applied model: the dyad (apprenticeship) model, which can result, as the *Doctoral Degrees National Report* observes, in "challenges in terms of power dynamics…which can be exacerbated by differences in background or culture" (Council on Higher Education 2022, 43). Achieving reciprocity is even more fraught in cross-disciplinary research, where a team of supervisors may have different notions of the process-product

balance, resulting in conflicting styles and expectations for output, as well as different degrees of support (Council on Higher Education 2022, 44). Mitchell and Willetts refer to this anecdotally, citing "a process in which a panel member of one disciplinary background said 'I just can't see a PhD in this work', while another replied 'I can see three'"(Mitchell and Willetts 2009, 1). When co-supervision comprises representation from different disciplines and worldviews, the student can potentially be put in the midst of ideological, epistemic or ethical conflict between differing supervisory expectations.

One of the essential responsibilities of the supervisor is to ensure that the graduate attributes embedded in a doctoral qualification are instilled in, critically appraised, referred to throughout the period of study, and ultimately demonstrated by the student. These attributes represent the potential impact of the research on the student and on the field of study. There are varying notions of how impact is to be evaluated (Halse and Mowbray 2011, 9). It can be narrowly measured in terms of the acquisition of transferable skills and economic advancement (employment, promotion, corporate profits, contribution to GDP). Still, such measures can overlook key benefits, such as "epistemological, ontological and axiological impacts" (ibid. 9). It is a skilled interpretation of the graduate attributes – considering the characteristics of the discipline(s), the research topic, the student and the institution – that make for effective supervision. This is a particularly complex issue in cases of increasing global trends towards cohort supervision and cross-disciplinary research, "where the supervisor is one voice amongst many (peers, other supervisors, other academic colleagues and allied professionals)" (Smith McGloin 2018, 6). Such diversity of views can lead to dilution, or conflict, in the guidance provided to the student. Whatever model of supervision is applied, it is of great value to the student's quest for social, cultural or economic relevance if the supervisor has experience of this aspect of research and can assist the student in exploring ways to enhance that quest. Furthermore, the research student's progress, in terms of both process and product, depends not only on the expertise, support, and goodwill of the supervisor but also on the role played by the institution through its vision, strategic priorities and scope, its policies and regulations, and the support it provides to both students and supervisors.

THE INSTITUTION

In their analysis of various paradigms for supervision – apprenticeship, person-centred, scientific-technical and socio-cultural paradigms – Halse and Bansel (2012) propose a new supervisory relationship concept: a "learning alliance" that embraces multiple agents, linking student and supervisor with entities throughout the institution, "including managers, administrators and support departments such as the library, information technology services,

and so on" (Halse and Bansel 2012, 384). In this way, an enclosed dyadic relationship expands to embrace a more complex collective mobilisation of ethical and practical responsibilities. While there needs to be a distinction between "managerial rules that enforce, constrain and audit, and the contextual principles that shape, facilitate and reflect upon what we do" (ibid., 386), the fundamental principle is provision of a coordinated set of enablers enhancing the student's emergence as a researcher and member of an academic or professional community.
The student may experience opportunities and difficulties in different environments: departmental, disciplinary, institutional, and societal/global contexts (McAlpine et al 2009, 98). The role of the institution is to connect the narrow supervisory environment with a broader communal one. This suggests an interrelated notion of supervision. It should be seen as the institution's total oversight of a student's progress and broad academic development. Many people are involved: academics other than supervisors, heads of department, fellow students, support services, technical staff, and administrative staff (McCulloch et al 2016, 178). There are, simultaneously, individual student characteristics and composite institutional ones that influence the quality of the graduate (Kariyana et al 2017, 13). Among the institutional characteristics, there should be "the need to promote geographical as well as interdisciplinary and intersectoral mobility for their doctoral candidates" (Bitzer 2012, 1194), because international collaboration between universities and other relevant parties' benefits students, disciplines, and institutions. This may be a greater priority for some institutions and some national systems than others, but it is widely accepted that collaborative exchange enhances the student's experience and intellectual development.

The institution has the responsibility, through its policies and procedures, for regulating and monitoring many aspects of the student's progress towards success. This includes timeframes. Rushing students towards completion can sacrifice quality. Students may fall short in areas not covered in production of a thesis: ability "to lead a project, manage a research budget, supervise others, or collaborate across disciplines" (Fielding 2025), or be prepared to generate after-graduation societal benefit. There may, in many cases, be a difference between the expected time for throughput and completion, and the time required for engaged research and its potential impact. Pressure to complete within minimum finite times may lead students to avoid potentially risky problems (and supervisors may veer towards institutional time-related policies), and there may be pressure to settle for less complex, more controllable topics, scope, methods or outcomes.

The time taken to complete a higher degree may not be entirely in the student's hands, as delays, such as for obtaining ethical clearance, can extend the time, and the same can be said of other institutionally-caused delays, such as proposal approval, supervisor feedback, and

examination processes. Unreasonable delays can frustrate the student, can frustrate the supervisor who may lose interest, and may cause research topics to exceed their shelf life, as what was topical and at the forefront of disciplinary debate at the time of proposal drafting may be outdated by time the graduate is ready to offer it in the marketplace of knowledge. Arguably, one of the most important institutional responsibilities is to ensure that supervisors are trained for, and are able to inculcate, the graduate attributes required of a research degree, and that examiners apply them as criteria for success. This is not always the case; supervisors are "not trained to embed the attributes; they might question the importance of the attributes" (Stracke and Kumar 2014, 617). Higher education institutions cannot rely on a top-down managerial approach to achieve the attributes, especially those that aim to ready the graduate for the world beyond. Institutions ought to go beyond simply applying externally-specified graduate attributes, such as those contained in national qualification standards. They should foster additional attributes, "such as critical citizenry and consciousness of social responsibility" (Council on Higher Education 2022, 74), emphasising the importance of engaged research that "enhances an appreciation of the context of an enquiry." This would enable the student to develop not only a personal research identity but also an identity representing public good, responsive to a community that is relevant to, and has an interest in, the research topic and which is often the source of its data.

THE COMMUNITY

Universities and faculties have a complementary responsibility: to engage students as future "stewards of the public trust and to be involved in making research real, relevant, and significant to people's lives both inside and outside academe" (O'Meara and Jaeger 2006, 6). Recently, "community engagement has been a growing force in academia and has been increasingly recognised as a realm of faculty responsibility within higher education" (Jaeger, Tuchmayer and Morin 2014, 71).

The propensity for community engagement varies between fields of study. Postgraduate education has been largely shaped by highly specialised scientific research. "The science model has held and continues to hold the greatest prestige on college campuses. The more specialised a graduate student's interest, the greater the institution's perception of the student's value, and the more likely that the student will seek and receive external funding. These students become insular and thus are the most likely to be disconnected from communities" (O'Meara and Jaeger 2006, 12). In research-intensive universities, community-directed research is often regarded as a satellite of basic research. However, professional schools have been increasingly involved in research that is responsive to community needs and interests. Prominent examples are in the

fields of public health, education and social work. Increasingly, emerging cross-disciplinary fields, such as climate change, environmental conservation, land distribution, food production, and global pollution, require close association with relevant communities.

The feasibility and scale of community engagement will vary across disciplines. They may range from a focus on a specific localised community to groups of national, regional, continental, or even global composition – the whole of humanity, as in the case of some vaccine research. In some disciplines, it may not be easy to identify a relevant community – laboratory-based research and abstract theoretical disciplines are examples. Yet the range of community-responsive research can be broader than it currently is. The question should be asked: whom may this research impact? "Each department and discipline must ascertain what integrating engagement into their doctoral programmes should look like, and find critical experiences and windows that make the most sense for the content and framework of that discipline" (O'Meara and Jaeger 2006, 5). Still, "there remains a knowledge gap regarding doctoral research in the scholarship of higher education community engagement" (Flores et al 2024, 2). The implication is that wider application of community engagement needs to be accompanied by further research on the topic itself, across a broad range of disciplines.

For the student researcher, involvement in a community can offer additional potential benefits, enhancing a sense of "becoming" and "belonging". "A possible way to mitigate academic isolation and alienation is for graduate students to engage in participatory and action-oriented research projects. The involvement and participation of the local community can provide for a more fulfilling and less estranged experience for students, which may lead to higher completion rates" (van der Meulen 2011, 1291). Engagement requires a distinctive combination of attitudes and skills.

> "For example, collaboration with community partners is dependent on respectful and mutually beneficial relationships between partners and scholars. Creating these relationships requires addressing the historical divide between the academy and communities, valuing forms of knowledge based on lived experiences or stories passed down over generations, and understanding and accommodating differences in cultures" (Warren, Park and Tieken 2016, 237, citing Hale, 2008).

There may be instances where "the local community participates in the design and research process, the analysis of the data, the announcement of results, and the implementation of solutions" and "expert research and local knowledges are combined" (van der Meulen 2011, 1293). Ideally, engaged community-focused research would "incorporate voices from marginal populations, honour community knowledge, shift the role of researcher to listener, work towards social justice, and fulfil basic human needs" (van der Meulen 2011, 1295), working

not *on* but *with* individuals and groups. When applied in collaboration with local or regional communal groups, such approaches may have significant benefits for disciplinary quests for the decolonisation of hegemonic epistemologies and the assimilation of indigenous knowledge systems.

There are constraints, including the possibility that a student choosing a community-engaged research perspective may have difficulty finding a supervisor with a like-minded epistemological approach (Jaeger et al. 2014, 72; Mitchell and Willetts 2009, 10). While the student may become aware of this early, it is possible that, further down the research path, the research output will be examined by someone with unforeseen indifference to the approach. In addition, the timeline for completing research and its examination may not align with the time required for the impact to become clear. It is not always easy to judge the communal or societal impact within the period between commencement and examination of the research (Mitchell and Willetts 2009, 18), and the implication is that the graduate ought to be instilled with the capacity to gauge effects that may emerge well after graduation.

Nevertheless, in a multicultural and multilingual society such as ours, with significant gaps in access to resources and in opportunities for the dissemination of experiential knowledge, a broad resort to communal insight is necessary, to the extent possible. As Warren et al. observe in respect of their own social context,

> "Growing economic inequality, the persistence of entrenched racial inequities, and the increasingly undemocratic nature of our political system are pressing more and more scholars to conduct research that promises to address profound systems of injustice directly. The rise of new networks and the growing interest of mainstream academic institutions indicate new openings to advance the field of community-engaged scholarship. But, if this new movement is to be fruitful, we need to cultivate and support a new generation of community-engaged scholars who can lead the field into this new era. Many graduate students are ready to take on this challenge—to work alongside faculty, educators, and families in the urgent movement to advance equity and justice in our schools and communities" (Warren et al 2016, 256).

This is echoed in the Doctoral Report, which recommends the inculcation of "critical citizenry and consciousness of social responsibility" in the range of graduate attributes. This has as its aim research outputs

> "Addressing democratic South Africa's inherited socio-economic imbalances, and the need for a doctoral qualification to be seen as a 'public good' that broadly benefits society rather than focusing exclusively on the private good driven by private motive." (Council on Higher Education 2022, 74).

Responsiveness to social accountability and the need for postgraduate research to be seen as a public good can benefit not only a community with interests in it, but can also benefit the student, supervisor and institution, in that they have an additional criterion for evaluating the quality of research, namely in terms of its real-world impact. Research outcomes can be assessed not only in terms of their transactional value but also in terms of their social, cultural and ethical influence.

CONCLUSION

In this article we have argued for a close association between interconnected elements – student, research topic, supervision, institutional oversight and community engagement – that can enhance the prospect of the postgraduate student's research output resulting in relevance and benefit beyond the examination of a thesis or dissertation and into the world beyond. An important aspect of revision is a realignment of the intrinsic purpose (the process of personal development) and extrinsic purpose (the product: advancing knowledge) of postgraduate research to ensure prominence of the former aspect without compromise to the latter. Within each discipline generally, and for each topic selected by students specifically, the capacity for a combination of intrinsic and extrinsic purposes to yield a desired communal benefit deserves to be continually reassessed.

For such a reassessment to be responsive to emerging needs and interests in a rapidly evolving socio-economic, intellectual, and academic environment, it needs to cast its net beyond a master-apprentice dyad. It should consider, within the context of each higher education institution, faculty, discipline, department, research topic and student, an approach recognising the role played by each. There should be a unique combination of influences, with, in all feasible instances, close collaboration with a community beyond the institution whose needs and interests are integral with not only the outcomes of the research but also its principles, pathways and real-world influence. Recognition of the interconnected roles of the elements identified in this article is a crucial aspect for maintaining and enhancing quality in postgraduate research.

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