

Quality assurance of the doctoral education at the University of Bergen

EUA-CDE Vienna University of Economics and Business 29
October 2009

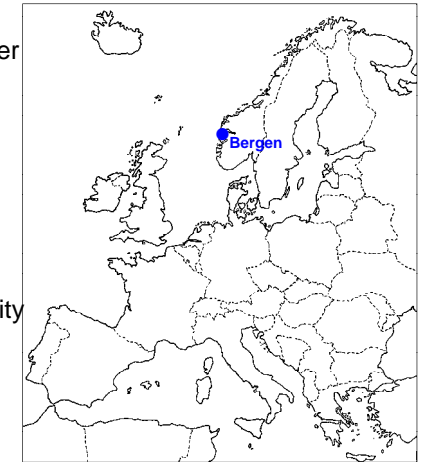
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Organisers EUA-CDE questions:



- Institutional **quality policies** on the doctoral programmes
- **Standard quality procedures** comparing with bachelor- and master levels
- **Quality indicators**
 - selection procedures for PhD-fellowships
 - link education- research
 - interdisciplinarity – transferrable skills training
 - monitoring of progress
 - international participation: mobility
 - publication
 - standard of thesis defence
 - time to degree
 - completion rate



Outline:



- Facts of the University of Bergen (UiB)
- Structure of doctoral studies in Norway
- Structure of doctoral studies at UiB
 - Institutional policy
 - Measuring quality of *PhD* vs *MA* and *BA*
 - Indicators for quality
- Challenges at UiB
- Plan and process of improving quality of doctoral education



UiB a research university



- **Research, PhD-programmes and research based education in all study programmes**
- **Long term research priorities**
 - Marine sciences (including arctic research and climate studies)
 - Development studies



Some facts



- **6 faculties** (Humanities, Law, Medicine and dentistry, Mathematics and natural sciences, Social sciences, Psychology)
- **30 Departments**
 - 19 research schools
- **14 100 students (2009)**
 - 7850 bachelor students
 - 4000 students of integrated masters and professional studies
 - 2250 master students
 - 1350 of 2 yr research masters graduated
 - including 1500 foreign students
- **1350 PhD-students**
 - **233 PhDs graduated in 2008**
 - 30 % from abroad
- **855 professors and associate professors**
- **650 PhD-fellowships & 175 post docs**
- **700 other teaching and research positions**
- **950 support staff**



Research Centres of UiB



National Centres of Excellence (basic research)



- *Climate*: Bjerknes Center for Climate Research*
- *Petroleum*: Centre for Integrated Petroleum Research*
- *Geobiology*: Centre for Geobiology*
- *Medieval history and philology*: Centre for Medieval Studies

Some top centres

*Marine related

- *Molecular marine biology*: SARS (*EMBL member*)*
- *Seafood, nutrition and health*: MitoHealth (*Nordic CoE*)*
- *ICT Code and Cryptology*: SELMER
- *Global health*: Center of international health
- *Psychological Neuroscience*: Bergen Magnetic Resonance Imaging Group (*Nordic CoE*)
- *African archeology*

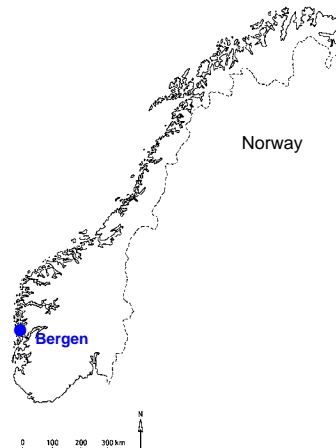
National Centres for research-based innovation (marine technology)

- *Christian Michelsen Centre for Industrial Measurement Science and Technology**
- *National Centre of Expertise "NCE Subsea"** (a world leading suppliers of subsea technology)

Doctoral studies in Norway:



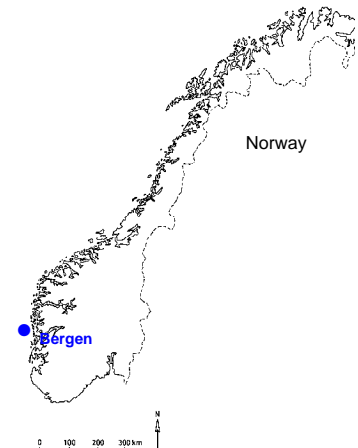
- **Now PhD is start of career**
 - Structured programmes first in natural sciences 1990
 - PhD-fellowship with 3 years salary and research grant
 - **Aim for 28-29 year old doctores**
- **Was end of career as Dr. Philos 1880-1990**
 - *no supervision* - no training - was already a senior
 - employed
 - 40-60 year old doctores



Doctoral studies in Norway



- **National regulations – Public defence**
 - Programmes **organised** at the faculty (school) levels
 - **Funded** for 3 years (4 for university fellowships including 25% duties as teaching assistants):
 - original research work and 30 ECTS course work
 - **Thesis**: a collection of articles with a synopsis or a monograph.
 - **Evaluation** committee: member(s) from abroad evaluate quality according to international standards and the *Dublin descriptors*
 - Written report – opponents at the defence
 - **The PhD-student**:
 - Public trial lecture on theme given by the committee
 - **Public defence**: oral presentation of main research findings and discussing thesis with 2 opponents from the evaluation committee



Doctoral studies at the University of Bergen



• Institutional policy

- UiB will develop strong research environments and meet society's demand for highly qualified employees
- Doctoral studies a fundament for UiB as a research university
- High quality, international profile
- Educational programmes that contribute to research
- Institutional regulations, but the faculty level is the organising unit
- PhD-fellowships in open competition
 - committee selection based on academic qualifications
 - salary and research project costs are covered 3 (PhD-work) or 4 years (PhD-work + 25% teaching assistant)
- PhD-students valuable members of active research groups and/or research schools
- One main supervisor and co-supervisor(s)
- Most PhD-studies are disciplinary, but UiB offers also interdisciplinary and transferrable skills training
- UiB will improve support to and training of supervisors

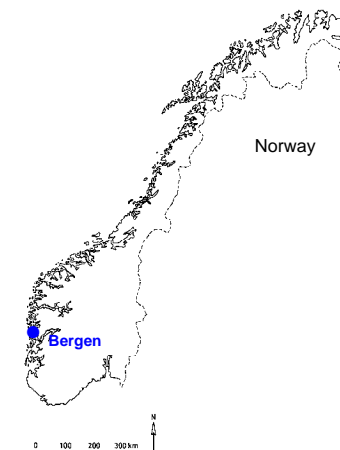


Doctoral studies at the University of Bergen



• Quality measures used

- **Start/enrolment**
 - Rely on qualifications after open competition
- **During the doctoral study**
 - *Handbook for doctoral education* (<http://www.uib.no/phd/en/>) sets expectations, responsibilities, "who does what"
 - Yearly progress report separately from student and supervisor
 - Midway evaluation
 - Submit papers to international journals with referee
 - Exam on coursework: grades A, B, C
- **Thesis work and defence**
 - Evaluation committee include member(s) from universities abroad
 - Trial lecture; topic given by evaluation committee
 - Public defence
 - Thesis public available before the defence
 - Public graduation ceremony
 - Grade: Pass or fail



Difference in third cycle vs first and second:



• Etelka Tamminen Dahl, UiB expert on learning outcome:

"The modern *Bachelor- and Masterdegree* studies are founded on predetermined curricula. The important element within the curricula are the intended learning outcomes described by the academics (teachers). These should be in alignment with the chosen assessment methods which measure the quality of the student's performance. *Studies on these levels are continuously monitored and the students work more or less under supervision and they should get often feedback on their work. The aim for the first and second cycle is progressively to give students a strong factual fundament and skills for autonomus studies on the third level.* The extent of independence, judgement and innovation in studies is the qualitative difference between the cycles"

Comparing with bachelor and master studies



• Measuring quality at the University of Bergen

- **Master**
 - **First year: master courses:**
 - feedback on written assignments
 - final exams evaluated using one internal and one external examiner
 - grades A, B, C, D, E
 - **Second year: research work** (1/2 yr in law and dentistry):
 - feedback during the thesis development as for the PhD
 - examination committee include external examiner
 - public presentation of master thesis
 - exam: discuss thesis with evaluation committee
 - grades A, B, C, D, E
- **Bachelor**
 - feedback on written assignments
 - written or oral exam
 - grades A, B, C, D, E

Challenges & status of doctoral studies at UiB



- **Performance in doctoral education is now part of funding scheme of Norwegian universities, but it also affect our reputation as a research university. Therefore UiB has:**
 - evaluated doctoral studies, improved the organisation and the way PhD-students and supervisors are supported
 - developed a plan for the improve
 - adopted best practices from UK-universities (Bristol, Imperial and UCL) and benchmarked with Århus, Gothenburg, Turku and Kiel
 - improved the institutional reporting procedures on doctoral education
- **To evaluate the status of doctoral education, UiB has compared some indicators for quality with those of universities abroad:**
 - Completion rates
 - Time to degree
 - Drop out rates

The plan for improving doctoral education:



- **A committee was led by the prorektor organising:**
 - workshops to:
 - identify challenges and possibilities
 - exchange best practices across faculties and disciplines
 - get inspirations from universities from abroad, inform about the progress of the planning, to organise hearings and to get feed back to plan outlines
 - **Participants in workshops:** academics, admin, research school leaders, PhD-students, department heads, vice deans for doctoral education and research
 - discussions with
 - leaders at all levels, including the University board
 - partner institutions
 - use of national and international documents and processes

Performance indicators – completion rate

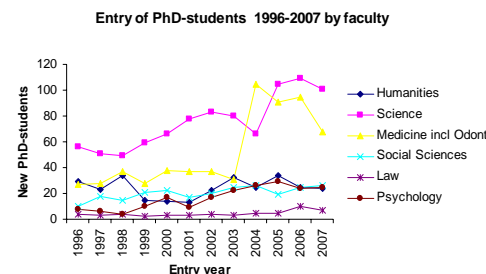


- **Indicators of quality at UiB versus UK- universities**
 - Research degree qualification rates after 6 yr across **98** UK universities was on average: **78%**
 - **Good UK performers:** - within 6 yrs
 - Bristol & Southampton: 90%;
 - Imperial College 86%;
 - University College London: 83%
 - **University of Bergen:** - within 6 yrs
 - 48% of the 96/97-cohort
 - 60% of the 00/01-cohort
 - **Average time to degree**
 - Norway: 3.6 yr (2007)
 - UiB: 3.9 yr (2007)
 - UK: 3.8 yrs
 - Sweden 6 yrs
 - France 4 yrs

Completion rate by UiB faculty (%) 4 yr after entry year



	Hum	Nat Sci	Med & Dent	Soc Sci	Law	Psyc
Numbers enrolled	32	80	31	25	3	22
2003 cohort	38%	61%	36%	16%	67%	27%



UiB: average 47% in 4 yrs

UK: 57% in 5 yrs

Netherlands 12%

Performance indicators – drop outs



- **Drop out:** HEFCE: Higher Education Funding Council for England, **define drop out** as not finished by 7 yr
http://www.hefce.ac.uk/pubs/hefce/2007/07_29/P1.xls
 - HEFCE 2005:UK: 29% of full time studies, 66% of part time ()
 - **UiB: average 28% of the 2000 cohort**
 - Australia 35% (Martin et al 2001)
 - Google result from Eurodoc and Science Next wave (2005):
 - France 35%
 - Netherland 25%
 - Spain 87%
 - Google result: *Tufts daily*, 1 October 2009 – *not finished after 10 yrs*
 - USA
 - 50% in humanities
 - 30% in sivil engineering
 - 30-50% in life sciences

Drop out at UiB by faculty (%) 7 yr after entry



	Hum	Nat Sci	Med Den	Soc Sci	Law	Psyc
Numbers enrolled	14	66	38	22	3	17
Cohort: 2000	36%	17%	29%	55%	0%	35%

Weighted average 28%

8 major improvement areas identified for doctoral studies



1. Dimensioning and resource allocation
2. Recruitment, information and career planning
3. Supervisors and Research Schools
4. Collaboration with partner institutions
5. Internationalization
6. PhD-courses
7. Administration and reporting
8. PhD regulations

1. Dimensioning:



- **SPECIFIC ACTIONS:**
- * Secure resources to research and supervision of doctoral students

2. Recruitment, information and career opportunities:



- **General:**
 - improve recruitment to doctoral studies
 - expose bachelor students to research and role models early
 - improve career opportunities after PhD: more post doc positions
- **SPECIFIC ACTIONS :**
 - * Need *Handbook for Doctoral Training (done)*
 - * High quality web-information expressing link between education, PhD-studies and research (started)
 - * Flexible transfer from master to PhD-studies Establish stipends for master students showing particular research potential (*turbo-stipend*)

3. Supervision and research schools :



- Doctoral students members of research groups and research schools
- Enough supervisors
- Mid-way evaluation for evaluating status and planning completion
- *Research Schools* are extra meeting places offering networking, seminars and doctoral courses
- One main supervisor and at least one co-supervisor
- International expertise in the supervisory committee (e.g. use adjunct 20% professor position)

4. Collaboration with partner institutions :



- **UiB offers doctoral education to PhD-students employed outside the university**
 - Partner institution fund salary and provide working place for the PhD-student, and some times co-supervision
- SPECIFIC ACTION:**
- PhD-students with a different employer than UiB has to spend periods in their supervisor's research group, preferably at the university
 - Need of stronger collaboration with partner institutions when they advertise a fellowship, but also when selecting for positions aiming for a PhD at UiB

5. Internationalization:



SPECIFIC ACTION :

- Supervisors are responsible for early information on possibilities for staying abroad and for linking the PhD-student to a research environment abroad.
- A short high quality stay abroad should be given a priority over longer and less focussed.
- Strengthening "internationalisation at home" such as:
 - Adjunct professorships from abroad (20% positions) as members of research groups
 - Research collaborations that involve capacity building and exchange visits with universities from abroad
 - Coimbra summer school on *Transferable skills training* for PhD students <http://www.eaie.org/pdf/F101art5.pdf>
 - *Bergen Summer Research School on global challenges* (<http://www.gdc.uib.no/>)

6. PhD- courses:



- **SPECIFIC ACTION :**
- Establish a centrally run web portal with complete info of all available PhD-courses at UiB; and coordination of course developments for training in *research skills* and *"transferable skills"*
 - Transferrable skills type of course:
<http://www.eaie.org/pdf/F101art5.pdf>

7. Administration and reporting :



- **Semester registration of PhD-students and annual progress reporting will :**
 - Allow the faculties and the university board identifying bottlenecks and where more action/resources are needed
 - improve indicators for success of doctoral programmes (completion time, time to degree, drop out)

8. PhD-regulations :



- There is a need for procedures of how to handle plagiarism and unethical aspects
- Define when status as PhD-students ends
 - **SPECIFIC ACTION :** PhD-students not completing within the fellowship period, must within 1 year; provide a progress plan for completion. If the plan is *not* approved, or if the PhD-student fail to submit a plan, he is regarded as drop out and no longer an active PhD-student.

Processes of improving doctoral studies should



- **Combine top-down decisions with strong bottom-up-involvement**
- Identify challenges and traditions at different units – keep good balance in disciplinary traditions and essential changes
- Involve all levels when discussing aims
 - create learning and respect across disciplines
- Identify an action plan to meet aims
 - academics are essential in the development and when following up decisions
- Define doctoral education as part of university policy