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RESEARCH TRENDS IN HIGHER EDUCATION STUDIES AT MASTER'S AND DOCTORAL LEVEL

'INTERDISCIPLINARITY' AND POSTGRADUATE SUPERVISION

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INTRODUCTION

Over the last two decades higher education (HE) has increasingly become an important research focus, and this focus includes postgraduate research. Tight (2003:3) argues that the underlying reason for the greater importance assigned to HE research "is undoubtedly that higher education itself is assuming greater importance". He substantiates his argument by referring to increased participation in HE, the new knowledge society, globalisation, technological developments, national competition, greater industry connections and increasing investment in higher education. All the changes have given rise to an international HE revolution with massification as 'defining feature' shaping the HE environment of this century (Wolhuter 2014:280).

Despite the growth it has experienced, HE is a relatively young field of study, yet complex, with ill-defined boundaries, and not always clear or well understood (Wright 2007). To avoid a discipline/field-of-study debate, it is sufficient to say that, at this stage, there is little evidence that HE as a field of study possesses the characteristics of a discipline (Tight 2014:94-95). HE as a phenomenon can, however, "be studied from an almost endless number of perspectives using an endless number of methodological combinations and permutations" (Bitzer & Wilkinson 2009:372). It is therefore probably more useful to regard HE as a field of study, researched from a number of (parallel) disciplinary perspectives – this makes it a multidisciplinary field of research (Tight 2014:93), characterised by a "juxtaposition of various disciplines, sometimes with no apparent connection between them" (Manathunga, Lant & Mellick

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2006:366). The interdisciplinary nature of HE research (Tight 2014:107), however, calls for greater interaction between two or more different disciplines or fields – as will be pointed out in the discussion.

Over the last two decades, several attempts have been made to bring order to the field of HE by organising the research according to themes or issues and, at the same time, to do some ‘mapping’ of the field, or ‘stocktaking’ about trends in particular contexts. Internationally one can refer, *inter alia*, to the studies undertaken by Teichler (1996), Tight (2003, 2012), and Jung and Horta (2013). In South Africa, several analyses of HE research have been undertaken at a national level, including that of Bitzer and Wilkinson (2009), Uys and Frick (2009), Le Grange (2009), Deacon, Osman and Buchler (2009), and Wolhuter (2014). The research referred to in this chapter builds on previous research and can be regarded as an updating of the work of Bitzer and Wilkinson (2009), who used the framework of Tight (2003) to evaluate and categorise thematic trends in South African HE research. They found the Tight Framework very applicable, but suggested a thematic expansion of the framework in order to provide a more context-specific overview of HE research in the country. The expansion encompasses the consideration of three additional main themes or categories, namely transformation in HE, socio-cultural links/relationships, and information communication technology (ICT) in HE, which is a growing area of research (Bitzer & Wilkinson, 2009:393-4). (The expanded framework is depicted in Table 21.1.)

In most analyses of HE research, the data sources are predominantly journal articles. The study reported in this discussion is, however, informed by relevant findings from an analysis of postgraduate research at master’s (M) and doctoral (D) level (also referred to as ‘postgraduate level’). The importance of this focus lies at several interrelated levels. It must, firstly, be seen in the light of demands to develop more PhDs for the emerging South African economy, with specific reference to the low rate of doctoral production in the country. These demands were set out in the consensus report of the Academy of Science (ASSAf 2010), which spelled out that the creation of a knowledge economy would inescapably be impeded by a relatively underdeveloped HE, research and development sector. One of the findings of the report was that “more research as well as better record-keeping was required to develop a comprehensive understanding of the dynamics of doctoral education in South Africa” (ASSAf 2010:21).

The discussion in this chapter is furthermore of particular relevance because postgraduate supervision forms an indispensable part of study at M and D level. Halse and Malfroy (2010: 80) emphasise that effective and sufficient postgraduate supervision plays a pivotal role in the successful

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completion of postgraduate studies of high quality. The supervisory role has become increasingly challenging due to the fact that postgraduate students come from diverse backgrounds and their success has become vital for educational institutions (Alam, Alam & Rasul 2013:876). In South Africa, supervisors carry heavy burdens, exacerbated by increasing student supervisor-student ratios, while completion times are lengthy – many studies are not completed at all (Samuel & Vithal 2011:77). Seen in this light, the findings of the analysis presented in this chapter introduce evidence that asks for serious deliberation on postgraduate supervision as “an integral and special (although often neglected) dimension of the teaching research nexus, which needs much more reflection, inquiry and sharing with peers” (Wilkinson 2011:903).

Due to the limitations of a single chapter, we base our discussions on the following matters – and leave any other matters as either summarised data or pointers for future research:

- Key findings on the disciplinary origins of the studies analysed, which, firstly, bear evidence of the multidisciplinary nature of HE research and, secondly, point to a need for the crossing of boundaries in the achievement of greater interaction between disciplines (thus more interdisciplinary work)
- Evidence of the thematic nature of HE studies in the South African context, firstly, to substantiate the ‘interdisciplinarity’ implied in many studies, and, secondly, to highlight the limited range and relevance of research with ‘postgraduate study’ or ‘postgraduate supervision’ as focus/topic.

The two sets of findings will be the focus of deliberations about the challenges facing HE studies as a field of study in order to address the future needs of the knowledge society.

RESEARCH METHOD

The study was exploratory in nature and targeted M and D studies, with a South African higher education focus, registered on the Nexus database¹ of the National Research Foundation (NRF). The purposefully selected sample involved 1 457 studies registered or completed in the period 2006-2012, consisting of 339 D studies and 1 118 M studies. Key terms for searches included higher education, university, student, academic, lecturer, college, tertiary, e-learning, technology and service-learning. For purposes of the analysis reported in this chapter, the focus was placed on the

¹ This database provides information on approximately 170 000 South African current and completed research projects including theses and dissertations (available at <http://stardata.nrf.ac.za>).

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titles/themes of studies and the disciplinary origins of the studies. Establishing the data set took a while. Manual, as well as computer-assisted checking and removal of all duplicates and studies not focusing on either HE or HE in the South African context, took place. The findings were ultimately compared with the findings of the analysis of 2003-2008 as presented in Bitzer and Wilkinson (2009). Because of the overlapping of the periods involved, it can be assumed that changes in research priorities took place in the period after 2008 (that is, 2009-2012).

An extensive content analysis procedure was followed, resembling the hermeneutic classificatory content analysis that involves qualitative as well as quantitative techniques (Babbie & Mouton 2001:494). In a team approach, systematic manual coding was aided by the use of Excel. Deductive coding took place according to a predetermined set of codes consisting of 11 main themes and related subthemes in the adapted framework of Tight (2003:8), as suggested by Bitzer and Wilkinson (2009:393-394) (see Table 21.1). In an inductive process, additional subthemes and topics emerged from the data, revealing quite clearly the South African emphasis in HE research at M and D level. The interpretive nature of this part of the analysis was very challenging and demanded that a comprehensive procedure be followed. Each team member took part in the initial coding of the 1 457 topics, as well as the careful scrutiny and checking that followed. In many cases the titles were phrased in such a way that straightforward decisions on the coding were not possible. Numerous meetings were held to discuss coding issues and reach consensus on the assigning of problematic or vague research topics to specific themes or subthemes.

To account for the 'overlapping' and potential 'loss' of possible 'hidden' themes, we made use of a weighted coding procedure. The research focus could consequently be shared equally between two main themes in cases where it was difficult to choose between two obvious themes (0.5 of the weight was then assigned to each theme). An example is a study that investigated the impact of a technology intervention (ICT theme = 0.5) on learning (Teaching and Learning theme = 0.5). We acknowledge that three or even more research foci/themes were identifiable in a relatively small percentage of studies. And although a finer division was possible, we decided against it as this would further complicate the coding process. Deviation from the procedure followed in our previous analysis would also make comparison very difficult. Table 21.1 depicts the 11 main themes and the subthemes in the contextualised framework that informed and represented our analysis.

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TABLE 21.1 Contextualised thematic framework for higher education research in South Africa

Main Themes	Subthemes
Teaching and Learning	Student learning, learning of different kinds of students, teaching in higher education (related to scholarship of teaching and learning), the 'how to' genre
Course Design	The HE curriculum (including competencies/attributes), writing/literacy development, learning design (including assessment), postgraduate course design
The Student Experience	The on-course experience, success and non-completion, personal factors/attributes/behaviour, experience of different groups of students (diversity)
Quality	Course evaluation, grading and outcomes, national monitoring practices and standards, ranking, recognition of prior learning
System Policy	The policy context, comparative and historical policy studies, funding policies
Institutional Management	HE management practice (various levels, including administration, support and other services), leadership and governance, institutional development and history, institutional structure and infrastructure, economics of scale
Academic Work	Academic roles (eg postgraduate supervising), academic development, experiences of academics, academic careers, women and minority groups of academics, (changing) nature of academic work, teacher education
Research and Knowledge	Nature of research, research (policy, practice and development), theoretical studies, nature of the university, 'disciplinarity', forms of knowledge
Transformation/Change*	Transformation in SA HE, policies and practices, impact of transformation, mergers, experiences of students and academics
Socio-cultural Links/Relationships*	Including political/cultural/health/economic links, issues and influences, community outreach/engagement, industrial relationships
ICTs in higher education*	Including ICTs in teaching and learning (eg e-learning, blended learning, learning management systems), systems and networks

(Source: Adapted and contextualised from Tight 2003, 2012).

*Additional themes suggested by Bitzer and Wilkinson (2009).

We acknowledge limitations in the study, in particular the possibility of subjectivity and inconsistency in the assigning of codes by multiple researchers. Measures were, however, continuously implemented to minimise the latter, including cross-checking, computerised methods and meticulous record-keeping of the assigning of codes. We believe that the team approach eventually added to the validity of the study. We furthermore acknowledge that numerical values (including percentages) depend on the choice of subthemes and related topics included under each main theme. These values should not be regarded as exact, but rather as useful indications or directives, particularly for the purposes of comparison between studies with similar

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categorisations. As the focus was on research undertaken at M and D level, we acknowledge that variations in research priorities would most probably occur should South African journal articles and commissioned research, for example, be included.

THE DISCIPLINARY ORIGIN OF HIGHER EDUCATION RESEARCH AT POSTGRADUATE LEVEL

For the majority of studies the description of the type of degree registered for did not reveal in which disciplinary or organisational environment (academic faculty, centre, school or department) the qualification originated. It was therefore not possible to come to exact conclusions about the disciplinary origin or context of many of the studies. It was, however, still possible to uncover a very interesting organisational distribution of degree types, as shown in Table 21.2.

TABLE 21.2 Organisational distribution of M and D degrees types with a higher education focus (2006-2012)

Master's degree type	Number (N=1 118)	Doctoral degree type	Number (N=339)
MA	310	PhD	231
MBA	15	DEd	16
MCom	70	DLitt	25
MCur	17	DPhil	17
MEd	154	DTech	22
		DTech (Education)	6
MNursing	26	D (miscellaneous)	22
MPhil	58		
MiSc	80		
MSocSc	46		
MTech	165		
MPsych	13		
M(misc)	164		
Total	1 118		

The organisational or disciplinary affiliation of 231 PhD and 17 DPhil qualifications could not be determined without engaging in additional time-consuming efforts. The clearest indication of disciplinary origin could be determined in the case of the 16 DEd degrees, which have an HE focus, and six DTech (Education) degrees. One can therefore conclude with certainty only that 22 of the D degrees originated in an educational setting – the traditional disciplinary home of formal HE studies at universities in South Africa (see Appendix in Bitzer and Wilkinson 2009:407-408) and elsewhere in the world (Tight 2014:107). A considerable number of the

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PhD and DPhil studies with HE as research focus could also have originated in an educational setting.

In the case of the degrees at M level, there is uncertainty about the disciplinary affiliation of 310 MA and 58 MPhil degrees. As a whole, the degree descriptions at this level provided some information on the organisational or disciplinary origin of the studies. These included, *inter alia*, the social sciences, the management environment, and nursing and science and technology related disciplines or fields. Thirteen studies originated in psychology (with topics predominantly related to students and their experiences, attributes and behaviour). The M degrees indicated as 'miscellaneous' in Table 21.2 originated in disciplines/fields such as the health sciences, administration, philosophy, languages and even music and theology. Education as discipline could be linked to the 154 MEd and 18 MTech (Education) degrees. The total of 172 education degrees represents about 15.3% of the total number of M degrees. One can assume that several MA and MPhil degrees also originated in an education/HE setting.

Although the largest concentration of studies on HE are still found in faculties of education and HE schools/centres, HE scholarship is visibly spread over a large range of academic fields and disciplines. Multidisciplinarity is therefore unmistakably a key feature of HE studies at M and D level. To some extent our findings confirm Teichler's (1996) notion of spheres of knowledge in HE research, with specific themes more commonly studied in a particular environment. Here again the vagueness of the descriptions of degree types made it difficult to uncover detail in this regard. Possible 'disciplinarity' was only implicated in a number of studies originating in educational settings (in an estimated 20-25% of the studies). With Table 21.2 as our guide, we therefore acknowledge the idea of possible knowledge clusters (themes in our case) more readily studied in certain environments, but we must also convey our observation of a much wider distribution among fields and disciplines than expected. The findings of Tight (2014) – based on the analysis of 567 articles published in 15 leading HE journals in 2010 – reveal that the largest proportion of authors come from education (including HE) settings (40%), but that substantial proportions come from the social and business sciences, with notable contributions from engineering, medicine and the natural sciences. Tight specifically mentions the extent to which contributors from different disciplinary environments engage with the whole range of themes identified. He concludes that "the interest in higher education research is not just multidisciplinary, but also multitheme in focus across the globe" (Tight 2014:97).

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In considering the above-mentioned findings, concern arises about the availability and quality of postgraduate supervision of HE research at multidisciplinary levels. A need is unequivocally implied for more interdisciplinary studies that encompass interaction between two or more distinctive disciplines or fields, “ranging from simple communication of ideas to the mutual integration of organizing concepts, methodology, procedures, epistemology, terminology, data ...” (Grigg, cited in Manathunga *et al* 2006:366).

Despite a great deal of discussion about how interdisciplinary (applied) research should focus on the needs of the knowledge society and should solve the multitude of problems facing HE today, postgraduate degree programmes continue to be largely discipline-based. Consequently, very few students are exposed to interdisciplinary research processes and very few interdisciplinary research leaders (including supervisors) are developed. Many supervisors in South Africa can testify that candidates interested in interdisciplinary studies are often met with opposition, and even hostility, from faculty management and faculty research committees, where the sharing of state funding is quite often perceived to be an insurmountable obstacle. The stipulations of the HE qualifications framework and the recognition of predominantly discipline-based research niche areas by national research funding agencies present similar barriers. Additionally, interdisciplinary work can be troubled by conflicting supervisor perspectives and the intricacies of efforts to overcome intellectual and administrative partitions. There is undeniably a need for universities to create better support structures for postgraduate students “who are transgressing powerful disciplinary boundaries” (Manathunga *et al* 2006:370).

The findings relating to the thematic trends in HE studies, presented below, will provide further grounds for deliberation on the concerns raised above.

THEMATIC TRENDS IN HIGHER EDUCATION RESEARCH AT M AND D LEVEL

In this section we identify the most significant trends in HE research at postgraduate level in the period 2006-2012 and compare the findings with those of a previous analysis (2003-2008), in which similar procedures of analysis were followed. We therefore acknowledge that our process of coding and categorisation does not make provision for clear-cut comparisons with analyses in which different procedures were followed. For this reason only noteworthy similarities or differences with other national and international analyses will be mentioned. Our main aim is, however, to deliberate on the challenges key findings pose for HE research at M and D level. The trends identified concern all postgraduate supervisors and students and emphasise postgraduate supervision as an academic role, as well as a focus of HE research.

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Its entangled relationship with ‘interdisciplinarity’ becomes a recurring theme. The discussion is divided into two subsections; the first part focuses on findings related to the thematic trends in HE research, and the second relates to postgraduate supervision and study as research focus/topics. A graphical comparison of the percentage distribution of themes for the two periods involved is presented in Figure 21.1.

FIGURE 21.1 Thematic distribution of higher education research at M and D level (2003-2008; N = 382) (2006-2012; N = 1457)

Thematic trends in higher education research

Comparing the research priorities of the two periods, the most notable change is the increase in studies with a focus on Student Experience (from 19.8% to 30.8%). This represents a surge in emphasis, with students and their experiences becoming an important focus in almost every disciplinary environment. This finding corresponds with that of recent analyses of national and international HE scholarship (Wolhuter 2014). An explanation for this increase can undoubtedly be found in the large increases in student enrolments, democratisation, and the increasing consumer orientation of universities (Wolhuter 2014; Le Grange 2009). The challenges presented by all the changes inevitably demand a massive production of relevant knowledge by large numbers of researchers, also at M and D level.

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Conversely, our research indicated a notable decrease of research interest in System Policy (5.0% to 1.0%) and Transformation/Change (7.1% to 1.9%), which, as we have explained, could be attributed to changes in research interests taking place in the period between 2008 and 2012. In their analyses of HE research in the period 1995-2006, Deacon *et al* (2009:1073) identify the socio-political implications of HE transformation and policy matters as some of the main research themes. Postgraduate students (and their supervisors) have ostensibly, in recent years, shifted their attention to other issues. The picture may, however, be different when research published by scholars in journals is included in the analysis. The decline in research interest in Institutional Management in general (from 15.8% to 8.2%) since 2008 may likewise be only indicative of the interests of researchers at M and D level. Nevertheless, HE research related to managerial issues in HE was one of the top five priority research areas in our analysis. Keeping massification and its consequences in mind, our findings suggest that crucial gaps exist in HE research in the categories of System Policy, Transformation/Change and Institutional Management. Relevant issues to be prioritised in HE research – either as a full or a shared focus – should include, *inter alia*, the financing of HE; issues of access and success; further transformation and democratisation; and relationships with industry.

The proportion of studies related to Research and Knowledge increased from 3.3% to 8.0%. A contributing factor may be the ‘widening’ of the category by adding ‘Research’ to the description of the main theme of ‘Knowledge’ in Tight’s second analysis (2012). This theme includes studies that focus on the nature of the university, disciplinarity, aspects of research and studies of a more theoretical nature. Of interest is that Deacon *et al* (2009) determined a minority interest in HE research that deals with inquiry into theory.

The ‘new’ category suggested for Socio-cultural Links/Relationships, has grown as research interest from 7.3% to 9.5%. Many of the studies in this category can be linked to the increasing focus on students and their experiences, particularly in relation to aspects with a social, cultural, health, political and financial origin. Some examples of studies in this category, in addition to community engagement and industrial relations, are investigations of students’ encounters with HIV/Aids, sex/sexuality, race, family, international students (including xenophobia), smoking, drinking, drugs, finances, and parenting. The importance of the creation of knowledge in this category for the knowledge society of the future is evident. A point of concern, however, is that most of the 257 studies suggest an interdisciplinary nature, but have probably been confined to a specific disciplinary environment – and supervised without the involvement of expertise from both/all the relevant disciplines/fields.

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This concern applies to a greater or lesser extent to all the other categories. Tight (2014:107) justifiably bemoans the lack of interaction between those researching particular HE issues from specific perspectives, “as it holds back the development of a more interdisciplinary approach”.

Academic Work as main theme showed a decrease in interest (12.3% to 9.1%), but still revealed itself as a priority theme in HE research. And although postgraduate supervision could be categorised solely as a subtheme under Academic Work, our analysis makes provision for a shared focus. The views and experiences of students related to postgraduate supervision would, for example, suggest a shared focus with Student Experience. Postgraduate supervision as pedagogy or teaching and learning activity would require a shared focus with Teaching and Learning, while the design of supervisory programmes, the quality assurance or management thereof and even the use of ICTs in postgraduate supervision suggest the overlapping of the relevant themes with Academic Work. The weighted procedure could fortunately account for (and reveal) all these nuances.

There was no or little change of interest in Teaching and Learning (6.8%), Quality (7.7%), Course Design (9.2% to 10%) and Use of ICTs (5.9% to 7%). There are, however, emerging trends within the subcategories, particularly an emphasis on language, the development of writing skills and the literacy levels of students. Similar emphases are reported by Wolhuter (2014) and Le Grange (2009). Course/ Curriculum Design attracts a significant proportion of attention worldwide (Wolhuter 2014; Tight 2014). In our analysis, postgraduate course design is included as subtheme in this category, yet it has attracted minimal attention. As regards teaching and learning related issues, we concur with the findings of Osman *et al* (2009) that HE research on teaching and learning is relatively ‘thin’. Correspondingly, we support the views of Waghid (2009) on the “unattentiveness” of South African HE research to teaching and learning. One may ask whether teaching and learning is regarded as a credible or sufficiently challenging topic for study at M and D level. If we duly regard postgraduate supervision as a teaching and learning encounter (Waghid 2009) of an extremely complex and challenging nature (Wilkinson 2011:903), we may expect correlation between the “unattentiveness” of HE research to teaching and learning and the level of interest in HE research focusing on postgraduate supervision.

Postgraduate supervision and study as research focus

Our analysis revealed a disappointing picture: we identified only six studies (0.4%) that specifically focused on postgraduate supervision as topic (with either a full or shared focus) for the period 2006-2012. The range of issues covered in these

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studies was 'thin' and mainly focused on the research supervision experiences and needs of students, the supervisor-student relationship and the use of specific learning environments to aid traditional supervision methods. This finding indicates an alarming lack of interest in postgraduate supervision as a topic at M and D level; it is certainly not a research focus contributing to a wide-ranging understanding of the future needs of the knowledge society. This may be a global problem, as postgraduate supervision in HE has been indicated as "lightly researched" (Brockbank & McGill, cited in Wilkinson 2011), with unsatisfactory evidence to rely on for an understanding of theory and practice. More research is certainly needed to address the wide range of problems postgraduate supervisors experience in their challenging task.

Slightly more encouraging are the 28 studies (1.9%) focusing on postgraduate students/studies. These studies were richer in variety and relevance and focused on aspects such as the academic transitional experiences of students, challenges experienced by international students, experiences of students who dropped out of a master's programme, retention of black African students, research knowledge of specific groups of postgraduate students, marriage and participation in postgraduate studies, and mechanisms for providing support to students at this level. Although the range of topics is more satisfactory than for postgraduate supervision, much more relevant aspects need to and should be researched at M and D level if we are at all serious in our desire to attain targets set for the delivery of doctorates as drivers of the economy in the ASSAf (2010) report. Relevant topics should, *inter alia*, be infrastructure at institutional level and support (Alam *et al* 2013:877), different models of D study, and a range of topics associated with the assessment of M and D studies (Samuel & Vithal 2011). There is also the as yet unanswered language and academic writing question.

CONCLUSION

In our analysis, higher education unveiled itself as both a lively and a growing field of research, as evidenced by the widespread interest and involvement in HE research over a large range of fields and disciplines. HE research clearly attracts large numbers of postgraduate students covering a significant range of topics. Yet, we acknowledge Tight's (2014:107) concern about the absence of a clear disciplinary identity for HE studies and a shortage of concentrations of researchers to expand the distinctiveness of the field. The fact that many postgraduate students only enter the HE field at M and D level without undergraduate qualifications in the field may also lead to theoretical weakness in HE studies. The resulting level of trans-/multidisciplinarity (and consequent cross-pollination) may, however, be regarded as a strength – and

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determining characteristic - of the field. Furthermore, if academics and members of research committees in disciplinary environments would recognise key HE elements in a particular study and classify that study as interdisciplinary, they could in turn 'import' the necessary expertise from the field of HE (by involving a co-supervisor for example). Willingness to think and reach out beyond disciplinary boundaries would not only benefit other disciplines and fields, but would also benefit HE studies. We are therefore of the opinion that recognition that transcends disciplinary boundaries would not undermine the development of a HE disciplinary identity, but would rather serve as a huge step forward for HE as a distinct field of study.

The thematic nature of the field, as determined by our analysis, corresponds to a large extent with those of international analyses, but there are several emphases unique to the South African HE environment. These characteristics are encapsulated in the expanded framework (Figure 21.1) and other detail about research foci and trends discussed in the chapter. Although the knowledge production can be regarded as potentially relevant and valuable, we identified a lack of both depth and breadth in some of the thematic areas studied, with substantial research gaps in an area such as postgraduate supervision, for example.

It became clear, furthermore, that the largest concentration of studies originated in an educational environment (an estimated 20-25% of the 1 457 studies analysed). This suggests a level of 'disciplinarity' of which the nature has yet to be established in finer detail. Similar to other global analyses (eg Tight 2014), our study found the bulk of HE research at M and D level in South Africa to be predominantly multidisciplinary and multi-thematic in nature, with the whole range of HE themes studied in almost every possible disciplinary environment. This finding implies the existence of large-scale 'interdisciplinarity' in HE research undertaken at postgraduate level in South Africa – even though few of these studies are formally recognised or offered as interdisciplinary. This uncovers the largely intertwined and complex problem of postgraduate supervision taking place in an interdisciplinary environment for which neither supervisor nor student has been adequately prepared. To aggravate the matter, interdisciplinary research is not widely recognised in the disciplinary setting in South Africa, which specifically poses problems relating to promotion and career advancement. In many instances, only pure disciplinary scholarship 'counts'. This situation holds major implications for future needs in HE research.

Postgraduate supervision is undoubtedly key to attaining higher completion rates – within specified time frames – and for improving the quality of research outputs in South Africa. However, postgraduate supervisors often face a range of multidimensional problems, in addition to the interdisciplinary problem mentioned

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above. Fortunately there are promising signs that some institutions have started to include supervisory success as part of a recognition and reward/award structure.

The serious lack of interest in scholarly work focusing on postgraduate supervision and the ‘thinness’ of the research can be regarded as one of the most disappointing findings of the analysis. There are certainly many reasons for this situation, but some of the contributing factors may be found in the measure of ‘interdisciplinarity’ suggested in a topic such as postgraduate supervision. Postgraduate supervision takes place in every disciplinary environment in HE where postgraduate students are enrolled. However, will postgraduate supervision as research topic be acceptable to research committees in disciplinary settings other than education/higher education? Probably not, if interdisciplinary study is not acceptable or possible in such environments. Unfortunately, as the findings of our analysis revealed, the production of new knowledge at M and D level in this area is currently not satisfactory – it is almost non-existent. The knowledge society urgently needs relevant contributions from this source – in particular in the light of the call for more research in order to develop a “comprehensive understanding” of the dynamics involved (ASSAf 2010:21). ‘Big’ issues in HE research and that are relevant to the call would certainly include ways of producing and developing more and better supervisors, through appropriate training programmes and, of course, the nature/design/pedagogy of developmental work/programmes, and the support needed to develop students from diverse academic backgrounds. Although the interdisciplinary problem in HE research is complex and interwoven in nature, one can rightfully ask: How can HE scholarship as growing field of interest flourish in the absence of recognition, resources and programmes for developing interdisciplinary work – also among students and supervisors? This concern demands serious attention, in particular if we are serious about increasing the quantity and quality of doctoral production in an emerging knowledge economy.

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