Developing a Toolbox for Managing International Collaborative PhD Programmes

Session 8: The use of the Toolbox (towards achieving the goals of collaborative PhD programmes – graduating excellent PhD researchers through informed and excellent supervision)

Session facilitator – Dorothy Stevens (SU)

27th June 2019, Cape Town

YEBO!

Developing the internationalization of PhD studies in South Africa

University of Cape Town · iYunivesithi yaseKapa · Universiteit van Kaapstad

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Co-funded by the Erasmus+ Programme of the European Union

Preparing and equipping supervisors towards excellent supervision in the context of joint/collaborative international PhD

Jan Botha
Stellenbosch University

Outline

1. The demand for supervisors at African Universities
2. Learning to supervise
3. Co-supervision
4. International joint or co-supervision
5. The memorandum of understanding providing for international joint or co-supervision

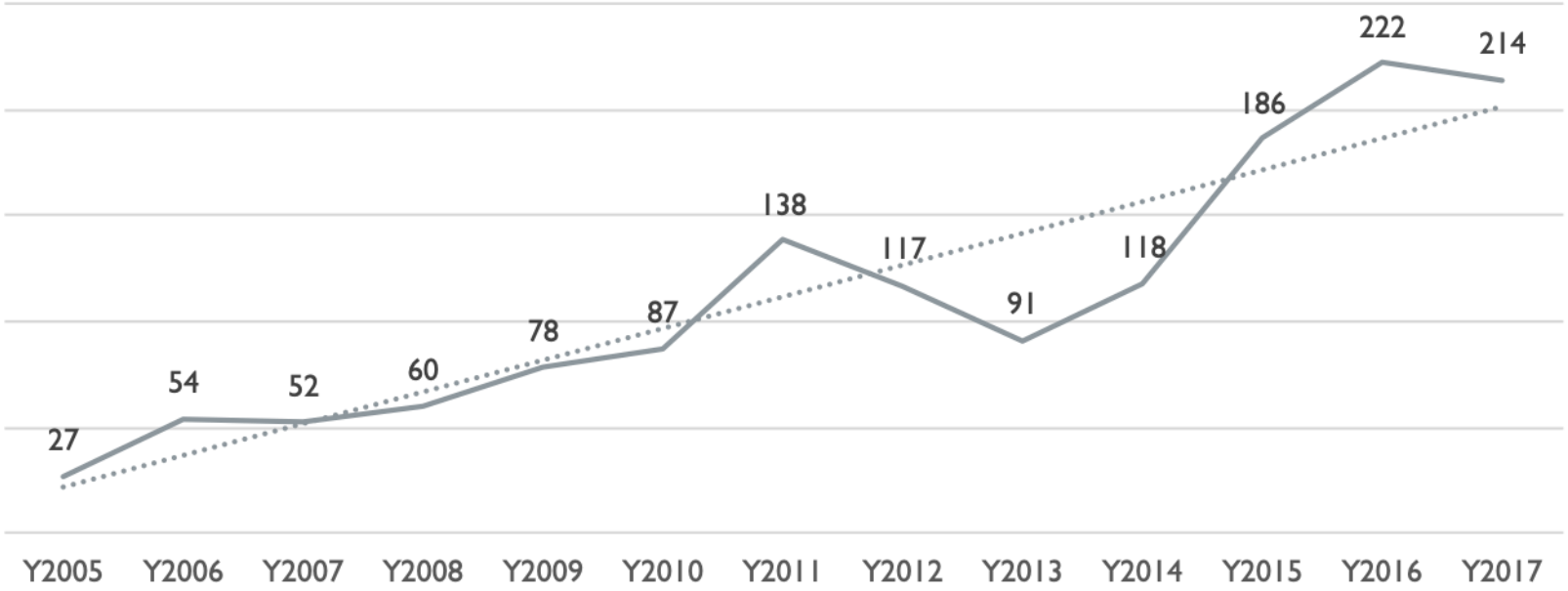
This presentation is as far as possible

based on

scholarly research

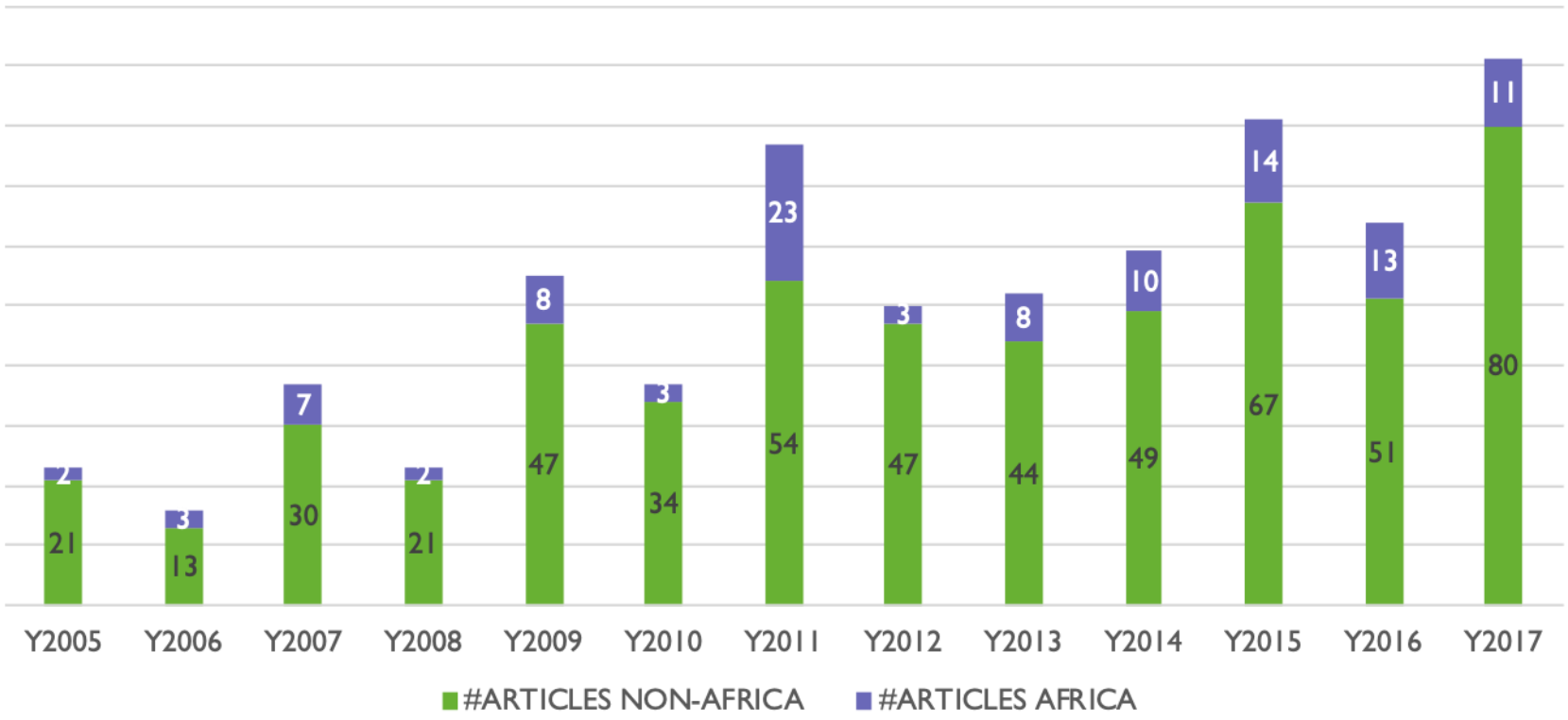
on doctoral supervision

Increase in number of journal articles on doctoral education globally



*A Web of Science search across disciplines and geographical areas was conducted for the period 2005-2017 for *published journal articles* in English related to doctoral education, which yielded a total of 1444 relevant articles

Scholarship on Doctoral Education



* **Journals** included in the analysis (2005-2017): *Studies in Higher Education [SHE] (n=131); Higher Education Research & Development [HERD] (n=98); South African Journal of Higher Education [SAJHE] (n=88); Studies in Graduate and Postgraduate Education (formerly International Journal for Researcher Development) [SGPE] (n=87); Innovations in Education and Teaching International [IETI] (n=83); Teaching in Higher Education [THE] (n=67); Higher Education (HE) (n=52); Journal of Higher Education (JHE) (n=33); Research in Higher Education (RHE) (n=23); Journal of Higher Education in Africa [JHEA] (n=3)* [N=665]

Contributions per country

COUNTRY	#ARTICLES	COUNTRY	#ARTICLES
Australia	181	South Korea	2
USA	43	Malaysia	2
UK	40	Belgium	2
New Zealand	38	Switzerland	2
Canada	30	Luxembourg	2
South Africa	**28**	Taiwan	2
Finland	13	India	2
Sweden	11	Russia	1
Denmark	10	Kazakhstan	1
China	9	France	1
The Netherlands	9	UAE	1
Spain	7	Peru	1
Germany	6	Uganda	1
Israel	6	Nigeria	1
Ireland	7	Cyprus	1
Norway	5	West Indies	0
Singapore	4	Slovenia	1
Portugal	3	Estonia	1
Italy	3	Austria	1
Turkey	3		

The demand for the doctorate and the need for supervisors

The crucial contribution of HE to a knowledge economy

- During the 1990s already it was recognized that there is a correspondence between the acceptance of the notion of the **knowledge economy and society** and the rise of the doctorate.
- Manuel Castells (1991): new modes of economic production are increasingly reliant on knowledge and information technology.
- Econometric studies carried out during the early 1990s started showing a statistical relationship between diffusion of information technology, **productivity and competition** for countries, regions, industries and firms.
- A World Bank calculation showed that the knowledge sector added more value than the business process to a product (Serageldin 2000).
  - This position was elaborated upon by Schwab (2012), founder of the World Economic Forum (WEF), who, reflecting on the 2012 WEF meeting, suggested that '**talentism**' is the new capitalism.

The value add of the PhD

- Confirming the valuing of talent in today's global economy, the Mercer Talent Survey shows that chief executive officers understand that **talent is a primary source of competitive advantage**: whether entering a new market, innovating existing processes, developing a product or expanding service lines, it is an essential element of every core business function (Mercer 2013).
- If knowledge and information are **the new electricity of the economy**, then it is a reasonable assumption that the university – as the main knowledge institution in society – will become increasingly important and that its apex training product, the PhD, will appear on the skills radar (*Times Literary Supplement* 2013).

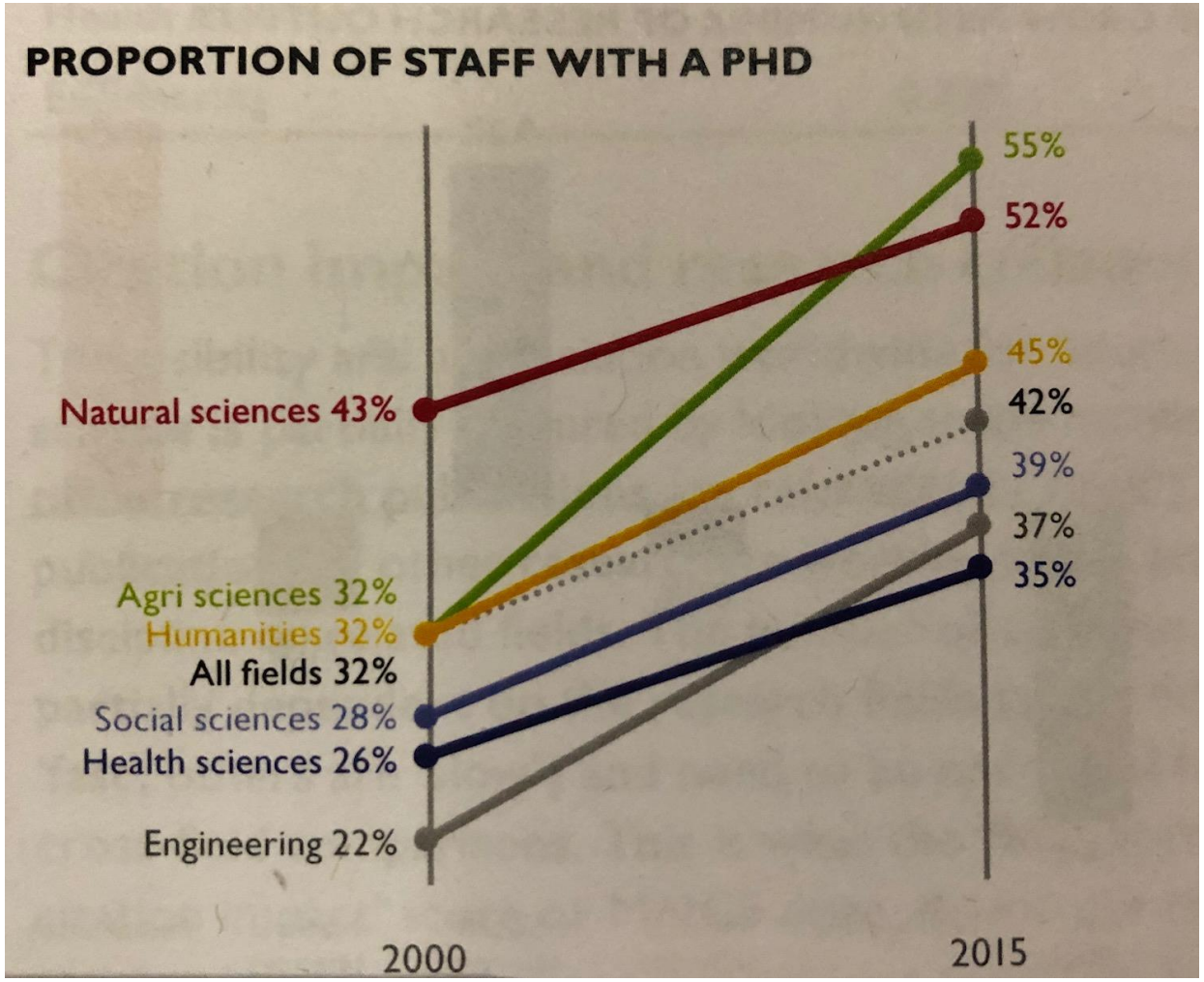
The PhD and its contribution to the university system

- But the PhD is not just a possible contributor to talent in the knowledge economy – it is also regarded as **crucial for improving quality in the university system**. In an article entitled 'The rise and rise of PhDs as standard', Morgan quotes Wendy Piatt, Director-General of the Russell Group (UK) of larger research-intensive universities:

  > *The vast majority of (our) academics […] have doctorates. There may be some slight variation according to discipline, but academics without a doctorate would be very much in a tiny minority. This has been the case at Russell Group universities for many years. Providing a first-class teaching and learning experience is vitally important to our universities.* (Piatt 2011, in Morgan 2011: 1)

- At South African HEIs 38% of academic staff members (in permanent appointments) do not have PhDs

Percentage of academics at South African HEIs with PhDs in 2000 and in 2015



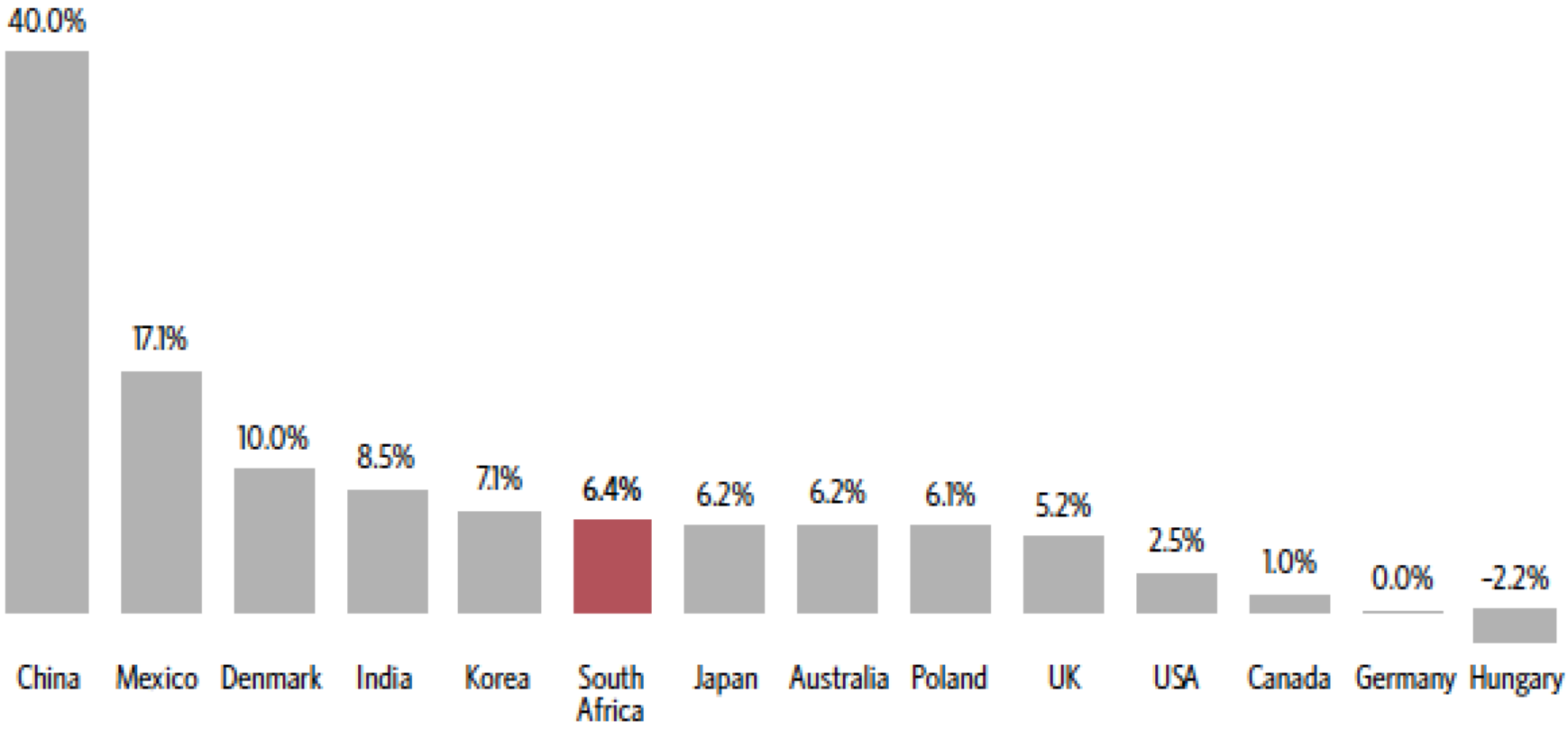
Source: CREST 2019 "*The State of the South African Research Enterprise*"

Increased interest in the doctorate

It is common knowledge that the 1990s brought an upsurge of interest in the doctorate.

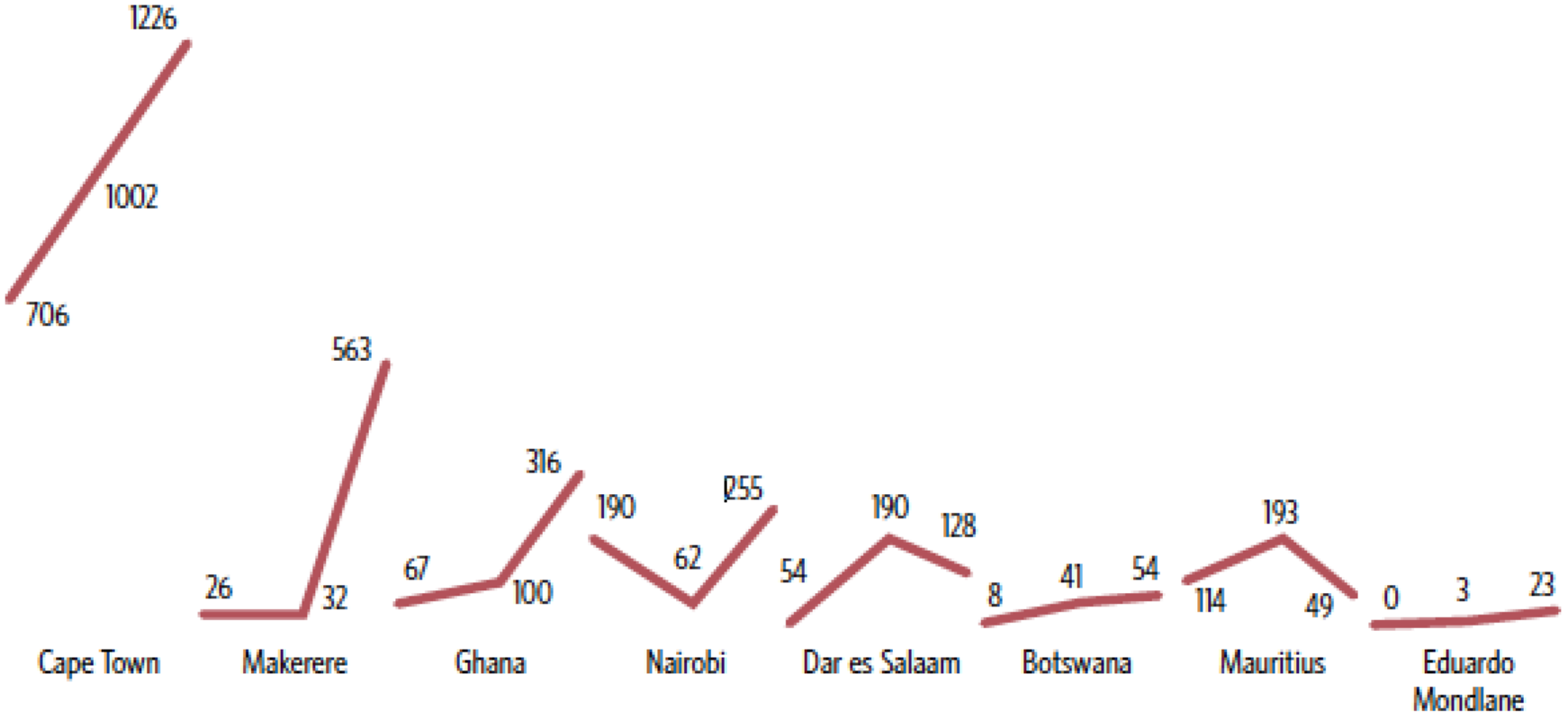
This upsurge has become frenzied in recent years.

Growth in doctoral output 1998 - 2006



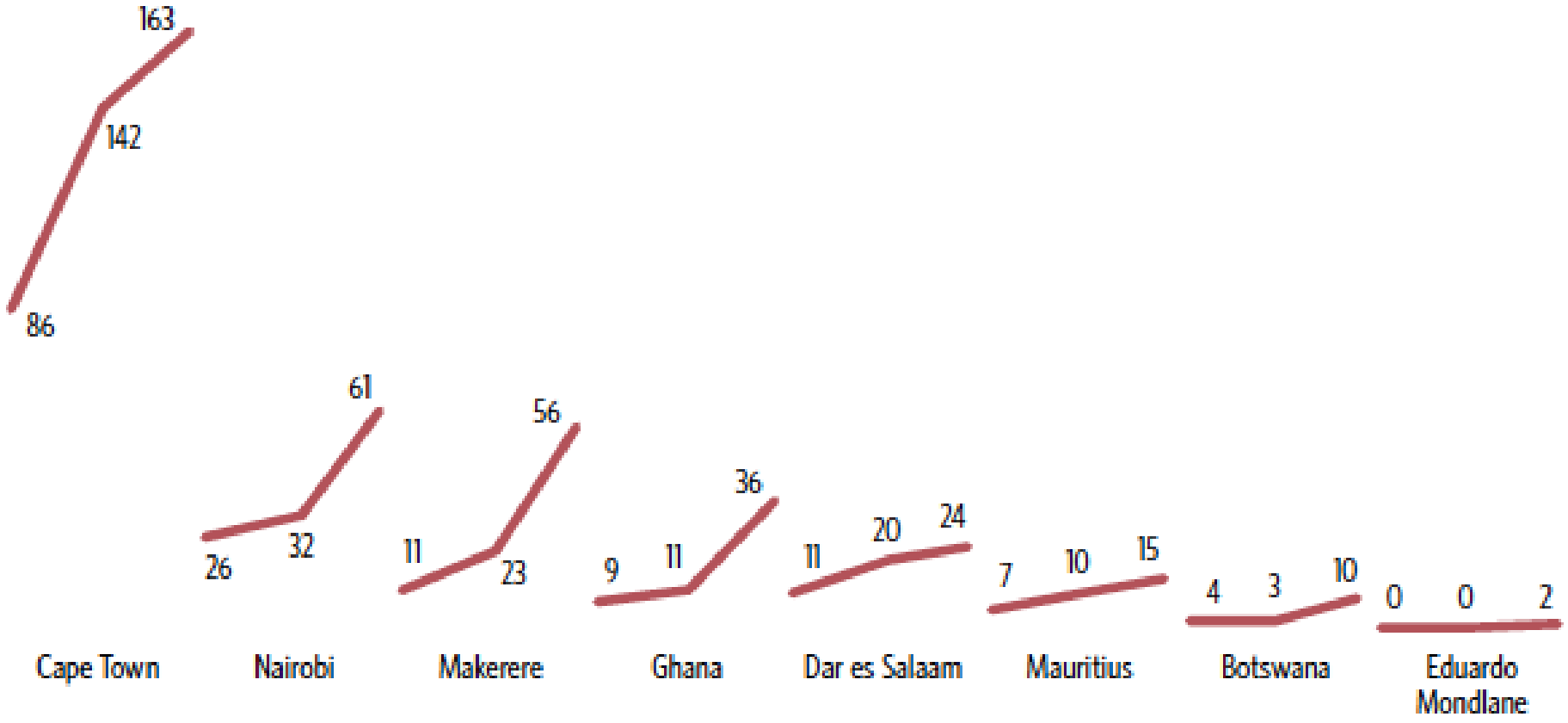
Source: Cyranoski et al. 2011

Doctoral enrolments at eight sub-Saharan African universities (2001, 2007, 2011)



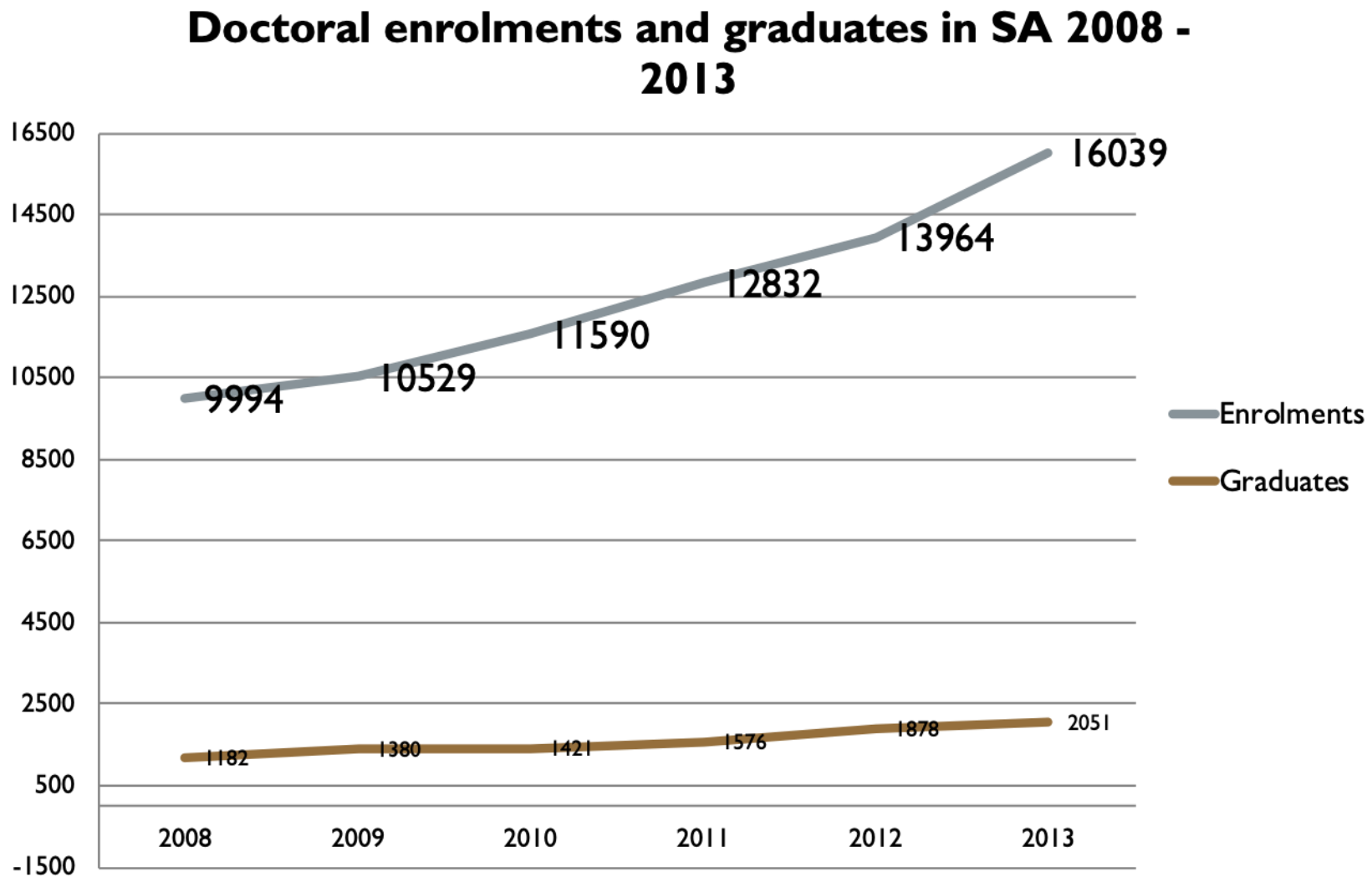
Source: Bunting et al., 2014

Doctoral graduates at eight sub-Saharan African universities (2001, 2007, 2011)

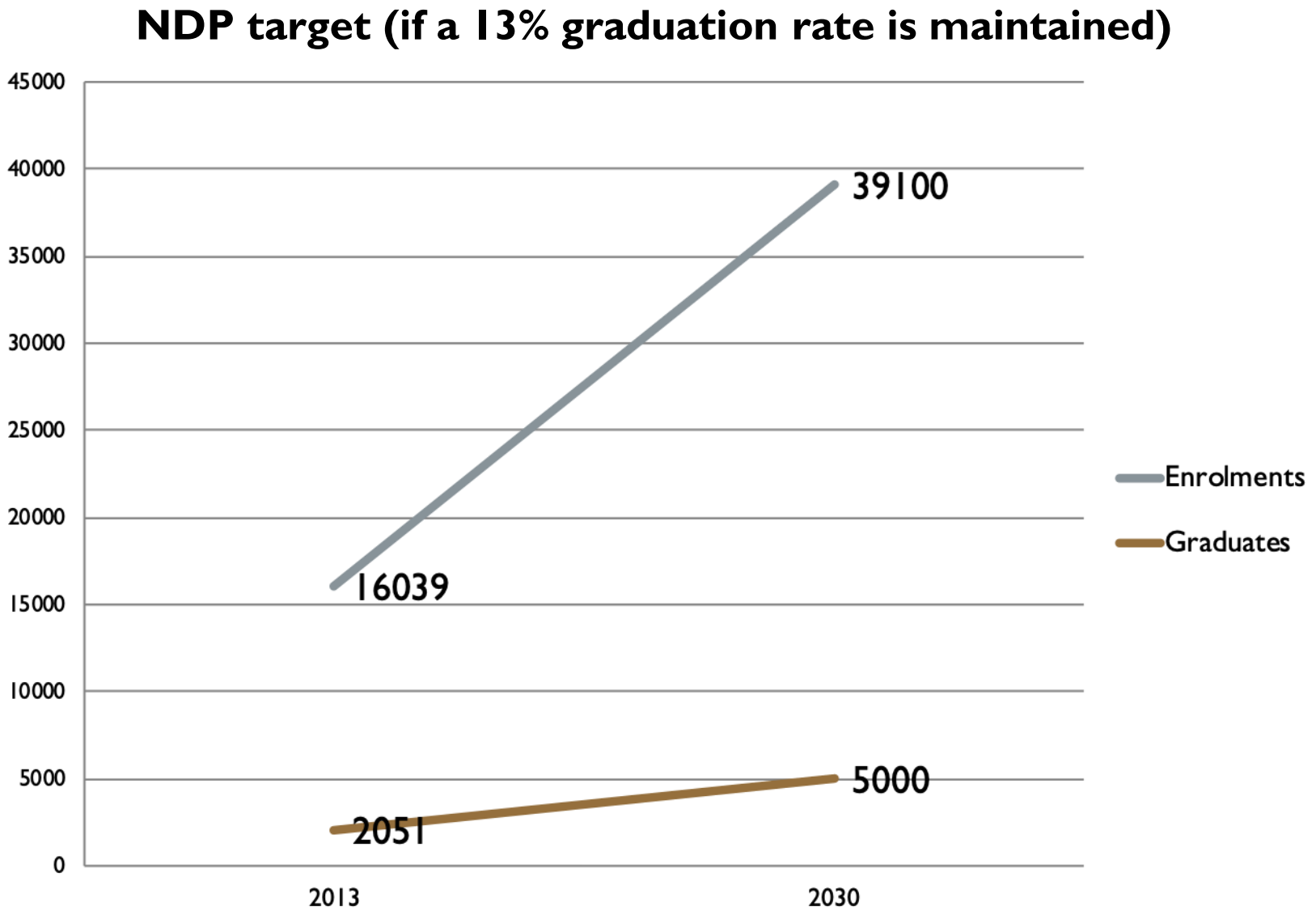


Source: Bunting et al. 2014

Recent SA context – doctoral studies



Projected enrolments and graduates



Supervisors for > 40 000 doctoral candidates…

- More supervisors: More academics at SA universities to obtain PhD degrees
- Training for newly doctorated academics to become good supervisors
- More candidates to be supervised by the current supervisors (Work load…)
- More international supervisors to supervise at South African universities
- More international collaboration (joint supervision and joint programmes)

Training supervisors

Supervisory training: A curriculum

Themes	Modules
Theme 1 The Doctoral Degree	Module 1 Doctoral studies in Africa: the need for the doctorate and the state of doctoral studies in Africa
	Module 2 Nature, purpose, standard, and format of the doctoral degree
Theme 2 The supervisor and the doctoral student	Module 3 Roles and responsibilities of the supervisor and the student
	Module 4 Supervisory models, styles and practice
Theme 3 The supervision process (life cycle)	Module 5 Supervising the preparation phase: selection, supervisor allocation, and supervising the proposal
	Module 6 Supervising the execution phase: responsible conduct of research and ethics, literature review, project management, writing, examination

The DIES/CREST Online Course for Doctoral Supervisors at African Universities

crest
Centre for Research on Evaluation, Science and Technology

Centre For Higher & Adult Education
Sentrum Vir Hoer & Volwassene Onderwys

chert
Centre for Higher Education Research, Teaching and Learning

Universiteit Stellenbosch University

Rhodes University
Where leaders learn

Funding support for the DIES/CREST Course

DAAD

Deutscher Akademischer Austauschdienst
German Academic Exchange Service

DAAD
HRK
DIES
Dialogue on Innovative Higher Education Strategies

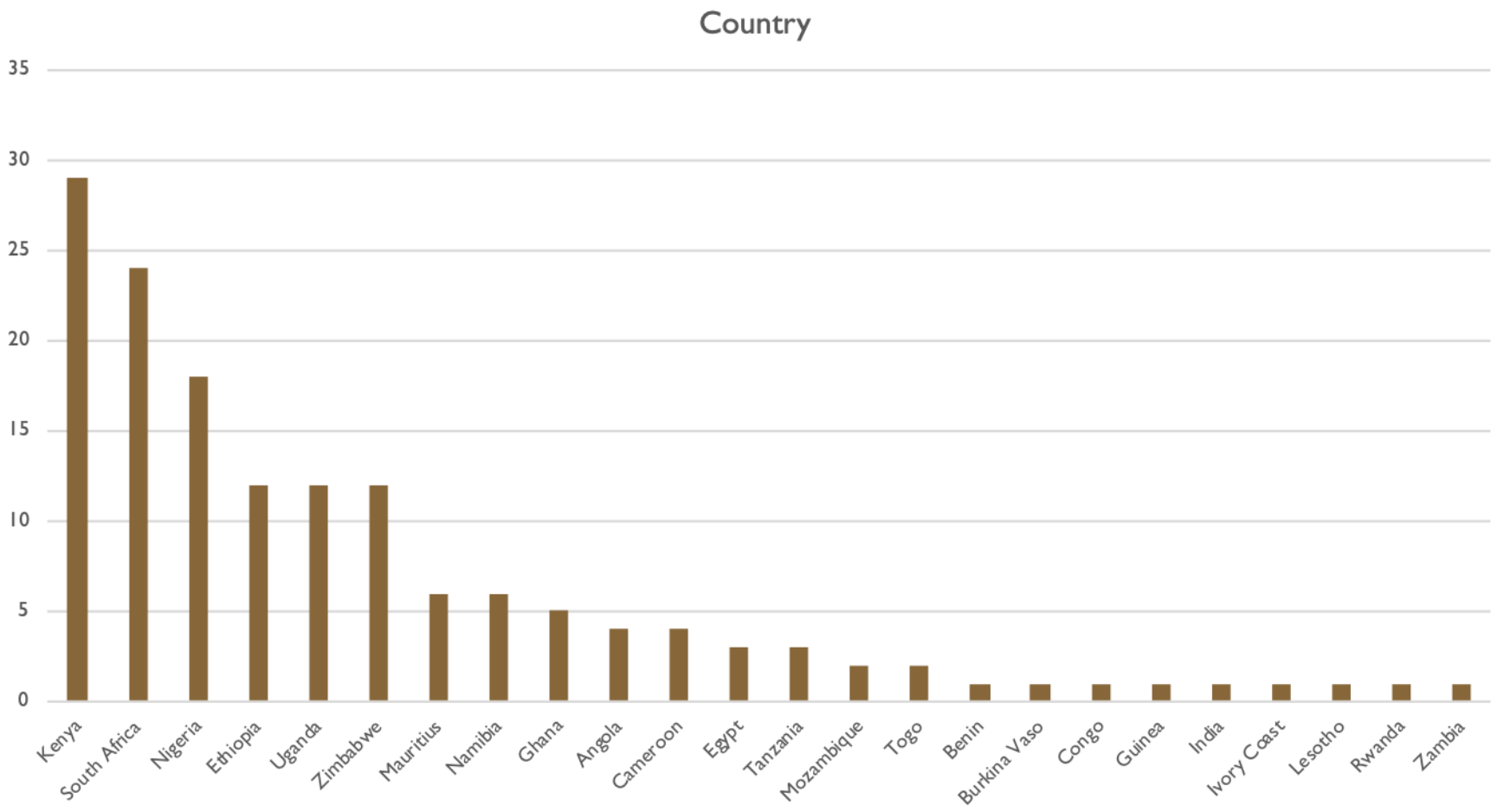
HRK German Rectors' Conference
The Voice of the Universities

Federal Ministry
for Economic Cooperation
and Development

The First Cohort (Oct 2018 – Feb 2019)

Registered	166
Cancelled	15
Total eligible for final assessment	151
Capstone Assignment Submitted	123
Throughput rate (Capstone Assignments submitted as percentage of registered participants)	74%
Success rate (Capstone Passed as percentage of participants eligible for final assessment)	81%

Country (151 candidates from 24 countries)



Classification and distribution of topics

Country Specific Challenges to doctoral education/supervision	25
Supervision process	18
Relationship between supervisor and candidate	14
Efficiency (e.g. TTD)	9
The doctoral programme (institutional arrangements, doctoral school, etc.)	9
Assessment and examination (and doctoral standards)	8
Supervising distance and part-time candidates	5
Supervisor training	5
Supervising diverse students (gender, culture, language, geographical origin)	4
Responsible Conduct of Research (incl. Publishing in predatory journals)	4
Supervising the development of the research proposal (conceptual tools)	3
Feedback	2
Supervisor Identity	2
Academic freedom	1
Contextualizing doctoral education for African conditions	1
Doctoral titles and cultural traditions	1
Doctoral writing	1
Employability of graduates	1
Institutional regulations	1
Quality enhancement strategies	1
Scholarly environment	1

On doctoral education in Ethiopia

"The PhD program [in my university] has a serious 'birth defect.' The 'birth defect' has political roots, but could only be addressed by abstaining from admitting students for a year or two, and then assigning supervisor to all existing students."

"Despite the dominant view in the extant literature, Ethiopia's experience shows that expansion of higher education and doctoral studies are inherently political. Without considering the political roots and processes, it becomes difficult to fully comprehend and address challenges in the sector. Expansion of HEIs led to higher demand for qualified University teachers, enticing the opening of graduate studies in the more established Universities. As this happened without the building of the available expertise in the Universities, especially in the social sciences, it led to higher pressures on supervisors. In extreme cases, PhD programs were established before having the capacity to do the teaching and supervision"

Learning to supervise

Turner, G. 2015. Learning to supervise: four journeys, *Innovations in Education and Teaching International* 52(1):86-98

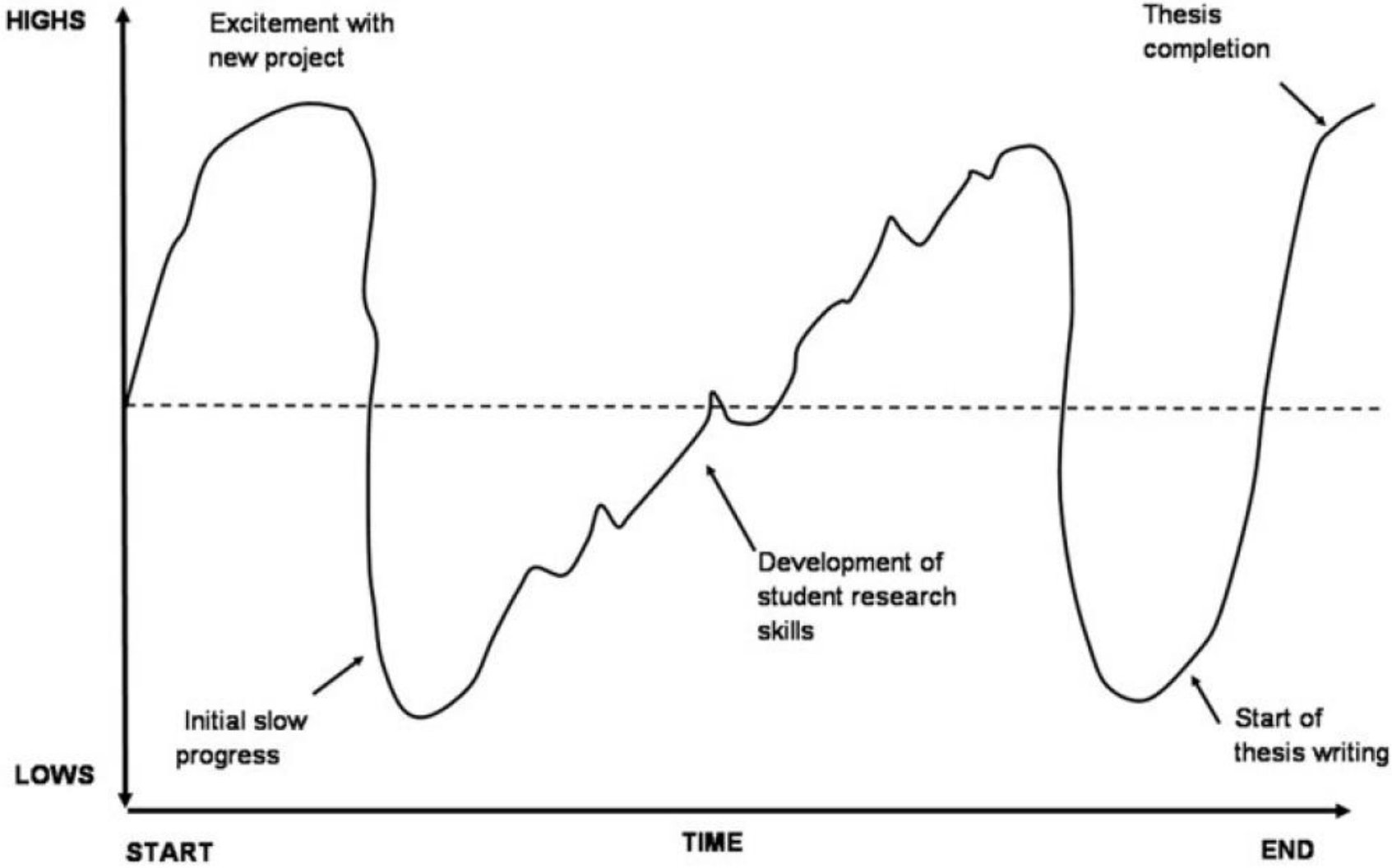
The new doctoral supervisor

- Supervision is important to student progress
- New supervisors draw primarily on their own experience when they were doctoral students
- Experiences of new supervisors
  - Opaque, private, emotional
  - Lack of clarity concerning standards
  - Little guidance on whether they "are doing it right"
  - Supervision process is personal
  - Isolation
  - Disappointment and struggle
  - Doubt and anxiety
  - Tensions

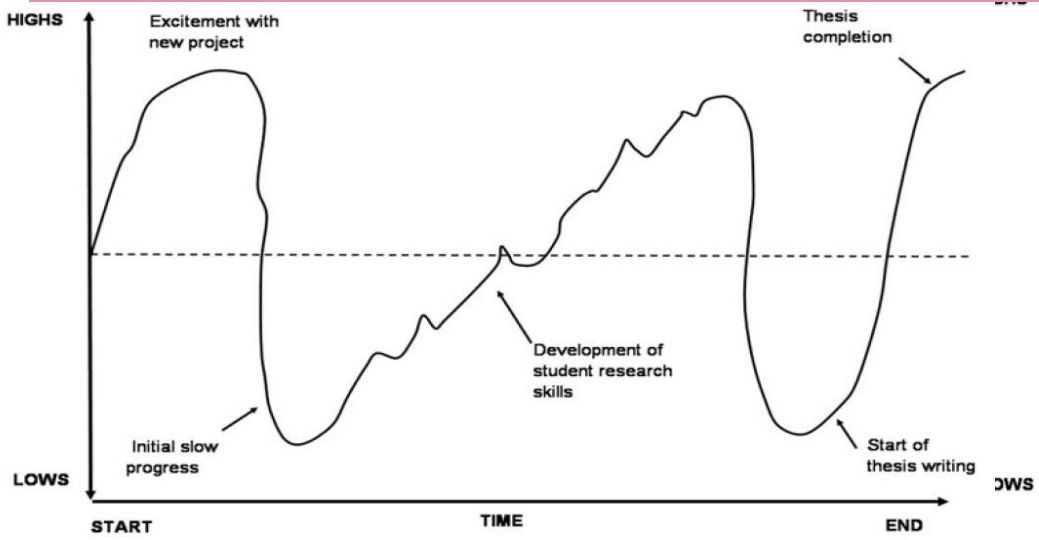
The metaphor of the journey

- Four interviewees
  - Humanities (6 enrolled, 3 completed in 2012; 9 years experience) BRAD
  - Social Science (4 enrolled, 0 completed in 2012; 6 years experience) ELEANOR
  - Physical Science (6 enrolled, 3 completed, 10 years experience) MONTY
  - Medical Science (3 enrolled, 1 completed, 5 years experience) TANYA
- Draw up a "Journey Plot" of supervision experience over time

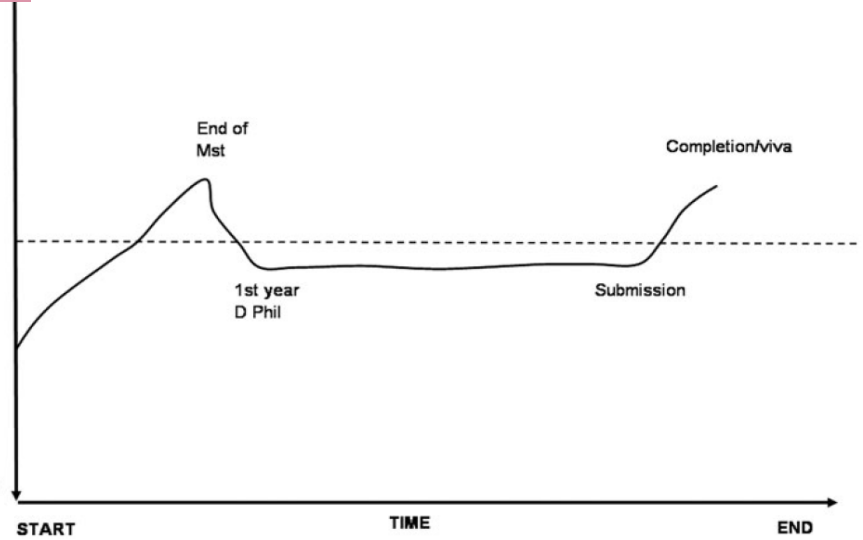
The physical scientist



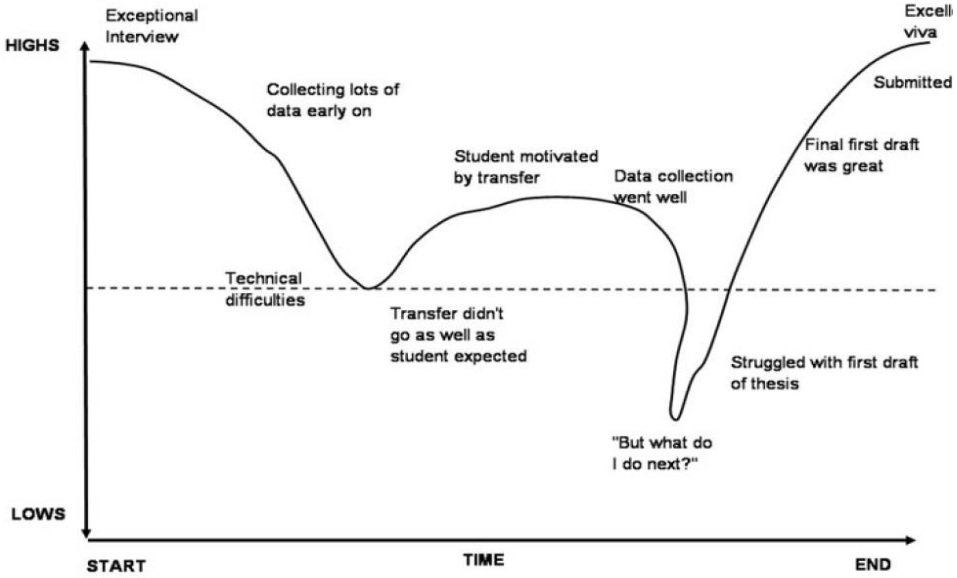
The Physical Scientist (Monty)



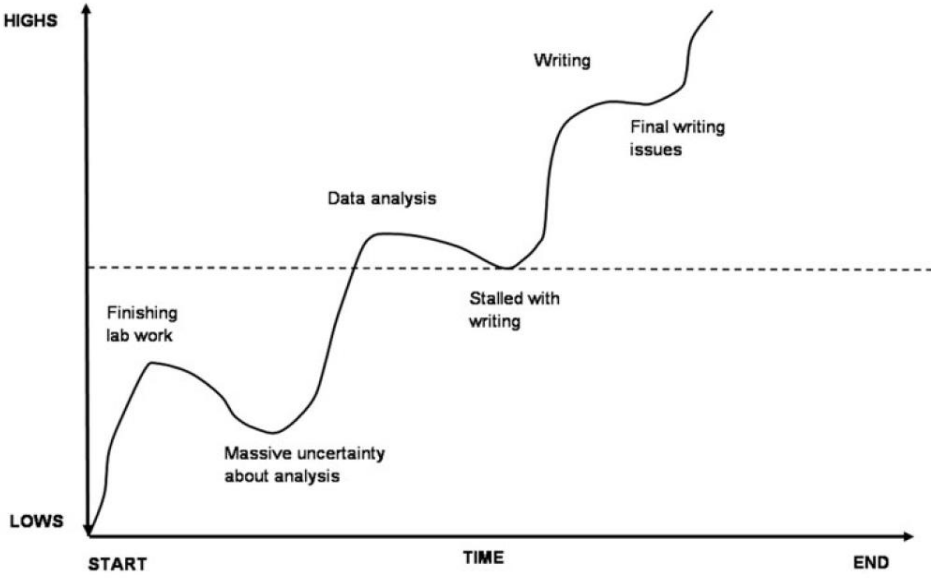
The Humanities Scholar (Brad)



The Medical Scientist (Tanya)



The Social Scientist (Eleanor)



Expectations

- What supervisors expected
  - Excited by student's project
  - Stimulating discussions
  - To provide guidance and ideas
  - To recommend books and articles to read
  - I expect that there will be difficulties, but mostly I anticipate that the students will require minimal input
  - Student has the abilities and aptitudes, they will make smooth progress
  - Quasi-collegial, intellectually stimulating, light touch, minimal intervention
- Reality was different and emotional
  - Necessary students skills and knowledge were missing; frustration
  - Student ignored supervisor's input
  - Existential crisis (demotivated student)
  - A stagnant deal

Student-supervisor relationship

- Physical scientist: developed a business-like relationship, distance
- Humanities scholar: expected a collegial relationship, ended up at distance
- Social scientist: had a strong personal relationship, found it a stumbling block, experience was rocky all the way through
- Medical scientist: started off very hands-on, later student's mini melt-down in front of supervisor, stressful, student recovered, stellar viva
  - Learned to be more objective, less personally involved
  - Not good to be too close
- People management is required but the new supervisors were unprepared for that

Discussion and conclusions

- New supervisors were relatively unprepared (despite attendance of courses on supervision)
- Supervisors lacked formal support
- The supervisory journeys were variable and personalised
- Firstly, supervisors were **agents**
  - Setting goals, directing action
  - Actions not always successful
  - Learn from experience
- Secondly, **resilience** was required
  - Student's 'mini melt-down'
  - 'Stagnant deal'
  - Better self-management skills
- Benefit from mentors and co-supervisors

Learning to supervise

- Will take time
- Will be challenging
- Require resilience and agency
- Will be emotional
- Will be a personalised journey
- You can benefit from the support of experienced supervisors
- Advice may alleviate some of the anxiety
- Reflective practice
  - Use a journey plot

Co-supervision

Literature on joint / co-supervision

	Pole, C. 1998. Joint supervision and the PhD: safety net or panacea. Assessment & Evaluation in Higher Education, 23(3):259–271
	Lahenius, K. & Ikävalko, H. 2012. Joint supervision practices in doctoral education – A student experience. Journal of Further and Higher Education, 38(3):427–446.

Joint supervision and the PhD
(Reading: Pole 1998)

Joint supervision

- A range of joint supervisory practices exist
  - **Number** of co-supervisors differ
  - Attribution of **responsibilities** in the team (for the student and for meeting university regulations)
  - Different **skills, knowledge, experiences** of supervisors
  - Relative **status** of team members
  - **Ethnicity, age, gender**
  - Physical **location** (and ease of availability to student)
- Each situation of joint supervision is **unique**
- **Factors impacting on joint supervision**
  - The research topic
  - The research methodology and perspective
  - The stage of the research
- **Joint supervision is complex, multifaceted and dynamic**

Models of joint supervision

- **In the social sciences**
  - One supervisor model is dominant, joint supervision is rare
  - Joint supervision linked to a concern for specialisms
  - Joint supervision used as training for inexperienced staff
  - Usually two (not more) supervisors involved
  - Both supervisors meet student during sessions
  - Clear demarcation of senior supervisor
- **In the natural sciences**
  - More common
  - More supervisors involved (up to 5)
  - Usually a senior supervisor, but he/she is not necessarily responsible for the finalisation of the theses
  - Individual meetings with student
  - Supervisory team not in a relationship of equals

Emergent issues in co-supervision

1. Are the lines of supervision and the roles clearly defined or fluid?
2. In natural sciences the research group is strong source of support; they are not necessarily members of formal supervisory team but they create a productive research environment
3. In social sciences individual supervision, isolation is dominant
4. Matching topic, candidate, supervisor / Supervisor allocation
5. Different supervisors support/guide different aspects
   - e.g. the person who wrote proposal and secured funding is not necessarily the primary supervisor
6. Distance between supervisors and student: intellectually, age, status, social; dynamic
7. General prescriptive rules for joint supervision is counter-productive, each situation is unique

Students' experience of joint supervision (Reading: Lahenius & Ikävalko 2012)

- Focus of article:
  - Reports **students' experiences with joint supervision**
  - Describes **three types of joint supervision**
    - Complementary
    - Substitutive
    - Diversified
- Evidence gathered through:
  - Interviews with 11 ABD doctoral students in a technical university in Finland (in the Industrial Engineering department)
  - Two questions asked in the interviews:
    - How do doctoral students experience joint supervision?
    - How do doctoral students perceive the work of their supervisors, if receiving supervision?

Review of literature on joint supervision

- The complexity of supervision also makes the practices of joint supervision increasingly important in assuring the quality of doctoral education
- Theory of doctoral supervision as professional work of Halse and Malfroy (2010) comprises five aspects:
  - the learning alliance, habits of mind, scholarly expertise, techné (writing skills, using resources, information management & data analysis, time management) and contextual expertise
- Phillips and Pugh (2005):
  - A diffusion of responsibility, or the student may attempt to play one supervisor off against the other
  - Issue of conflicting advice
- Spooner-Lane et al. (2007):
  - Exposure to diverse intellectual perspectives and expertise
  - Enabling labour in supervisory roles to be divided
  - Access to at least one senior academic

Approaches to joint supervision

- **Complementary supervision** practice: both the additional supervisor and the principal supervisor actively participate in supervision.
- **Substitutive supervision**: the principal supervisor was not actively involved with supervision of the doctoral student's thesis work. At the beginning of the studies the principal supervisor was selected on the basis of the student's research topic. This individual supervision relationship did not always work satisfactorily. Students then realised they needed additional resources to guide them because:
  - Deep knowledge of topic and specific competencies needed
  - Need more support with methodology
  - Principle supervisor's lack of time
  - Telling the principal supervisor about the additional supervisor was an emotional issue
  - Principle supervisor sometimes then sidelined in rest of studies

Approaches to joint supervision

Diversified supervision: more than one additional supervisor during the thesis process; the additional supervisors worked in different organisations from the students' institutions

	Comple-mentary	**Substitu-tive**	**Diversified**
Number of supervisors	2	2	>2
Role of supervisors	PS: all tasks	PS: admin tasks	PS: all tasks
	AS: advice and guide writing process	AS: advice and guide writing process	AS: advice and guide writing process

Five aspects of supervision as perceived by students

Five aspects related to co-supervision:

1. the learning alliance – "he/she is committed and available" OR "he/she never has time for me"
2. habits of mind – "he/she let me do things I wanted to… he/she supported my choices"
3. scholarly expertise – "he/she is the best in this field"
4. techniques / skills
   - writing skills – e.g. co-writing with PS or AS
   - using resources
   - information management & data analysis
   - guidance of student's time management
5. contextual expertise – he/she knows faculty and university policies, procedures and requirements

International joint supervision

Joint or co-supervision in international collaborations

- Fourie-Malherbe, M., Botha, J. & Stevens, D. 2016. The rationale, challenges and benefits of joint doctoral degrees as a new form of doctoral education, in Fourie-Malherbe, M., Albertyn, R., Bitzer, E. & Aitchison, C (eds.). *Postgraduate supervision: future foci for a knowledge society*. Stellenbosch: SunMedia.pp. 313-333

- Mc Alpine L & Norton J 2006. Reframing our approach to doctoral programs: an integrative framework for action and research. *Higher Education Research and Development*, 25(1): 3-17.

Nested contexts influencing doctoral retention and completion (Adapted from McAlpine & Norton 2006)

Data collection

- At the time of the research (during 2015) seven PhD candidates had graduated under joint agreements between Stellenbosch University and partner institutions in Germany, the Netherlands, France, Belgium and Scotland.
- The population consisted of 28 individuals
  - 7 doctoral candidates,
  - 14 supervisors
  - 7 institutional representatives).
- We invited all of them to interviews and succeeded in interviewing five of the seven doctoral graduates, ten supervisors (five each from Stellenbosch University and partner institutions) and two institutional representatives, for a total of 17 interviews.

Distribution of statements on the rationale for joint degrees across different levels				
	Society/system	Institution	Department / discipline	Individual
To capitalise on existing institutional cooperation formalised in a framework agreement		X	X	X
To give effect to institutional strategies (internationalisation) and Faculty / Departmental initiatives		X	X	
To formalise existing scientific cooperation between individuals / research groups			X	X
To increase the number of PhD students	X	X	X	X
To gain confirmation of quality / standards		X	X	
To expand knowledge base and hold qualifications from different institutions		X	X	X
To leverage more research grants / funding opportunities	X	X	X	X
To share resources and expertise to benefit all parties		X	X	X
To work on a topic specifically related to SA context				X
European degree important for employability of graduates				X
Successful candidate to serve as catalyst for more students to do joint degree			X	
To expand cultural horizons				X

Challenges related to joint degrees

Distribution of statements on the challenges related joint degrees across different levels				
	Society/ system	Institution	Department / discipline	Individual
Commitment of key role players		X	X	X
Regulations and rules		X	X	X
Additional work			X	X
Coming to an agreement	X	X	X	X
Share resources and expertise to benefit all parties		X	X	X
Leverage more research grants / funding opportunities	X	X	X	X
Additional expenses	X		X	X
Uncertainty		X		X
Institutional culture				X
Issues related to co-supervision				X
Academic differences				X
Language and culture				X
Reputation		X		

Benefits of joint degrees

Distribution of statements on the benefits of joint degrees across different levels				
	Society/ system	Institution	Department / discipline	Individual
Scientific benefits gained	X	X	X	X
Enhanced research cooperation		X	X	X
More PhDs enrolled	X	X	X	
Visibility of science and researcher	X		X	
Standards and quality confirmed		X	X	X
Reputation enhanced	X	X	X	X
More funding accessed		X	X	X
Mutual learning		X	X	X
Co-supervision			X	X
Employability enhanced	X		X	X
Typical benefits of study abroad		X	X	X
System level knowledge gained	X			
New research opportunities			X	
Success of candidate served as catalyst for more students to do this		X		
Complementarity of supervisors				X

Supervisor preparation for international joint supervision

1. Expect to be confronted with different institutional rules and practices regarding all aspects of doctoral education
   - admission, funding (and conditions of employment), level of involvement of supervisor, levels of institutional support, institutional accountability, IP, examination, graduation
2. Critical importance of the framework documents (the institutional MoU as well as the co-tutelle)
3. Open to learn from partner
4. Be flexible
   - Prepared to adapt and to compromise, maturity, eye on the goal
   - Limits in adaption
5. Expect different styles of supervision (as always in co-supervision)
   - Laissez-faire, Directional, Contractual, Pastoral
6. Optimal use of ICT
7. On-going commitment up to the end of the project of the institution and of all the supervisors
8. Power relationships (international university with high reputation compared with us, a HEI in a developing country
9. Best interest of the student

The memorandum of understanding between supervisor(s) and the doctoral candidate

Memorandum of Understanding

- There is a danger that what we take for granted might seem strange or mysterious to our students.
- So we need to open spaces for articulation of expectations and negotiation of relationship.
- For this a Memorandum of Understanding (MoU) is required – a written document that outlines the roles and expectations you have of each other and how you plan to work together.

Memorandum of Understanding

- Every institution has different norms and processes, so it is important to **contextualise your MoU**
  - to the processes of your own university
  - and the processes international collaborative endeavour.
- The MoU should also direct the student to any relevant policies in the university such as Higher Degrees Guide, supervision policy, postgraduate rules, examination rules, academic integrity & plagiarism policy, ethics rules etc.
- Many issues are much easier to discuss early on before any problems crop up. For example, discussing how long the student should expect to wait for feedback and what they should do if they don't get it by the deadline, or whether you will co-author from the research and so on.
- This is not a once-off process. An MoU between student/s and supervisors is very useful to make things clear from the start, but it is also important to revisit it regularly

Memorandum of Understanding

- The MoU is often considered a contract, a legally binding means of enforcing regulations.

  But we caution against this. Indeed it can be an important process for agreeing on deadlines but if it is seen to be a regulatory document rather than one based on making the graduate journey and relationship explicit, it can reinforce problematic power imbalances rather than challenge them.

Example of MoU

(Example from "*Enhancing Postgraduate Environments*")

1. Meetings and communication
2. Timelines and progress reports
3. Submission of work to supervisor, feedback and revision
4. Expected Outputs
5. Expectations around intellectual property and patents
6. Expectations regarding Skills and Knowledge
7. Expectations regarding funding
8. Expectations regarding work in the Department/Faculty/University

Example of MoU

9. Ground rules and regulations
10. Mechanisms for dealing with disputes
11. Managing co-supervision

    Discuss the role of the co-supervisor and expectations about communicating with the co-supervisor. Include the co-supervisor in this part of the MoU.

    Examples

    - Should student meet separately with supervisor and co-supervisor?
    - Are there specific roles for each of the supervisors and how does this affect communication, meetings, feedback and timelines
    - What are the expectations regarding communication, feedback
    - How will differences of opinion be dealt with?
    - Are there expectations about co-authorship?

THANK YOU

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