DURBAN UNIVERSITY of TECHNOLOGY

Research Capacity Building Workshops
2. The Research Process

Programme

- Introductions
- Resources available

N.B. We may choose to focus on some aspects only of:

- The research process

Introductions

1. Introduce yourself, your subject area and what you are supervising/intend to supervise (e.g. MTech, DTech).

2. Say what you would most like to learn from this workshop.

How does one acquire and develop expertise as a researcher?

Researcher prerequisites

We learn by doing.

There is no “right way” to do research, but, there are certain basic principles:

The researcher should have a good knowledge of

- the subject area in particular,
- the research process in general,

and must have a passion for finding out things.

Importance of Supervision

The supervisor should have the skills/expertise the student is expected to master, or, at least, be able to point the student towards a suitable expert in that area (e.g. statistics).

It is accepted that the student may end up having more specialist subject knowledge than the supervisor (in fact, desirable, particularly in a doctorate).

How much help should the supervisor give?

- The supervisor should help the student to become an independent researcher.
- General opinion is that doctoral students need less help than masters students.
- The choice of supervisor must be to the student's satisfaction.

For my own part:

- *The student must choose the topic.*
- *The work is most intense in the first six months when the student is preparing the proposal.*

Resources available

Handbooks:

- Postgraduate Student Guide (See the *Critical Path*, in particular.)
- Postgraduate Forms (PG Forms)

These tend to assist with administration more than the actual process.

- Manuals

Books/articles

Brabazon, T. 2010. How not to write a PhD thesis [Online]. *Times Higher Education*, 28 January 2010. Available: http://www.timeshighereducation.co.uk/story.asp?sectioncode=26&storycode=410208&c=1 [Accessed 1 June 2010].

Dietz, A.J., Jansen, J. D. & Wadee, A.A. 2006. *Effective PhD supervision and mentorship. A workbook based on experiences from South Africa and the Netherlands*. South Africa-Netherlands research Programme on Alternatives in Development (SANPAD). Pretoria: UNISA Press.

Hoffstee, E. 2006. *Constructing a good dissertation: a practical guide to finishing a master's, MBA or PhD on schedule*. Johannesburg: EPE.

Van Aswegen, E. S. 2007. Post-graduate supervision: the role of the (language) editor: sed quis custodiet ipsos custodes? (Juvenal, Satire 6, 346 - 348). *South African Journal of Higher Education,* 21, 1142 -1154.

Resources available contd.

Online resources and courses:

Materials are posted online after workshops, including useful articles and books.

Research/supervision processes are dealt with in some of these resources.

- Higher Degrees Research Module
- Research Matters

http://dutmoodle.dut.ac.za/moodle/

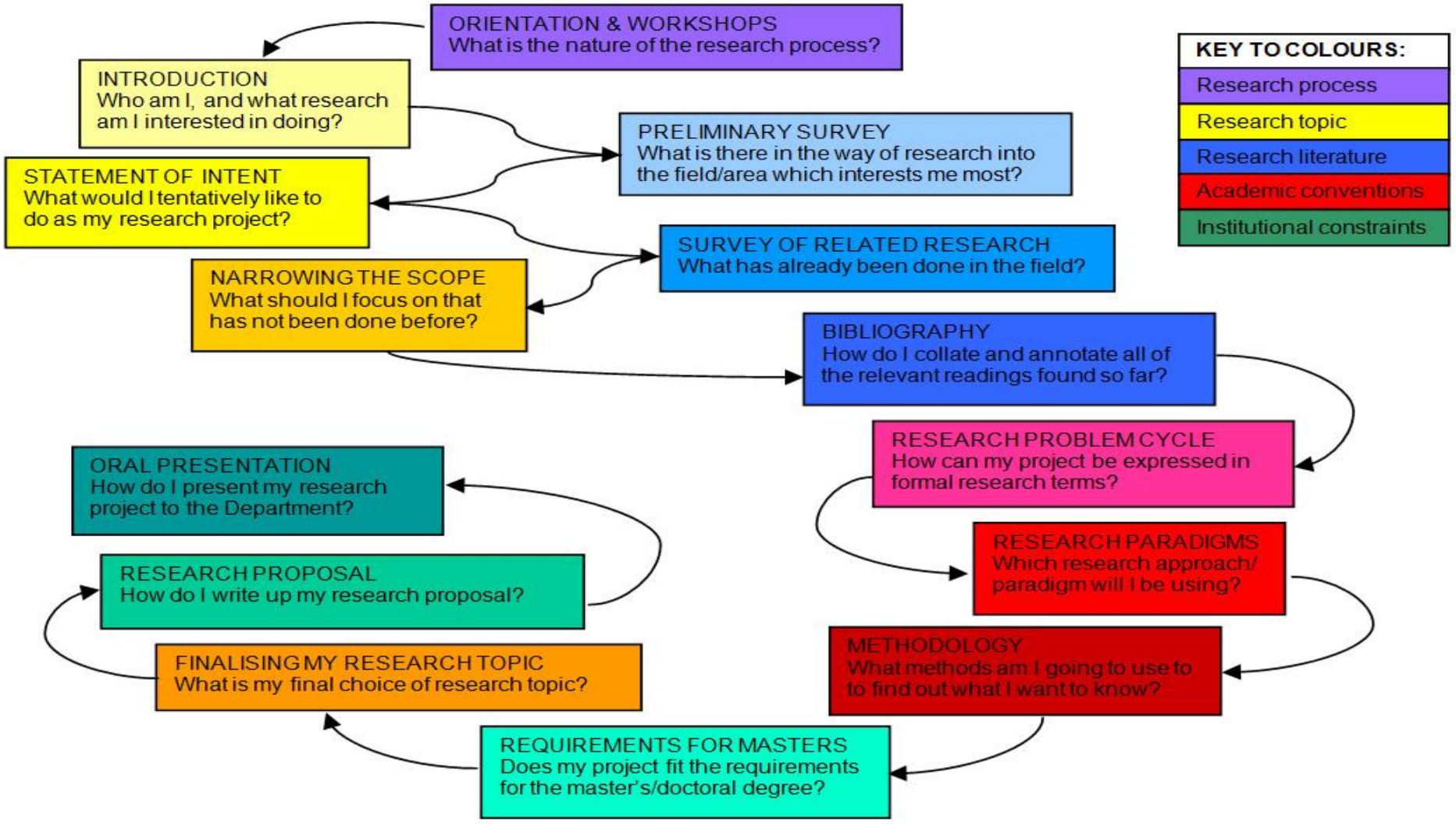
Courses are listed under *RPS Research Capacity Building*.

Resources available contd.

Software:

- EndNote
- NVIVO
- Turnitin
- Library.nu
- Vox Proxy
- Writing Tutor Program

The research process in proposal writing



Research processes

However, these processes are not random, but follow a complex system:

- The research must be **contextualized.**
- Some **knowledge content** must be generated.
- Knowledge is generated in various **interactions.**
- Social (i.e. research) **conventions** govern what is considered to be “true knowledge”.
- The whole research process is regulated by **feedback**.

1. The research must be **contextualized**.

To qualify as research, a study must be set in its social context as well as in the context of existing knowledge in the field.

- The social context is usually described in the thesis Introduction.
- Existing knowledge in the field is usually covered in the Literature Review of the thesis.

Most novice researchers have difficulty setting their research in context.

Setting your research in context

To set your research in context, answer the following questions (in ONE sentence for each question):

- What does my research involve?
- In what social setting does it take place?
- What is already known/has been done in that field?
- Why bother?
- What is the value of what I am going to find out?

2. **Knowledge content** must be generated.

Apart from summing up existing knowledge, the thesis includes a little “new knowledge” in a masters, and a greater amount in a doctorate.

The “new knowledge” is the result of the empirical work (i.e. data gathering), which may also result in new theoretical knowledge.

3. Knowledge is generated in **interactions**…

- with other researchers and experts in the field (face to face and in their literature)
- with one's supervisor
- in one's own thinking processes (intrapersonal)
- in one's own writing (informal and formal)
- with the world (i.e. with participants and other data sources used in the empirical work)

4. Research **conventions** govern what is considered to be "true knowledge"

Research conventions include:

- Thesis structure
- Choice of content
- Writing style
- Specialist language
- Referencing and citation styles
- Font and spacing conventions
- Numbering
- Figures and tables

5. The research process is regulated by feedback.

- Supervisor feedback
- Peer feedback
- Departmental and faculty feedback
- Feedback on conference papers and articles
- Proof-reader and editor feedback
- Self-reflection
- Examiner feedback

The research process is systemic

SYSTEM OF FUNCTIONS UNDERPINNING THE RESEARCH PROCESS	
Functions	Research…
Contextual	…must be contextualised.
Ideational	…needs knowledge content.
Interactive	…constructs knowledge in interactions.
Social	…is governed by research conventions.
Reflexive	…is regulated by feedback.

FUNCTIONS	RESEARCH
	The researcher…
CONTEXTUAL A research project needs to be properly contextualised before it can be carried out.	…sets the research project in context by deciding on a topic, reading up on the subject, and planning how to carry out the project…
IDEATIONAL Knowledge content in the form of data needs to be generated.	…and gathers data…
INTERACTIVE Some form of interaction is necessary to generate data.	…by interacting with participants and/or the world: observing, measuring, questioning and recording results.
SOCIAL The findings need to be socially accepted as "knowledge".	…carries out the project with attention to rigour and protocols, so that results can be seen to be reliable.
REFLEXIVE The reflexive function regulates the research process in the manner of a feedback loop.	…checks assumptions and procedures to ensure that s/he is on track.

Supervisor involvement

SUPERVISOR INVOLVEMENT/DETACHMENT DURING THE COURSE OF THE RESEARCH	
CHOOSING A TOPIC AND WRITING THE PROPOSAL	Intense involvement is required to ensure that the student prepares properly for the task, and submits a sound proposal.
DATA GATHERING	Monitoring only is required, unless there are problems.
DATA ANAYLSIS	The student must be given the chance to make sense of the data.
WRITING UP THE THESIS .	This must be monitored carefully and regularly, but fine editing is not appropriate at the early drafting stages: respond first to content, later to structure.
PREPARING THE THESIS FOR EXAMINATION	Intense involvement is required here. Students should produce a table of contents so that the supervisor can check that the structure/logic is sound, and should be directed to suitable proof-readers so that language and conventions are correct.

Problems with supervision in South Africa

Dietz *et al.* (2006:10) categorise the following as "systemic problems" with supervision in South African universities:

1. The uncontrolled growth of doctoral student numbers and the corresponding lack of supervision capacity.
2. The quality of PhD supervisors.
3. The quality of doctoral student intake.
4. The lack of institutional selectivity with respect to supervisors.
5. The lack of an induction experience for new supervisors.
6. The lack of internal evaluation systems for measuring supervision competence.
7. *A compromised system of external accountability* for the final thesis.
8. The lack of an enabling departmental or institutional culture to support effective supervision (2006:11-12).

Research administration: critical path

CRITICAL PATH FOR POSTGRADUATE QUALIFICATIONS (this is contained in more detail in the text of the Guide)	
STUDENT'S RESPONSIBILITIES	**UNIVERSITY'S RESPONSIBILITIES**
(1) **APPLICATION AND PRE-REGISTRATION FOR HIGHER DEGREE**	
The prospective student approaches the HoD with a proposed research topic and Supervisor (if available) and completes form PG1 (*Notification of Proposed Research Topic and Supervisor*) together with the HoD. The prospective student completes the preliminary registration form and submits it, together with form PG 1 and all supporting documents, to the Faculty Officer. *See section 3.1 for further information.*	The Faculty Officer processes the prospective student's registration and retains form PG1 on record after it has been noted by the FRC and signed by the Executive Dean/FRC Chair. *The HoD is to update form PG1 if/as needed (e.g. when appointment of Supervisor/s occurs).*
(2) **APPOINTMENT OF SUPERVISOR**	
The student may accept the nominated Supervisor or request another person.	The HoD appoints a suitable Supervisor, and updates form PG 1 if/as necessary. Note: The approval process is faculty specific.
(3) **CONTRACT AGREEMENT BETWEEN STUDENT AND SUPERVISOR**	
The student negotiates a contract with the Supervisor, which is included on form PG1.	The Supervisor completes (or updates) form PG1, and the appointment is noted at the FRC.
(4) **SUBMISSION OF RESEARCH PROPOSAL TO FRC**	
The student submits a Research Proposal to the Supervisor on form PG4a (*Research Proposal and Ratification of Research Proposal by the Higher Degrees Committee*), and prepares the Research Budget, which can be accessed after ratification by the HDC.	The *Checklist and Evaluation of Research Proposal* section of form PG4a must be completed by a suitably qualified Reviewer prior to submission of the proposal to the FRC. The Supervisor then signs where necessary and submits form PG4a via the HoD to the FRC. A section of PG4a (pages1-2/3) serves before the HDC for ratification.

Critical path contd.

5 **SUPERVISOR AND STUDENT PROGRESS REPORTS**	
The student completes an annual progress report on form PG5a (*Annual Progress Report: Student*) and submits it via the HoD to the FRC.	The Supervisor completes an annual progress report on form PG5b (*Annual Progress Report: Supervisor*) and submits it via the HoD to the FRC.
6 **INTERRUPTION/EXTENSION/TERMINATION OF STUDIES**	
In the case of unavoidable interruptions/delays or requests for extension or termination of studies, the student must complete PG6 (*Application for Interruption/Extension/Termination of Studies*).	The Supervisor checks completed form PG6 and submits it via the HoD to Faculty Board.
7 **NOTIFICATION OF INTENTION TO SUBMIT THESIS/DISSERTATION FOR EXAMINATION**	
The student submits PG7 (*Notice of Intention to Submit Dissertation/Thesis for Examination*) to the HoD *at least 3 months in advance* of the intended date of exam submission of dissertation/thesis.	The HoD, in consultation with the Supervisor, should identify suitably qualified Examiners *at least 3 months in advance* of the anticipated submission date. The HoD is to forward form PG7 to the Faculty Officer.
8 **NOMINATION OF EXAMINERS**	
	The HoD, in consultation with the Supervisor, submits names of suitable Examiners to the FRC for approval on form PG8 (*Nomination of Examiners*).
9 **EXAMINATION RESULTS**	
The student undertakes any amendments as may be recommended by examiners before submitting the prescribed number of print and electronic copies to the Faculty Office.	The HoD, via the FRC, submits Examiners' results and recommendations on forms PG10 and PG11 to the HDC for approval. The Faculty Officer notifies the student of the decision after HDC approval.
10 **GRADUATION – CONGRATULATIONS!**	

Possible problem areas

- Lack of knowledge about DUT rules/procedures
- Different Faculty/Departmental interpretations
- Conferment of status
- Change of supervisor
- Selection of Examiners
- Fees and registration
- Time wasted *on* administration
- Time wasted *by* administration

How to log in to Moodle courses

- To use Moodle courses, go to web address:
- http://dutmoodle.dut.ac.za/moodle/
- If you have already been registered on the Moodle courses **Higher Degrees Research Module** or **Research Matters**:
- Log in (top right hand corner) with Username and password.
- Username for staff/students: staff/student number
  Password (for staff and students): research