

Guidelines for Supervisors and Co-Supervisors of Masters Students

Directors: EC Kieswetter (President), B Anderson (Vice-President and Chief Executive Officer)
Company Registration No. 2001/009271/07

Registered with the Department of Higher Education and Training as a private higher education institution under the Higher Education Act, 1997.

Accreditation No. 2004/HE07/003

RESEARCH • DESIGN • EDUCATION

TABLE OF CONTENTS

Contents

1	Introduction	2
2	Structure of the Master's Degree	2
3	Supervisors, Co-Supervisors and Students	6
3.1	Appointments	6
3.2	Functions and Roles	7
3.2.1	Supervisor	7
3.2.2	Co-Supervisors	7
3.2.3	Student.....	8
3.2.4	Postgraduate Office	8
3.2.5	Research Office	9
3.3	Initiation of the Dissertation Process.....	9
3.4	Student Progress.....	10
4	The Dissertation	10
4.1	General Guidelines.....	10
4.2	The Dissertation: Requirements and Structure	10
4.3	Submission of the dissertation	12
4.4	Examination	12

1 *Introduction*

The master's degree relies on the successful completion of an **academic research project** to be **reported on in a dissertation**. Research can be defined as a systematic process of uncovering and communicating the truth about a phenomenon and/or its relationship to other phenomena.

At Da Vinci Institute, a master's degree research entails demonstrating that first, the student can conduct research and second, that such research can be utilised in the workplace.

The postgraduate research journey can often be compared to a visitor (the student) driving a car in an unknown region, and a passenger (the supervisor) from that region with knowledge/experience of the area, the general conditions of the road, local traffic rules and related matters. There rests a responsibility on the Supervisor to guide the student to reach the destination successfully – without disempowering the student as the driver! This document summarises the formal and other guidelines that should assist the Supervisor in adding value to the journey not only for the student but also for the Supervisor.

2 *Structure of the Master's Degree*

The Master's programme consists of both coursework (120 credits) and a dissertation (120 credits). A student has to pass the research proposal before progressing with the module work and submitting a dissertation for examination. The focus is on management development and the full qualification accounts for 240 credits at National Qualifications Framework (NQF). level 9.

Coursework

To assist Supervisors, especially those who are relatively new partners, the coursework components are specified in some detail to serve as reference information that should be useful as coordinates for the supervision of the dissertations. The coursework component is delivered in the form of modules with pre- and post- module assignments (PMAs). This course work component consists of a Da Vinci component (60 credits) and a generic or custom-designed component (60 credits).

Access to the qualification

Qualification for which applying	Previous Academic Qualifications	Appropriate Work Experience (years)		Conditions
Master of Management in Technology and Innovation NQF 9	Relevant NQF 8 qualification	5	General	
	Not equivalent to NQF 8 qualification	7	Detailed assessment	Conditions: <ul style="list-style-type: none"> • Demonstrate an understanding at NQF Level 9 (appropriate level descriptors will be used to guide the process). • Evidence of relevant publications, presentations or relevant working experience that could be considered for Recognition of Prior Learning at NQF Level 9

The Da Vinci Master of Management in Technology and Innovation framework is composed of the following:

Systems and Foundational Competencies	Credits
Self, Other and Social Context (MSOS)	10
Problem Solving, Creative Thinking and Decision Making (MPCD)	8
Management Leadership Development (MMLD)	2
Managing the Systems Way (MMSW)	12
Core Competencies	Credits
Management of Innovation (MMOI)	10
Management of Technology (MMOT)	10
Management of People (MMOP)	8
Business Management Competencies	Credits
MVIN - Visual Intelligence	12
MLCA - Leadership Perspectives: The Leadership Challenge in Africa	12
MREF - Reverse Engineering the Future	12
MGLC - Leadership Perspectives: The Global Leadership Challenge	12
MCM - Change Management	12
Total Credits	120

Research	Credits
MDISS - Dissertation	120
Total Credits	240

The module outcomes to support the writing of the dissertation

Module	Purpose and Learning Outcomes
<p>Management of Innovation</p>	<p>Management of Innovation is about developing and creating a sustainable end to end innovation process within the organisation.</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> ☞ Demonstrate an understanding of the Management of Innovation and explain the potential thereof on their organisation; ☞ Conceptualise and explain innovation as a key business process; ☞ Access innovation barriers and enablers and develop strategies to overcome and/or enhance these in their organisation; ☞ Develop and describe a strategy to implement and embed an end-to-end innovation process in their organisation; ☞ Design a plan to develop an innovation culture and capture and drive creativity in their organisation; and ☞ Explain the role of tools and technologies such as Information and Communications Technologies in driving and supporting innovation.
<p>Management of Technology</p>	<p>Management of Technology now integrates technology platforms from a technology driver perspective and strategically manages these so that the best value is derived from technology applications.</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> ☞ Appreciate the impact of technology on business, society and the processes of change and how it can be best integrated into the pursuit of commercial success; ☞ Assess the technological competence of the business, its competitors and best practice exemplars in relation to both the context of the people and hardware involved; ☞ Identify technology needs in the context of the key business drivers and the means to access such technology through an understanding of the research and development process; ☞ Appreciate the benefits and principles of implementation of multifunctional organisation and team working in the development and integration of technological change; and ☞ Appreciate the tools and techniques necessary to identify, assess and deliver technological change at an acceptable risk.
<p>Management of People</p>	<p>Management of People expands the people performance ideas and incorporates organisational transformation as well as entrenches organisational growth and wellness concepts and applications.</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> ☞ Understand key issues in the behaviour of people in a work situation; ☞ Consider various options for designing appropriate organisational structures; ☞ Be aware of the people dynamics surrounding specific organisational architecture; ☞ Understand the individual behavioural requirements for high performing structures and teams; ☞ Integrate organisational wellness strategies operationally; and ☞ Distinguish between effective transformational leadership and transactional management roles.

Module	Purpose and Learning Outcomes	
Managing the Systems way	<p>Managing the Systems Way develops full-spectrum systems thinking and causal loop processes such that extremely powerful problem identification processes are developed. Students are able to unpack current and future integrated strategies for organisational renewal.</p> <p>The student should be able to:</p> <ul style="list-style-type: none"> ☞ Conceptualise and explain the essential components of a system and key attributes with respect to its behaviour; ☞ Demonstrate an understanding of systems through an ability to select appropriate models and develop a system’s model for their organisation; ☞ Interpret the impact of interventions, like new innovations, in the context of understanding the impact on different parts of the system and the system as a whole; ☞ Use a systems perspective in analysing problems and failures; and understand the basic constructs of chaos theory and their applicability in the work environment. 	
Research	<p>The student should be able to:</p> <ul style="list-style-type: none"> ☞ Formalise a research challenge; ☞ Understand, interpret and apply appropriate research methodologies; ☞ Write a dissertation; and ☞ Track business implications and benefits. <p>On successful completion of this programme, students are required to integrate all assignments to reflect an understanding of the four exit level outcomes as part of their research report.</p>	
Period of Registration		
Programme	Duration of programme (years to complete)	
Master of Management in Technology and Innovation	2 - 4	

Failing to finish the qualification/programme within the specified duration of the programme, students must re-register to complete the qualification/programme.

The Dissertation

The dissertation will be submitted in partial fulfilment of the award of a Master of Management in Technology and Innovation degree. In general, a dissertation represents an academic research report involving the application of theory, covered at least partially in the modules, to a significant work-related problem and demonstrating clear evidence of structured thought processes.

Essential elements of the dissertation include a critical review of relevant literature, research methodology and design, analysis of data/information, interpretation of the results and reporting of the preceding phases according to international conventions.

The total workload of the dissertation should be in the order of 1 100+ notional hours; which includes all work activities related to completing the dissertation. (Total of 1 100 + hours = 110 credits)

3 Supervisors, Co-Supervisors and Students

3.1 Appointments

Each student has the support of one Supervisor and Co-Supervisors; namely:

The Supervisor, appointed by the Research Committee, based on the following criteria:

- Hold at least an appropriate masters or a doctoral degree to supervise Master's students.
- Have particular expertise in the field of the dissertation.
- Preferably, has already supervised at least two masters students successfully.
- Undertakes to apply the relevant Da Vinci theoretical paradigms, methodological, supervision, dissertation, and ethical guidelines.
- Have attended the supervisor on-boarding workshop and at least one supervisor training workshop per year for Continuous Professional Development (CPD).

Co-Supervisors are identified and nominated by the student, but approved by the Research Committee, based on the following criteria:

- While not essential, the Co-Supervisor should preferably have a relevant degree at the master's level or at the doctorate level.
- The ability to identify and promote the application of the research and its findings to the work environment and in this way, in effect, facilitating the dissertation quality.
- Should have shown significant awareness of the technical and managerial aspects of the project within the context of the work environment, and be in a position to assess the contribution of the student to the project.

3.2 Functions and Roles

3.2.1 Supervisor

The Supervisor is appointed by the Research Committee and serves as the 'accountable' person with regard to the scientific process and quality of the research and would normally add value to the dissertation through the functions listed below:

- Serves as the key communication node with regard to all matters relating to the progress of the student.
- Guide the student in terms of the required technical, project management and academic requirements of the project, without doing the work.
- Liaise with the Co-Supervisors to ensure the project is adequately directed in respect of its academic and industrial quality and relevance.
- Monitor progress, assess effort, competence and comprehension, as well as provide the student with feedback on submitted sections of the draft dissertation.
- Assess the professional relevance of the research.
- Participate in the oral examination in accordance with the guidelines.
- Support the student in writing and publishing a research article in collaboration with the Research Office.
- Read and assess the completed dissertation in terms of the Da Vinci guidelines.
- Spend approximately 40 to 60 hours (including face-to-face, e-mail, etc.) per student in the course of the life-cycle of a dissertation project.

3.2.2 Co-Supervisors

The Co-Supervisors are responsible for:

- Jointly, with the Supervisor, monitor and support the student.
- Guide the student in terms of technical, managerial, and other general aspects, without doing the work.
- Liaise with the Supervisor to ensure the project is adequately directed with respect to its industrial relevance.
- Monitor progress in order to assess effort, competence and comprehension.
- Facilitate or promote the implementation of the findings of the dissertation.
- Read and assess the completed dissertation, in terms of the Da Vinci guidelines as provided.
- Participate, with the Supervisor, in the oral examination in accordance with the guidelines.

The above functions will require the following time minimum commitments:

- The initial meeting between the Student and the Supervisor to ensure the research is viable, meets the academic and industrial requirements, and the necessary resources are available – 1 hour.
- Subsequent three-way meetings which would include Co-Supervisors, if necessary – usually only the first is required.
- Student meeting with the Supervisor(s) to discuss his/her ideas, progress, problems – depending on the student –approximately one hour per month.
- Assessment and feedback to the student during the research period – 15 to 20 hours.
- Oral examination – 2 hours.

3.2.3 Student

Although it is rather obvious, it is necessary to emphasise that the student is the owner of his research and key role player in the research and innovation journey. It follows that the main responsibility for student's progress and reaching the qualification of a master's degree lies with the student. The following properties normally characterise the functions, role and responsibilities of a postgraduate student:

- Primary responsibility for initiating and completing all phases of the dissertation project.
- Commitment to learning, discovery/innovation and productivity.
- Dedication and commitment to the research project, including the theme, design and project management plan.
- Honouring of all agreements with the supervisors.
- Managing work, personal and social life, knowing that sacrifices will be made over the short term!

3.2.4 Postgraduate Office

The Postgraduate Office will ensure that the Student and Supervisors have all the necessary guidelines, marking schedules, etc.

3.2.5 Research Office

The Research Office will:

- Intervene when and where necessary if challenges are experienced during the research process.
- Act as a link between various parties where and when necessary.

3.3 Initiation of the Dissertation Process

The dissertation process is initiated when the student submits a research proposal. The research proposal is reviewed and assessed by the Institute. If the proposal qualifies, it is forwarded to the Research Committee which approves the proposal, the title of the topic, and allocates Supervisors. The Program Convener of the cohort will, upon the approval of the research proposal, communicate accordingly with both supervisors and student.

The process will be launched by a first meeting between the student and Supervisor following the guidelines below:

- The student should take the initiative to organise the first meeting with the Supervisor.
- The envisaged research and project plan should be acceptable to all parties in terms of its content and relevance; its viability and that resources are available to ensure that the student can carry out the research programme.
- All parties should commit themselves explicitly to the project plan.

Participants at the meeting should spend time clarifying all relevant aspects of the research design, including literature survey, critical review of the management of technology, innovation and people in a systemic way, research methodology, dissertation structure and any other aspects, and agree to such outcomes stipulated in the design process.

All parties should agree to a time schedule and how the schedule will be monitored.

3.4 Student Progress

The following cryptic notes may be relevant to both the Supervisor and Student, since the student's progress is a key performance area at an institutional and personal level, and obviously needs to be monitored – with the necessary guidance where necessary:

- All Master's students will have completed an induction process that covers the research process and the requirements of the dissertation.
- Students should have designed a research project plan (including a time schedule) for their research period.
- Students who are new to the research process often need guidance in tackling some aspects of the research such as knowing where to start, how to carry out a literature search, etc.

4 The Dissertation

4.1 General Guidelines

The Research Office will provide all students with detailed guidelines on the conventional requirements for the dissertation, including a structure and the motivation for the dissertation.

NB: The Supervisor should explicitly, and in writing, give their approval for the student to submit the dissertation for examination and fill out a form in which it is agreed that the dissertation complies with the requirements of an academic research report. In instances where there is a deadlock between the Student and the Supervisor, the Research Office (Dean: Research) may intervene to restore the deadlock.

4.2 The Dissertation: Requirements and Structure

A dissertation is a formal academic research report on a practical research project. A flawed literature research and research process cannot be disguised in an elegant report. However, good research can sometimes be obscured by poor structuring, language and technical editing and a general careless approach. It should communicate effectively with the relevant research, innovation, professional and employer communities. The structure

would comply with standard conventions and it should be concise. It is important that the dissertation be professionally edited – language and technical aspects – and comply with the Da Vinci guidelines as summarised below:

- Cover, title page and other front matter should comply with Da Vinci specifications.
- Abstract/Summary: This gives the reader a brief summary of the academic research report: on research objectives, research methodology, results, and conclusions/recommendations – not more than 350 words, or one page. No sources are cited.
- Table of Contents: Properly structured, clearly shows section sequence and logical flow of dissertation. Its importance often underestimated, the Table of Contents clearly indicates the structure of the dissertation.
- Chapters 1 – Introduction: Rationale for the study; general statement of the problem; the aim of the study; key research question/objectives stated explicitly; introduction to research methodology; the structure of the rest of the dissertation.
- Chapter 2 – Conceptual framework and literature review: Definition of key concepts (variables, factors, and drivers) and their relationship to each other (= theoretical framework); critical review of the relevant and recent literature. The management of technology, innovation and people in a systemic context integrated into the discussion.
- Chapter 3 - Research Design: Operationalisation of concepts and research questions (also motivation for above); design (e.g. survey, case study, etc.); sources of data/information (e.g. people, documents); measures/instruments for data collection (e.g. questionnaire, interview, focus group, content analysis); statistical and other methods used for analysis of the data/information.
- Chapter 4 – Results: Presentation of results in explicit, transparent and systematic form and aligned to the description and hypotheses in the previous chapter; results should preferably not be interpreted and comprehensively discussed here – leave the reader to assess the results on his/her own.
- Chapter 5 – Summary: Evaluation and discussion of the results within the context or rationale of the study, the conceptual framework, design and methods used; an assessment of the extent to which the objectives of the study have been attained, research questions been answered or hypotheses been proved. New perspectives can emerge in this chapter but not new information that should have been covered in earlier chapters. No new material should be added in Summary discussion chapter – which means: no sources should be cited.

- Chapter 6 – Implementation: Guidelines or a framework on how the findings (could be in the form of hard/soft technology and innovation) should be implemented for maximum impact.
- References - Use the Harvard referencing style. If a literature source provides any information, it should be cited in the text and listed in the list of references.
- Appendices: All relevant material that would not assist the reader to follow the text of the dissertation should be included in the appendix/ces. These normally include questionnaires and measuring instruments, short transcriptions (especially in the case of qualitative research approaches), preliminary illustrative material and data sets.

4.3 Submission of the dissertation

The dissertation should be submitted according to the dates and guidelines provided by the Research Office, prior to the end of the student’s registration.

4.4 Examination

The specific guidelines and differential weights of the individual components are available from the Research Office, but the following summary offers an overview of the elements of the examination process.

The following weights are given to components of the dissertation:

	Weight
1. Title/ Background/ Aim/Objectives/Rationale	15
2. Literature Review	15
3. Research Design and Methodology	20
4. Technical Aspects: <ul style="list-style-type: none"> • Structure • Data • Writing Style • Referencing 	15
5. Research findings, conclusions and recommendations	20
6. Integrating the Business Leadership Framework Advancing knowledge on managerial leadership and integration of the Da Vinci Business Leadership Framework, i.e. Management of Technology, Innovation, People and Systems Thinking (TIPS)	15
	100

The Examiner must recommend a final mark for the dissertation using the following assessment guidelines:

Pass without revision: 75 >
Pass after minor revision: 60 – 74 Re-submission to the Examiner is not necessary, and the changes to be effected under the guidance of the Supervisor
Re-examined after major revision: 50 – 59 The dissertation needs major revisions and must be submitted for re-examination
Fail: Re-submission and re-examination: 40 – 49 The dissertation does not meet the minimum criteria, but if it is reworked and substantially re-written, it may be submitted for examination
Fail: Not eligible for re-submission: < 39 The dissertation is highly flawed and the quality of the work is totally unacceptable for a dissertation
The Examiner is required to submit a brief (narrative) report on the dissertation based on the following criteria: <ul style="list-style-type: none"> • Title / Background / Aim / Objectives / Rationale • Literature Review • Research Design and Methodology • Technical Aspects: Structure, Data, Writing Style, Referencing • Research Findings, Conclusions and Recommendations • Integration of the Business Leadership Framework

After the examination reports on the dissertation have been received from the examiners, The Da Vinci Institute will organise an oral defense of the dissertation, to be attended by Supervisors, as well as an audience of approximately five persons who are familiar with the topic, and/or its relevance. The Guidelines for the oral defense of a dissertation will be made available by the Research Office.

The oral defense takes the form of a professional presentation by the student, followed by a question and answer session. The total length of the oral defense will be - 2 hours. The oral defense is based on the research work carried out by the student. The oral defense counts 10% towards the final result of the dissertation.

Should the student not pass, he/she will be given one opportunity to improve the dissertation in order to meet the minimum standards. All students are given three months from notification to complete the corrections.