

Doctoral Supervision

Let's think about it

Pandelis Ipsilandis

Professor Emeritus

University of Thessaly, Greece

Contents for discussion

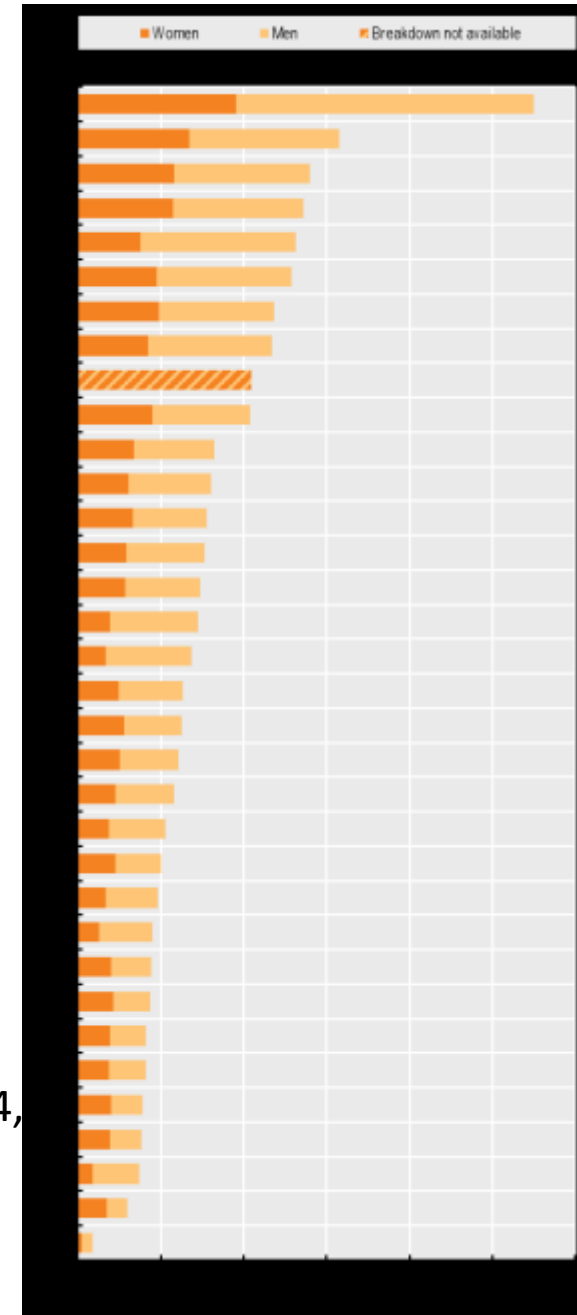
- I. Doctoral Studies: An evolution...
- II. Before Beginning a Doctorate?
- III. Managing Expectations...
- IV. Doctoral Supervision
- V. Completing the Doctorate?
- VI. Approaches to Research Supervision
- VII. Other issues?
- VIII. Doctoral Education in Europe

Doctoral Studies: An evolution...

What the numbers tell us

- Doctorate holders in the working age population, 2012
Per thousand population aged 25-64

- OECD calculations based on OECD data collection on Careers of Doctorate Holders 2014, www.oecd.org/sti/cdh; and other international sources, June 2015.



10 Basic Principles for the third cycle

Bologna process, Salzburg 2005

1. The core component of doctoral training is the **advancement of knowledge through original research**. At the same time it is recognised that doctoral training must increasingly **meet the needs of an employment market that is wider than academia**.
2. Embedding in institutional strategies and policies: **universities as institutions need to assume responsibility** for ensuring that the doctoral programmes and research training they offer are designed to meet new challenges and include appropriate professional career development opportunities.
3. The **importance of diversity**: the rich diversity of doctoral programmes in Europe – including joint doctorates – is a strength which has to be underpinned by quality and sound practice.
4. **Doctoral candidates** as early stage researchers: should **be recognised as professionals – with commensurate rights** - who make a key contribution to the creation of new knowledge.
5. The **crucial role of supervision and assessment**: in respect of individual doctoral candidates, arrangements for supervision and assessment should be based on a transparent **contractual framework of shared responsibilities** between doctoral candidates, supervisors and the institution (and where appropriate including other partners).

10 Basic Principles for the third cycle

Bologna process, Salzburg 2005

6. Achieving critical mass: Doctoral programmes should seek to achieve critical mass and should draw on different types of innovative practice being introduced in universities across Europe, bearing in mind that **different solutions may be appropriate to different contexts** and in particular across larger and smaller European countries. These range from graduate schools in major universities to international, national and regional collaboration between universities.
7. Duration: doctoral programmes should **operate within appropriate time duration** (three to four years full-time as a rule).
8. The promotion of innovative structures: to meet the challenge of interdisciplinary training and the **development of transferable skills**.
9. **Increasing mobility**: Doctoral programmes should seek to offer geographical as well as interdisciplinary and intersectoral mobility and international collaboration within an integrated framework of cooperation between universities and other partners.
10. Ensuring **appropriate funding**: the development of quality doctoral programmes and the successful completion by doctoral candidates requires appropriate and sustainable funding

The evolving landscape

- Doctoral degrees are no longer simply a training ground for the next generation of academics. Different forms have evolved to encompass multi-and trans-disciplinary study by practitioners within their work context (Lester, 2004). The designation has also changed to include terms such as professional, industrial or practice-based PhDs or Doctorates (Fillery-Travis, 2012).
- A significant number of the 745K doctoral candidates in Europe (Eurostat, 2011) are undertaking modern doctorates (e.g. 16% of all German doctorates).
- Need to distinguish between Traditional (Ph.D.) vs. “Modern” Doctoral degree
 - And, as always, there is a grey area in the between

The evolving landscape

- Ph.D.
 - Prepare students for career in Teaching / Research
 - Focus on capabilities required of candidates, mainly research and teaching
 - New generation of Academics
- “Modern” Doctoral studies
 - Applied nature of the required outcomes (*Law, Business, IT,..*)
 - Knowledge exchange between industry and academia,
 - Development of higher levels of professional practice
 - Individualised development programmes for practitioners of advanced standing.
 - Candidate’s significant expertise and knowledge of the work context and environment may be beyond that of their supervisors
 - Priorities are, in part at least, set by the needs of their organisation and work role
- Do we need a formal differentiation ?
 - Both are needed
 - Difficult to serve diverse needs
 - Assessment standards must remain the same for all doctorate types

The evolving landscape

- Better conditions for doctoral candidates
 - Measures related to supervision, support and qualifications, within the framework of **structured doctoral training**
 - Quality Assurance processes
 - Transparency of the supervisory relationship
 - Support for young researchers
 - Opportunities for internationalization
 - Opportunities for publishing research work

What is doctorate supervision today?

“...caring for students has to be the key”

- Involves the fundamentals of good teaching, among them, concern for students, interest in their progress, and the provision of thoughtful and timely feedback.
- Intensive form of teaching, in a much broader sense than just information transfer. It involves much time and energy. Good supervisors are aware of this and of the professional commitment necessary to every student they agree to supervise.
- The supervisory relationship has a particularly personal dimension, especially when students face crises of confidence or personal problems.
- Research students are highly individual. Different preferences, expectations of the relationship, and approaches to study. Recognise and value this diversity, and adjust own practices accordingly.
- Extend their students well beyond what they thought possible, by setting high but realistic standards. Encourage independence by building students' confidence in their personal research capabilities.
- Finally, good supervisors are conscious of their mentoring role. They aim to be a model for first-rate scholarship. **Develop a quality of supervision culture. New academics must share and promote it.**

Which of the following are the big Challenges you face?

1. Advancement of knowledge through original research.
2. Meet the needs of an employment market that is wider than academia.
3. Universities as institutions need to assume responsibility
4. Importance of diversity
5. Doctoral candidates should be recognised as professionals – with commensurate rights
6. The crucial role of supervision and assessment:
7. Contractual framework of shared responsibilities
8. Different solutions may be appropriate to different contexts
international, national and regional collaboration between universities
9. Operate within appropriate time duration
10. Development of transferable skills
11. Increasing mobility
12. Appropriate funding

Before Beginning a Doctorate?

Before Beginning a Doctorate?

- **Candidates**

- Should examine their motivation
 - They are taking a decision about a period of several years during which the focus of their life will take on a new shape or even change completely
- Cannot write a thesis in one's spare time!
- Consider at an early stage the question of possible professional development after completion of the doctorate

- **Supervisors should be involved**

- In a better position to assess the perspectives and prospects of an academic career that may be open to their doctoral students
- Be clear in their own minds about why the prospective candidate wants to take a doctorate, and should expect the candidate to be clear about this too
- Sometimes is better for both sides for the doctoral application to be rejected

Reasons for taking a doctorate?

Intrinsic interest in the research topic: *Someone is fascinated by the discipline or by a particular topic.*

- Will my chair or institute provide this PhD candidate with the best possible environment for the research she or he wants to undertake?
- Is a graduate school or doctoral programme an option?
- Does the topic this individual wants to investigate add something to the existing research focus of my chair or research institute?
- Are there suitable networks in existence that this individual can be integrated into?
- Am I prepared to devote a considerable amount of time to academic interaction with this individual, and also to invest time in their personal development?

Reasons for taking a doctorate?

Academic career: *This individual wants to pursue an academic career*

- Will my chair or institute provide this PhD candidate with the best possible environment for the research she or he wants to undertake?
- Does the topic this individual wants to investigate add something to the existing research focus of my chair or research institute?
- Are there suitable networks in existence that this individual can be integrated into?
- **Will the prospective candidate benefit from contributing to teaching?**
- **Does the planned research topic indicate that high-quality publications can be expected?**
- **Does the prospective candidate have the necessary personal prerequisites?**
- **Will the prospective candidate fit into the scientific community?**
- Am I prepared to devote a considerable amount of time to academic interaction with this individual, and also to invest time in her or his personal development?

Reasons for taking a doctorate?

Non-academic career: *The potential candidate needs the academic qualification in order to pursue professional success outside the university, e.g. in industry*

- Am I prepared to accept this motivation on the part of a doctoral candidate, or do I prefer to supervise those with a purely academic interest?
- Will my capacities meet with the necessary and pragmatic effort regarding time and resources?
- Will the pragmatic approach satisfy my academic standards?
- Despite the pragmatic considerations, does the proposed topic fit into my research focus?

Reasons for taking a doctorate?

Professional goals in science and research management

- Am I prepared to accept this motivation on the part of a doctoral candidate, or do I prefer to supervise those with a purely academic interest?
- Will my capacities meet with the necessary and pragmatic effort regarding time and resources?
- Will the pragmatic approach satisfy my academic standards?
- Despite the pragmatic considerations, does the proposed topic fit into my research focus?

Reasons for taking a doctorate?

A lack of direction: *Someone wants to write a thesis as a stopgap or for want of any other goals*

- Given these conditions, am I interested in supervising this thesis?
- Is there a danger that both the candidate and I will waste our time, and that the thesis will not be completed?
- Are there any (professional) alternatives to writing a thesis?
- At what point would I, together with the candidate, decide that the time had come to halt the project?
- Where appropriate, refer the potential candidate to the advisory service.

Reasons for taking a doctorate?

The offer of a post *attached to my chair, to enable the candidate to qualify*

- Does this candidate's professional perspective fit in with my own goals?
- Setting out the duties to be taken on by the candidate, in addition to work on the thesis: teaching, administration and the time to be spent on these tasks.

Entry requirements

Does the potential candidate meet the necessary formal requirements?

- Which University? Which subject? Are additional Master level courses needed to establish solid background?

Additional criteria?

- How long since last degree? Master's GPA?
- Review of Master Thesis? Is research element noticeable?
- Participation in research projects. Publications?
- English language skills (real not nominal)?
- Academic writing skills?
- Qualifying exams

Personal and Social circumstances

How will the doctoral research be funded?

- Does the candidate need my support? (Teaching fellowship, working in a research project; support for an application for a scholarship?)
- What effect may the candidate's employment have on her or his personal schedule for completion of the doctorate?

What are the candidate's personal and social circumstances?

- Life planning and planning for the candidate's family,
- Time management and self-management,
- The role of hobbies, holidays, leisure activities,
- Income and delay in attaining a higher job status.

...ensure the partnership is right for the project

How many “yes”

- ☐ Do I have an adequate disciplinary background to advise this student or is the project likely to head into academic terrain that is very unfamiliar to me?
- ☐ Is my expertise strong enough in the methodological approach the project requires?
- ☐ Am I truly interested in the proposed study and in what ways does it relate to my own research interests?
- ☐ Thinking of my total academic commitments, in particular my supervisory commitments, do I have time to do justice to this student's needs?
- ☐ Does the department (or the University) have resources for the specific needs of this project?

5 “yes” would be ideal but unrealistic

Think long term: Your selection affects University's academic prestige and quality of Higher Education in the future

...ensure the partnership is right for the project

Some students *are looking for the opportunity to pursue their own research ideas and interests* while others *feel more comfortable from being given a clear-cut project at the beginning*

- The initial consultation between a student and prospective supervisor is therefore a critical time for both parties.
- In some disciplines, supervisors may play a leading role in selecting research topics, because student research can be part of funded investigations. In other disciplines the topic is very much the student's own.
- As a general rule it is inappropriate to 'allocate' a topic to a student.

Assessment of student needs

- At the very early stages
 - what knowledge and skills students bring to their project
 - Important to identify students' strengths
 - the areas in which they will need special assistance
 - By the end of the project students should have developed the core attributes of competent researchers in the discipline.
 - how they are likely to approach their research
motives for doing the research, preferred learning style, confidence, past experiences, ideological and social perspective

Assessment of student needs

- Gaps in knowledge and skills that emerge during early discussions, should be addressed immediately

Check list

- *knowledge of the relevant theoretical base*
- *understanding of methodological procedures and options*
- *necessary technical skills (for example, statistical analysis or other analytical tools)*
- *necessary computing skills*
- *project management skills*
- *writing skills.*
- *.....*
- Others gaps may emerge in the process

How many students can you supervise?

- Number of students affects
 - Workload
 - Quality of work
 - Selection of students
 - Scientific output
- In many EU universities the rule is 1-2 new students per academic year
- Total of 6 allowed only in exceptional cases

Managing Expectations...

Establish reasonable agreed expectations

- Consider this recent scenario,

A group of students and their supervisors were provided with a structured opportunity to 'talk straight' with each other about their working relationship.

One supervisor emerged shaken from his discussion. He had found out that an international student had been expecting far more direction from him than he had realised – and more than he considered appropriate.

- He had been working with this student for eighteen months. During that time, it seems, the student had formed a judgment that the supervisor was negligent.

Supervisor's Expectations

- Diligence
- Independence
- Reliability
- Creativity
- Dedication
- Contributions
- Ability to
 - Read and understand
 - Analyse
 - Conceptualise
 - Think abstractly
 - Think independently
 - Write clearly
 - Write concisely

The student shall ...

- Take direction
- Understand that the life of an academic is far more complicated than simply thinking new thoughts
- Work hard from day one
- Stay focused on the goal of the research
- Stay focused on the PhD degree
- Avoid the “failure to launch” syndrome

Student's expectations

- Simple registration
- Guidance with
 - Proposal writing
 - Experimentation
 - Conclusions
- Access to
 - Equipment
 - Laboratories
 - Subjects
 - Prior knowledge
 - Networks
- Safe environment
 - Field work
- Contribution to research critical mass
- Mentorship
 - Life lessons
 - Career advancement
 - Balance in social setting
- Being held accountable
 - Actions
 - Progress
 - Inaction

What students expect of their supervisors - I

- To support, encourage, guide and advise
- To read the work submitted to them
- To be friendly, open and available when needed
- To have good knowledge of the research area
- To be critical but in a constructive way
- To be flexible and understand what they are communicating
- Set aside uninterrupted time to discuss the research project

What students expect of their supervisors - II

- Attend seminars when they are presenting their work
- To have sufficient interest in their research
- To introduce them to other researchers in the same field
- To be a role model in research and publications
- Encourage independent thinking and originality
- Help with problems that may interfere with their progress
- Review progress reports and advise accordingly
- Ensure student receives appropriate research training
- Ensure adequate research facilities and resources

Supervision agreement

- Candidate and supervisor clarify their reciprocal expectations at the start of the supervisory relationship
- Even better if they could put this understanding in writing, for example in the form of a supervision agreement or something similar
 - specification of requirements in those areas where the doctoral candidate is expected to pursue further training while writing her or his thesis (personal development plan)

Role perception rating scale

(by Ingrid Moses (1985), Supervising Postgraduates. Campbelltown: HERSDA Inc.)

Read each pair of statements listed on this sheet.

Each expresses a standpoint supervisors may take.

You may not agree fully with either of the statements.

Therefore, please estimate your position and mark it on the scale.

Supervisor and student can complete separately and then discuss.

Topic/course of study		
1 It is the supervisor's responsibility to select a promising topic	1 2 3 4 5	It is the student's responsibility to select a promising topic
2 In the end, it is up to the supervisor to decide which theoretical frame of reference is most appropriate	1 2 3 4 5	Students have a right to choose their own theoretical standpoint even if it conflicts with the supervisor's
3 The supervisor should direct the student in the development of an appropriate program of research and study	1 2 3 4 5	The supervisor should act mainly as a sounding board for the student's ideas and give advice

Role perception rating scale

Supervisor and student can complete separately and then discuss.

Contact/Involvement		
4 Staff-student relationships are purely professional and personal matters should not intrude.	1 2 3 4 5	The supervisor should support the student right through until the thesis has been submitted, regardless of his/her opinion of the work
5 The supervisor should initiate frequent meetings with the student	1 2 3 4 5	Students should have the opportunity to find their own way without having to account for how they spend their time
6 The supervisor should know at all times on which problems the student is working	1 2 3 4 5	It is up to the student to decide when s/he wants meetings with the supervisor
7 The supervisor should terminate supervision if s/he thinks the project is beyond the student	1 2 3 4 5	Close personal relationships are essential for successful supervision

Role perception rating scale

Supervisor and student can complete separately and then discuss.

Contact/Involvement		
8 The supervisor should ensure that the thesis is finished not much later than the minimum period	1 2 3 4 5	As long as the student works steadily s/he can take as long as s/he needs to finish the work
9 The supervisor has direct responsibility for the standard of the thesis	1 2 3 4 5	The supervisor advises only and leaves all decisions concerning content, format and standards to the student
10 The supervisor should insist on seeing drafts of the every section of the thesis in order to review them	1 2 3 4 5	It is up to the student to ask for constructive criticism from the supervisor
11 The supervisor should assist in the actual writing of the thesis if the student has difficulties	1 2 3 4 5	The supervisor should be wary of contributing too much to the thesis

Workshop #1

Work in pairs (roles: supervisor / doctorate students)



Fill the Role Perception Rating Scale Independently

Then articulate and reach agreements that **leads to specific practices**

Examples of expectations that need to be articulated and negotiated

- Extent and nature of direction from the supervisor
- Degree of independence of the student
- Procedures for consultation – frequency, preparation, conduct – including, where appropriate, the degree of support in the laboratory
- Submission of written work – progress reports, literature reviews, drafts
- The nature and timing of response from the supervisor
- The appropriate role of the supervisor in editing
- How differences are going to be handled.

Since these expectations evolve over time, they need to be discussed more than once in the beginning

Doctoral Supervision

Supervision models

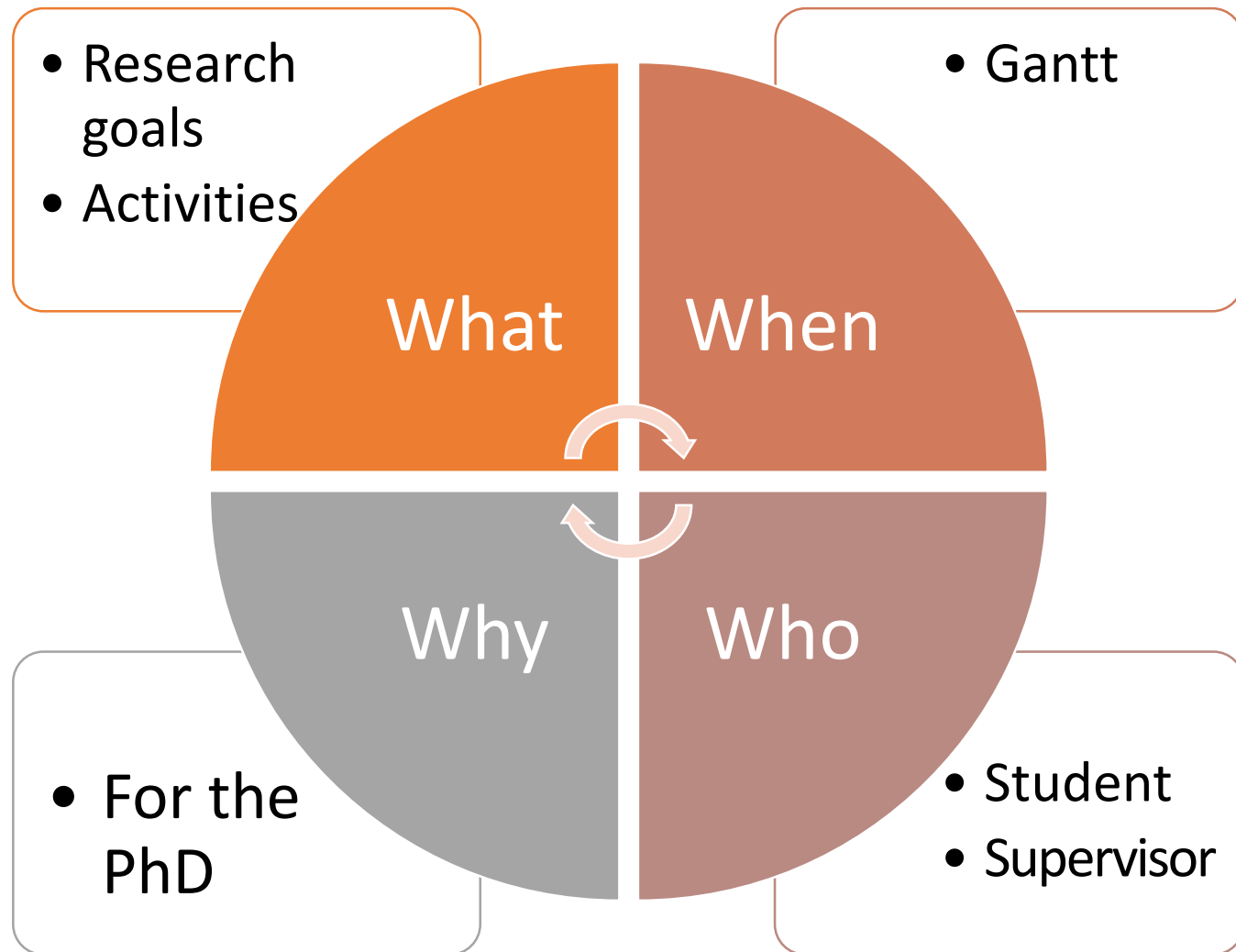
- One-on-one
 - Traditional, Majority of doctorates
- Supervisor and co-supervisor
 - May overcome some of the shortcomings of one-to-one supervision, enriching the project with specialised knowledge and diversity of opinion. Enriches students' experiences
 - Increases complexity of interpersonal relations
 - Roles must be clear
 - At what time a co-supervisor is brought in? Is it necessary?
- Panel supervision
 - Case where faculty/ department lacks the expertise
 - Enriches research environment. Development of supervision skills for newer academic staff.
 - Principal supervisor must be appointed
- Project supervision
 - Doctorates funded within the framework of a large scale research project
- Other?

Supervisor-supervisee contract

- Signed by both supervisor and student
- Signed early on in the relationship
- Contains an outline of expectations
- Explicitly 'outlaws' certain behaviours
- Explicitly encourages other behaviours



The contract should cover ...



Research Phase

- I. Intermediate phase
- II. Supervision Instruments
- III. Creating a Framework
- IV. Work on Research Topic
- V. Personal Relationship

Research Phase – Intermediate actions

1. Administrative steps candidates need to take along the way
2. How, and at what point in time, a second supervisor / co-supervisor should be identified and integrated into the work and the supervision process
3. Question arises of whether the thesis should or can be written cumulatively; consider pros and cons.
4. Required expenditures for research, publishing results, etc.
5. In bi-national framework, communications and agreements with partner university
6. Sponsor's requirements if research is funded by an outside organization

Research Phase – Supervision Instruments

Two main instruments

- I. Individual supervision meeting, which should take place at least once every semester (even if students suspended their studies)
- II. Integrate the candidates into a doctoral colloquium, which should meet regularly and where candidates report to their supervisor and their fellow candidates on the progress they are making on their projects

It has been found to be beneficial if the supervision meeting follows as soon as possible after the colloquium.

Research Phase – Supervision Instruments

Transparency – Avoid misunderstandings – Clarify right at the beginning

- How often meetings should take place
- What standard is expected of draft chapters handed in beforehand, how comprehensive the text segments handed in should be
- What form the supervisor's feedback will take, whether written comments on the work handed in will be provided
- To what extent the candidate's data-gathering strategies will be discussed and regularly subjected to critical examination.

It is a good idea for the supervisor to take the initiative in beginning a discussion on these lines

Research Phase – Supervision Instruments

Measures

- **Supervision Agreement:** The points on which agreement has been reached can be put in writing in a supervision agreement
 - an established practice in numerous graduate schools
- **Keeping a written record:** In addition to the measures taken to ensure transparency in the supervisory relationship it is advisable to keep a record of all points agreed upon and in this way to document progress made in the jointly undertaken work.
 - Done by supervisor or by the student and checked by the supervisor.

Especially important with international students

Supervision meeting (I)

- Where possible, discuss an informal agenda with the student beforehand.
 - Could ask students to provide input to agenda
- Arrange your office so that it is a comfortable place to meet. Avoid possible distractions by diverting phones and so on.
- Always check on the student's motivation – look for signs of flagging spirits.
- Agree on the length of each session and try to stick to this agreement.
- Prepare for the meeting by refamiliarising yourself with the progress of the research.
- Allow for some informal and wide-ranging exploration of ideas – many students remark that this is one of the most valuable aspects of their supervision sessions.

Supervision meeting (II)

- Take a record of the key issues and decisions of each supervision session, and provide students with a copy. In addition to being an aide memoire for yourself, these will remind students of the discussion.
- Discuss the timeline ahead and any periods during which you will be unavailable.
- Settle on a date for the next meeting and agree on the tasks to be undertaken by that time. Although it should be understood that the 'pencilled-in' date can be changed, to alter or postpone the meeting will now require some action from either party.
- File copies of all documents relating to the project. It is essential for supervisors to keep an adequate document file on the project. This file is especially important should a colleague be required to take over the supervision at some stage.

Is there a minimum number of supervisory meetings

- Is it appropriate to set a minimum?
- It is up to the personal style of supervision?
- Is it up to the candidate?
- Should it be formal?
 - Could be included in doctoral study regulations

Some Universities set

- a minimum of one meeting per month (good practice)
 - Intermediate communications in the between
- a semester review meeting

Research Phase – Creating a framework

Create best preconditions

- Help with funding: during the preparatory phase but problems or opportunities may arise as work proceeds
 - thinking, together with the candidate, about whether external funding might be obtained, and if so how,
 - supporting an application for a scholarship to fund the doctorate,
 - making sure the candidate is aware of any official sources of advice available within the institution.
- Finding necessary resources:
 - travel, printing, access to databases, conference fees, courses at other universities
- Respecting candidate's autonomy:
 - especially if supervisor is candidate's superior (to be avoided)

Research Phase – Creating a framework

Create best preconditions

- Need for further training and opportunities:
 - Expand their area of expertise, (special skills, key competences, etc.)
 - Use existing structures at the University
 - Other universities, summer doctorate schools
- The strategy accompanying the doctoral research project should be discussed regularly with the candidate and should be documented in the written record of supervision meetings. In connection with this, candidates should be encouraged to reflect on a regular basis, as their work proceeds, on what they consider to be the goal of their doctorate.

Creating Research framework

- Few students are prepared
- Need to polish research concept → Produce an agreed written research proposal
 - especially important for students to grapple with and make explicit their assumptions and where appropriate their hypotheses
 - determine the conceptual framework that will guide data collection and reporting (in certain researches)
- Directed to readings → Encouraged to start writing
- How long that it should be?

Creating Research framework

- How long that it should be?
 - Balance freedom to explore with a good measure of pragmatism – completion times
 - Defining the project can be a puzzle for a novice researcher, and this can be a period of great uncertainty and frustration, particularly for a student anxious to begin with data collection.
 - Students who begin their data collection without an adequate conceptual understanding may find themselves struggling to analyse and interpret the information.
 - The supervisor needs to be convinced that the student has both a sound conceptual overview and a grasp of where the proposed research will fit in relation to the relevant literature.
- Risks of prolonging the initial work
 - similar investigation has been done elsewhere
 - lose sight of the research questions they are trying to answer
- Producing a Formal Research proposal

Producing a Formal Research proposal

- Needs to be robust enough to allow the student and supervisor to consider the following questions.
 - Is the scale of the project appropriate to the level of the degree?
 - Is the research truly worth doing? (i.e. is it likely to lead to significant advances in knowledge, and will it be useful for the students' career?)
 - Is the methodology feasible and manageable?
- Indicative content
 - Statement of the research problem (4 parts)
 - Introduction / The research question - Subsidiary questions / Research objectives / Review of the relevant research and theory
 - The procedure
 - Description of the theoretical or conceptual framework / sources of evidence and authority / analytical techniques and research design / a timetable for completing the dissertation.
 - A trial table of contents
 - A brief bibliography

Work on thesis topic

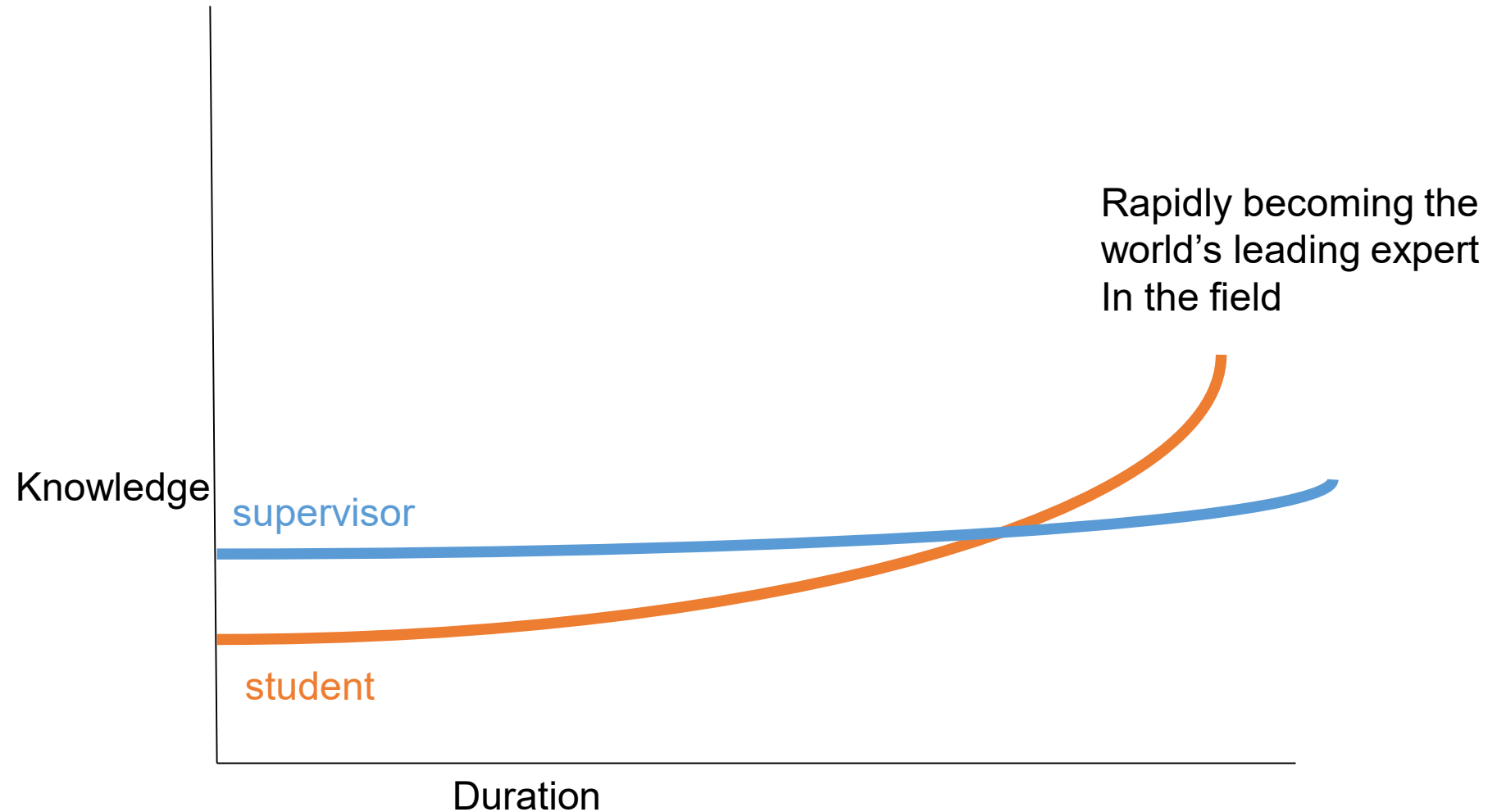
Discussing substantive issues

- Supervisory relationship should provide a forum for regular dialogue about the contents of the work in progress
- The supervisor will not always be an expert on the particular field within which the thesis is located, and it is advisable to make this point clear
- The function of the supervisor can equally well consist of offering a competent external perspective on the project.

The supervisor-student dynamic shifts over the course of a degree

- **Early on the supervisor**
 - hands on, advice on specific topics, helping to craft early papers
- **Toward the end the student**
 - Knows more than the supervisor
 - Take the lead in the investigate
- **The trick is getting the timing right.**

Understand the dynamic nature of supervision



Work on thesis topic

Areas for providing substantive advise

- Research schedule
 - Established timetable, Ensure that time is realistic and milestones are clearly set with defined deliverables. Handle adjustments
 - Drastic changes?? will be needed
- Monitoring the progress of the project
 - The question under investigation, structure and hypotheses must be constantly revised in order to bring them into line with the progress being made, the findings emerging from the research and unforeseen developments
 - Ensure that candidates keep up to date with the latest developments in research findings and specialist publications even after they have started work on their own projects
 - Candidates take advantage of the support offered in areas like managing projects and organizing one's time and workshops on writing skills.

Work on thesis topic

Areas for providing substantive advise

- Widening horizons and integrating doctoral candidates into the scientific community
 - Contacts with other scholars and productive discussion networks are important for the successful completion of a doctorate
 - Other scholars can be brought into the doctoral project at an early stage – as second examiners, or members of supervisory panels
 - Encourage candidates to give lectures and publish their work, in both national and international forums – get external feedback and gain experience of different academic cultures
- Encourage candidates' self-reflection as researchers
 - Form a clear idea of where they are positioned in their research field and what specific tasks they see themselves as carrying out within that field, especially in view of the defence, in which they will be expected to present themselves as autonomous researchers

Encourage students to write early and often

- Early writing – on focused writing tasks, not necessarily the thesis chapters themselves – and regular presentation of work to supervisors are beneficial
 - Prevents a psychological pattern in which ‘writing up’ becomes more and more daunting as data or ideas are accumulated
 - Avoid vicious cycle where the student postpones writing because of the enormity of the task, continues to gather data or do more reading, and thus adds to the looming mountain of intractable material.
- In many fields the concept of ‘writing up’ makes no sense. A student who has not started writing has, in a sense, not really embarked on the research.
- Literature review is a good place to start
- Supervisor must review writing at an early stage so that skills can be enhanced and appropriate style established

Bypassing writers' block

- The early-writing strategy can go a long way towards preventing the development of ***writer's block***. However, paralysis might set in at any point in the cycle of the research project.
- Academic and personal factors
 - overwhelming work or family commitments.
 - academic difficulties: either a lack of confidence in dealing with the material or a particular conceptual problem
- Supervisors can help assuming a directive teaching role
 - talking through the issues,
 - suggesting alternative ways of approaching the problem,
 - using a series of probing questions to help the student think it through
- Lack of confidence
 - Ask student to produce a short report on a sub-problem
 - break up what looks like an overwhelming task into units small enough to be managed without fear

Personal Relationship

Keep an eye on the candidate as a person, i.e. supervision should be oriented towards the needs and individual situations of the candidates (there are different types of candidates)

- Motivation
 - Doctorate work involves setbacks. Convey positive thinking can make a difference
- Establishing trust
 - Reliable information, stick to agreements made, show interest in the work.
 - Makes it possible for candidates to respond to advice and criticism positively
- Imparting good scientific practice
 - Make sure that candidates become familiar with the basic principles of good scientific practice

Get students involved in the life of the department

- Students' experiences of conducting research are greatly enhanced and enriched if they feel part of the academic community.
- Academic and social isolation are widely recognised problems for postgraduate research students.
- Postgraduate students who are part of a learning community feel a sense of allegiance, affiliation and a shared sense of purpose with both fellow students and academic staff.
- Provide opportunities for postgraduate students and staff to meet as a group
 - Combine academic and social events
 - Seminars by visiting scholars
 - Beginning and End of year functions
- Teaching scholarships

Completing the Doctorate?

Completing the Doctorate

1. The start of the completion phase

- Assessment of whether the findings of the project so far are sufficient for a successful thesis, or additional time and effort might be worthwhile to improve the quality of the thesis
 - By what dates must the individual parts of the thesis be completed?
 - Will individual chapters be handed in to the supervisor for correction, or will this only be done when the whole thesis is complete?
 - What is the timeframe for the supervisor to make corrections?
 - If some parts are revised after correction by the supervisor, will they be handed in once again for further correction?
- Agreement is reached on a realistic submission date for the thesis and, if possible, on the specification of a period within which the defence (viva voce examination) should take place.

Completing the Doctorate

2. Final version of the Thesis

- Important points to clarify
 - Ask once again, in a critical spirit, whether the research questions examined in the thesis have been investigated competently, using appropriate methods.
 - Has the thesis been put together in a way that makes sense; is the structure adequate and clear?
 - Do the structure of the text and the contents of the argument cohere?
 - Have the findings been presented and discussed convincingly?
 - Have the individual chapters been written in a way that makes their significance for the thesis as a whole sufficiently clear?
 - Does the thesis make a significant contribution to scientific knowledge, e.g. a contribution to the development of the theory or methods of this particular field?

Completing the Doctorate

3. Preparing for the defence (viva voce examination)

- The candidate should be reminded (**repeatedly if necessary**) that preparatory workshops can be helpful.
- Candidates should be advised to attend other examinations of this kind in order to familiarize themselves with the procedure.

4. Publication phase

- If parts of the thesis have not already been published as preconditions or contributions to cumulative doctorate, it may be necessary to revise the text
- Consider translation and publishing parts in another language
- Is thesis published on-line?

5. Candidate's Professional options

- Supervisor's contacts may help

Ideal PhD Supervisor-Students perspective

In addition to having knowledge and expertise,
should be;

- Passionate about mentoring
- Have personal interest in the student welfare
- Ready to share professional experiences, wisdom and knowledge
- Appreciates that at the end of the graduate program the student will be the expert

This is interesting ...

What do you think is the most important component of success in the PhD student – Supervisor relationship? Communication? Hard work? Transparency?

A = 1,	B = 2,	C = 3,	D = 4,	E = 5,	F = 6,
G = 7,	H = 8,	I = 9,	J = 10,	K = 11,	L = 12,
M = 13,	N = 14,	O = 15,	P = 16,	Q = 17,	R = 18,
S = 19,	T = 20,	U = 21,	V = 22,	W = 23,	X = 24,
Y = 25,	Z = 26				

1 + 20 + 20 + 9 + 20 + 21 + 4 + 5 = 100%
A T T I T U D E

Approaches to Research Supervision

Ann Lee (2008)

Some Influences on Supervision

- Disciplinary pedagogy
- Departmental practices
- Conceptual approach of supervisor
- Codes of practice
- Employers / funders' requirements
- Full or part time students?
- Experienced or inexperienced students?
- International or home students?
- PhD vs. professional or practitioner doctorate?
- Supervisor/ co-supervisor

Initial questions

- As a PhD supervisor: what are the problems that you have faced? Do they fall into any categories? How have you coped with them?
- How were you supervised when you did your PhD?

Caricatures of supervisors (as seen by students)



... it may not be far from the truth!

A framework for concepts of research supervision

	Functional	Enculturation	Critical Thinking	Emancipation	Relationship Development
Supervisors Activity	Rational progression through tasks	Gatekeeping Master to apprentice	Evaluation Challenge	Mentoring, supporting constructivism	Supervising by experience, developing a relationship
Supervisor's knowledge & skills	Directing, project management	Diagnosis of deficiencies, coaching	Argument, analysis	Facilitation, Reflection	Managing conflict Emotional intelligence
Possible student reaction	Organised Obedience	Role modelling, Apprentice- ship	Constant inquiry, fight or flight	Personal growth, reframing	A good team member. Emotional intelligence

Functional approach

- *“I have a weekly timetabled formal slot for them and follow-up if they do not turn up”*
- *“3 months: literature search
6 months: focus fixed,
12 months transfer report completed...”*
- *“In the 2nd year we see them monthly and they produce 5000 words before each meeting”*
- *Regular pair or small group meetings with supervisor to present findings*

Enculturalisation

- *I would feel I had failed if they did not stay in the field*
- *My students all know their academic grandfather*
- *I give my book to all my students*
- *Students need to know what 'good enough' looks like*
- *You need frequent meetings for international students*
- *The international student especially can implement all your corrections and think that is good enough.*
- *Some cultures expect you to tell them what to do*

Critical thinking

- *“I avoid dependency by getting them to think about some problems and giving them resources”*
- *“I want them to stand on their own feet and challenge the thinking”*
- *“My tutor was not confrontational, she encouraged me to be critical of my own ideas”*
- *“They need to explain to me why, what and how”*
- *“I ask them to email me a question about their project every week”*
- *“I use ‘magic’ words to help them identify the thread in their argument e.g. arguably, conversely, unanimously, essentially, early on, inevitably etc.”*

Emancipation

- *“Your job as a supervisor is to get them knowing more than you”*
- *“I try to get the students to take the initiative”*
- *“My supervisor encouraged me to read widely, thinking critically, find examples in newspapers”*
- *“I try to get them to admit and confront their problems”*
- *“You get a lot of satisfaction, you have facilitated that growth in them”*

Developing a relationship

- Enthuse: *You need to fire the imagination, it is different for different students*
- Altruism: *My supervisor helped me with my writing but never pressed me to publish.*
- Encourage: *Need to inspire and encourage them to be brave in what they are thinking*
- Recognise achievement: *I wanted to call my supervisor the moment I solved the tough maths*
- Pastoral support: *this was as important as intellectual support to get me through*

Advantages and Disadvantages

	Functional	Enculturation	Critical Thinking	Emancipation	Relationship Development
Advantages	Clarity Consistency Progress can be monitored Records are available	Encourages standards, participation, identity, community formation	Rational inquiry, fallacy exposed	Personal growth, ability to cope with change	Lifelong working partnerships Enhanced self esteem
Disadvantages	Rigidity when confronted with the creation of original knowledge	Low tolerance of internal difference, sexist, ethnicised regulation (Cousin & Deepwell 2005)	Denial of creativity, can demean or depersonalise student	Toxic mentoring (Darling 1985) where tutor abuses power 'sink or swim' approach	Potential for harassment, abandonment or rejection

Dependence and independence

	Functional	Enculturation	Critical Thinking	Emancipation	Relationship Development
Dependence	Student needs explanation of stages to be followed and direction through them	Student needs to be shown what to do	Student learns the questions to ask, the frameworks to apply	Student seeks affirmation of self-worth	Student depends on supervisor's approval
Independence	Student can programme own work, follow own timetables competently	Student can follow discipline's epistemological demands independently	Student can critique own work	Student autonomous. Can decide how to be, where to go, what to do, where to find information	Student demonstrates appropriate reciprocity and has power to withdraw

In small groups



- Take a problem you described earlier, or one of the case studies.
- Explore how the supervisor could react using each approach to supervision in turn
- Be prepared to share the group's findings

Thesis Defence (viva voce) models

- Thesis examination committee
 - Participation of supervisor ?
 - Supervising panel members?
 - Externals from within the University
 - Externals from other Universities
 - Person from industry or scientific organizations
- Promoter / opponent model
 - Promoter (supervisor)
 - Master Examiner
 - “Opponents” from the faculty, other faculties, other universities
- Other?

Other issues?

Other Issues

- Inbreeding
 - Characteristic of early development
- Many “part-time” doctoral students
 - Difficult to integrate with academic community
- Mature students
 - Career and family obligations
- Very little project oriented / sponsored research.
Departments with Research agenda
 - Mostly in large well-known universities
- Lack of Internationalization
- Emphasis on output of graduates not on output of research
- Quality of Publications
- Admission criteria / Progress criteria
- High attrition

Academic Inbreeding

- Academic is hired straight after concluding doctoral degree, becoming an academic at the same graduating university
- More of a 'grey' approach than a 'black and white' one
- At some point in the development of H.E. systems, this practice is likely to have been beneficial
 - fostered a fast build-up of knowledge capability, research team cohesion, reinforcement of institutional identities, diminished risks in recruitment gamble, provided organizational stability
- Challenges brought to universities by society and science demand flexibility, openness, dynamism and creative thinking. May be necessary to curtail this practice.
 - Research universities in the United States sometimes sponsor a practice whereby academics finish their degree at one university, go and work for a few years in another university, and if they demonstrate themselves capable, they are hired back by the university where they graduated in the first place

Part-time doctoral students

- Difficult to integrate with academic community
- Working obligations make communication difficult
- Not time available to invest in building transferable skills (analytical tools, proposal writing, etc.)
- New literature appears. Need to revisit literature review. May lead to revising research questions and objectives
- Prolonging studies may make research topic “obsolete”
- Total supervision effort increases

Mature students

- Professional experience is a plus but sometimes conceals the theoretical background
- Must distinguish between a research project and a work project
- Update theoretical knowledge and writing skills
- Personal goals may not be clear

Departmental Research agenda

- Helps to attract funding and support full-time doctoral students
- Synergies create opportunities for all
- Creates a departmental research identity
- Increased chances for participating in large scale EU research projects
- Attracts better qualified doctoral students
- Attracts international researchers

Emphasis on output of graduates not on output of research

- Because of current metrics. **Should be reversed.**
 - What's so good if you produce plenty of doctoral graduates, with low research output?
 - Actually is very bad for the image of the Faculty / University
- Monitoring research output of doctoral candidates
- Analyse results vis-a-vis the profile of graduates
 - Helps in candidate selection
- University research management office may help
- Emphasis on **Quality of research publications** according to international classification of journals

Admission and Progress Criteria

- How do we select doctoral students?
 - Identify scholarly motivated master's students who have excellent thesis (*Ph.D. material*)
 - *Detect inclination for research*
- Maintain a high GPA during taught element of Ph.D. program
- Use resources (take specialized courses) from other universities
- International Doctoral Summer Schools (often funded by EU or other sources)
- Milestones

High attrition rates

- Some reasons

- Learn too much instead of staying focus
- Expect perfection
 - Students that can't begin to write until they have the perfect structure of the paper mapped out will never get started.
- Procrastinate
 - Chronic perfectionists, Eternal students with a drive to learn instead of research.
- Wrong timing in advisors / advisee dynamics
- Threat doctoral studies like school or work
- Ignore the committee
- Aim too low or too high
- Miss the real milestones (precondition publications)

Doctoral Education in Europe



- Findings of a recent study by the European University Association - Council for Doctoral Education

Doctoral education in Europe Today: approaches and institutional structures, 2019

<https://eua.eu/downloads/publications/online%20eua%20cde%20survey%2016.01.2019.pdf>

Figure 2: Organisation of doctoral education



Figure 3: Level of organisation

To what extent is doctoral education in your institution organised at or around ...?

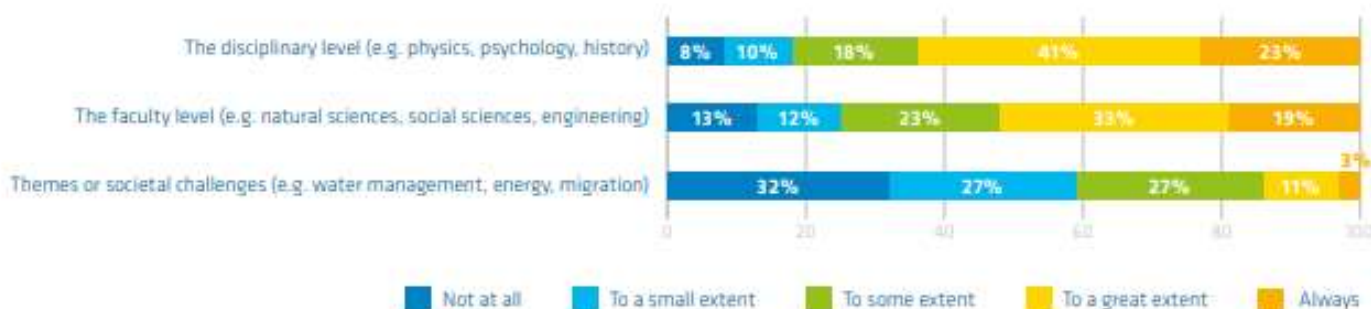


Figure 4: Guidelines for elements of doctoral education

In your institution, are there rules or guidelines regarding the following aspects of doctoral training?



Figure 5: Skills training

In your institution, how important are the following elements of doctoral training?



Figure 6: How do doctoral candidates spend their time?

In your institution, how important are the following elements of doctoral training?

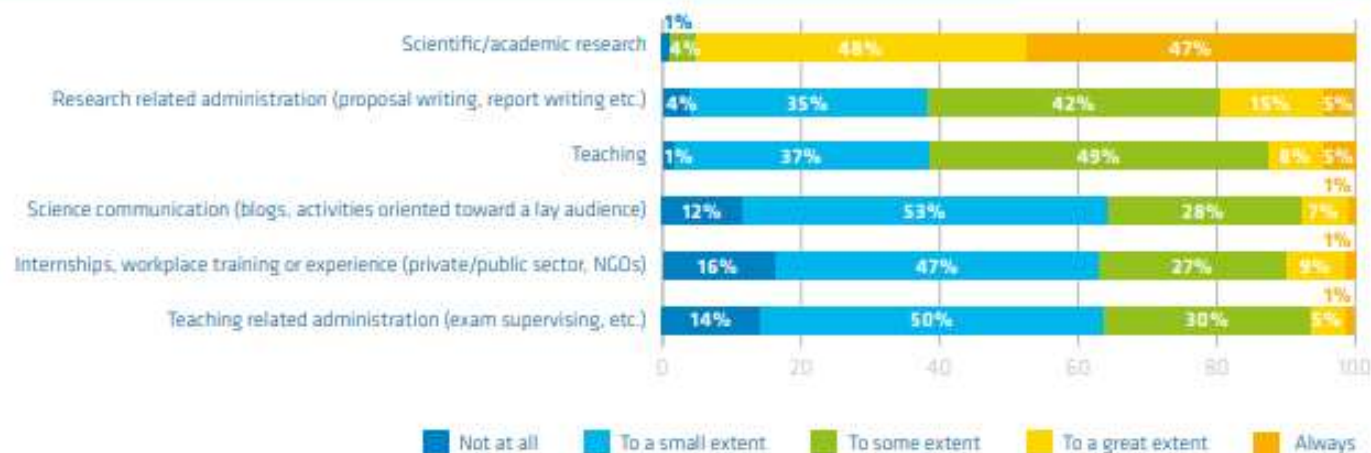


Figure 7: Conceived future role of doctoral candidates

To what extent is doctoral education in your institution conceived as preparing the future generation of...?

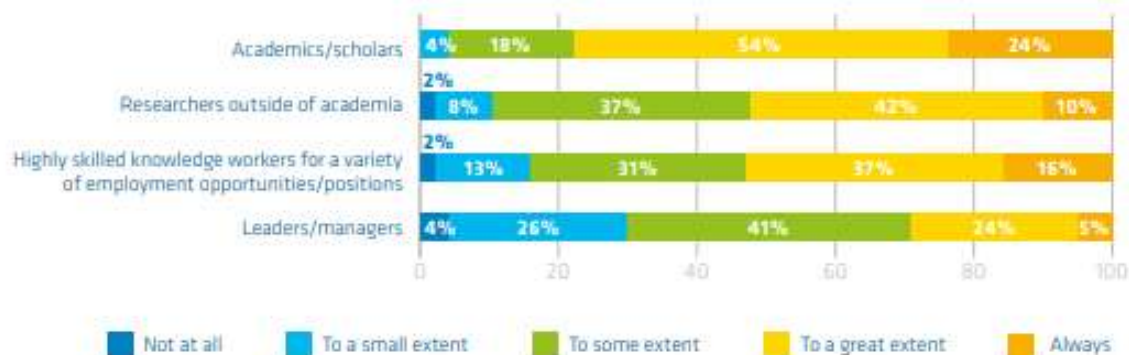


Figure 8: Continuation of the academic career in the same institution

Can doctoral graduates continue their academic career in your institution?

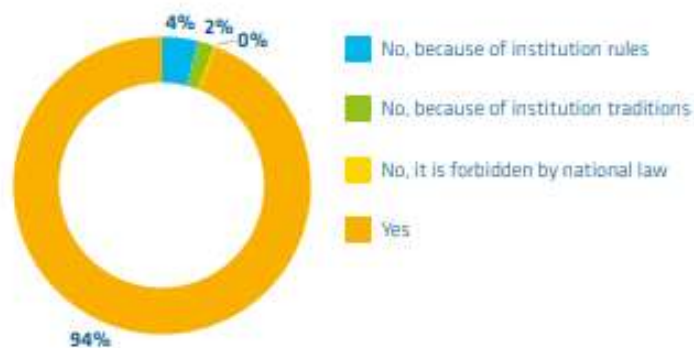


Figure 9: Career tracking of doctorate holders

Does your institution track the careers of its doctorate holders?

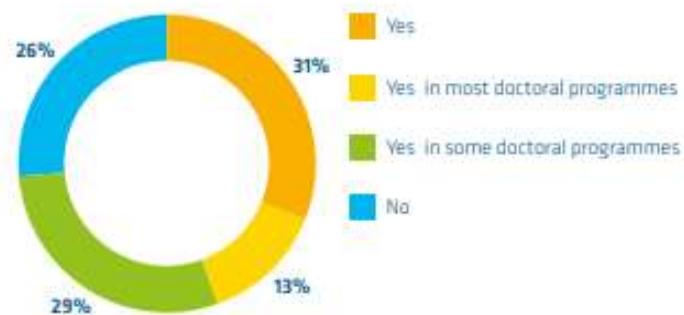


Figure 10: Financial support of doctoral candidates

To what extent are doctoral candidates at your institution financially supported (stipend, grant, salary, scholarship, fellowship, etc.) by the following sources?

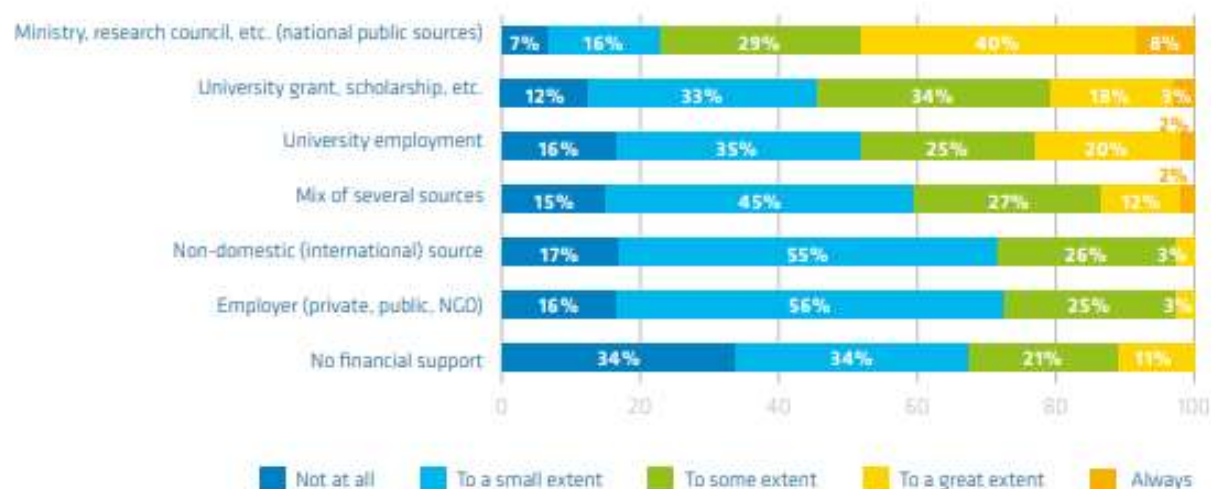


Figure 11: Qualifying degree from same or other institution

What percentage of doctoral candidates at your institution have a qualifying degree from the same institution, another institution in the same country or an institution from another country? (European aggregate)

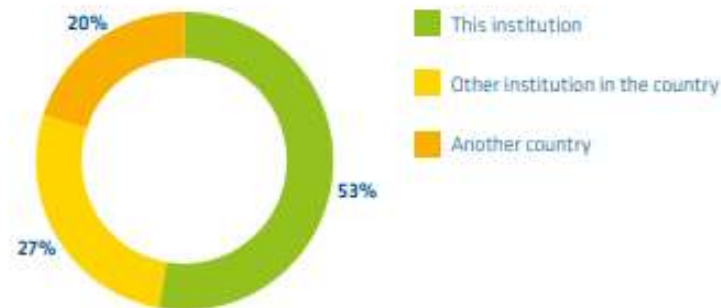


Figure 12: Time to completion

In your institution, how long do your graduates on average take to complete their full-time doctoral studies?

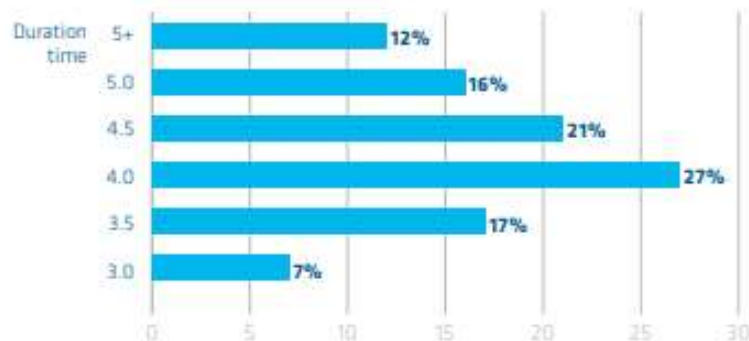


Figure 13: Average time to complete the doctoral programme compared to 10 years ago

Compared to ten years ago, in your institution has the average time to complete a doctoral programme decreased, remained stable or increased?

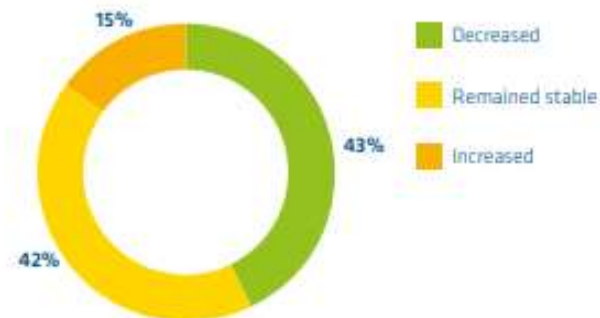


Figure 14: Rules and guidelines on supervision

In your institution, are there rules or guidelines regarding the following aspects of doctoral supervision?

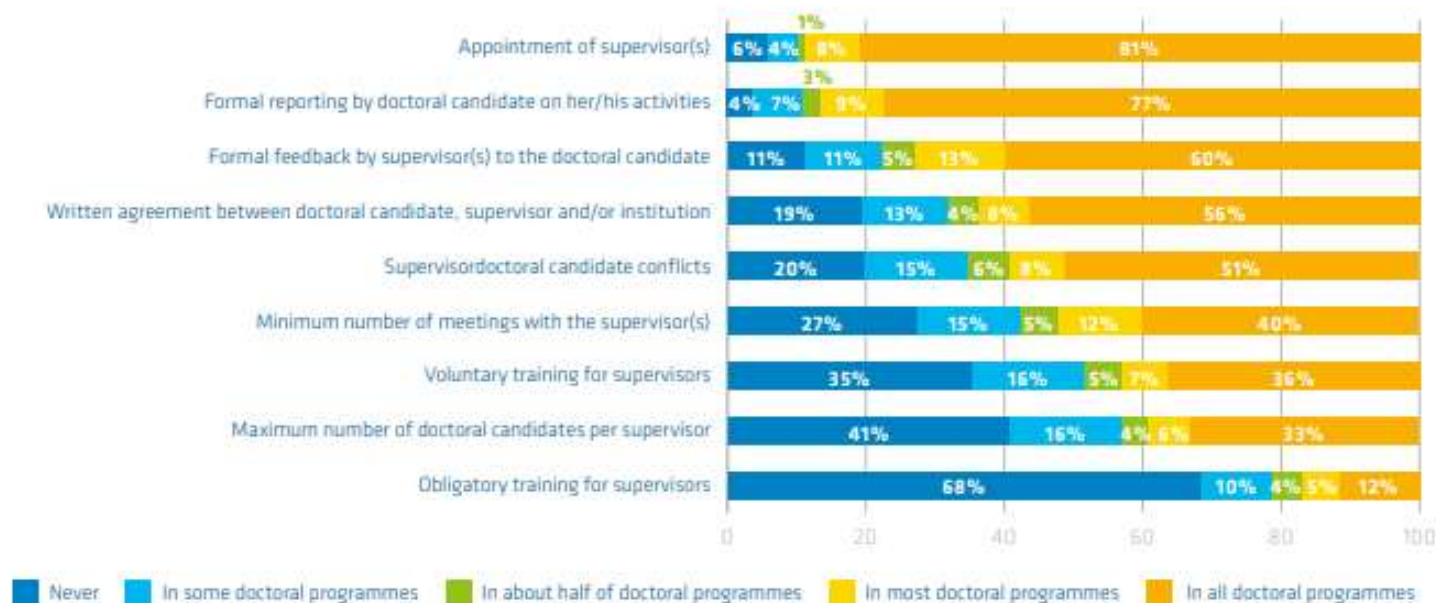


Figure 15: Team vs. Single supervision

To what extent are doctoral candidates in your institution supervised by ...?

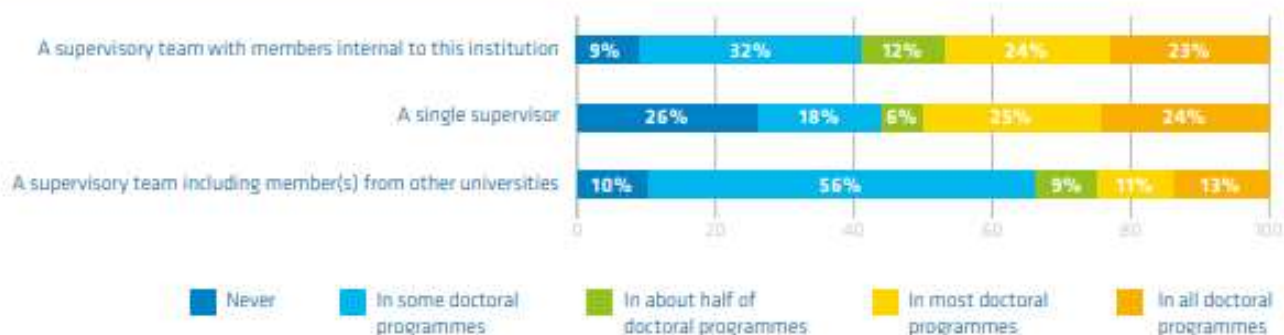


Figure 16: Steps for admission to doctoral education programmes

In your institution, which of the following steps are used for the admission procedure for doctoral candidates?

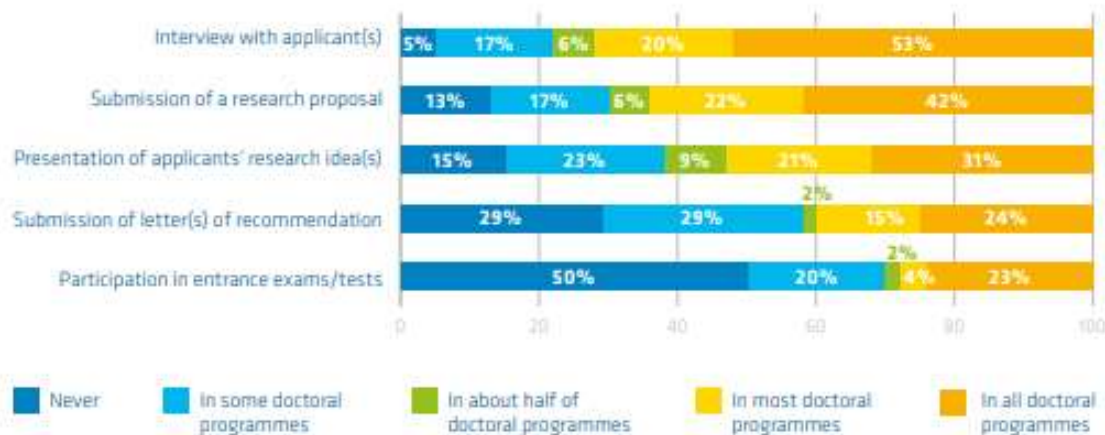


Table 1: Decision making procedures

Who participates in the decision-making process regarding the following issues? You can choose multiple answers per issue

	National level	Institutional level	Institutional sub-units	Supervisor
Elements of the selection procedure (e.g. submission of research proposal, interviews required)	16,2%	46,9%	84,1%	45,8%
The selection of the candidate(s)	5,0%	16,5%	91,7%	56,8%
Contract conditions between doctoral candidate and supervisor/organisational unit	21,9%	66,0%	60,0%	27,5%
Supervision rules and guidelines (e.g. regarding meetings, reporting, feedback)	12,3%	58,7%	77,9%	42,8%
Required topics of doctoral training	11,6%	37,8%	86,2%	52,0%
Required tasks of doctoral candidates (e.g. teaching, administration, etc.)	14,0%	39,9%	86,3%	50,9%
Examination rules and guidelines	32,8%	69,7%	69,0%	15,7%

Figure 17: Complaint procedures

At your institution, doctoral candidates —



Figure 18: Percentage of doctoral candidates graduating within six years (SD 28)

What percentage of doctoral students that enrolled in 2009 graduated within six years?

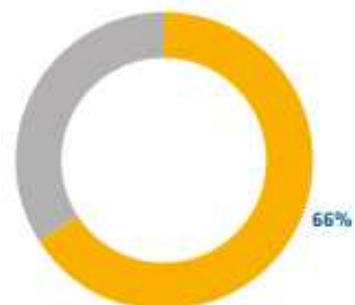


Figure 19: Completion rate over last 10 years

Compared to ten years ago, has this number...?

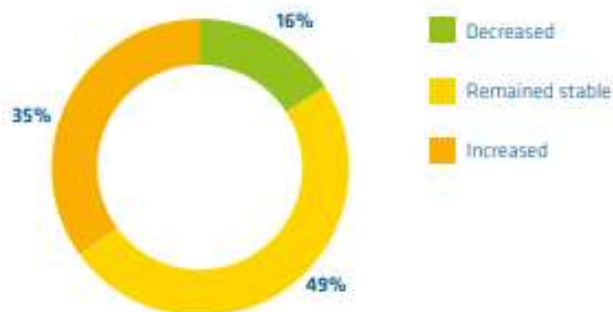


Figure 20: Strategic priorities

To what extent are the following issues currently considered a strategic priority in doctoral education within your institution?

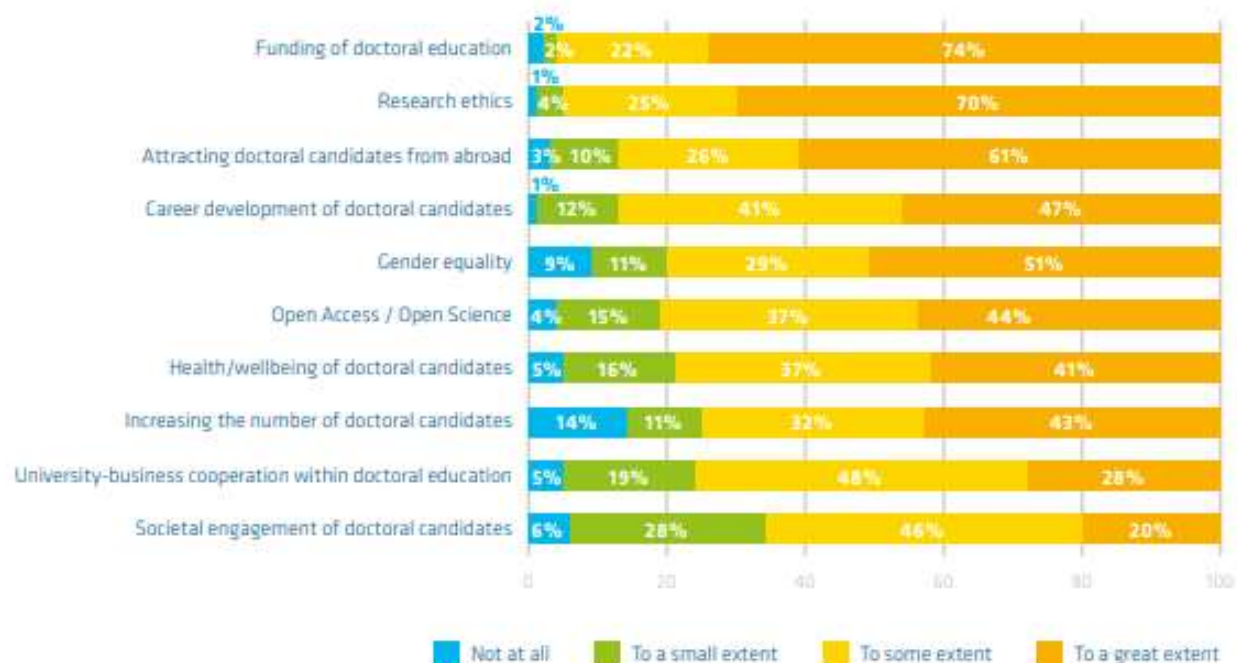


Figure 22: Indicators used for assessment

In your institution, to what extent are the following aspects/criteria used to assess/evaluate doctoral education?



Last but not Least

Doctoral Supervision is a hard and demanding work. It basically shapes the new generation of academics

Universities should recognize
the importance of the task,
the workload involved
and provide proper support and compensation

