10 ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES

Ruth Albertyn, Salome van Coller-Peter
& John Morrison

INTRODUCTION

> The … coursework to me was like riding a mountain bike on a mountain bike trail. It was tough at times, but a great adventure. The more you rode, the more skilful you became, both technically and theoretically. The research process for me was like cycling the same mountain bike trail, but on a road bike. It just never really became easy. (Student)

This comment illustrates how a student participant in our study vividly distinguished the research experience from the coursework in completing a postgraduate qualification. The challenges experienced with research, and the natural predisposition towards the theoretical and practical course content, play a role in completion rates at master's or doctoral level. This phenomenon has become a focus of research and sometimes it is referred to as 'all but dissertation' or ABD (Blum 2010; Albertyn, Kapp & Bitzer 2008). In some cases, the research component is seen as the 'necessary evil' of obtaining the higher degree. A negative attitude to research at the outset could influence students' engagement with research, their ability to think creatively, and eventually the quality and completion of the research (Kearns, Gardiner & Marshall 2008).

Researcher development is an emerging field of study that focuses on the skills required to improve the quality of research (Evans 2011). Pasupathy and Siwatu (2014), who link research self-efficacy with the research-training environment, illustrate the importance of this focus on development. Development of the research environment should holistically consider various aspects that form a research climate

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

PART THREE • CHANGING EXPECTATIONS OF POSTGRADUATE STUDENTS AND SUPERVISORS

such as research education, postgraduate supervision and support (Evans 2011; 2014).

Our study was positioned in the growing body of knowledge of researcher development amid a changing population of postgraduate students. Postgraduate education is no longer primarily aimed at developing scholars for the academic context (Mode 1 knowledge), but has shifted towards developing lifelong researchers that can be involved in knowledge creation in their practice in applied work settings (Mode 2 knowledge) (McAlpine, Amundsen & Turner 2013). This currency of knowledge has led to credential inflation, which results in increasing numbers of students enrolling for postgraduate qualifications (Engebretson, Smith, McLaughlin, Siebold, Terret & Ryan 2008; Morgan 2014). The increase in students with Mode 2 knowledge expectations has implications for research education, postgraduate supervision, course management, and quality in postgraduate qualifications (Maxwell & Smyth 2011). Moreover, Alauddin and Ashman (2014) examined the study philosophy of postgraduate students and found that those in business-related programmes were more motivated by expediency drivers than students in other disciplines were.

The context for our research was a master's qualification in Management Coaching. Many students are mature practitioners. They may be embarking on studies primarily to increase their capital currency (Engebretson *et al* 2008) mainly for theoretical and practical skills and not to attain research skills for academic careers. In the first year of study, students attend five residential module sessions of a week each. During this year they are also exposed to research education, which culminates in a research proposal at the end of the year. Once the proposal has been defended, the students are allocated to supervisors, who are mainly practitioners and not full-time academics. Students are expected to complete the research and graduate at the end of the second year. The research is conducted and supervised off campus by supervisors who are mainly consultants and coaches. The phenomenon of casualization of academic staff has implications for quality and underscores the need for development efforts and support for both supervisors and students.

Given the scholarly focus on shifts associated with the increased demand for qualifications in line with Mode 2 knowledge, and the corresponding impact thereof on research completion, it was deemed useful to focus a study on this group of postgraduate students. In particular, as these students elect to study a management-related field and may be driven more strongly by short-term results (Alauddin & Ashman 2014), the context adds to the potential usefulness of the findings in a changing higher education landscape. According to Morgan (2014), knowing the characteristics of students and their support requirements will assist institutions

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

CHAPTER 10 • ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES

in managing student expectations and targeting new researcher development more effectively.

We argue that a different response may be needed to support the changing student and supervisory context in higher education. If one continues to assume models of supervision based on the traditional notions of knowledge production, the quality of the research education process and product may be jeopardised. Insight into the experiences of both the student and the supervisor participating in the research component of a higher degree – in this case a management-related qualification – it may be useful to design more effective research support within the changing higher education environment.

The overall aim of our study was therefore to find ways to support supervisors and students during postgraduate supervision. Three objectives were set for this study:

▪ to explore the student experience of research both from a student and a supervisor perspective;

▪ to establish the relationships between the issues identified by each role-player; and

▪ to develop a proposed support framework for both students and supervisors.

RESEARCH METHODS

The research followed the Interactive Qualitative Analysis (IQA) research design (Northcutt & McCoy 2004). This design provides a method for understanding complex systems by identifying the elements (called affinities) of the system through the eyes of constituents that have first-hand experience of the phenomenon. The directional influence between these affinities is generated in a collaborative way. The aim is to provide a visual display of the affinities as a system of influences, called a systems influence diagram (SID). To this end, each person compiles an affinity relationship table (ART), which is a pair-wise indication of the perceived influences of all affinities relative to each other. The influence direction can be outward, inward, or neutral. Based on a summation of outward influences (pluses) and inward influences (minuses), delta values are calculated for each affinity. Some affinities will emerge as drivers (plus delta values), some as outcomes (minus delta values), and others may be neutral (zero delta values).

A focus group approach formed the first inductive phase of our data collection where this process culminated in the generation of the SIDs. Sessions for four focus groups (Kreuger & Casey 2009) were presented, two with supervisors and two with students. The second phase of data collection comprised individual interviews with a sample

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

PART THREE • CHANGING EXPECTATIONS OF POSTGRADUATE STUDENTS AND SUPERVISORS

of the participants. This phase served to verify and to provide richer narratives on the affinities identified in the first phase.

The same procedure was followed in each of the focus groups, starting with a clarification exercise. The participants were requested to reflect on the overall research experience. Next, they were asked to generate key thoughts or themes triggered by the issue statement and write down one idea per card, all in silence. The following issue statement was posed to both students and supervisors: "Tell me about the experience of students during the research component of their studies." The facilitator collected cards as they were being generated and then randomly affixed them to a wall. After the ideas had been exhausted, the participants were asked to work collectively to group the items into themes or affinities (ie axial coding). The facilitator compiled a pro forma ART sheet after which participants had to conduct theoretical coding by considering the relationships between affinities on this sheet.

From the data generated in the focus group phase, SIDs were generated for individual participants. Using the Pareto table, the individual SIDs were converted to group composite SIDs, one for each focus group. The SIDs reflected the relationships between issues and allowed comparison between supervisor and student perceptions.

During Phase Two, verification of the elements was established by conducting individual semi-structured interviews with a sample of ten students and four supervisors who had attended the focus group meetings and who volunteered to participate. The interview guide was developed using the affinities identified for each relevant focus group. The duration of an interview was approximately one hour long and was conducted face-to-face or via Skype. The aim of the interview was to gather rich data on all identified themes, as well as to gain insight that would assist in identifying support for students and supervisors in accordance with the final objective.

The qualitative data were analysed according to the IQA protocol (Northcutt & McCoy 2004). Interview recordings were transcribed and after member checking, the data were coded using ATLAS.ti. Ethical clearance was obtained for the study and all participants signed informed consent forms, both for participation in the focus groups and participation in the interviews. All students who had been registered for the past three years (completed or currently registered) and all supervisors were invited to attend. Participation in both the focus group and the interview phase was voluntary.

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

CHAPTER 10 • ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES

FINDINGS

The participants in this study are reflected for each phase of data collection in Table 10.1.

TABLE 10.1   Students and supervisors participating

Participants	Focus Group Phase	Interview Phase
Students (n=17)		
Research completed	3	2
Research in progress	14	8
Total:	**17**	**10**
Supervisors (n=11)		
Full-time	2	0
Part-time	9	4
Total:	**11**	**4**

We present the findings in three parts: diverse perceptions of research challenges (focus group SIDs displaying interrelationships between affinities), addressing challenges (interview data), and aligning student and supervisor support (the emergent conceptual framework). Reference to quotation source number is indicated for supervisor as 'Su' and student as 'St'.

Diverse perspectives of research challenges

The IQA research design extracted different realities from each group. What emerged in the focus group SIDs is that there are four different constructions of a reality as seen from four different perspectives. This outcome shows that researcher development is not a simple process; different realities exist of how it is experienced. Taking this into account, and by studying the unique experiences from the perspectives of both students and supervisors and some common themes emerging, we could contribute towards focused support for researcher development.

Experiences of students

In the one focus group (A), there was a timeline construction taking it from the educational input, the tools provided, moving into the complexity of balancing everything. The other focus group (B) immediately went into the complex interaction wherein research teaching and tools formed part of the total mix. The visual representation of how the student group experienced the research component of their studies is illustrated in Figures 10.1 and 10.2 below, which show the way they saw the affinities being related to one another.
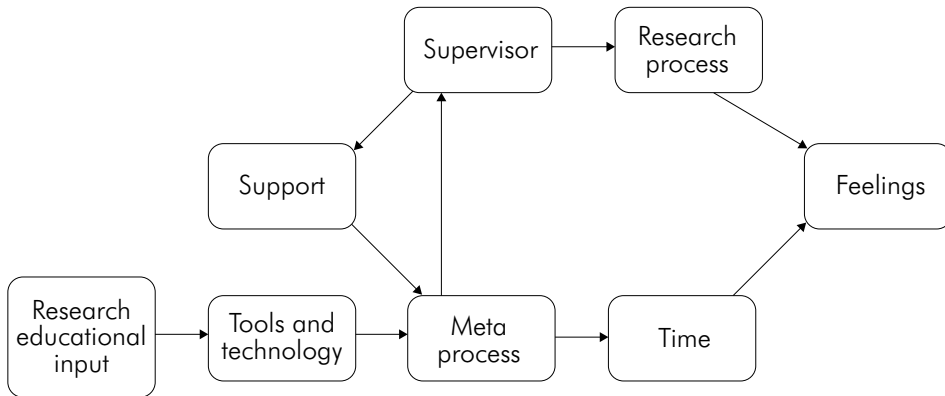
FIGURE 10.1 Systems influence diagram for student Group A

For Group A, research educational input was the primary driver. They supplemented their knowledge by self-study using tools and technology. The meta-process was a pivot that influenced time and feelings. The supervisor and support both played a role as secondary drivers and fed into the meta-process. Indirectly, via the supervisor, the meta-process influenced the research process and directly influenced time and ultimately the feelings of the students.
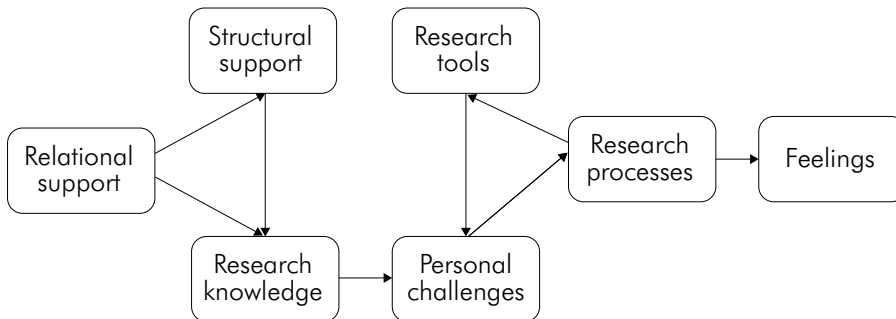

FIGURE 10.2   Systems influence diagram for student Group B

For Group B, relational support with the supervisor was the primary driver and both relational and structural support from the university (teaching during coursework) influenced their research knowledge. Tools and technology were used in the research process and this influenced the personal challenges that led to the research process being conducted satisfactorily or not, which in turn, would result in positive or negative feelings.

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

CHAPTER 10 • **ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES**

Experiences of supervisors

Both supervisor groups viewed the students' experience of research differently, which could have various interpretations. A stronger focus on individuals coupled with strong support rather than research knowledge and skill may be due to the supervisors' role mostly during the application phase of conducting the research and not during the research teaching in class (during the first year of study). The primary outcomes of balance and writing were found to fall into place to enable students to finish. All the preceding affinities worked into achieving work life balance in the one case, and enough writing proficiency in the other to complete the research. The systems influence diagram for supervisor Group A is presented in Figure 10.3.
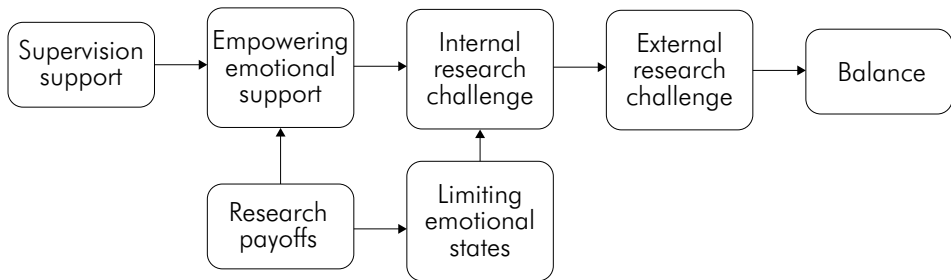

FIGURE 10.3 Systems influence diagram for supervisor Group A

Supervisors in Group A saw themselves and their support as pivotal and as a primary driver in the student relationship, possibly due to students being geographically distant from the main campus. These supervisors saw research payoffs influencing both the students' empowering emotional states and their limiting emotional states. Both of these influence their perceptions of internal research challenges (a pivot) that affect external research challenges. Balance is the primary outcome, which is reflected in overcoming time pressures and attaining balance and completion of the qualification. The systems influence diagram for supervisor Group B is presented in Figure 10.4.
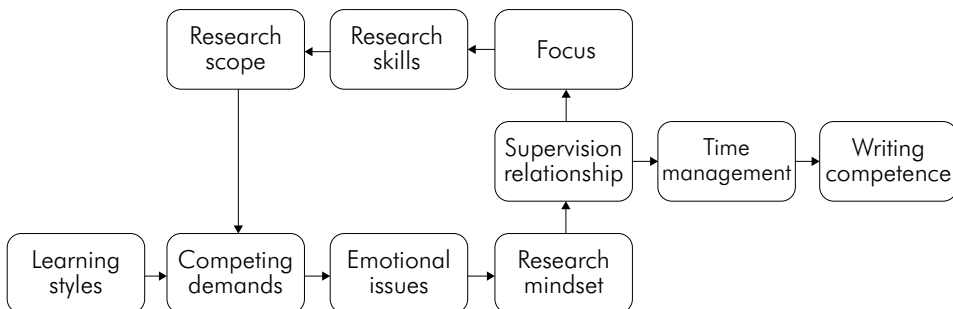

FIGURE 10.4 Systems influence diagram for supervisor Group B

For these supervisors, the student and the learning styles affinity was the primary driver and the secondary drivers also focused more on the student realities; a more individual perspective. This supervisor group only saw their support role as a secondary outcome.

Addressing challenges

Experiences relayed in the interviews seem to point to three themes that provide insight into ways to address challenges. To a certain extent, these themes correspond with trends observed in affinities in the SIDs. The first is research knowledge, the second is support, and the last is personal feelings. In each section, the perspectives of students and supervisors are presented.

Research knowledge

Both students and supervisors noted research educational input, structure, support and application. The issue of the timing of research input is contested and there is much debate whether to provide educational input before or during the research process (Kearns *et al* 2008; Wagner, Garner & Kawulich 2011). Students had opinions regarding the timing, structure and nature of learning as reflected by Student 1: "It was like stuff I learned then only sunk in when you start really having to work with it." This illustrates the liminal space noted by Raiker (2010) and suggests the importance of building cognitive structures so that students are more aware of the connection between theory and application during the year of independent research.

Another example reflects negativity regarding timing:

> … the structure of how the research is presented in parallel with coursework does not work. … to have all this going on and still focus on research tools … well, that remains theoretical and then unhelpful. Research is something you do. So it is tangible. […] There should rather be research blocks as well and not parts of days attached onto other coaching blocks. (St4)

This comment reinforces the finding of Burke and Hutchins (2007) that for learning to be more effective, the purpose and application must be clear. Structural support from the university is necessary and continual reflection on methods is important in provision of research education.

The second comment below reinforces the need to have protracted time periods for research skills to develop (Kearns *et al* 2008).

> I was surprised that it [Research Method coursework] started so early. I thought the outline was so well done, because it is in line with the practical side of your course. […] From the onset you take us through …

> you could make the connection from early on. […] But I think that the lay-out, the structure, and how it was done, as part of the course, was brilliantly done … it was practical and from the very beginning, we were sort of forced to make that link to research … I think there was a nice sequence, a build up from the basics. (St8)

What is also evident is the need to focus on a different mindset and skills needed in research as opposed to other modules in the coaching programme while still making the link between practice and research. The benefit of building up from the basics indicates the scaffolded learning structured into the institutional provision of research training during the first year. Student 8 commented on the research input: "… it was well aligned and structured and there were practical examples".

One supervisor noted that she builds on the research knowledge gained in the first year of study.

> I don't think this [research] is a challenge … It is just a process … our purpose … is to get [the students to] an exponential understanding of research. (Su2)

The comment about exponential learning suggests that students do need to be taught the basics, but it is in application that this knowledge is consolidated. Student 8 affirmed this view: "There is a lot of basic information I already had … but I also realised that research is ongoing … I can always learn something". The supervisor's reference to exponential understanding illustrates the importance of transferability of skills (Evans 2014) and this should be a focus in teaching research. The students need to apply knowledge during the course of the first contact year and work towards the planning of their own projects. The exponential nature of learning research (transferability) as opposed to other levels of learning (acquisition of knowledge or learning content) needs to be clear to the students. Focus on application will help with making cognitive links (Raiker 2010) between theory and application in later research activities.

Supervisor 3 reflected on cognitive development related to research and was aware of unrealistic expectations that students sometimes have. Support needs also vary depending on each student's understanding: "You have got to gauge that. Some students definitely just require more … they struggle more. And there are others who get it." It appears, therefore, that supervisors are aware of the need to tailor-make and provide individualised support according to the nature of postgraduate research and the level of development of the students.

Support

In one focus group, students indicated that they do not see the supervisor as playing such a central role but rather as part of the meta-process of research. These students seem to be more independent and use their own agency when seeking additional knowledge. Both groups referred to the use of various forms of support. The value of peer learning (Samuel & Vithal 2011) is illustrated by the following comment:

> [The triad support groups] served to really get me to show up, one wants to succeed and do better because the group as a whole are so positive. So I think it gets one out of a comfort zone … it is not a competitive one … you want to actually give it your best, because everybody else is really putting themselves out there. (St5)

Supervisor support is needed, as indicated by Student 7: "… that kind of bouncing off and this is what I understand, can I just check this out". Students manage their expectations and adapt in the interpersonal relationship:

> Although there was a mismatch of expectations in the beginning and I found [her/his] approach very authoritarian and stern, when I had accepted that that is simply how [she/he] is and decided to use [him/her] as an ally, things did an about turn. (St1)

The supervisors indicated that it is important to take note of the students' learning styles, emotional issues and competing demands. Mature students – typical of this group – face challenges that may not be found in a younger cohort of students. This supervisor observation is confirmed by a comment from Student 2: "… in terms of my family, I contracted with them, give me two years to get this qualification".

Personal feelings

It is necessary to consider the feelings of mature students, as these are pivotal in the research process. It is interesting that in both student groups, the primary outcome was feelings, which indicates how they see the whole process coming together. The following emotions were elicited from the students (see Table 10.2).

TABLE 10.2   Expression of student emotions

Positive feelings	Negative feelings
• Research process gave me some comfort • In awe of the process • Encouraged • Inspiring • Motivation to keep going • An exciting adventure • Exciting • Excitement as it started to come together • Awesome sense of achievement on completion • Relief to actually finish • Enjoyed developing new models • Actual research rewarding • Qualitative approach more exciting than expected • Talking to people I would not usually meet • Enlightened	• Overwhelming • Isolated • Lonely • Anxiety • Confusing • Fragmented • Angry • Lack of enthusiasm • Exhausted at times • Overcoming fear of failure • Disconnected • Drastic change from cohesion to alone approach • Less support from group • Felt alone and lost when starting analysis • Results disappointing • Slightly dumbfounded by the size of the job ahead

It seems as if 'feelings' is the proxy affinity controlling the end product delivery. This finding indicates that universities should focus on creating positive emotional empowerment in the complex mix of teaching, and institutional and supervisory support. This focus is important given the different emotional contexts senior postgraduate researchers have at home and at work. This finding illustrates essential internal and external elements in the postgraduate higher education context: the personal characteristics of the student (internal) and the responsibility of the institutional context (external) in successful completion of postgraduate qualifications.

In the interviews, the finer nuances of changing feelings over time emerged and students reported that at the start of the course they were overwhelmed and experienced self-doubt, fear and anxiety. This unsettling period noted by Clegg, McManus, Smith and Todd (2006) could be an impetus to learning. They reported that during the coursework year their fear dissipated to an extent but at the start of independent research, they felt increased anxiety and loss of confidence, which resonates with the findings of Raiker (2010). As they started to apply their knowledge while doing their research, they first lost and then regained confidence. They also reflected on their emotions and could see the paradoxical value of anxiety:

> I don't think that I had a full night's sleep [during fieldwork]. I was really anxious. So there is that kind of dichotomy about that I did not know it

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

PART THREE • CHANGING EXPECTATIONS OF POSTGRADUATE STUDENTS AND SUPERVISORS

> makes you anxious, and thank goodness for it, it makes you work a bit harder. (St1)

There was also evidence of meta-reflection, pride and longer-term thinking:

> My feelings really went from 'I do not want to do this' to 'I love this, I want to do more of this, I actually think one day I might consider a PhD. It was very positive in the end. (St6)

This response suggests that the student took ownership over the course of time while mastering the application of research skills, and it suggests effective researcher development as noted by Evans (2011). Furthermore, it reflects the ontological development (Barnett 2010) of students in developing their identity. The personal significance of the learning in research may indicate the importance of paying greater attention to ontological development during research training. Personal engagement is the key to ontological development of their identity (Sinclair, Barnacle & Cuthbert 2014) but this development takes place over time.

The supervisors seemed to be aware that research requires personal engagement and investment. Supervisor 2 noted that postgraduate research is not an easy process. Personal connectedness is important but not easy. As noted by one supervisor, a researcher is a unique identity:

> There is quite an identity involved in being a researcher … is a different identity to being a student … they got [research] techniques, but not the identity. (Su1)

The primary identity of these students is that of a coach and not a researcher. It may thus be helpful to promote the notion of the development of research skills to enhance an evidence-based coaching approach. In the currently competitive coaching environment with many lower qualifications in coaching, this may give the students a pride in their competitive advantage if they can enhance this skill.

Supervisors focus on empowering emotional states needed for the process and successful completion. Sometimes students battle with the skills involved in becoming a researcher and one useful strategy may be to focus students' attention on vision and identity:

> I think there is a bigger focus … why I am doing this? … they sometimes forget that longer-term purpose. (Su1)

> The pay-off you know, they are so proud of themselves … a passion inside them for what they do. (Su2)

Focusing on a common vision may be a useful strategy to unify students and supervisors in the challenging postgraduate process (Edwards 2011). By being aware

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

CHAPTER 10 • ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES

of student and supervisor perspectives of challenges of the research component of their studies, we can suggest ways of improving support.

Aligning supervisor and student support

Suggestions for ways to improve support can be conceptualised by combining the student and supervisor perceptions of research challenges. The diagram in Figure 10.5 illustrates the concepts emerging from the findings.
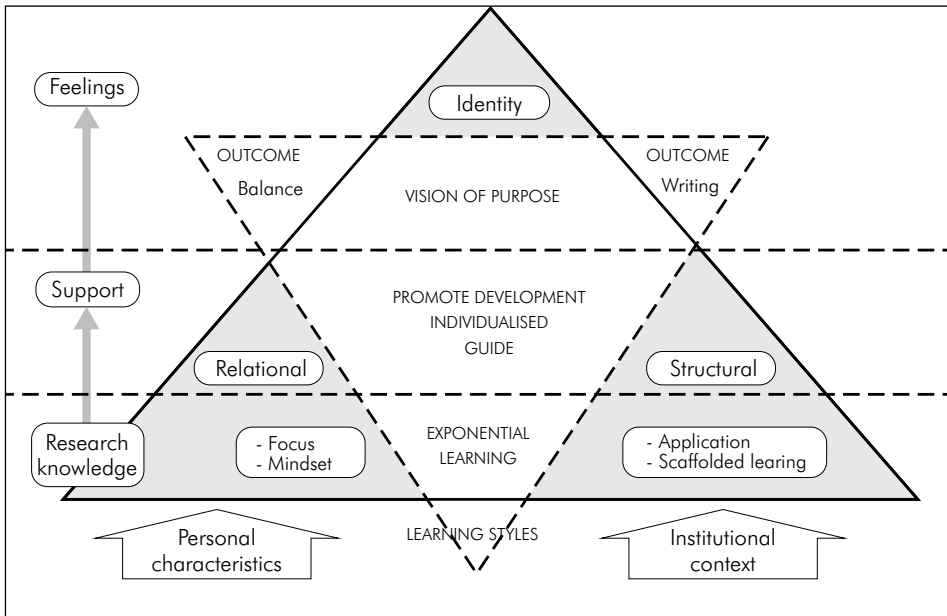

FIGURE 10.5 Aligning support to address challenges

We propose that there are two main factors influencing the completion of the research: the personal characteristics of the student (internal) and the institutional context, which includes the research training and support on various levels (external). These factors are essential elements in the context of postgraduate higher education. The intersection of internal and external contexts therefore needs to be considered when supporting students. Research knowledge and support as the primary drivers and feelings as the primary outcome reflect the students' systems influence diagram (see left-hand side of the diagram in Figure 10.5). The triangle represents the student. The concepts indicated in each horizontal band are aspects noted by students as being key elements at each stage, such as focus and mindset, which are related to their personal characteristics, and scaffolded learning and application that were valued from the side of the institution (research education input provided during the

first year of study). The inverted triangle reflects key elements on which supervisors focus in their supervision of students and can provide guidance for supervision roles at the intersection between the internal and external environment of research.

This conceptual framework of findings from this study provides a picture of the alignment of the experiences of research of supervisors and students. Knowing how to facilitate research development related to educational input, support and feelings could contribute to strategies of postgraduate supervision that are more effective.

CONCLUSION

In this study we examined the experiences of the research part of a master's qualification from the perspective of both the student and the supervisor. We saw that the research activity in its broader context is a complex phenomenon that is experienced in terms of different realities (each participant's own perceived reality). The aim of our study was to contribute to the need of higher education institutions to improve the support to students and supervisors during postgraduate supervision.

An interactive qualitative analysis design was used, which aims to create a systemic picture (systems influence diagram) of a variety of factors that interact to produce an outcome. It was not possible to create one such combined influence diagram in this study. Different groups constructed different pictures of how they experienced this phenomenon. However, a number of themes emerged when aligning the rich data underlying the constructed pictures.

When considering implications for practice, we propose themes for attention in four areas: research teaching, bridging the gap between learning and application, dealing with the student as researcher, and supervisor development. These themes are briefly discussed below.

Research teaching. There should be increased opportunities for application of theory during contact sessions. Furthermore, there needs to be a discussion about the timing of the input on research methods. Scaffolded learning is needed so that students gain skills exponentially. Lecturers in other coaching modules need to incorporate examples of coaching-based research in class.

Bridging the gap between learning and application. It is clear from the perceptions of all four groups that the challenge lies in starting to apply the classroom learning about research to the student's own research. During this process students often go through liminal spaces and difficult learning discoveries before they make progress. Institutions need to understand that research education cannot stop in the classroom, but has to include mechanisms and resources to support transfer of learning even

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

CHAPTER 10 • ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES

when students are off campus. This will include, but is not limited to, the role of the supervisor.

Dealing with the student as researcher. It became clear from perceptions of both groups that students are individuals, each with their unique learning styles and personal contexts. Even though graduation rates are such an important measure of success, one cannot treat students at this stage of a postgraduate qualification merely as members of a population with generalisable characteristics. The total learning and support process must accept the notion of differences, and institutions must design their researcher development process around this reality.

Supervisor development. The supervisor plays a central role in researcher development. Much of the transfer of learning to application and support take place while the student has the supervisor as primary resource. Supervisor development is a priority especially when institutions have to use supervisors that are part-time lecturers, and not full-time researchers. The design of student-researcher development models should see the role of the supervisor as an integral part of the process, and ensure that appropriate supervisor development is part of the model.

Researcher development in the context of a taught master's programme, in which the research component is merely a small part of the total credits, appears to be a rich area for further research. Based on our findings, we suggest that further research should explore the influence of supervisor and student learning styles on the dyadic experience. It may also be interesting to see how similar reflections by supervisors that are not professional coaches compare, especially as far as the theme of relational support is concerned. Lastly, it should be useful to compare our findings with the perceptions of students that failed to complete the research component of their studies.

In conclusion: Academic institutions need an alternative dynamic response to managing support by taking various techniques, personalities and learning styles into consideration in a changing higher education context characterised by diverse groups of students and supervisors. Appropriate and effective responses could not only contribute to improving throughput, but also to improving transferable skills that could influence evidence-based practice and the quality of graduates in the workplace.

REFERENCES

Alauddin M & Ashman A. 2014. The changing academic environment and diversity in students' study philosophy, beliefs and attitudes in higher education. *Higher Education Research and Development*, 33(5):857-870.

Albertyn RM, Kapp CA & Bitzer EM. 2008. Profiling exiting postgraduate students' performance and experiences. *South Africa Journal of Higher Education,* 22(4):749-772.

Barnett R. 2000. Supercomplexity and the curriculum. *Studies in Higher Education,* 25(3):255-265.

Blum LD. 2010. The 'all-but-the-dissertation' student and the psychology of the doctoral dissertation. *Journal of College Student Psychotherapy,* 24(2):74-85.

Burke LA & Hutchins HM. 2007. Training transfer: An integrative literature review. *Human Resource Development Review,* 6(3):263-296

Clegg S, McManus M, Smith K & Todd MJ. 2006. Self-development in support of innovative pedagogies: Peer support using email. *International Journal for Academic Development,* 11(2):91-100.

Edwards A. 2011. Building common knowledge at the boundaries between professional practices: Relational agency and relational expertise in systems of distributed expertise. *International Journal of Educational Research,* 50(1):33-39.

Engebretson K, Smith K, McLaughlin K, Siebold C, Terret G & Ryan E. 2008. The changing reality of research education in Australia and implications for supervision: A review of the literature. *Teaching in Higher Education,* 13(1):1-15.

Evans L. 2011. The scholarship of researcher development: Mapping the terrain and pushing back boundaries. *International Journal for Researcher Development,* 2(2):75-98.

Evans L. 2014. What is effective research leadership? A research-informed perspective. *Higher Education Research and Development*, 33(1):46-58.

Kearns H, Gardiner M & Marshall K. 2008. Innovation in PhD completion: The hardy will succeed (and be happy!). *Higher Education Research and Development*, 27(1):77-89.

Kreuger RA & Casey MA. 2009. *Focus groups: A practical guide for applied research.* Thousand Oaks, CA: SAGE Publications.

Maxwell TW & Smyth R. 2011. Higher degrees research supervision: From practice towards theory. *Higher Education Research and Development*, 30(2):219-231.

McAlpine L, Amundsen C & Turner G. 2013. Constructing post-PhD careers: Negotiating opportunities and personal goals. *International Journal for Researcher Development,* 4(1):39-54.

Morgan M. 2014. Patterns, drivers and challenges pertaining to postgraduate taught study: An international comparative analysis. *Higher Education Research and Development,* 33(6):1150-1165.

Northcutt N & McCoy D. 2004. *Interactive qualitative analysis.* Thousand Oaks, CA: SAGE Publications.

Fourie-Malherbe M, Aitchison C, Blitzer E, Albertyn R (eds) 2016. Postgraduate Supervision-Future Foci for the knowledge society. Stellenbocsh: SUN PRESS.

CHAPTER 10 • ALIGNING STUDENT AND SUPERVISOR PERSPECTIVES OF RESEARCH CHALLENGES

Pasupathy R & Siwatu KO. 2014. An investigation of research self-efficacy beliefs and research productivity among faculty members at an emerging research university in the USA. *Higher Education Research and Development*, 33(4):728-741.

Raiker A. 2010. Creativity and reflection: Some theoretical perspectives arising from practice. In: C Nygaard and C Holtham (eds). *Teaching creativity: Creativity in teaching*. Faringdon, Oxfordshire: Libri Press. 121-138.

Samuel M & Vithal R. 2011. Emergent frameworks of research teaching and learning in a cohort-based doctoral programme. *Perspectives in Education,* 29(3):76-86.

Sinclair J, Barnacle R & Cuthbert D. 2014. How the doctorate contributes to the formation of active researchers: What the research tells us. *Studies in Higher Education*, 39(10):1972-1986.

Wagner C, Garner M & Kawulich B. 2011. The state of the art of teaching research methods in the social sciences: Towards a pedagogical culture. *Studies in Higher Education,* 36(1):75-88.