
THE SUPERVISION OF RESEARCH FOR DISSERTATIONS AND THESES

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South African higher institutions of learning are engaged in rapid transformation processes. Some of the consequences are that an increasing proportion of the postgraduate student body is from previously disadvantaged backgrounds and that the body of academic staff has also been transformed. In general, students have limited experience of independent research work as well as using library and other research facilities. However, quality research needs to be maintained. It is of great importance that academics should have the knowledge and skills to supervise research. However, preliminary research indicates that very little is done to equip academic staff in the skills of supervising research.

A literature study is done to determine the nature of postgraduate supervision as well as the role of the supervisor and the student. From this investigation an interview schedule, consisting of open-ended questions, was composed to use in focus group interviews with academics from various local and international universities.

The interviews revealed that seasoned supervisors experience the guidance of postgraduate students as quite satisfactory although a number of pitfalls were raised by supervisors with less experience in the field. None of the interviewees indicated that they have been formally trained to act as a supervisor. It was also indicated that students need much support and training in scientific formulation and writing. It seems that a definite need exists for newer academic staff to be schooled in research supervision.

Keywords: dissertation; postgraduate; report writing; research; research supervision; thesis

BACKGROUND

The task of a university rests on three pillars, namely research, tuition, and community service. The relative importance of each of the three is influenced by the subsidy formula being used by the government from time to time as well as various other factors. Ngcongco (2001:53) maintains that "... supervision and promotion of Masters', Doctoral or PhD students is an important activity through which University staff perform their teaching and research roles". The purpose of this paper is to focus on one aspect of the three pillars, namely research, and more specifically, the supervision of research.

For the sake of clarity and understanding of the terms used, the following meanings are imbedded in these terms. *Postgraduate* refers to *higher degrees*, namely on Masters and Doctoral level. On Doctoral level, the terms *thesis* and *promoter* are used, and similarly the terms *dissertation* and *supervisor* are used on Masters level. The generic term *research supervision* (or *supervision* for short) will be used to include all interventions and interactions from the staff member (*academic* or *supervisor*) in the research process to guide the *researcher* (*postgraduate student*, also referred to as *candidate*).

Since the underlying principles are the same for the various research studies, very little differentiation will be made in the discussion between Doctoral and Masters research, as well as between a thesis (dissertation) as full or partial fulfilment (whatever the percentage, supplemented by course work) of the requirements for the relevant degree. The main difference between these research reports is mainly in the scope and depth of the research. This difference will affect the practice of the research

supervision, but not the underlying principles. Whenever it is required in the paper, these differences will be highlighted.

In higher education, attrition rates and completion rates of postgraduate students are becoming statistics of vital concern. For example, at the University of the Western Cape only 10% of Masters students admitted completed their dissertations within three years (Sayed *et al.*1998:175). Feedback at three international workshops facilitated by the authors from participants from various universities indicates that they also experience very low success rates. Some of the implications of this situation are that science is deprived of the anticipated research contributions by early termination of these studies, and that much effort (by the student as well as the supervisor) is wasted. This situation indicates the need to improve completion rates.

Postgraduate supervision in South Africa currently takes place in a much more problematic context than a decade ago. This context includes the following: (1) South African higher institutions are engaged in rapid transformation processes. (2) An increasing proportion of the postgraduate student body is from previously disadvantaged backgrounds with limited experience of library facilities and independent research work. (3) Most lecturers are grappling with the demands of increased student numbers as well as rapidly changing curricula and modes of delivery (Cooper & Subotsky 2001:1; Holderness 2000:14). (4) Lack of support (in terms of research funding and tuition workload) from the side of universities with the result that the body of researchers is currently very limited and is in fact decreasing. Bailey (2002:4) summarised these challenges facing universities as follows: "... postgraduate students come from different backgrounds and educational experiences, and bring with them a diversity of skills, expertise and motivations. This more heterogeneous the postgraduate student population, together with the different forms and quality of supervision within and across institutions, means that students have a variety of expectations and experiences of postgraduate supervision."

Maintaining quality in postgraduate research amidst transformation and changing environments is of the utmost importance. Being quality minded in higher education means maintaining a scientific basis and adhering to scientific and ethical principles in research. It also includes caring about the goals, needs and interests of students and other external groups (Eaton 1999:26; Nielsen 1997:288; Whitaker & Moses 1994:76). Moreover, students are aware of their educational rights and are more likely to demand competent and accessible supervisors than before. There are already examples of lack of success in research and that universities and supervisors are blamed for such failures. Clarity about the roles and responsibilities of supervisors and of students is therefore crucial. Data about students' perceptions offers valuable information about their expectations and to what extent these expectations are met (Ramsden & Dodds 1989:16; Van Niekerk & Herman 1996:44).

CONCEPTUAL FRAMEWORK

Understanding the topic of the proposed research implies understanding the nature of postgraduate supervision and the roles of the supervisor and the student in the process. Postgraduate supervision refers to the guidance of a postgraduate research student by a supervisor to obtain a recognised postgraduate research degree. The nature of a thesis or dissertation is more than its rhetorical structure. Paltridge (2002:135) distinguishes between a simple traditional form (one problem), a complex traditional form (more than one problem), a topic-based approach and a compilation of a number of research articles. Due to a lack of experience and knowledge, students need advice and support when deciding about the form of their text. Bailey (2001:7) sees postgraduate study as a dynamic process and a journey of growth and empowerment. It is a process in which the supervisor

provides assistance, guidance and support to the student. The nature of the supervision is determined by the answer to the question: *to what extent does the supervisor have to support the student in his or her research?*

Rademeyer (1994:94) discusses two different views on the nature of postgraduate supervision. On the one hand, the supervisor can treat the student as an *independent* researcher who takes initiative in proposing and executing the research. On the other hand, the student is seen as being *dependent* on the supervisor.

Similarly, Deist (1990:67) uses the terms *rigid control* and *no control* to indicate the intervention of the supervisor, and sees the role of the supervisor as lying between these two extremes. Delamont *et al.* (1998:157) also caution that "too much control threatens the originality of the PhD and the autonomy of the novice researcher; too little can delay completion and even lead to total failure". They found in their study with 32 supervisors that supervisors experience tension between the need to guide and structure doctoral work on the one hand, and the desire to preserve the doctoral student's autonomy on the other (Delamont *et al.* 1998:170).

Supervisors need to realise that every research study is unique, as is the researcher. The supervising style (amongst other factors, in terms of dependency and rigidity of control) should be determined in each situation. It should even be gradually revised as the study progresses and the student researcher becomes more experienced in the research process. Gurr (2001:86) is in favour of a Supervisor/Student Alignment Model which takes into account the fact that the student undergoes academic growth during his research and the supervisory style also be adjusted to a more hands-off approach to allow competent autonomy to be developed. Burnett (1999:49) describes the value of a Collaborative Cohort Model (CCM) in which students meet in person or by teleconference to discuss their progress and problems regarding their dissertations. These meetings reduce isolation, offer encouragement, contribute to knowledge and critical thinking skills, and enhance an understanding of research design and methods. McAlpine & Weiss (2000:6) advise that both parties should be included in an interactive consideration of this process. The view of Bailey (2001:4) confirms that the supervisory relationship plays a critical role in the success of the degree process and can make or break the postgraduate experience for the student.

The role of the supervisor in the postgraduate research process

The contribution or role of the supervisor is considered to be threefold, namely expertise in the research area, support for the student, and balancing creativity and critique (Fraser & Mathews 1999:5; Hockey 1994:293). Accordingly, Mouton (2001:17) sees the role of the supervisor as guiding, advising, ensuring scientific quality and providing emotional support.

The supervisor must ascertain that the student is knowledgeable about the components of the research process. Thus, supervisors should acquaint themselves with the applicable research methodology to be able to guide student through the process.

The research process often starts with a literature review, which implies identifying terms to use in the literature search, locating the literature, reading and checking the relevance of the literature, organising the selected literature and writing the literature review (Creswell 2002:86). The literature review plays an important role in the understanding and solving of the research problem. Creswell (1994:37) distinguishes three criteria for a literature review namely "... to present results of similar studies, to relate the present study to the ongoing dialogue in literature and to provide a framework for comparing the results of a study with other studies".

The nature of the research question determines whether a literature study is complemented with an empirical study. The empirical investigation can be quantitative or qualitative and supervisors as well as students need sufficient knowledge for the flow of the research process.

An intensive literature study (referring to the research undertaken by Deist 1990:67; Dillon & Malott 1981:195; Fraser & Mathews 1999:5-6; Helm 1989:80-84; Johnston 1996:15; Mouton 2001:19; Nerad & Miller 1997:83; Pearson 1996:308; Rademeyer 1994:93; Van Schalkwyk 1994:35) reveals the following regarding the task and role of the supervisor in postgraduate research.

Experienced supervisors show a pattern of interaction with students which involves the following aspects:

- Significant effort and time spent at the beginning of the research. This is done in assisting the student to select a research topic and design; formulate a research question; ensure that the topic selected does indeed present a researchable problem; have a clear understanding of the field in which the problem occurs and of the problem itself; understand the importance of the research design since it gives structure to the research and provides guidelines for the supervision; divide the research into different phases; attend to administrative aspects by entering into a contract; holding of regular meetings to give guidance; requiring progress reports and concept texts; specification of research-tasks and performance standards; keeping minutes; determining deadlines and feedback, holding workshops on research and reading papers and publications.
- Monitoring with less interaction, but being perceptive of difficulties encountered in the research process.
- Increased interaction when writing the report to ensure that: the candidate uses the appropriate research methodology to solve the research problem and does an extended literature study of appropriate sources; the problem is indeed solved according to the requirements of the methods employed and the research leads to adding value to the body of knowledge of the field of research.

The roles of the supervisor as described in the literature can be summarised in the following concepts: confidante, facilitator, guide, mentor, coach and co-learner; source of intellectual inspiration, resource manager, grant application writer, navigator of institutional tangles to steer the student between the administrative jungle of regulations, manager of change – from novice to experienced researcher, writing teacher and editor, career mentor and networker (Bartlett & Mercer 2001:4; Kelly & Ling 2001:74).

The supervisor may possess some knowledge on the student's research topic but is mainly expected to provide *academic insights* to the student on the issues raised in the research. The student, however, retains the responsibility of the outcome of the study and has the task of doing the research and the reporting of the study.

Expectations of students in the supervising process

Students expect the supervisor to be enthusiastic and supportive. Binns & Potter (1989:213) hold the view, based on presentations made by postgraduate students, that they feel that the supervisor's main function is to provide support, give constructive criticism and ensure a measure of overall guidance. Students often complain about inadequate supervision, a lack of communication between supervisor and student, and the student's misperception of standards and requirements and of the supervisor's

role and functions (Shannon 1995:12).

From research done by Lessing & Schulze (2002:148-9) it is clear that students' expectations (whether justified or not) are not entirely met regarding some aspects of supervision. For example ... Students want guidance with regard to the overall planning of the research in terms of which approach to follow, for example students are not sure when to conduct qualitative or quantitative research. Especially on Masters level, most students prefer a more structured way of working and want supervisors to help them decide on due dates for chapters to be submitted. It was also found that students prefer constructive criticism and need support with regard to statistical analyses as well as the interpretation and presentation of research results (Lessing & Schulze 2003:161). Doctoral students, being more experienced in research, indicated that they want the freedom to work relatively independently. The findings from the research indicated a need for supervisors to be trained in research supervision skills to meet the needs of students.

The role of the student in the postgraduate research process

Postgraduate students are expected to write a report reflect their research and it is expected that the dissertation will be a clear exposition of the study carried out (Georgia State University 2002:15). At Masters level, students are introduced to research and trained as researchers (Salmon 1992:10; Sayed *et al.* 1998:278), while Doctoral students, being more experienced in research work, are expected to work more independently to make substantial and original contributions to knowledge in the discipline. At Masters level the research may be limited in scope and with little originality, while at Doctoral level greater depth, synthesis and critical ability are expected (Phillips & Pugh 2000:21). To be a researcher implies the mastering of specific skills. One of the main goals of assisted guidance in research is to develop generic research skills within the student.

The role of the student in the postgraduate research process entails, amongst other aspects, to select a researchable topic; understand the research in their field of specialisation and reflect an understanding in the literature review and bibliography; understand and use appropriate research techniques; independently research a problem and arrive at justifiable conclusions; evaluate the work of other authors as well as their own in the light of current developments; present the findings of the research accurately and scientifically; write research reports that have clear aims, are coherent and show critical depth and originality; on Doctoral level, state hypotheses (if applicable), do required reworking, backtrackings and corrections, and manifest a degree of tolerance of ambiguity (Boote & Beile 2003:1; Burnett 1999:47; Georgia State University 2002:15; Katz 1997:16; Nerad & Miller 1997:76; Phillips & Pugh 2000:21, 74; Salmon 1992:14; Shannon 1995:14; Smith *et al.* 1993:53).

In writing a dissertation/thesis, a student should demonstrate professional knowledge and skills, which include technical competence, techniques for analysis of data, self-management in terms of time and personal responsibilities, management of others like technicians, supervisors and other academics, strategies for accessing a peer network of other students, as well as experience in networking with other academics and knowledgeable people.

Students are responsible for determining that which is required for the research, and to carry it out. They must not wait for their supervisors to tell them what to do, but are expected to initiate discussions, ask for help that they might need when they need it, and argue about what they should be researching. It is not the task of the supervisor to write the thesis, do language editing or derive solutions for practical problems encountered during the research process. However, the supervisor may help in evaluating some of the possible solutions that the student might consider (Deist 1990:67; Hockey 1994:296; Pearson 1996:306; Phillips & Pugh 2000:1; Sayed *et al.* 1998:280).

The postgraduate candidate can practise mastering research skills by studying the works of established researchers to take note of successful research practices, skills and techniques. It is also of great value to read and study works of other students (for example Masters dissertations and Doctoral theses, preferably from the relevant supervisor) in related fields and to evaluate these in terms of the checklist that examiners use in assessing dissertations. Completed dissertations also serve as examples of approved and accepted specimens of completed research (Phillips & Pugh 2000:53). Another way of mastering research skills is to practice them and to ask for feedback. Practising research skills has the value that the student learns the ability to carry out a range of professional skills which must be developed and obtains internal and external feedback on the success of the task.

Boote & Beile (2003:3) stress the importance of the literature review and bibliography as an indication of a Doctoral candidate's ability to locate and evaluate scholarly information. The authors emphasise the importance of the use of respected journals and scholarly books rather than sources such as conference papers and dissertations which vary greatly in quality. A proper literature review also indicates the candidate's ability to synthesise information in the chosen field of study. A thorough understanding of the field of study is of crucial importance for Doctoral students to enable them to do substantial and useful research.

Supervisors expect students to take ownership of their research and they encourage independent thought in their students. In a research done by Lessing & Schulze (2003:161), supervisors indicated that many students do not meet supervisors' expectations regarding the expected quality of the dissertations. It is also indicated that many students often have unrealistic expectations of the scope of postgraduate research and misjudge the time that they will need to finish the research. Lecturers were also worried about the poor use of language by second-language students. Postgraduate studies are the responsibility of students, therefore students (especially on Doctoral level) should not wait for supervisors to tell them what to do, but should initiate discussions and work independently.

Aspects influencing the completion of postgraduate studies

Various factors may influence the completion of postgraduate studies and both supervisor and student should take cognisance of these factors. Postgraduate students often experience problems which delay their studies or even prevent them from finishing altogether. According to Helm (1989:79) these problems are threefold, namely problems in the research design, the collecting and processing of information and the writing of the final report (dissertation/thesis). These problems could result due to the lack of research experience of the student, to poor supervision or an inefficient or inhibiting administrative system (Helm 1989:79; Jacobs 1994:33-34; Johnston 1996:15; Katz 1997:17; Mouton 2001:2; Sayed *et al.* 1998:279). The successful completion of a dissertation is just as much a function of the abilities and commitment of the student as that of the supervisor (Rademeyer (1994:55), Hockey (1994:294) and Smith *et al.* (1993:58)).

One of the contributing factors limiting researchers from a professional work environment is the lack of a research culture as opposed to a more pragmatic approach in getting to conclusions. Labaree (2003:13) indicates peculiar problems when preparing educational researchers. There is a cultural gap between the teaching profession (practice) and the education faculty (research orientated) with the result that teachers entering a Doctoral programme often feel that they are expected to abandon *teacher culture* in favour of a new *academic culture*. He contends that students may feel they are being asked to transform their cultural orientation from normative to analytical, from personal to intellectual, from particular to universal, and from experimental to theoretical and they often resist.

Although these remarks reflect on researchers from the teaching profession, it is equally true for other professionals, for example engineers, accountants and business practitioners.

Postgraduate research has an intellectual as well as a psychological component that needs to be attended to (Binns & Potter 1989:213; Phillips & Pugh 2000:75; Salmon 1992:20; Sayed *et al.* 1998:281; Smith *et al.* 1993:57). Illustrating this, Bartlett & Mercer (2001:2) state that none of the manuals on postgraduate supervision gives an indication of the variety of possible situations that may arise between a supervisor and a candidate. This is confirmed by a survey done by Harman (2001:9) of PhD students in major Australian universities. It was found that only 56.9% of respondents rated their overall experience as postgraduate students as *satisfactory* or *very satisfactory*, while 12.8% rated it as *unsatisfactory* or *very unsatisfactory*. The main reason for their discontent was the unavailability of supervisors due to large workloads.

Attention should be given to the following pitfalls in the completion of postgraduate studies:

- internal conflicts, like ever changing thoughts and feelings, inability to focus on a selected topic and the inability to be satisfied with completed work;
- external conflicts, like personal relationships, time and resource constraints (Katz 1997:16; Rademeyer 1994: 92-95);
- too much isolation since the research inhibits social activities (Sayed *et al.* 1998:276, 282);
- trying to take unsubstantiated short cuts in completing the research and thus violating the scientific basis of the research;
- not understanding the academic and scientific requirements of a higher degree by overestimating or underestimating what is required;
- misjudging the amount of work that is required in the final writing and editing of the research report (Lessing & Schulze 2003:175; Phillips & Pugh 2000:44-45; Sayed *et al.* 1998:278); having a supervisor who does not know what a research degree and the research process require (Bailey 2002:5; Lessing & Schulze 2003:172) or with limited or no supervision experience;
- losing contact with the supervisor when guidance is crucial;
- not being able to argue a position: “At minimum ... the study must have a 'story line', a coherent thrust which pushes along an argument, an explanation, a systematic set of inferences derived from new data or new ways of viewing current data” (Phillips & Pugh 2000:42);
- absence of a research environment, especially when supervisors are not actively engaged in research themselves (Holderness 2000:16).

The following factors may enhance the completion of postgraduate studies:

- adequate supervision and clear communication with supervisors (Bailey 2002:4);
- personal and collegial support;
- previous experience that may contribute to psychological survival;
- tenacity, determination and perseverance (rather than brilliance);
- familiarity with evaluation criteria (Phillips & Pugh 2000:32; Shannon 1995:11; Smith *et al.* 1993:57-59).

From the literature review, it is clear that supervision of postgraduate studies does not only imply a scientific approach to the process, but also guidance and skills on the side of the supervisor. The supervisor and candidate have specific roles and responsibilities in the process. If these tasks are not accomplished, it can cause frustration to both parties and could even cause early termination (and

non-completion) of the research. The findings of the literature research have been tested in interviews with colleagues from various local and international universities at three different conferences.

RESEARCH DESIGN

A literature study that is exploratory, descriptive and explanatory has been utilised for this investigation. It was complemented by an empirical investigation by means of focus group interviews of the phenomenon. The study aims at exploring a relatively unknown domain that in the context of this investigation is the nature of postgraduate supervision and the factors that contribute to the completion or early termination of postgraduate studies. The researchers describe the phenomenon studied from the literature as accurately as possible.

Keeping the findings of the literature study in mind, the question underpinning this investigation is: What is the perception of lecturers of the supervision of postgraduate studies? Thus, the aim of the research was to investigate the views of academics from various universities on the issue of supervising postgraduate studies. An interview schedule (a plan outlining the proposed approach in interviews, including the themes to be discussed during the interview) was compiled from the literature investigation and was used as basis for the discussions. The compiled interview schedule, as derived from the literature investigation, entails the following themes:

- The nature of postgraduate supervision;
- The role of the supervisor in the postgraduate research process;
- The role of the student in the postgraduate research process;
- Factors contributing to the completion or termination of the study.

These themes are now discussed.

It is important that the collected data be rich in information about the studied phenomenon. Therefore, a purposeful selection was done to engage participants who have experience of supervision of postgraduate students and who would be able to provide a variety of perspectives. Focus group interviews were conducted at three international conferences by means of workshops facilitated by the researchers. These were attended by academics interested in research supervision, who came from ten different universities from Africa, Australasia, America, Canada and Europe.

The following appropriate techniques were applied to ensure the validity of the qualitative findings: (1) Triangulation of methods was used - focus group interview supported by field notes. (2) Uncertainties were clarified during the focus group interviews. (3) Both researchers analysed the raw data to reach consensus about the categories that emerged from the themes and to check the consistency of each other's analysis. (4) The researchers remained objective and did not participate and reveal personal views in the focus group interviews.

The following ethical measures were taken to ensure the rights and privacy of the participants: (1) Permission was gained from the participants to conduct the research. They were informed about the research and the role of the researchers and could decide on participation or not. (2) Confidentiality regarding identity and personal information of the participants were guaranteed. (3) The privacy of the participants was respected and they could withdraw whenever they wanted to. (4) The sources used were acknowledged and feedback will be given to participants by publishing the results in a subject journal. (5) A final report with all essential information was written accurately, objectively and unambiguously.

The processing of the data entailed that field notes were taken during the focus group discussion and that these notes were used as a basis for the processing of data. The analysis process was intuitive and the researchers used different thinking strategies, such as induction, synthesis, bracketing and logical thinking to identify different themes and categories. The raw data gained from the filed notes of the focus group interviews was processed to identify themes, categories and subcategories. The researchers worked inductively by identifying repetitive categories mentioned by the workshop participants. The emerging information was interpreted and explained to construct meaning to answer the research question.

DISCUSSION OF THE FINDINGS

Although an interview schedule was used to focus the discussion on the nature of postgraduate supervision, the role of the supervisor and the student in the research process and factors contributing to the completion or termination of the research, a number of other themes also came to the fore during the discussions.

Supervisors highlighted the satisfaction that is gained from supervision and also indicated some challenges in the research process. Administrative problems and the need for supervisor training were seen as important aspects in postgraduate supervision.

The role of the supervisor and the student in the postgraduate research process

In the discussion of the literature study the roles of the supervisor and student in the research process were discussed under separate headings. However, in the interviews these two roles were integrated by the participants, to such an extent that separation of them would not do justice to the findings.

Supervisors felt the writing of the research report is predominantly the responsibility of the postgraduate student although the supervisor has a definite role providing support in the process. Supervisors also agreed that students need support on the research process and research techniques, although different views existed about the extent of support to be given. According to literature findings, studies are more often successful if there is a balance between supervisor's direction and student's independence (Grant & Graham 1999:82; Holdaway *et al.* 1995:26).

Besides the provision of guidelines, most supervisors felt that the technical editing is the responsibility of the student. Different views were given regarding support on managerial aspects. One supervisor indicated: "I have to help them to get going with the research. How to gather, to organise, to start to write ... some students are really lost in the process." There are numerous aspects to look after. Students need help accessing sources and organising their world of study.

Presenting workshops for writing, forming of support groups and developing effective self-management, which includes the use of journals, project planning, time management, goal setting, effective reading, note taking and information storage is also a way to support students (Grant & Graham 1999:82; Holdaway *et al.* 1995:26).

It can be concluded that students need a lot of academic support. One participant substantiated this view: "Some students do not know how to write a proposal ... in fact ... they do not know what they want to research".

Satisfactory aspects of doing research

It was stated that one of the most satisfying aspects of supervision is to stay in touch with the profession. Research assistance was also mentioned as a most satisfying experience. One of the participants considers a satisfying aspect of supervision as: "transforming a colleague into a full researcher and writer who can present at conferences", although some felt that publication or conference participation is not that important.

By assisting a student in the research process, a supervisor shares his/her knowledge and experience in the scientific approach to researchable issues with the student, but also personally gains from the interaction. Research supervision serves as an opportunity to share intellectual maturity with the student (as a researcher-in-training) and to learn about new research methodologies. Mutual gain from the supervision situation is regarded as a satisfactory experience. Supervisors not only guide their students, but also gain from the situation (Delamont *et al.* 1998:157; Rademeyer 1994:94).

Issues in getting started and challenges during the research

The importance of the development of scholarship ability, amongst other research skills, was raised during the focus group interviews. Students need to understand that research is problem-based and that they should focus on the research problem. Research skills acquired during the formal research process are transferable and applicable to diverse situations of problem-solving, for example, in the work situation.

The difficulty in getting started can be addressed by establishing an initial cluster group. Such a group can counter potential isolation experienced by some postgraduate students. Monthly meetings for students was suggested, as that would provide an opportunity to get to know and learn from each other and to discuss research problems with fellow students. This could also serve as moral support for novice researchers. This is in accordance with findings from the literature (see 2.2).

Another option is for the supervisor and student to develop a working schedule to help the student get started and work continuously. It was suggested that the supervisor could support the student by providing a reading list on the chosen topic, but strong objections were raised against formally providing such a list. It was felt that such a spoon-feeding approach would deprive the researcher of the opportunity to initiate research. Furthermore, it could lead to a built-in bias by focussing on the literature identified by the supervisor.

A key concept in the self-regulatory, synergistic model is that of meta-cognition, which implies the awareness of the components of the postgraduate experience, an ability to reflect on them, and an ability to manage them effectively. Styles & Radloff (2001:98) see the components of the postgraduate experience as:

- goals - motives for engaging in the research process and the production of a thesis
- beliefs - conceptualisations, attitudes and feelings about the self, the thesis and the environment
- strategies - such as help-seeking and writing strategies and strategies to keep on track
- outcomes - cognitive and affective.

Thus, doing postgraduate research implies knowledge and the application of sound research procedures. Students need to acquaint themselves with the conditions and expectations for acceptable research. Students' proposals often do not meet the required academic standard. One person summarised the views of many participants as follows: "... students want to do research, but do not have an idea what it really involves." Some students need much support since they have no underpinning knowledge of or experience in research. According to the literature study, students who want to be researchers need to master specific skills and supervisors can expect a certain level of development (Katz 1997:16; Nerad & Miller 1997:76; Phillips & Pugh 2000:21). However, some students experience difficulty in linking the literature study with the research problem. They are often unable to critically review, sift and query information gathered from the literature.

Administrative problems encountered

The bureaucracy of universities was also indicated as a real problem in getting started. Too much administrative *red tape* may impede the student's enthusiasm. It is important to have a student-supportive and administratively streamlined process in dealing with postgraduate students affairs.

Delegates from various universities present at the workshop reported different admission requirements and procedures for Masters and Doctoral studies. In general, participants agreed that the administration should run smoothly without time delays and that the assessment of students' work should take place as soon as possible. It was also emphasised that the selection of research students should be done with great care because of the high intensity and time-consuming involvement on the part of the supervisor, but also because of a high emotional driving force on the side of the student.

The need to train supervisors in research supervision and methodology

Very little attention is given to the development of supervisors at the different universities. One lecturer said: "No, we do not have formal training ... we learn from each other". Another supervisor mentioned the value of co-supervising, especially in the case of a new lecturer, as a means of training for supervision.

Supervisors do not only need to be trained for their role as supervisors they also need support and in many cases training in research methodology to be able to assist students in their research. Students often do not have sufficient knowledge about the research process and they are dependent on their supervisors for support. One of the workshop participants summarised this situation as "... they do not really know what thesis writing means." Although almost all the candidates have attended (and passed) a module in "Research Methodology", it seems that they still lack a research orientation when they present themselves for research-based studies. The consensus is that proper training in the practice of research methodology is an important aspect of research. According to Pole (1998:262) the best way to effective Doctoral education is an active research culture in which postgraduates are supported and regularly monitored by supervisors who are themselves researchers, within an institution which values and makes a commitment to postgraduate research. Pole (1998:262) also places great value on joint supervision not also to the benefit of the student, but also for the training and support of new supervisors.

In addition to the need for students to be schooled in research methodology and to be guided to develop a research attitude, the need for the training of supervisors was also raised in all the workshops as acknowledging problem areas in research supervision. This need was confirmed in the literature (Schulze & Lessing 2003). Discussions between colleagues are seen by Lindén (1999:362) as an extremely important means of developing professional competence. People can also develop

personal competence through efforts to understand their own supervisory experience. This is done by group discussions at workshops.

The following needs came to the fore in the focus groups with supervisors/promoters:

- There is a need for more discussion and debate about issues in postgraduate supervision raised by this research. Of the most important areas for discussion are examination and student admission.
- There is also a need for the training of postgraduate supervisors, especially in research methods.
- Interaction with supervisors from other universities on issues in postgraduate supervision could be enriching.
- The need for written guidelines to lecturers on postgraduate research is also highlighted by this research (Schulze & Lessing 2003).

CLOSURE

From the reported literature study it is clear that the supervisor and the postgraduate student have very explicit roles in the postgraduate research process. These roles are discussed in some detail in the literature and were highlighted and confirmed by the empirical investigation that was done. Schooling in research tasks and skills is stated explicitly as an issue that needs urgent remedial attention. The interviews revealed that seasoned supervisors experience the guidance of postgraduate students as quite satisfactory although a number of pitfalls were raised by supervisors with less experience in the field. None of the interviewees indicated that they have been formally trained to act as a supervisor, and it seems that a definite need exists for newer academic staff to be schooled in research supervision.

A number of reasons are given for the failure to complete research. Ideas from various international academics are linked to a great extent to information in the literature, describing supervisors' experiences. Supervisors are willing to support postgraduate students on various aspects of their research, but they also expect certain skills to be mastered by the students. Students need much support and training in scientific formulation and writing. In general, supervisors experience supervision as an enriching and satisfactory task.

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