EVALUATION OF DOCTORAL TRAINING
FUTURE OF DOCTORAL EDUCATION

On Monday 16 May, 2016 at 12:15 – 15:45 in Agora, Auditorium 1

Programme
12:15 Opening words. Professor Kaisa Miettinen Vice-Rector, Head of the University Graduate School
12:30 Evaluation process and preliminary results. Tuula Oksanen Graduate School Coordinator
13:00 Examples of good practices in doctoral training at JYU
13:30 Feedback workshop
14:15 Coffee break
14:30 Feedback workshop continues
15:30 Closing words
EVALUATION OF DOCTORAL TRAINING IN JYU: PROCESS AND PRELIMINARY RESULTS

16.5.2016
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tuula.a.oksanen@jyu.fi
Background

- Operational Agenda for the Strategy of the University of Jyväskylä
  - 2015-2016 Doctoral training is evaluated
  - 2016-2020 Doctoral training is developed on the basis of the evaluation conducted in 2016

- Internal evaluation based on the realisation of
  - the operating principles of the University Graduate School
  - Graduate School Steering Board’s additional guidelines and recommendations

- Doctoral training in the faculty doctoral schools and their doctoral programmes after the establishment of the University of Jyväskylä Graduate School (1 August 2011)

- Participants
  - Science Council
  - Graduate School Steering Board
  - Graduate School Coordinator and Quality Manager
  - Doctoral schools and programmes (doctoral students, supervisors, heads of doctoral schools and programmes)
Objectives

Evaluate
- The realisation of operating principles
- Transparency of operating methods
- Long-term viability of the operating model

Recognise
- Strengths and development needs of doctoral training at the University

Promote
- Sharing of good practices

Improve
- The quality of doctoral training

Increase understanding
- How doctoral training is implemented in different fields of science?

Take into account
- Strategic targets of the University
Process

2015 Planning

Spring 2016 Implementation

Autumn 2016 Development plan

2016-> Follow-up

Self-evaluation of doctoral schools

- Realisation of operating principles
- Transparency of operating methods
- The long-term viability of the operating model
- Strengths
- Development needs
- Other observations
- SELF-EVALUATION REPORTS

School-specific evaluation discussions

- Verification and supplementing of the information presented in the self-evaluation reports
- Internal strategic targets of doctoral education
- EVALUATION REPORT

Discussion about the future

- Sharing of good practices
- Needs for development
- Visions of the future
- Feedback about the evaluation process
Final report

Contents

- Development plan
- Evaluation reports
- The outcomes of future discussion
- Evaluation procedure

Compiled by the Graduate School Steering Board

Presented to the Science Council for approval

Published in Finnish and in English by the end of 2016
Follow-up

- Development plan with development actions and timetable
  - Operational Agenda for the Strategy of the University of Jyväskylä

- Realisation of development actions
  - Graduate School Steering Board and Science Council

- The impact of development actions
  - Systematic feedback surveys e.g. doctoral student survey
Preliminary results

- Evaluation reports
- Self-evaluation reports
- Doctoral student survey 2016
Student recruitment

Positive observations

- Many faculties have been working on their admission and selection processes
- Increased focus on selection criteria:
  - Quality and feasibility of research plan
  - The relevance of the topic to the department’s research strategy
  - Availability of qualified supervision and sufficiency of guidance resources

Current challenges

- Providing the applicants with a clear understanding about the circumstances of doctoral training
  - 24% (n=402) of middle and end phase respondents have guaranteed funding for full-time doctoral studies for the entire duration of their doctoral studies
  - 29% (n=634) of all respondents are pursuing a research career at a university
Assess how the factors below were implemented when you applied for the postgraduate study right and were selected as a doctoral student. Scale 1-5 (I don't know removed). Beginning phase.

<table>
<thead>
<tr>
<th></th>
<th>n</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Information about the application period was easily available.</td>
<td>204</td>
<td>4.25</td>
<td>1.036</td>
</tr>
<tr>
<td>I received an adequate amount of guidance and supervision during the application process.</td>
<td>217</td>
<td>4.13</td>
<td>1.034</td>
</tr>
<tr>
<td>Information about the application procedure was easily available.</td>
<td>214</td>
<td>4.00</td>
<td>0.967</td>
</tr>
<tr>
<td>I have a clear understanding of why I was accepted.</td>
<td>213</td>
<td>3.72</td>
<td>1.138</td>
</tr>
<tr>
<td>The selection criteria were openly available.</td>
<td>204</td>
<td>3.65</td>
<td>1.150</td>
</tr>
<tr>
<td>The selection process was transparent.</td>
<td>193</td>
<td>3.39</td>
<td>1.182</td>
</tr>
</tbody>
</table>
Student guidance and supervision

Positive observations

- Having two or more supervisors is becoming more common
  - 51% (n=636) of all respondents
  - 58% (n=228) of beginning phase doctoral students
- More post docs act as second (junior) supervisors
- The supervisors are committed to their duties and easy to reach
- Many faculties and departments arrange meetings for supervisors

Current challenges

- Support for the development of guidance skills e.g. supervisor training or peer support
- Adequate supervision and guidance at the beginning of doctoral studies
- Keeping the supervisors informed about University’s rules and recommendations
Assess the quality of the following aspects of doctoral training and the practices related to it based on your current experience. Scale 1-10 (I don't know removed). All respondents.

<table>
<thead>
<tr>
<th>Aspect</th>
<th>n</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The scientific quality of the research environment</td>
<td>565</td>
<td>7.78</td>
<td>1.962</td>
</tr>
<tr>
<td>The supervision of dissertations</td>
<td>602</td>
<td>7.26</td>
<td>2.387</td>
</tr>
</tbody>
</table>
How much orientation was offered to prepare you for your doctoral studies? n=227 (beginning)

- Very little or none at all: 30% (n=68)
- To some extent: 36% (n=82)
- Adequately: 23% (n=53)
- I didn't need or want orientation: 8% (n=19)
- I don't know: 2% (n=5)
Students who receive an adequate amount of supervision for their dissertation research (67 %, n=631)

- Are young: 24-36 years
- Are full-time doctoral students
- Have a part-time employment relationship with the University
- Have currently stronger motivation than they did at the beginning of their doctoral studies
- Have received an adequate amount of orientation
- Are working on an article dissertation
- Are writing their dissertation in some other language than Finnish
- Carry out their dissertation research in a research group
- Have secured funding for the entire duration of their doctoral studies
Students who DO NOT receive an adequate amount of supervision for their dissertation research (17 %, n=631)

- Are older than 47 years
- Are not studying at the moment
- Are not employed by the University at the moment, but have been before
- Have currently weaker motivation than they did at the beginning of their doctoral studies
- Are in the middle phase of their doctoral studies
- Have been offered very little or not at all orientation
- Have not decided the form of their dissertation or the form is something other than an article dissertation or a monograph
- Have not decided the language of their dissertation
- Do not know if they are working in a research group or not
- Have funded their doctoral studies with employment in an academic position or with another type of employment or income
Supervision documents and follow-up groups

- There have been challenges in putting the supervision documents and follow-up groups into practice

- The main purpose and constitution of follow-up groups split opinions
  - Supporting and follow-up of student’s progress
  - Solving potential problems

- Among the beginning phase doctoral students (n=227)
  - 64 % registered a supervision document
  - 51 % had a follow-up group nominated for them

- Among the middle and end phase doctoral students (n=404)
  - 51 % have a follow-up group
  - 21 % don’t know if they have a follow-up group or not
Integration in research communities

University strategy: Doctoral students are tightly integrated in research communities

Positive observations

- Integrating doctoral students in research groups is becoming more common
  - 26 % (n=633) of all respondents work in a research group
  - 36 % (n=226) of beginning phase students work in a research group

Current challenges

- Supporting the integration of part-time doctoral students
- Ensuring that international doctoral students and supervisors get the same information and opportunities as the Finnish speaking students and supervisors
- In research groups
  - Recognising the status of doctoral students as both students and researchers
  - Retaining clarity in the distribution of supervisory duties
Students who answered “Yes” to question: My integration into the scientific community has been promoted

- Are young: 24-36 years
- Are completing their degree full-time
- Have their place of residence abroad
- Have a native language other than Finnish
- Are at the end phase of their doctoral studies
- Are employed by JYU full-time or part-time
- Consider the quality of doctoral training to be good
- Have currently stronger motivation than they did at the beginning of their doctoral studies
- Are writing their dissertation in some other language than Finnish
- Carry out their dissertation research in a research group
- Have secured funding for the entire duration of their doctoral studies
- Receive an adequate amount of supervision for their dissertation research
- Have not been delayed from their original study plan
- Have had teaching duties at JYU
At the moment, do you have office space at the University? % In my current daily research environment…

I meet other doctoral students with whom I can exchange thoughts n=391
- Yes, I have office space at my home department or somewhere else at the Uni
- No, but I would like to have office space at the Uni / I don't need office space at the Uni

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I fully agree</td>
<td>90%</td>
</tr>
<tr>
<td>somewhat agree</td>
<td>68%</td>
</tr>
<tr>
<td>in-between</td>
<td>60%</td>
</tr>
<tr>
<td>somewhat disagree</td>
<td>38%</td>
</tr>
<tr>
<td>I fully disagree</td>
<td>13%</td>
</tr>
<tr>
<td>I don't know</td>
<td>8%</td>
</tr>
</tbody>
</table>

I can ask one of the other researchers if I have any problems related to my doctoral studies n=389
- Yes, I have office space at my home department or somewhere else at the Uni
- No, but I would like to have office space at the Uni / I don't need office space at the Uni

<table>
<thead>
<tr>
<th>Opinion</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>I fully agree</td>
<td>82%</td>
</tr>
<tr>
<td>somewhat agree</td>
<td>60%</td>
</tr>
<tr>
<td>in-between</td>
<td>56%</td>
</tr>
<tr>
<td>somewhat disagree</td>
<td>26%</td>
</tr>
<tr>
<td>I fully disagree</td>
<td>18%</td>
</tr>
<tr>
<td>I don't know</td>
<td>14%</td>
</tr>
</tbody>
</table>
### The scientific staff members are generally interested in hearing about my research. n=388

<table>
<thead>
<tr>
<th>Option</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I fully agree</td>
<td>74%</td>
</tr>
<tr>
<td>somewhat agree</td>
<td>60%</td>
</tr>
<tr>
<td>in-between</td>
<td>66%</td>
</tr>
<tr>
<td>somewhat disagree</td>
<td>54%</td>
</tr>
<tr>
<td>I fully disagree</td>
<td>23%</td>
</tr>
<tr>
<td>I don't know</td>
<td>17%</td>
</tr>
</tbody>
</table>

### I have access to research infrastructure necessary for my research (e.g. research equipment, data and software). n=388

<table>
<thead>
<tr>
<th>Option</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>I fully agree</td>
<td>82%</td>
</tr>
<tr>
<td>somewhat agree</td>
<td>55%</td>
</tr>
<tr>
<td>in-between</td>
<td>52%</td>
</tr>
<tr>
<td>somewhat disagree</td>
<td>52%</td>
</tr>
<tr>
<td>I fully disagree</td>
<td>13%</td>
</tr>
<tr>
<td>I don't know</td>
<td>9%</td>
</tr>
</tbody>
</table>
**Doctoral students and their research are respected n=389**

- Yes, I have office space at my home department or somewhere else at the Uni: 70% (I fully agree)
- No, but I would like to have office space at the Uni / I don't need office space at the Uni: 30% (I fully disagree)

- Somewhat agree: 52% (somewhat agree)
- In-between: 68% (in-between)
- Somewhat disagree: 42% (somewhat disagree)
- I fully disagree: 21% (I fully disagree)
- I don’t know: 18% (I don’t know)

**I feel that I am a part of the University community n=388**

- Yes, I have office space at my home department or somewhere else at the Uni: 90% (I fully agree)
- No, but I would like to have office space at the Uni / I don't need office space at the Uni: 10% (I fully disagree)

- Somewhat agree: 71% (somewhat agree)
- In-between: 61% (in-between)
- Somewhat disagree: 44% (somewhat disagree)
- I fully disagree: 10% (I fully disagree)
- I don’t know: 6% (I don’t know)
Degree requirements

Positive observations

- Transferable skills studies
  - The courses of Language Centre and IHME are popular and considered of good quality >> courses fill up quickly

Current challenges

- All studies
  - Consistency and specificity in presenting degree requirements
  - Clarity at the beginning of doctoral studies

- Transferable skills studies
  - Establishing of transferable skills as part of degree requirements
  - Adequacy of offerings in English
  - Equal opportunities to attend courses offered by different units
Career planning

Positive observations

- Students find it easy to discuss research career with their supervisors

Current challenges

- Structures, models and methods for supporting career planning
  - Different careers in Finland and internationally
  - International students
At the moment, which career are you pursuing?

% phase of studies

- **Beginning**: n=228
- **Middle**: n=239
- **End**: n=167

**Researcher at a university**
- Beginning: 35%
- Middle: 19%
- End: 35%

**I am going to continue in my current or previous job**
- Beginning: 14%
- Middle: 20%
- End: 16%

**Expert position in the private or public sector**
- Beginning: 14%
- Middle: 18%
- End: 13%

**I don’t know**
- Beginning: 15%
- Middle: 12%
- End: 10%

**Teacher (at the Uni or other)**
- Beginning: 11%
- Middle: 12%
- End: 9%

**Research career outside of a university**
- Beginning: 4%
- Middle: 10%
- End: 11%

**Self-employment**
- Beginning: 4%
- Middle: 4%
- End: 1%

**Other**
- Beginning: 4%
- Middle: 5%
- End: 5%
Please assess how satisfied you are with the working life orientation of your doctoral studies at the moment. middle and end phase

<table>
<thead>
<tr>
<th>Opportunity</th>
<th>Satisfied</th>
<th>Not at all</th>
<th>To some extent</th>
<th>To a great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opportunities to use the skills that I have acquired during my doctoral studies in working life n=395</td>
<td>12</td>
<td>7</td>
<td>46</td>
<td>36</td>
</tr>
<tr>
<td>Opportunities to acquire knowledge about employment opportunities and job search n=395</td>
<td>25</td>
<td>18</td>
<td>45</td>
<td>12</td>
</tr>
<tr>
<td>Opportunities to establish connections to potential employers n=392</td>
<td>27</td>
<td>20</td>
<td>43</td>
<td>10</td>
</tr>
<tr>
<td>Opportunities to get understanding about working in an expert position n=393</td>
<td>27</td>
<td>22</td>
<td>37</td>
<td>14</td>
</tr>
<tr>
<td>Opportunities for career guidance n= 393</td>
<td>32</td>
<td>27</td>
<td>32</td>
<td>9</td>
</tr>
</tbody>
</table>
Doctoral degree funding

Observations

- Doctoral schools and programmes are in very different positions to implement the 1+3 principle of doctoral degree funding.
- From the point of view of doctoral schools and programmes there seems to be contradiction between the rules of University's funding for doctoral training and the four year target time for completing the degree.

Current challenges

- Transparency in the rules and decision-making regarding doctoral students’ funding.
- Equality between doctoral students regardless of the funding situation.
- Clarity in the status of doctoral students with different positions.
- Insufficiency of funding in relation to the number of doctoral students.
How would you describe the funding situation of your doctoral studies? Middle and end phase

- I have guaranteed funding that is intended for doctoral studies (as a University employee or a grant researcher) for the entire duration of my doctoral studies. n=98
- The continuation of the funding that I have received for my doctoral studies is uncertain or there have been undesired discontinuations (comb) n=126
- I have funded my doctoral studies with employment (comb) n=176
Part-time doctoral students

Positive observations

- Part-time students are appreciated
  - Societal relevance of research
  - Networks and connections
  - Independent and initiative
  - Cost effective

- Increased effort to place the part-time students to department’s main research areas and in research groups

- The need for stronger integration has been recognised

Current challenges

- Ensuring an adequate amount of supervision

- Opportunities for distance learning and tools for online communication with supervisors

- A very heterogeneous group
Part-time doctoral students

- Are born before year 1980
- Study in the faculty of information technology, education or sport and health sciences
- Have their place of residence outside Central Finland or abroad
- Have Finnish as their native language
- Write more often an article dissertation than a monograph
- Write more often a monograph than full-time students
- Have funded their doctoral studies with employment in an academic position or with another type of employment or income
- Are more often women (66 %) than men compare to full-time students (55 % women)
Quality management in doctoral training

Positive observations

- Increased effort to ensure the quality of dissertation research

Current challenges

- Mechanisms and processes for the development of doctoral training
- Clarity in responsibilities at the different levels of the Graduate School
- Balance between regulations and flexibility
- Resource allocation to the coordination of faculty doctoral schools
Thank you!

The participants of future discussion

The participants of evaluation
discussions:

60 Doctoral students,
42 Supervisors
22 Heads of doctoral schools and programmes

Numerous people at the faculties,
departments and independent institutes
who gave their valuable contribution
during the self-evaluation of faculty
doctoral schools

Pirjo Halonen
Mirja Hirvensalo
Päivi Häkkinen
Marjo Kuronen
Jan Lundell
Taina Rantanen
Terhi Skaniakos
Timo Tiihonen

Graduate School Steering board
Science Council
Good practices

- Introduction to doctoral studies. Senior researcher, Dr. Mika Haapanen, School of Business and Economics
- Post-graduates’ ECT Credits earned by teaching. Professor Heikki Tuononen, Department of Chemistry
Introduction to doctoral studies at the JSBE

Dr. Mika Haapanen
Senior researcher in economics, coordinator of JSBE doctoral school

16 May 2016
Content of the presentation

• Background
• Content of the introductory course
• How to complete the course?
• Feedback from students after the course
Background

• Admission of doctoral students twice per year
• TTKJ161 Introduction to doctoral studies
  ▪ Course organized annually in September to October
  ▪ Target group is the new doctoral students at the JSBE
  ▪ Around 10-15 participate annually
  ▪ Used to be in Finnish, nowadays always in English
  ▪ 4 ECTS
• Also separate courses on research methods and on academic writing and publishing
Background

• Students’ wishes before the start of the introductory course (from Korppi-form)
  ▪ information on funding channels
  ▪ process/structure/planning of doctoral studies
  ▪ information on common practices, understanding the big picture, to get to know people
  ▪ organizing the dissertation work
  ▪ conferences, networks
  ▪ ideas for research plan
  ▪ international mobility, methodology…
Background

• The purpose of the course is to give a *practical* introduction
• Max 10 hours of lectures and discussion of exercises
• Completed with returning essay exercises
• Course materials in Koppa
Content of the course

JSBE doctoral school
1. Introduction
2. Planning of doctoral studies
3. Study and research environment (incl. faculty and staff)
4. Funding
5. Dissertation work
6. Publishing

Graduate school
1. Introduction to doctoral studies in the JYU
2. Planning of doctoral studies
3. Supervisors and the university community
4. Study and research environment
5. Dissertation work
6. Publishing
7. Funding

Orientation to doctoral studies

Orientation to doctoral studies is a material and exercise package that guides new doctoral students to get familiar with the study and research environment of the University of Jyväskylä and to consider some important matters at the beginning of doctoral studies. The orientation deals with research, studying and being part of the University community. Thus, it supplements information received from, for example, study guidance, counselling and student or staff orientation.

Contents
1. Introduction to doctoral studies in the University of Jyväskylä
2. Planning of doctoral studies
3. Supervisors and the university community
4. Study and research environment
5. Dissertation work
6. Publishing
7. Funding

Introduction to doctoral studies in the University of Jyväskylä

Shared material
- General introductory lecture
  - Handout

Faculty specific materials
- Faculty specific introductory lectures

Planning of doctoral studies

**Target:** The student has skills to create the postgraduate study plan in cooperation with his/her supervisor, and/or skills to evaluate appropriate implementation of the plan and to update the plan when necessary.
Content of the course - some topics covered

• Introducing students to each other, discussion of who is who in the faculty
• Study and research environment
• Courses available in JSBE and elsewhere
• Research seminars, networks, library services
• Practicalities, e.g. office spaces at the JSBE
• Funding opportunities and how to apply (e.g. hints), research proposal
• Conferences and presentation, visits abroad
• Academic writing and publishing, quality
• Career guidance
Doctoral Study Guide (effective 1 January 2016 onwards)

Doctoral students, whose study plans have been approved before 1.1.2016, can follow the guidelines in the previous Doctoral Study Guide. For these students, the previous study guide is valid until 31.12.2020.

1. OBJECTIVES OF DOCTORAL STUDIES
2. APPLICATION AND REGISTRATION FOR DOCTORAL STUDIES
3. SUPERVISION OF RESEARCH
4. STRUCTURE OF DOCTORAL DEGREE
5. EXAMINATION OF DOCTORAL DISSERTATION
6. DOCTORAL DISSERTATION REQUIREMENTS
7. LICENTIATE DEGREE

Persons who have completed a master’s degree and are interested in undertaking scientific research - and are eligible for doctoral studies in a discipline represented at Jyväskylä University School of Business and Economics (JSBE) - may apply for admission to doctoral studies at the school. Two doctoral programmes are offered at JSBE: doctoral programme in economics and doctoral programme in business. A licentiate degree is a potential, but non-obligatory, degree preceding the doctorate.
How to complete the course?

• Five essay exercises:
  1) Planning of doctoral studies
      Utilize JYU GS orientation exercise 1
  2) Brief analysis of research funding opportunities
      Aurora database
  3) Writing application for scholarship
      “Simulation of application process”, incl. research plan
  4) Analysis of publishing channels
      Comparison across fields, and within own field, e.g. JUFO rankings
  5) Attending at least one public defense of doctoral dissertation
      A learning diary
How to complete the course?

- Exercises must be returned in the Koppa-system
  - Lecture -> Exercises -> Lecture -> Exercises
- If a student is absent from the lectures, s/he must do interview augmenting the exercises
- Last exercise returned by mid-December
- Marking of the course: pass/fail
- Individual feedback after the course
Feedback from students after the course

- Provides answers to many practical questions
- Provides motivation and tools for doctoral studies
  - E.g. motivates participating in the academic community even if one is not on daily basis at the university environment (part-time student)
- Good timing
- Exercises useful and practical
- Forces to (re)consider one’s own research plan
Comments or questions?
Future of Doctoral Education

Good practices at the Department of Chemistry: Earning ECTS credits by teaching

Professor Heikki M. Tuononen
Department of Chemistry,
YE522
University of Jyväskylä
heikki.m.tuononen@jyu.fi
www.jyu.fi/mgc
Future of Doctoral Education

- Teaching skills and practical teaching experience are increasingly important in both academic and non-academic jobs.

- Only a few students have the possibility to take the module in university pedagogy (YPE10).

- Doctoral students are in general required to earn credits by teaching.

- Doctoral studies consist of taught (40 ECTS), research (publications and thesis) and teaching (20 ECTS) components.
Future of Doctoral Education

- doctoral students earn 2 ECTS credits per 56 mandatory contact hours of teaching per year
- teaching typically includes chemistry tutorials (laboratory work and chemistry related calculus) supporting student’s research work
- advanced doctoral students can earn credits by teaching research related skills to their peers
- credits can also be earned by co-supervising B.Sc. and M.Sc. students – primary supervisor is always a senior faculty member
Future of Doctoral Education

- In order to actually obtain credits for teaching, a **written report is required**.
- Full 20 ECTS credits can only be earned by **developing teaching systematically** and in a well-documented manner.
- Students get **support from senior faculty members** that are responsible for teaching.
- **Feedback is collected on all courses** and it is **discussed together with senior faculty members** responsible for teaching.